DEPARTMENT OF CITY PLANNING

RECOMMENDATION REPORT

City Planning Commission

Date: February 13, 2020
Time: after 8:30 a.m.
Place: Los Angeles City Council Chamber, Room 340
200 North Spring Street
Los Angeles, CA 90012

Public Hearing: January 23, 2020
Appeal Status: Off-Menu Density Bonus not appealable per LAMC; Site Plan Review appealable to City Council.
Expiration Date: February 16, 2020
Multiple Approval: Yes

Case No.: CPC-2019-2926-DB-SPR
CEQA No.: ENV-2019-2927-CE
Incidental Cases: None
Related Cases: None
Council No.: 15 – Buscaino
Plan Area: San Pedro
Plan Overlay: San Pedro CPIO – Regional Commercial Subarea
Certified NC: Central San Pedro
GPLU: Regional Commercial
Zone: C2-2D-CPIO

Applicant: LAMF 511 Harbor, LLC
Representative: Dana Sayles, Three6ixty

PROJECT LOCATION: **511 South Harbor Boulevard**, legally described as Lot: D; Tract: PM 4479

PROPOSED PROJECT: The proposed project is the construction of a mixed-use building containing 137 dwelling units (11% or 16 units restricted to Very Low Income households) and 2,478 square feet of commercial. The project will be 8 stories and 92 feet in height, and have a 4.06:1 Floor Area Ratio ("FAR") with 135,310 square feet of floor area. The project will provide 118 parking spaces in three above-grade parking levels. The project will involve the demolition of the existing restaurant building, removal of 3 non-protected on-site and 2 non-protected street trees, and export of approximately 919 cubic yards of soil.

REQUESTED ACTION:

1. Pursuant to California Environmental Quality Act ("CEQA") Guidelines, an Exemption from CEQA pursuant to State CEQA Guidelines, Article 19, Section 15332 (Class 32), and that there is no substantial evidence demonstrating that an exception to a categorical exemption pursuant to CEQA Guidelines, Section 15300.2 applies.

2. Pursuant to Los Angeles Municipal Code ("LAMC") Section 12.22 A.25(g)(2) and (3), a **Density Bonus Compliance Review** to permit the construction of a project totaling 137 dwelling units, including 16 dwelling units for Very Low Income Household occupancy for a period of 55 years, with the following requested **incentives** and **waivers**:

    a. An Off-Menu Incentive to allow 113 residential parking spaces in lieu of the 164 spaces required by Parking Option 1 and LAMC Sec. 12.22 A.25(d)(1);

    b. An Off-Menu Incentive to allow 37 of the required parking spaces to be compact in lieu of the requirement that all required parking spaces be standard size;

    c. A Waiver of Development Standards to allow a reduced side yard of 5 feet in lieu of 11 feet;

    d. A Waiver of Development Standards to allow a reduced rear yard of 5 feet in lieu of 20 feet;

e. A Waiver of Development Standards to allow reduced publicly-accessible open space area to 4,000 square feet in lieu of the 5,000 square feet otherwise required by the San Pedro Community Plan Implementation Overlay ("CPIO") Section II-2 E.1(a); and

f. A Waiver of Development Standards of the Transitional Height requirements of LAMC Section 12.21.1 A.10, and allow the building height to be stepped back at a 45 degree angle from a horizontal plane originating 15 feet above grade at the property line of the adjacent lot in the Open Space zone.

3. Pursuant to LAMC Section 16.05, a **Site Plan Review** for a development project which creates, or results in an increase of, 50 or more dwelling units.

RECOMMENDED ACTIONS:

1. **Determine**, that based on the whole of the administrative record, the project is exempt from CEQA pursuant to State CEQA Guidelines, Article 19, Section 15332 (Class 32), and that there is no substantial evidence demonstrating that an exception to a categorical exemption pursuant to CEQA Guidelines, Section 15300.2 applies.

2. **Approve** a **Density Bonus Compliance Review** for a project totaling 137 dwelling units, including 16 dwelling units for Very Low Income Household occupancy for a period of 55 years, with the following **two (2) Off-Menu Incentives**:

   a. An Off-Menu Incentive to allow 113 residential parking spaces in lieu of the 164 spaces required by Parking Option 1 and LAMC Sec. 12.22 A.25(d)(1);

   b. An Off-Menu Incentive to allow 37 of the required parking spaces to be compact in lieu of the requirement that all required parking spaces be standard size;

3. **Approve** the following **four (4) Waivers of Development Standards**:

   a. A reduced side yard to allow 5 feet in lieu of 11 feet;

   b. A reduced rear yard to allow 5 feet in lieu of 20 feet;

   c. To reduce publicly-accessible open space area to 4,000 square feet in lieu of the 5,000 square feet otherwise required by the San Pedro Community Plan Implementation Overlay ("CPIO") Section II-2 E.1(a); and

   d. To waive the Transitional Height requirements of LAMC Section 12.21.1 A.10, and allow the building height to be stepped back at a 45 degree angle from a horizontal plane originating 15 feet above grade at the property line of the adjacent lot in the Open Space zone.

4. **Approve** a **Site Plan Review** for a development project which creates, or results in an increase of, 50 or more dwelling units.

5. **Adopt** the attached Findings.

VINCENT P. BERTONI, AICP
Director of Planning

Lisa Webber, AICP, Deputy Director

Debbie Lawrence, ACIP, Senior City Planner

Alan Como, AICP, City Planner
Telephone: (213) 847-3633

ADVICE TO PUBLIC: *The exact time this report will be considered during the meeting is uncertain since there may be several other items on the agenda. Written communications may be mailed to the *Commission Secretariat, Room 273, City Hall, 200 North Spring Street, Los Angeles, CA 90012* (Phone No. 213-978-1300). While all written communications are given to the Commission for consideration, the initial packets are sent to the week prior to the Commission's meeting date. If you challenge these agenda items in court, you may be limited to raising only those issues you or someone else raised at the public hearing agendized herein, or in written correspondence on these matters delivered to this agency at or prior to the public hearing. As a covered entity under Title II of the Americans with Disabilities Act, the City of Los Angeles does not discriminate on the basis of disability, and upon request, will provide reasonable accommodation to ensure equal access to these programs, services and activities. Sign language interpreters, assistive listening devices, or other auxiliary aids and/or other services may be provided upon request. To ensure availability of services, please make your request not later than three working days (72 hours) prior to the meeting by calling the Commission Secretariat at (213) 978-1300.

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PROJECT ANALYSIS

PROJECT SUMMARY

The proposed project is the construction of a mixed-use building containing 137 dwelling units (11% or 16 units restricted to Very Low Income households) and 2,478 square feet of commercial. The project will be 8 stories and 92 feet in height, and have a Floor Area Ratio ("FAR") of 4.06:1, with 135,310 square feet of floor area. The project will provide 118 total parking spaces in three above-grade parking levels. The project will involve the demolition of the existing restaurant building, removal of 3 non-protected on-site and 2 non-protected street trees, and export of approximately 919 cubic yards of soil.

BACKGROUND

Subject Property

The project site is located at the southwest corner of Harbor Boulevard and 5th Street in the San Pedro Community Plan area. The project site consists of one (1) lot approximately 33,285 square feet, with approximately 205 feet of frontage along the south side of 5th Street and 155 feet of frontage along the west side of Harbor Boulevard. The site is currently improved with a one-story 4,169 square foot commercial building, which will be demolished.

Zoning and Land Use Designation

The San Pedro Community Plan was adopted by City Council in May 2018, with related Community Plan Implementation Overlay District ("CPIO") ordinances effective in June 2018. The San Pedro Community Plan Map designates the site for Regional Commercial use with corresponding zones of C2, C4, R4, RAS4, and R5. The property is zoned C2-2D-CPIO. Height District No. 2 limits Floor Area Ratio (FAR) to 6:1 and no limit on maximum height or number of stories. However, the San Pedro CPIO places a D limitation on the property which imposes a maximum height of 250 feet, as well as other development regulations. The property is located in the Harbor Gateway State Enterprise Zone, City of Los Angeles Transit Priority Area, and Transit Oriented Communities Tier 2 area.

Surrounding Uses

The surrounding area is developed with a mix of multi-family residential, commercial, entertainment, cultural, and recreational uses. Property to the east of the site across Harbor Boulevard has a land use designation of Open Space and is zoned OS-1-CPIO and developed as Gibson Park. To the east of Gibson Park is the Port of Los Angeles waterfront. Northeast of the subject site is Los Angeles Fire Department Station 112, located at 444 South Harbor Boulevard, as well as the Battleship USS Iowa Museum. Properties across 5th Street to the north are designated as Public Facilities and Regional Commercial and are zoned PF-2D-CPIO and C2-2D-CPIO, respectively. The properties are developed with the Port of Los Angeles Liberty Hill Plaza, a California Registered Historical Landmark (No. 1021), as well as the Port of Los Angeles Boys and Girls Club and associated surface parking. Property to the west is designated Regional Commercial and zoned C2-2D-CPIO. The property is a 7-story, 83-foot tall mixed use building with 404 multi-family dwelling units and approximately 5,200 square feet of ground floor commercial space, currently under construction. The abutting property to the south is designated as Regional Commercial and is zoned C2-2D-CPIO and developed with the 3-story Sunrise Hotel San Pedro.

Streets and Circulation

Harbor Boulevard, abutting the property to the east, is designated by the Mobility Plan as an Avenue I, which is required to have a designated right-of-way width of 100 feet and roadway width of 70 feet. The segment of Harbor Boulevard adjacent to the site is fully dedicated and is improved with a half-roadway width of approximately 39 feet and sidewalk width of approximately 10 feet, with curb, gutter, street trees, street lights, traffic lights, and traffic signs. No dedications would be required per the Bureau of Engineering report dated November 20, 2018. However, a 15 foot by 15 foot cut corner or 20 foot curved corner radius is required.

5th Street, abutting the property to the north, is a designated by the Mobility Plan as an Avenue II, which is required to have a designated right-of-way width of 86 feet and roadway width of 56 feet. The segment of 5th Street adjacent to the site is fully dedicated and is improved with a half-roadway width of approximately 33 feet and sidewalk width of approximately 6.5 feet, with curb, gutter, street trees, street lights, traffic lights, and traffic signs. No dedications would be required per the Bureau of Engineering report dated November 20, 2018. However, a 15 foot by 15 foot cut corner or 20 foot curved corner radius is required.

Relevant Cases and Building Permits

Subject Site:

Case No. CPC-2009-1557-CPU – On May 15, 2018, the City Council adopted the San Pedro Community Plan Update (CPU) (Council File No. 17-1044, Ordinance No. 185,541) for the preparation of the Community Plan Implementation Ordinance (CPIO). The CPIO (Ordinance No. 185,539) became effective on June 26, 2018. The CPU and CPIO include amending the policy document and land use map of the San Pedro Community Plan, adopting the zoning ordinance to implement the updates to the Community Plan, including changes for certain portions of the Community Plan Area to allow specific uses, development standards (including height, Floor Area Ratio, and massing) and design standards, as well as amendments to the Framework and Circulation (Mobility Plan 2035) Elements of the General Plan, and others as necessary.

Surrounding Sites:

The following relevant cases were identified to be within 1,500 feet of the subject site:

Case No. DIR-2016-624-CDO-MSC-SPR – On December 5, 2016, the Director of Planning approved a seven-story mixed-use development comprised of 404 multi-family dwelling units an approximately 5,200 square feet of ground floor commercial uses in an 83 foot tall building, located adjacent to the west at 550 South Palos Verdes Street. The project is currently under construction.

Case No. CPC-2005-8628-ZAA-ZC-SPR – On January 26, 2006, the City Planning Commission approved and recommended the City Council approve a Zone Change from C2-2 to [T][Q]C2-2 for the construction of a 16-story 170-foot tall building containing 318 multi-family dwelling units and a 5-level 60-foot tall parking structure, for property located at 255 West 5th Street.

Case No. CPC-2003-8776-ZC-GPA-ZAA-SPR – On June 10, 2004, the City Planning Commission approved and recommended the City Council approve a General Plan Amendment from Limited Manufacturing to Regional Center Commercial and a Zone

Change from CM-2 to [T][Q]C2-2 for the construction of an 80-foot tall building containing 318 multi-family dwelling units, for property located at 255 West 5th Street.

REQUESTED ACTIONS

Density Bonus / Affordable Housing Incentives Program

In accordance with California State Law (including Senate Bill 1818, and Assembly Bills 2280 and 2222), the applicant is proposing to utilize LAMC Section 12.22 A.25 (Affordable Housing Incentives – Density Bonus) to set aside 16 dwelling units for Very Low Income household occupancy for a period of 55 years. Because the applicant is providing 11 percent of total dwelling units to be affordable for Very Low Income household occupancy, the project is eligible for two (2) Density Bonus Incentives.

Off-Menu Incentives
As a result of setting aside 11 percent (16 dwelling units) of the total 137 dwelling units as Restricted Affordable Units for Very Low Income Households, the applicant requests two (2) Off-Menu Density Bonus Incentives, as follows:

a. An allowance to provide 113 residential parking spaces in lieu of the 164 spaces required by Parking Option 1 and LAMC Sec. 12.22 A.25(d)(1); and

b. An allowance to provide 37 of the required parking spaces as compact in lieu of the requirement that all required parking spaces be standard size

Waivers of Development Standards
As mentioned above, a project that provides 11 percent of its total units for Very Low Income Households qualifies for two (2) Incentives, but may request other "waiver[s] or reduction[s] of development standards that will have the effect of physically precluding the construction of a development meeting the [affordable set-aside percentage] criteria of subdivision (b) at the densities or with the concessions or incentives permitted under [State Density Bonus Law]" (Government Code Section 65915(e)(1)), in conjunction with a Density Bonus Project. Given that the project is utilizing all two (2) Density Bonus Incentives, the applicant requests four (4) Waivers of Development Standards, as follows:

c. Reduced side yard to allow 5 feet in lieu of 11 feet;

d. Reduced rear yard to allow 5 feet in lieu of 20 feet;

e. Reduced publicly-accessible open space area to 4,000 square feet in lieu of the 5,000 square feet otherwise required by the San Pedro Community Plan Implementation Overlay ("CPIO") Section II-2 E.1(a); and

f. To waive the Transitional Height requirements of LAMC Section 12.21.1 A.10, and allow the building height to be stepped back at a 45 degree angle from a horizontal plane originating 15 feet above grade at the property line of the adjacent lot in the Open Space zone.

Site Plan Review

In accordance with LAMC Section 16.05, the applicant has requested Site Plan Review for a development project that creates or results in an increase of 50 of more dwelling units.

ISSUES

Publicly Accessible Open Space

The San Pedro CPIO contains a development regulation for projects with new construction to comply with publicly accessible open space requirements. For projects that front 200 feet or more of a single street, projects must provide open space that is all of the following:

a. A minimum of 5,000 square feet;
b. Located on the ground level with direct pedestrian connection to the adjacent street;
c. Unenclosed by any wall, fence, gate, or other obstruction;
d. Lined with Ground Floor tenant spaces usable for retail uses, including one or more restaurants, along at least 20 percent of the building frontage that abuts the open space;
e. At least 40 percent landscaped with usable lawn or similar usable groundcover or artificial grass, or with plant materials that are low maintenance, and native or drought tolerant; and
f. Improved with Pedestrian Amenities.

The project site has approximately 205 feet of frontage along 5th Street, which qualifies the project as having to comply with the publicly accessible open space requirements. Additionally, Section II-2.E.3 of the CPIO requires Projects with frontage on Harbor Boulevard to locate the required open space adjacent to Harbor Boulevard. However, Section II-2.E.2 states that "projects on properties that front less than 200 feet of a single street shall provide open space at a rate of one square foot per 100 square feet of nonresidential floor area up to 5,000 square feet. The open space shall be visible and accessible from the sidewalk and include Pedestrian Amenities and/or landscaped areas." For the proposed project, if it were to have less than 200 square feet of frontage, it would only be required to provide an approximate 25 square feet of publicly accessible open space on the ground floor.

The CPIO defines Pedestrian Amenities as "Any public or private improvement that facilitates direct, safe, attractive, accessible, and enjoyable walking. This term includes outdoor sidewalk cafes, public plazas, retail courtyards, water features, kiosks, Paseos, Arcades, patios, covered walkways, or spaces for outdoor dining or seating that are located on the Ground Floor, and that are accessible to and available for use by the public." The proposed project includes a publically accessible open space on the ground floor with a direct pedestrian connection to Harbor Boulevard, and is unenclosed by any wall, fence, or gate. The open space is lined with Ground Floor tenant spaces including retail uses and a restaurant along at least 20% of the building frontage along Harbor Boulevard, and is at least 40% landscaped with native and drought tolerant landscaping. The open space meets the definition in the CPIO for a Pedestrian Amenity, described above, as it contains a public plaza and retail courtyard which includes a covered walkway and spaces for outdoor dining or seating that are located on the Ground Floor, and that are accessible to and available for use by the public.

Parking Reduction

At the public hearing, a number of speakers addressed the requested parking reduction. The applicant requested an Off-Menu Incentive to allow 113 residential parking spaces in lieu of the 164 spaces required by Parking Option 1 and LAMC Section 12.22 A.25(d)(1). Density Bonus Parking Option 1 requires parking spaces at the following ratios: 1 space per unit containing 0 to 1 bedrooms, 2 spaces per unit containing 2 to 3 bedrooms, and 2.5 space per unit containing 4 or more bedrooms. The project provides 25 studio units, 85 one-bedroom units, and 27 two-bedroom units, and is therefore required to provide a total of 164 residential parking spaces.

The applicant has agreed to unbundle residential parking from the cost of a unit, and has committed to utilizing a parking attendant to manage parking demand in the garage. At the public hearing, some speakers raised concerns that residents of the project who didn't want to pay for parking would park on the street. The applicant's representative responded at the hearing that site constraints and CPIO regulations make it difficult to provide additional parking and that with a parking demand strategy that utilizes a parking attendant, an additional 20% capacity might be available.

Design (Urban Design Studio / Professional Volunteer Program)

The project was presented to the Professional Volunteer Program ("PVP") on December 3, 2019. The following comments were made on the project design:

1. Having two driveways appears redundant and creates blank walls along 5th Street. Should remove the second driveway, or demonstrate why it is not feasible to have one driveway. See if there is an opportunity to have only one driveway that meets at grade..

2. Introduce more greenery and landscaping along the street-facing facades and corner. There is too much paving and blank walls. Consider climbing vines or other materials that will soften the facades.

3. Provide more information on the building material on the third parking level. What is the building material? Ensure that parking will not be visible from the street.

4. The building design appears generic looking, and does not reflect the San Pedro community's art deco character, or the community center across the street.

On December 20, 2019, the Applicant submitted revised project plans incorporating and in response to the design comments from the UDS and PVP. Specifically, the revisions to the project design include:

1. Removal of the second driveway.

2. Added windows and a door along 5th Street façade to reduce appearance of blank wall.

3. Increased sidewalk adjacent landscaping along 5th Street frontage.

Overall, the applicant was able to incorporate and respond to the intent of the design comments by removing the proposed 2nd driveway along 5th Street and adding articulation where previously lacking on the 5th Street building facade.

CONCLUSION

As proposed, the project will redevelop an underutilized site with a mixed-use development containing 137 dwelling units and 2,478 square feet of commercial. The project will result in 16 affordable units reserved for Very Low Income households. The project will provide much-needed housing in the San Pedro community as intended by the Density Bonus program and other state housing initiatives, and will help activate this portion of the Harbor Boulevard.

Based on the information submitted to the record, and the surrounding uses and zones, staff recommends that the City Planning Commission approve the project, as recommended, subject to the Conditions of Approval.

CONDITIONS OF APPROVAL

Density Bonus Conditions

1. **Site Development.** Except as modified herein, the project shall be in substantial conformance with the plans and materials submitted by the Applicant, stamped "Exhibit A," and attached to the subject case file. No change to the plans will be made without prior review by the Department of City Planning, West/South/Coastal Project Planning Division, and written approval by the Director of Planning. Each change shall be identified and justified in writing. Minor deviations may be allowed in order to comply with the provisions of the Los Angeles Municipal Code or the project conditions.

2. **Residential Density**. The project shall be limited to a maximum density of 137 residential units including Density Bonus Units.

3. **Affordable Units.** A minimum of 16 units, that is 11 percent of the total dwelling units, shall be reserved as affordable units, as defined by the State Density Bonus Law 65915 (c)(1) or (c)(2).

4. **Housing Requirements.** Prior to issuance of a building permit, the owner shall execute a covenant to the satisfaction of the Los Angeles Housing and Community Investment Department (HCIDLA) to make 16 units available to Very Low Income Households, for sale or rental as determined to be affordable to such households by HCIDLA for a period of 55 years. Enforcement of the terms of said covenant shall be the responsibility of HCIDLA. The applicant will present a copy of the recorded covenant to the Department of City Planning for inclusion in this file. The project shall comply with any monitoring requirements established by the HCIDLA. Refer to the Density Bonus Legislation Background section of this determination.

5. **Floor Area Ratio (FAR)**. The project shall be limited to a maximum floor area ratio of 4.06:1 per Exhibit "A".

6. **Height**. The project shall be limited to eight (8) stories and 92 feet in height per Exhibit "A".

7. **Yard Setbacks (Waiver).** The project shall provide a minimum 5-foot southern side yard setback and 5-foot western rear yard setback per Exhibit "A".

8. **Automobile Parking for Residential Uses (Incentive).** The project shall provide a minimum of 113 residential parking spaces. Of the required residential spaces, 37 are permitted to be compact spaces.

9. **Automobile Parking for Commercial Uses.** As required by LAMC Section 12.21 A.4(c), the project shall provide a minimum of 5 parking spaces for the 2,478 square feet of commercial uses, at a ratio of one space for every 500 square feet of commercial square footage.

10. **Bicycle Parking.** Bicycle parking shall be provided consistent with LAMC 12.21 A.16.

Site Plan Review Conditions

11. The project shall comply with the development standards and use regulations of the San Pedro CPIO Chapter II, except as modified herein.

12. **Mechanical Equipment**. All exterior mechanical equipment, including heating, ventilation and air conditioning (HVAC) equipment, satellite dishes, and cellular antennas, shall be screened

from public view through the use of architectural elements such as parapets. The transformer, located along 5th Street, shall conform with the regulations in the San Pedro CPIO Section II-2.I.

13. **Lighting**. All outdoor and parking lighting shall be shielded and down-cast within the site in a manner that prevents the illumination of adjacent public rights-of-way, adjacent properties, and the night sky (unless otherwise required by the Federal Aviation Administration (FAA) or for other public safety purposes).

14. **Lighting Design**. Areas where nighttime uses are located shall be maintained to provide sufficient illumination of the immediate environment so as to render objects or persons clearly visible for the safety of the public and emergency response personnel. All pedestrian walkways, storefront entrances, and vehicular access ways shall be illuminated with lighting fixtures. Lighting fixtures shall be harmonious with the building design. Wall mounted lighting fixtures to accent and complement architectural details at night shall be installed on the building to provide illumination to pedestrians and motorists.

15. **Heat Island Effect**. To reduce the heat island effect, a minimum of 50% of the area of pathways, patios, driveways or other paved areas shall use materials with a minimum initial Solar Reflectance value of 0.35 in accordance with ASTM (American Society of Testing Materials) standards.

16. **Electric Vehicle Parking.** All electric vehicle charging spaces (EV spaces) and electric vehicle charging stations (EVCS) shall comply with the regulations outlined in Sections 99.04.106 and 99.05.106 of Article 9, Chapter IX of the LAMC.

17. **Unbundled Parking**. Residential parking shall be unbundled from the cost of the rental units, with the exception of parking for Restricted Affordable Units.

18. **Parking Structure Design**. Parking structures or that portion of a building or structure that is used for parking at grade or above grade shall be designed to minimize vehicle headlight and parking structure interior lighting impacts (“spillover”) on adjacent streets and properties.

19. **Landscape Plan**. Revised landscape plans shall be submitted to show the size and location of all plants. The landscape plan shall indicate landscape points for the Project as required by LAMC 12.40 and Landscape Ordinance Guidelines “O”. All open areas not used for buildings, driveways, parking areas, recreational facilities or walks shall be landscaped, including an automatic irrigation system, and maintained in accordance with a final landscape plan prepared by a licensed landscape architect or licensed architect, and submitted for approval to the Department of City Planning. The final landscape plan shall be in substantial conformance with the submitted Landscape Plan, Exhibit “A,” and shall incorporate any modifications required as a result of this grant.

20. **Tree Wells**. The minimum depth of tree wells and planters on the rooftop, any above grade open space, and above a subterranean structure shall be as follows:
    a. Minimum depth for trees shall be 42 inches.
    b. Minimum depth for shrubs shall be 30 inches.
    c. Minimum depth for herbaceous plantings and ground cover shall be 18 inches
    d. Minimum depth for an extensive green roof shall be 3 inches.
    e. The minimum amount of soil volume for tree wells on the rooftop or any above grade open spaces shall be based on the size of the tree at maturity:
    f. 600 cubic feet for a small tree (less than 25 feet tall at maturity).
    g. 900 cubic feet for a medium tree (25-40 feet tall at maturity).
    h. 1,200 cubic feet for a large tree (more than 40 feet tall at maturity)

21. **Street Trees**. New trees planted within the public right-of-way shall be spaced not more than an average of 30 feet on center, unless otherwise permitted by the Urban Forestry Division, Bureau of Public Works.

22. **Greywater**. The project shall be constructed with an operable recycled water pipe system for onsite greywater use, to be served from onsite non-potable water sources such as showers, washbasins, or laundry and to be used as untreated subsurface irrigation for vegetation or for cooling equipment. The system specifics shall be required as determined feasible by the Department of Water and Power in consultation with the Department of City Planning.

23. **Stormwater/Irrigation.** The project shall implement on-site stormwater infiltration as feasible based on the site soils conditions, the geotechnical recommendations, and the City of Los Angeles Department of Building and Safety Guidelines for Storm Water Infiltration. If on-site infiltration is deemed infeasible, the project shall analyze the potential for stormwater capture and reuse for irrigation purposes based on the City Low Impact Development (LID) guidelines.

24. **Solar and Electric Generator**. Generators used during the construction process shall be electric or solar powered. Solar generator and electric generator equipment shall be located as far away from sensitive uses as feasible.

25. **Solar-ready Buildings**. The Project shall comply with the Los Angeles Municipal Green Building Code, Section 99.05.211, to the satisfaction of the Department of Building and Safety.

26. **Solar Panels**. Solar panels shall be installed on the building rooftop for a minimum 15 percent of the rooftop area as shown on the roof plan, as a part of an operational photovoltaic system to be maintained for the life of the project. The Project shall comply with the Los Angeles Municipal Green Building Code, Section 99.05.211, to the satisfaction of the Department of Building and Safety.

27. **Signage**. There shall be no off-site commercial signage on construction fencing during construction.

Administrative Conditions

28. **Final Plans.** Prior to the issuance of any building permits for the project by the Department of Building and Safety, the applicant shall submit all final construction plans that are awaiting issuance of a building permit by the Department of Building and Safety for final review and approval by the Department of City Planning. All plans that are awaiting issuance of a building permit by the Department of Building and Safety shall be stamped by Department of City Planning staff “Plans Approved”. A copy of the Plans Approved, supplied by the applicant, shall be retained in the subject case file.

29. **Notations on Plans.** Plans submitted to the Department of Building and Safety, for the purpose of processing a building permit application shall include all of the Conditions of Approval herein attached as a cover sheet, and shall include any modifications or notations required herein.

30. **Approval, Verification and Submittals.** Copies of any approvals, guarantees or verification of consultations, review of approval, plans, etc., as may be required by the subject conditions, shall be provided to the Department of City Planning prior to clearance of any building permits, for placement in the subject file.

31. **Code Compliance.** Use, area, height, and yard regulations of the zone classification of the subject property shall be complied with, except where granted conditions differ herein.

32. **Department of Building and Safety**. The granting of this determination by the Director of Planning does not in any way indicate full compliance with applicable provisions of the Los Angeles Municipal Code Chapter IX (Building Code). Any corrections and/or modifications to plans made subsequent to this determination by a Department of Building and Safety Plan Check Engineer that affect any part of the exterior design or appearance of the project as approved by the Director, and which are deemed necessary by the Department of Building and Safety for Building Code compliance, shall require a referral of the revised plans back to the Department of City Planning for additional review and sign-off prior to the issuance of any permit in connection with those plans.

33. **Enforcement.** Compliance with these conditions and the intent of these conditions shall be to the satisfaction of the Department of City Planning.

34. **Covenant.** Prior to the issuance of any permits relative to this matter, an agreement concerning all the information contained in these conditions shall be recorded in the County Recorder's Office. The agreement shall run with the land and shall be binding on any subsequent property owners, heirs or assign. The agreement must be submitted to the Department of City Planning for approval before being recorded. After recordation, a copy bearing the Recorder's number and date shall be provided to the Department of City Planning for attachment to the file.

35. **Indemnification and Reimbursement of Litigation Costs.**

    Applicant shall do all of the following:

    (i) Defend, indemnify and hold harmless the City from any and all actions against the City relating to or arising out of, in whole or in part, the City's processing and approval of this entitlement, including but not limited to, an action to attack, challenge, set aside, void, or otherwise modify or annul the approval of the entitlement, the environmental review of the entitlement, or the approval of subsequent permit decisions, or to claim personal property damage, including from inverse condemnation or any other constitutional claim.

    (ii) Reimburse the City for any and all costs incurred in defense of an action related to or arising out of, in whole or in part, the City's processing and approval of the entitlement, including but not limited to payment of all court costs and attorney's fees, costs of any judgments or awards against the City (including an award of attorney's fees), damages, and/or settlement costs.

    (iii) Submit an initial deposit for the City's litigation costs to the City within 10 days' notice of the City tendering defense to the Applicant and requesting a deposit. The initial deposit shall be in an amount set by the City Attorney's Office, in its sole discretion, based on the nature and scope of action, but in no event shall the initial deposit be less than $50,000. The City's failure to notice or collect the deposit does not relieve the Applicant from responsibility to reimburse the City pursuant to the requirement in paragraph (ii).

    (iv) Submit supplemental deposits upon notice by the City. Supplemental deposits may be required in an increased amount from the initial deposit if found necessary by the City to protect the City's interests. The City's failure to notice or collect the deposit does not relieve the Applicant from responsibility to reimburse the City pursuant to the requirement in paragraph (ii).

    (v) If the City determines it necessary to protect the City's interest, execute an indemnity and reimbursement agreement with the City under terms consistent with the requirements of this condition.

The City shall notify the applicant within a reasonable period of time of its receipt of any action and the City shall cooperate in the defense. If the City fails to notify the applicant of any claim, action, or proceeding in a reasonable time, 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.

The City shall have the sole right to choose its counsel, including the City Attorney's office or outside counsel. At its sole discretion, the City may participate at its own expense in the defense of any action, but such participation shall not relieve the applicant of any obligation imposed by this condition. In the event the Applicant fails to comply with this condition, in whole or in part, the City may withdraw its defense of the action, void its approval of the entitlement, or take any other action. The City retains the right to make all decisions with respect to its representations in any legal proceeding, including its inherent right to abandon or settle litigation.

For purposes of this condition, the following definitions apply:

"City" shall be defined to include the City, its agents, officers, boards, commissions, committees, employees, and volunteers.

"Action" shall be defined to include suits, proceedings (including those held under alternative dispute resolution procedures), claims, or lawsuits. Actions includes actions, as defined herein, alleging failure to comply with any federal, state or local law.

Nothing in the definitions included in this paragraph are intended to limit the rights of the City or the obligations of the Applicant otherwise created by this condition.

FINDINGS

DENSITY BONUS/AFFORDABLE HOUSING INCENTIVES COMPLIANCE FINDINGS

1. **Pursuant to Section 12.22 A.25(c) of the LAMC, the Director shall approve a density bonus and requested incentive(s) unless the director finds that:**

   a. The incentives are not required to provide for affordable housing costs as defined in California Health and Safety Code Section 50052.5 or Section 50053 for rents for the affordable units.

   The record does not contain substantial evidence that would allow the Director to make a finding that the requested off-menu incentives are not necessary to provide for affordable housing costs per State Law. The California Health & Safety Code Sections 50052.5 and 50053 define formulas for calculating affordable housing costs for Very Low, Low, and Moderate Income Households. Section 50052.5 addresses owner-occupied housing and Section 50053 addresses rental households. Affordable housing costs are a calculation of residential rent or ownership pricing not to exceed 25 percent gross income based on area median income thresholds dependent on affordability levels.

   Based on the set-aside of 11 percent of total units for Very Low Income households, the applicant is entitled to two (2) Incentives under both the Government Code and LAMC. Therefore, the first Off-Menu requests qualify as the proposed development's Incentives. The remaining requests must be processed as a Waiver of Development Standard.

   Parking Reduction: The applicant requested an Off-Menu Incentive to allow 113 residential parking spaces in lieu of the 164 spaces required by Parking Option 1 and LAMC Sec. 12.22 A.25(d)(1). Density Bonus Parking Option 1 requires parking spaces at the following ratios: 1 space per unit containing 0 to 1 bedrooms, 2 spaces per unit containing 2 to 3 bedrooms, and 2.5 space per unit containing 4 or more bedrooms. The project provides 25 studio units, 85 one-bedroom units, and 27 two-bedroom units, and is therefore required to provide a total of 164 residential parking spaces. The Applicant has requested a parking reduction to allow 113 residential parking spaces in lieu of the 164 residential parking spaces otherwise required by Density Bonus Parking Option 1.

   As recommended, the Off-Menu Incentive will allow the developer to expand the Project's building envelope so that the residential units being constructed are of sufficient size, configuration, and quality. Compliance with the requirements of Parking Option 1 would require the removal of a significant amount of floor area that could otherwise be dedicated to the number, configuration and livability of affordable housing units; and would similarly reduce the building footprint within which the Project could be built, the arrangement of amenities provided for the residential units proposed, and configuration of amenities that will be accessible to all of the residents within the affordable housing development.

   Due to the requirement for a portion of the site to contain a publicly accessible open space plaza which is required to front Harbor Boulevard, the project is physically limited from expanding its proposed parking areas to increase the number of provided parking spaces. If the project were to expand its parking area by building an additional parking level, the resulting building height would trigger a cost-prohibitive construction type. As a result, the provision of affordable units that the project currently proposes would no

longer be financially feasible. Similarly, if the project was to construct a subterranean parking level to accommodate the required parking pursuant to Parking Option 1, it would also result in financial infeasibility.

Compact Parking: The applicant requested an Off-Menu Incentive to allow 37 of the required parking spaces to be compact in lieu of the requirement that all required parking spaces be standard size. LAMC Section 12.21 A.5(c) requires that "In each parking area or garage devoted to parking for dwelling uses all parking stalls in excess of one parking stall per dwelling unit may be designed as compact parking stalls to accommodate compact cars." Every standard parking stall provided for dwelling units shall be at least 8 feet 6 inches in width and 18 feet in length; every compact stall shall be at least 7 feet 6 inches in width and 15 feet in length. The project is physically limited from expanding its proposed parking areas to provide all 118 spaces as standard size spaces, due to the requirement for a portion of the site to contain a publicly accessible open space plaza which is required to front Harbor Boulevard. Therefore, it would be financially infeasible to provide for all 118 parking spaces in the proposed project as standard size spaces.

b. The Incentive will have specific adverse impact upon public health and safety or the physical environment, or on any real property that is listed in the California Register of Historical Resources and for which there is no feasible method to satisfactorily mitigate or avoid the specific adverse Impact without rendering the development unaffordable to Very Low, Low and Moderate Income households. Inconsistency with the zoning ordinance or the general plan land use designation shall not constitute a specific, adverse impact upon the public health or safety.

There is no evidence in the record that the proposed density bonus incentive(s) will have a specific adverse impact. A "specific adverse impact" is defined as, "a significant, quantifiable, direct and unavoidable impact, based on objective, identified written public health or safety standards, policies, or conditions as they existed on the date the application was deemed complete" (LAMC Section 12.22.A.25(b)). The finding that there is no evidence in the record that the proposed incentive(s) will have a specific adverse impact is further supported by the recommended CEQA finding. The findings to deny an incentive under Density Bonus Law are not equivalent to the findings for determining the existence of a significant unavoidable impact under CEQA. However, under a number of CEQA impact thresholds, the City is required to analyze whether any environmental changes caused by the project have the possibility to result in health and safety impacts. For example, CEQA Guidelines Section 15065(a)(4), provides that the City is required to find a project will have a significant impact on the environment and require an EIR if the environmental effects of a project will cause a substantial adverse effect on human beings. The proposed project and potential impacts were analyzed in accordance with the State California Environmental Quality Act (CEQA) Guidelines. Analysis of the proposed Project determined that it is Categorically Exempt from environmental review pursuant to Article 19, Class 32 of the CEQA Guidelines. The Categorical Exemption (CE) could be adopted, including, on the basis that none of the potential environmental effects of the proposed Project would cause substantial adverse effects on human beings, the physical environment, on public health and safety, or on property listed in the California Register of Historic Resources. Based on all of the above, there is no basis to deny the requested incentive.

c. The waiver[s] or reduction[s] of development standards will not have the effect of physically precluding the construction of a development meeting the [affordable set-aside percentage] criteria of subdivision (b) at the densities or with the

concessions or incentives permitted under [State Density Bonus Law]" (Government Code Section 65915(e)(1)).

A project that provides 11 percent of total units for Very Low Income Households qualifies for two (2) Incentives, and may request other "waiver[s] or reduction[s] of development standards that will have the effect of physically precluding the construction of a development meeting the [affordable set-aside percentage] criteria of subdivision (b) at the densities or with the concessions or incentives permitted under [State Density Bonus Law]" (Government Code Section 65915(e)(1)).

Therefore, the request for the following is recommended as a Waiver of Development Standards. Without the below Waivers, the existing development standards would preclude development of the proposed density bonus units and project amenities:

a. A reduced side yard to allow 5 feet in lieu of 11 feet;

b. A reduced rear yard to allow 5 feet in lieu of 20 feet;

c. To reduce publicly-accessible open space area to 4,000 square feet in lieu of the 5,000 square feet otherwise required by the San Pedro CPIO Section II-2 E.1(a); and

d. To waive the Transitional Height requirements of LAMC Section 12.21.1 A.10, and allow the building height to be stepped back at a 45 degree angle from a horizontal plane originating 15 feet above grade at the property line of the adjacent lot in the Open Space zone.

Reduction in Yards: The applicant is requesting a reduced side yard setback to allow 5 feet in lieu of 11 feet and a reduced rear yard setback to allow 5 feet in lieu of 20 feet through a Waiver of Development Standard. The applicant has chosen to increase the size of the proposed units rather than pursue the maximum allowable density under density bonus incentives. The limitation on the setbacks would require the developer to reduce the space dedicated to parking in order to fit the requested number of units. This development standard would have the effect of physically precluding construction of a development providing 137 dwelling units, of which 16 units will be set aside for Very Low Income households. As proposed, the setback reductions will allow for the construction of the affordable residential units. Furthermore, the setback reductions are necessary due to 4,000 square feet of buildable area that is taken away to allow for the San Pedro CPIO required Publically Accessible Open Space along Harbor Boulevard. Therefore, the requested setback waiver will allow the developer to expand the building envelope so the additional units can be constructed and the overall space dedicated to residential uses is increased.

Reduction in CPIO required open space: The applicant is requesting a waiver to reduce publicly-accessible open space area to 4,000 square feet in lieu of the 5,000 square feet otherwise required by the San Pedro CPIO. The San Pedro CPIO contains a development regulation for projects with new construction to comply with publicly accessible open space requirements. For projects that front 200 feet or more of a single street, projects must provide open space that is all of the following:

a. A minimum of 5,000 square feet;
b. Located on the ground level with direct pedestrian connection to the adjacent street;
c. Unenclosed by any wall, fence, gate, or other obstruction;

d. Lined with Ground Floor tenant spaces usable for retail uses, including one or more restaurants, along at least 20 percent of the building frontage that abuts the open space;
e. At least 40 percent landscaped with usable lawn or similar usable groundcover or artificial grass, or with plant materials that are low maintenance, and native or drought tolerant; and
f. Improved with Pedestrian Amenities.

The project site has approximately 205 feet of frontage along 5th Street, which qualifies the project as having to comply with the publicly accessible open space requirements. Additionally, Section II-2.E.3 of the CPIO requires Projects with frontage on Harbor Boulevard to locate the required open space adjacent to Harbor Boulevard. However, Section II-2.E.2 states that "projects on properties that front less than 200 feet of a single street shall provide open space at a rate of one square foot per 100 square feet of nonresidential floor area up to 5,000 square feet. The open space shall be visible and accessible from the sidewalk and include Pedestrian Amenities and/or landscaped areas." The requirement to provide 5,000 square feet of publically accessible open space located at the ground floor would reduce the buildable area of the proposed project and would limit the size of the proposed units, as the applicant has chosen to increase the size of the proposed units rather than pursue the maximum allowable density under density bonus incentives. For the proposed project, if it were to have less than 200 square feet of frontage, it would only be required to provide an approximate 25 square feet of publicly accessible open space on the ground floor.

The proposed project includes a publically accessible open space on the ground floor with a direct pedestrian connection to Harbor Boulevard, and is unenclosed by any wall, fence, or gate. The open space is lined with Ground Floor tenant spaces including retail uses and a restaurant along at least 20% of the building frontage along Harbor Boulevard, and is at least 40% landscaped with native and drought tolerant landscaping. The open space meets the definition in the CPIO for a Pedestrian Amenity, described above, as it contains a public plaza and retail courtyard which includes a covered walkway and spaces for outdoor dining or seating that are located on the Ground Floor, and that are accessible to and available for use by the public. Therefore, the project complies with the regulations in Section II-2.E of the San Pedro CPIO.

Transitional Height: The applicant has requested a waiver from the Transitional Height requirements of LAMC Section 12.21.1 A.10, which requires a tiered building height limit given the distance of the building from a property zoned RW1 or more restrictive. The property located to the east across Harbor Boulevard is zoned OS-1-CPIO and developed with Gibson Park, bordering the Harbor waterfront. The transitional height requirement is as follows:

Distance from RW1 or more restrictive zone	**Height**
0 to 49 feet	25 feet
50 to 99 feet	33 feet
100 to 199 feet	61 feet

The applicant has instead requested the building height be allowed to be stepped back at a 45 degree angle from a horizontal plane originating 15 feet above grade at the property line of the adjacent lot in the Open Space zone, which is consistent with Transit Oriented Communities guidelines. The San Pedro CPIO allows a maximum building

height of 250 feet for the proposed project, with no transitional height restrictions. Based on the distance of the subject property from the OS zone, the maximum building height allowed by the transitional height regulations would be 61 feet for a significant portion of the building along the Harbor Boulevard frontage. The request to allow the building to be stepped back at a 45 degree angle from a horizontal plane originating 15 feet above grade at the property line of the adjacent lot in the Open Space zone would provide for a more consistent building façade, which would in turn allow for more residential units. Additionally, due to the requirement for a portion of the site to contain a publicly accessible open space plaza which is required to front Harbor Boulevard, the project is physically limited from further expanding the building's floor area. Therefore, the requested transitional height waiver will allow the developer to expand the building envelope so the additional units can be constructed and the overall space dedicated to residential uses is increased.

DENSITY BONUS LEGISLATION BACKGROUND

The California State Legislature has declared that "[t]he availability of housing is of vital statewide importance," and has determined that state and local governments have a responsibility to "make adequate provision for the housing needs of all economic segments of the community." Section §65580, subds. (a), (d). Section 65915 further provides that an applicant must agree to, and the municipality must ensure, the "continued affordability of all Low and Very Low Income units that qualified the applicant" for the density bonus.

With Senate Bill 1818 (2004), state law created a requirement that local jurisdictions approve a density bonus and up to three "concessions or incentives" for projects that include defined levels of affordable housing in their projects. In response to this requirement, the City created an ordinance that includes a menu of incentives (referred to as "on-menu" incentives) comprised of eight zoning adjustments that meet the definition of concessions or incentives in state law (California Government Code Section 65915). The eight on-menu incentives allow for: 1) reducing setbacks; 2) reducing lot coverage; 3) reducing lot width, 4) increasing floor area ratio (FAR); 5) increasing height; 6) reducing required open space; 7) allowing for an alternative density calculation that includes streets/alley dedications; and 8) allowing for "averaging" of FAR, density, parking or open space. In order to grant approval of an on-menu incentive, the City utilizes the same findings contained in state law for the approval of incentives or concessions.

California State Assembly Bill 2222 went into effect January 1, 2015, and with that Density Bonus projects filed as of that date must demonstrate compliance with the housing replacement provisions which require replacement of rental dwelling units that either exist at the time of application of a Density Bonus project, or have been vacated or demolished in the five-year period preceding the application of the project. This applies to all pre-existing units that have been subject to a recorded covenant, ordinance, or law that restricts rents to levels affordable to persons and families of lower or very low income; subject to any other form of rent or price control (including Rent Stabilization Ordinance); or is occupied by Low or Very Low Income Households (i.e., income levels less than 80 percent of the area median income [AMI]). The replacement units must be equivalent in size, type, or both and be made available at affordable rent/cost to, and occupied by, households of the same or lower income category as those meeting the occupancy criteria. Prior to the issuance of any Director's Determination for Density Bonus and Affordable Housing Incentives, the Housing and Community Investment Department (HCIDLA) is responsible for providing the Department of City Planning, along with the applicant, a determination letter addressing replacement unit requirements for individual projects. The City also requires a Land Use Covenant recognizing the conditions be filed with the County of Los Angeles prior to granting a building permit on the project.

Assembly Bill 2222 also increases covenant restrictions from 30 to 55 years for projects approved after January 1, 2015. This determination letter reflects these 55 year covenant restrictions.

Under Government Code Section § 65915(a), § 65915(d)(2)(C) and § 65915(d)(3) the City of Los Angeles complies with the State Density Bonus law by adopting density bonus regulations and procedures as codified in Section 12.22 A.25 of the Los Angeles Municipal Code. Section 12.22 A.25 creates a procedure to waive or modify Zoning Code standards which may prevent, preclude or interfere with the effect of the density bonus by which the incentive or concession is granted, including legislative body review. The Ordinance must apply equally to all new residential development.

In exchange for setting aside a defined number of affordable dwelling units within a development, applicants may request up to three incentives in addition to the density bonus and parking relief which are permitted by right. The incentives are deviations from the City's development standards, thus providing greater relief from regulatory constraints. Utilization of the Density Bonus/Affordable Housing Incentives Program supersedes requirements of the Los Angeles Municipal Code and underlying ordinances relative to density, number of units, parking, and other requirements relative to incentives, if requested.

For the purpose of clarifying the Covenant Subordination Agreement between the City of Los Angeles and the United States Department of Housing and Urban Development (HUD) note that the covenant required in the Conditions of Approval herein shall prevail unless pre-empted by State or Federal law.

SITE PLAN REVIEW FINDINGS

2. The project is in substantial conformance with the purposes, intent and provisions of the General Plan, applicable community plan, and any applicable specific plan.

The proposed project is in substantial conformance with the purposes, intent, and provisions of the General Plan and the San Pedro Community Plan.

The site is located within the adopted San Pedro Community Plan area, and is designated for Regional Commercial land uses corresponding to the C2, C4, R4, RAS4, and R5 Zones. The site is zoned C2-2D-CPIO. Height District No. 2 limits Floor Area Ratio (FAR) to 6:1 and no limit on maximum height or number of stories. However, the San Pedro CPIO places a D limitation on the property which imposes a maximum height of 250 feet, as well as other development regulations. On May 15, 2018, the City Council adopted the San Pedro Community Plan Update (CPU) (Council File No. 17-1044, Ordinance No. 185,541) for the preparation of the Community Plan Implementation Ordinance (CPIO). The CPIO (Ordinance No. 185,539) became effective on June 26, 2018. The CPU and CPIO include amending the policy document and land use map of the San Pedro Community Plan, adopting the zoning ordinance to implement the updates to the Community Plan, including changes for certain portions of the Community Plan Area to allow specific uses, development standards (including height, Floor Area Ratio, and massing) and design standards.

Framework Element

The General Plan designates the subject site with Regional Commercial land use designation. Regional Commercial areas are mixed-use centers that provide jobs, entertainment, culture, and serve the region. The Regional Commercial land use designation corresponds to the C2 zone, which also allows for R4 (High Medium Residential) land uses.

Per the Framework Element's Long Range Land Use Diagram for the West/Coastal Los Angeles area, the site is also within a Regional Center. A Regional Center is described as "a focal point of regional commerce, identity and activity and containing a diversity of uses such as corporate and professional offices, residential, retail commercial malls, government buildings, major health facilities, major entertainment and cultural facilities and supporting services. Generally, different types of Regional Centers will fall within the range of floor area ratios from 1.5:1 to 6.0:1. Some will only be commercially oriented; others will contain a mix of residential and commercial uses. Generally, Regional Centers are characterized by 6- to 20-stories (or higher). Regional Centers are usually major transportation hubs".

Therefore, as a 8-story mixed-use development with a maximum 4.06:1 FAR and containing a combination of residential and commercial uses as allowed by the Community Plan, the proposed project is consistent with the General Plan Framework.

Land Use Element – San Pedro Community Plan

The proposed project aligns with the intent of the 2018 San Pedro Community Plan including the following:

Policy LU3.2 – Incorporate multi-family housing in areas targeted for mixed use and in the Regional Center.

Policy LU3.3 – Provide an equitable distribution of housing types for all income groups throughout San Pedro's multi-family neighborhoods and promote mixed-income developments rather than creating concentrations of below-market-rate housing.

Policy LU3.6 – Include amenities for residents such as on site recreational facilities, community meeting spaces, and useable private and/or public open space in new multi-family development.

Policy LU5.5 – Complementary residential uses. Residential uses in commercial areas should complement and enhance commercial districts with compatible design, entrances, scale, massing and continuation of the streetwall.

Policy LU5.7 – Strategically locate new large projects. Allow large projects in appropriate locations, and provided that projects do not interrupt community fabric, the street grid, designated public views, or the viability of commercial areas, and that those facilities are designed to be compatible in scale and character with surrounding uses.

Policy LU5.8 – Spaces for people. Integrate pedestrian amenities, traffic-calming features, plazas and public areas, attractive streetscapes and signage, lighting, shade trees, outdoor dining and open spaces to create destinations for area residents to shop and gather.

Policy LU5.9 – Enhanced pedestrian street activity. Incorporate retail and service-oriented commercial uses on the first floor street frontage of structures, including mixed-use projects and parking structures.

Policy LU5.11 – Buildings that engage the street. Require buildings to be oriented to and actively engage the public realm through such features as building

orientation, build-to and setback lines, façade articulation, ground-floor transparency, and location of parking.

Policy LU5.17 – Public spaces. Develop connecting public plazas and paseos to encourage outdoor activity and public gathering places.

Goal LU11 – A distinct, mixed-use, transit and pedestrian-oriented Regional Center that serves as a civic, cultural and entertainment destination for the City, and provides a vibrant mix of retail, employment, entertainment, and residential uses that are a complement to, and extension of waterfront attractions.

Policy LU11.2 – Urban vitality. Promote housing and employment uses in San Pedro's existing Regional Center as a means of enhancing retail viability, establishing pedestrian-oriented shopping districts, creating more attractive buildings and public spaces, supporting transit viability, and reducing vehicle trips.

Policy LU11.5 – Regional Center emphasis. Generally direct higher-intensity land uses and taller buildings to major intersections along arterial roads to facilitate access, enhance transit service, and promote physical differentiation between the Downtown Regional Center and adjacent Community Commercial Center along Pacific Avenue and Gaffey Street.

Policy LU11.8 – Large-scale development. Major new developments should be designed to integrate pedestrian-oriented features and connections, abundant landscaping, paseos and alleys; and to retain public views to the waterfront per the San Pedro CPIO. "Superblocks" should be discouraged. Where development fronts on multiple streets, its design should include architectural features on all street frontages.

Policy M3.1 – Pedestrian access. Encourage walking by orienting building entrances to face the streets and sidewalks when designing access to new developments and buildings.

Policy M3.3 – Pedestrian amenities. Maintain sidewalks, streets and right-of-way in good condition, free of obstructions, and with adequate lighting, trees and parkways. Streets should accommodate pedestrians comfortably through adequate sidewalks and parkway landscaping that provides a buffer from moving vehicles, shade from the hot sun, and street lighting that provides for safety during the night.

Policy M12.1 – Reduced parking near transit centers. Consider reductions in parking requirements for projects located within the Downtown Regional Center.

The San Pedro CPIO District is the implementing ordinance of the San Pedro Community Plan. The intent of the San Pedro CPIO District is to preserve and strengthen the appearance, vitality, and compatibility of San Pedro's commercial, industrial, and multi-family residential areas. It provides use and design standards to shape new development and improvements to existing properties. The San Pedro CPIO District incorporates the Downtown San Pedro Community Design Overlay guidelines to further shape future development. The Regional Commercial Subarea of the CPIO seeks an airy aesthetic through well-designed, medium to high-rise buildings that preserve upland views, and maximize public spaces and connections to the waterfront. This Subarea creates an active, pedestrian-oriented district through building orientation, façade articulation, and ground floor transparency to commercial and community uses.

The proposed project is the construction of a mixed-use building containing 137 dwelling units (11% or 16 units restricted to Very Low Income households) and 2,478 square feet of commercial. The project will be 8 stories and 92 feet in height, and have an FAR of 4.06:1, with 135,310 square feet of floor area. The project will provide 118 total parking spaces in three above-grade parking levels. The project site is located at the southwest corner of Harbor Boulevard and 5th Street in the San Pedro Community Plan area. The San Pedro Community Plan Map designates the site for Regional Commercial use with corresponding zones of C2, C4, R4, RAS4, and R5. The property is zoned C2-2D-CPIO. The Regional Commercial land use and C2 zone allow mixed-use projects of the type proposed, and the subject site is located in an area where this density and project size are appropriate. Directly adjacent to the west of the subject property there is an under-construction project for a seven-story mixed-use development comprised of 404 multi-family dwelling units an approximately 5,200 square feet of ground floor commercial uses in an 83 foot tall building. Additionally, at the southwest corner of 5th Street and Palos Verdes Street, to the west of the project site is a 16-story 170-foot tall building containing 318 multi-family dwelling units and a 5-level 60-foot tall parking structure.

The project is oriented towards Harbor Boulevard with a 4,025 square foot publically accessible retail plaza, directly adjacent to the right-of-way. Section II-2.E.3 of the CPIO requires Projects with frontage on Harbor Boulevard to locate the required open space adjacent to Harbor Boulevard. Additionally, the open space shall be visible and accessible from the sidewalk and include Pedestrian Amenities and/or landscaped areas. The proposed covered retail plaza meets the intent of a number of the above stated Community Plan goals and policies.

Housing Element 2013-2021

The proposed project also conforms with the applicable policies of the Housing Element, including:

Goal 1: A City where housing production and preservation result in an adequate supply of ownership and rental housing that is safe, healthy and affordable to people of all income levels, races, ages, and suitable for their various needs.

Objective 1.1: Produce an adequate supply of rental and ownership housing in order to meet current and projected needs.

Policy 1.1.2: Expand affordable rental housing for all income groups that need assistance.

Policy 1.1.4: Expand opportunities for residential development, particularly in designated Centers, Transit Oriented Districts, and Mixed-Use Boulevards

Goal 2: A City in which housing helps to create safe, livable and sustainable neighborhoods.

Objective 2.2: Promote sustainable neighborhoods that have mixed-income housing, jobs, amenities, services and transit.

Policy 2.2.2: Provide incentives and flexibility to generate new multi-family housing near transit and centers, in accordance with the General Plan Framework element, as reflected in Map ES.1.

Policy 2.2.5: Provide sufficient services and amenities to support the planned population while preserving the neighborhood for those currently there.

Objective 2.4: Promote livable neighborhoods with a mix of housing types, quality design and a scale and character that respects unique residential neighborhoods in the City.

Objective 2.5: Promote a more equitable distribution of affordable housing opportunities throughout the City.

Policy 2.5.2: Foster the development of new affordable housing units citywide and within each Community Plan area.

Program 98: In accordance with State law, provide a density bonus up to 35% over the otherwise allowable density as well as reduced parking requirements for all residential developments that include units affordable to very low-, low- and/or moderate-income households. Provide additional incentives and concessions to required development standards in order to provide the buildable area needed for the affordable units and increased density.

The proposed project will result in a net increase of 137 new residential units to the City's housing stock and conforms with the applicable provisions of the Housing Element. The applicant has requested deviations from code requirements under the Density Bonus program for reduced parking, reduced setbacks, waiver of transitional height requirements, and waiver of a CPIO requirement for publically accessible open space, thereby allowing the creation of affordable units around transit stops. Pursuant to Density Bonus requirements, 11 percent (16 units) of the total units, will be set aside for Very Low Income units. Additionally, this mixed-use development in close proximity to transportation options including transit stops, and a variety of retail, commercial, entertainment, recreational, and employment opportunities. Locating new housing in this portion of San Pedro will allow residents to have better access to employment centers and places of interest in area.

In addition, the site has been identified in the 2013-2021 Housing Element's Inventory of Sites for Housing prepared by the Department of City Planning. The Inventory of Sites for Housing identifies parcels suitable for additional residential development without the need for any discretionary zoning action by the City. Therefore, the project is consistent with the Housing Element's vision of providing housing on these applicable sites.

Therefore, the proposed project is consistent with the purposes, intent and provisions of the General Plan, San Pedro Community Plan, Housing Element, and the Residential Citywide Design Guidelines by meeting several of its goals, objectives, and policies. Specifically, the project would accommodate necessary residential growth and provide a mix of apartment sizes and affordability levels, including restricted very low income units; and reinforce an existing mixed-use corridor by providing an array of retail choices, streetscape, and landscaping opportunities, and wide sidewalk that would be inviting to nearby residents and pedestrians along Harbor Boulevard, specifically through the addition of a 4,025 square foot publically accessible retail plaza adjacent to the public right-of-way.

3. The project consists of an arrangement of buildings and structures (including height, bulk and setbacks), off-street parking facilities, loading areas, lighting, landscaping, trash collection, and other such pertinent improvements that is or will

be compatible with existing and future development on adjacent properties and neighboring properties.

The project site is located at the southwest corner of Harbor Boulevard and 5th Street in the San Pedro Community Plan area. The project site consists of one (1) lot approximately 33,285 square feet, with approximately 205 feet of frontage along the south side of 5th Street and 155 feet of frontage along the west side of Harbor Boulevard. The site is currently improved with a one-story 4,169 square foot commercial building, which will be demolished.

The surrounding area is developed with a mix of multi-family residential, commercial, entertainment, cultural, and recreational uses. Property to the east of the site across Harbor Boulevard has a land use designation of Open Space and is zoned OS-1-CPIO and developed as Gibson Park. To the east of Gibson Park is the Port of Los Angeles waterfront. Northeast of the subject site is Los Angeles Fire Department Station 112, located at 444 South Harbor Boulevard, as well as the Battleship USS Iowa Museum. Properties across 5th Street to the north are designated as Public Facilities and Regional Commercial and are zoned PF-2D-CPIO and C2-2D-CPIO, respectively. The properties are developed with the Port of Los Angeles Liberty Hill Plaza, a California Registered Historical Landmark (No. 1021), as well as the Port of Los Angeles Boys and Girls Club and associated surface parking. Property to the west is designated Regional Commercial and zoned C2-2D-CPIO. The property is a 7-stoty, 83-foot tall mixed use building with 404 multi-family dwelling units and approximately 5,200 square feet of ground floor commercial space, currently under construction. The abutting property to the south is designated as Regional Commercial and is zoned C2-2D-CPIO and developed with the 3-story Sunrise Hotel San Pedro.

The proposed project is the construction of a mixed-use building containing 137 dwelling units (11% or 16 units restricted to Very Low Income households) and 2,478 square feet of commercial. The project will be 8 stories and 92 feet in height, and have a Floor Area Ratio (“FAR”) of 4.06:1, with 135,310 square feet of floor area. The project will provide 118 total parking spaces in three above-grade parking levels. The project is oriented towards Harbor Boulevard with a 4,025 square foot publically accessible retail plaza, directly adjacent to the right-of-way. Section II-2.E.3 of the CPIO requires Projects with frontage on Harbor Boulevard to locate the required open space adjacent to Harbor Boulevard. Additionally, the open space shall be visible and accessible from the sidewalk and include Pedestrian Amenities and/or landscaped areas. The main pedestrian entrance is provided on Harbor Boulevard, while the vehicular entrance is on 5th Street. The proposed project includes a restaurant located on the ground floor of the building at the corner of Harbor Boulevard and 5th Street, with additional ground floor retail space. The proposed project would include landscaping improvements, off-street parking facilities, lighting, publically accessible pedestrian amenities, and other design features to enhance the visual quality of the area, and to be compatible with existing and future development on neighboring properties.

Height

The proposed project consists of an 8 story building approximately 92 feet in height. The property is zoned C2-2D-CPIO. Height District No. 2 limits Floor Area Ratio (FAR) to 6:1 and no limit on maximum height or number of stories. However, the San Pedro CPIO places a D limitation on the property which imposes a maximum height of 250 feet. The abutting property to the west is a 7-stoty, 83-foot tall mixed use building with 404 multi-family dwelling units and approximately 5,200 square feet of ground floor commercial space, currently under construction. The abutting property to the south is developed with the 3-story Sunrise Hotel San Pedro. Additionally, at the southwest corner of 5th Street

and Palos Verdes Street, to the west of the project site, is a 16-story 170-foot tall building containing 318 multi-family dwelling units and a 5-level 60-foot tall parking structure. The proposed height is allowed by the San Pedro CPIO and Density Bonus Law, and is compatible with the existing and potential future build-out of similar sites along Harbor Boulevard and 5th Street.

Bulk/Massing

The proposed mixed-use development abuts two streets, with approximately 205 feet of frontage along the south side of 5th Street and 155 feet of frontage along the west side of Harbor Boulevard. The massing of the building is similar to the development on the abutting site to the west, which is a 7-stoty, 83-foot tall mixed use building with 404 multi-family dwelling units and approximately 5,200 square feet of ground floor commercial space, currently under construction. The project is oriented towards Harbor Boulevard with a 4,025 square foot publically accessible retail plaza, directly adjacent to the right-of-way, which is required by the San Pedro CPIO. The ground floor includes restaurant and retail space and a residential lobby, which are oriented to Harbor Boulevard, behind which is located automobile and bicycle parking. The building also includes three above-grade parking levels, on top of which the apartments are arranged in a u-shape around a 3,643 square-foot courtyard.

Additionally, the applicant has requested the building height be allowed to be stepped back at a 45 degree angle from a horizontal plane originating 15 feet above grade at the property line of the adjacent lot in the Open Space zone. The San Pedro CPIO allows a maximum building height of 250 feet for the proposed project, with no transitional height restrictions. Based on the distance of the subject property from the OS zone, the maximum building height allowed by the transitional height regulations would be 61 feet for a significant portion of the building along the Harbor Boulevard frontage. The request to allow the building to be stepped back at a 45 degree angle from a horizontal plane originating 15 feet above grade at the property line of the adjacent lot in the Open Space zone would provide for a more consistent building façade, which would in turn allow for more residential units. In accordance with the Citywide Design Guidelines, the project provides architectural detailing that enhances the building frontage through both recessed and protruding balconies, varying building materials and colors, and a publically accessible retail plaza along the ground floor.

Building Materials

The building design incorporates a variety of balconies, stepbacks, varied rooflines, and different materials to add architectural interest to the building and creates distinct breaks in the building plane. These breaks are further differentiated through the use of a variety of building materials that include cement plaster (3 different colors), vertical corrugated metal panels, formed metal panels, and perforated metal screen with custom pattern for the podium parking. Together, these elements are applied to create sufficient breaks in plane and articulation. In accordance with the Citywide Design Guidelines, changes in building materials are applied purposefully to modulate the building façade, with unique materials applied to differentiate the commercial base from upper residential levels.

Entrances

Main pedestrian entrances are located along Harbor Boulevard, including entrances for commercial retail and restaurant uses, and for the residential building lobby. In accordance with the Citywide Design Guidelines, the residential lobby is located and designed to create distinction from the commercial frontage, centrally located along the ground floor frontage with floor to ceiling glass. The location of the entrances along Harbor Boulevard is in conjunction with the 4,025 square foot publically accessible covered retail plaza,

which delineates the main building frontage, in addition to functioning as a ground floor amenity space.

Setbacks
The project creates a strong street wall along Harbor Boulevard with the 4,025 square foot publically accessible covered retail plaza. The ground floor façade is therefore setback approximately 24 feet from the property line, with the parking levels and residential floors above creating the covered walkway. The applicant is requesting a reduced side yard setback along the western property line to allow 5 feet in lieu of 11 feet, and a reduced rear yard setback along the southern property line to allow 5 feet in lieu of 20 feet through a Waiver of Development Standard. As proposed, the setback reductions will allow for the construction of the affordable residential units, as well as creating the necessary space for the publically accessible open space along Harbor Boulevard.

Parking/Loading
The project will provide 113 residential parking spaces via and off-menu density bonus incentive, and 5 commercial parking spaces, in the form of one at-grade level, and two above-grade levels. The at-grade parking level is wrapped with active uses and enclosed so that it is not visible from the street, as provided in Exhibit "A". The above grade levels are screened through the use of metal-mesh screens which allow for necessary ventilation. These parking levels are designed to match the façade articulation of the residential floors above, making them more integrated to the overall design of the project. Pursuant to the San Pedro CPIO, the project is prohibited from having curb cuts on Harbor Boulevard, and has further reduced the number of curb cuts along 5th Avenue to provide one main point of ingress and egress for automobiles. Therefore, the project will improve walkability of the site through ground level enhancements such as the publically accessible open space along Harbor Boulevard, and by providing one consolidated vehicular entry point along 5th Avenue. As conditioned, a minimum of twenty percent of spaces will be configured for electric vehicle chargers.

Lighting
The proposed project is conditioned so that all pedestrian walkways and vehicle access points will be well-lit with lighting fixtures that are harmonious with the building design. As conditioned, all outdoor lighting provided on-site will be shielded to prevent excessive illumination and spillage onto adjacent public rights-of-way, adjacent properties, and the night sky.

Landscaping
On-site landscaping and open space includes the 4,025 square foot publically accessible retail plaza on the ground floor, a 3,643 square-foot courtyard on the 4th level which opens to views of the harbor, and a 1,745 square foot rooftop deck which will include landscape planters. The common open space areas shall meet the minimum dimension, landscaping, and amenity requirements per LAMC Section 12.21 G.2(a). In addition, the project proposes landscaping in the form of screening vines along the exterior façade along the 5th Avenue facade and the transformer enclosure to comply with CPIO regulations. The project is conditioned to submit landscape plans prepared by a licensed landscape architect or licensed architect to show the size and location of all plants, and ensure sufficient depth and soil volume for trees and green roofs.

Trash Collection
Trash and recycling areas are contained within the ground floor of the parking garage to ensure that they are not visible from public view from the street. Service providers will access the trash area from the driveway along 5th Avenue and enter the parking garage

for trash collection. Therefore, trash collection will not affect circulation for surrounding properties.

4. **The residential project provides recreational and service amenities to improve habitability for its residents and minimize impacts on neighboring properties.**

   The proposed project provides recreational and service amenities that will improve habitability for the residents and minimize any impacts on neighboring properties. Common open space is provided in the form of a 4,025 square foot publically accessible retail plaza on the ground floor, a 3,643 square-foot courtyard on the 4th floor which opens to views of the harbor, and a 1,745 square foot rooftop deck which will include landscape planters. Additionally, the project also includes an 833 square foot gym on the ground floor, and a 339 square foot community room on the 4th floor. The project also provides private balconies for use as private open space for individual units. Therefore, the proposed project provides sufficient recreational and service amenities for its residents, minimizing any impacts on neighboring properties.

CEQA Findings

The Department of City Planning determined based on the whole of the administrative record, that the Project is exempt from the California Environmental Quality Act ("CEQA") pursuant to State CEQA Guidelines, Article 19, Section 15332 (Class 32), and there is no substantial evidence demonstrating that an exception to a categorical exemption pursuant to CEQA Guidelines, Section 15300.2 applies. The Notice of Exemption and Justification for Project Exemption for Environmental Case No. ENV-2019-2927-CE is provided in the case file and attached as Exhibit E.

The proposed project is the construction of a mixed-use building containing 137 dwelling units (11% or 16 units restricted to Very Low Income households) and 2,478 square feet of commercial. The project will be 8 stories and 92 feet in height, and have a Floor Area Ratio ("FAR") of 4.06:1, with 135,310 square feet of floor area. The project will provide 118 total parking spaces in three above-grade parking levels. The project will involve the demolition of the existing restaurant building, removal of 3 non-protected on-site and 2 non-protected street trees, and export of approximately 919 cubic yards of soil.

As a mixed-use multi-family residential building, and a project which is characterized as in-fill development, the project qualifies for the Class 32 Categorical Exemption.

CEQA Determination – Class 32 Categorical Exemption Applies

A project qualifies for a Class 32 Categorical Exemption if it is developed on an infill site and meets the following criteria:

(a) **The project is consistent with the applicable general plan designation and all applicable general plan policies as well as with the applicable zoning designation and regulations.**

   The subject site is located within the San Pedro Community Plan and is designated for Regional Commercial Land Uses. The site is zoned C2-2D-CPIO and is consistent with the land use designation. As shown in the case file and under Finding No. 2 above, the project is consistent with the General Plan, the applicable San Pedro Community Plan designation and policies, and all applicable zoning designations and regulations as permitted by Density Bonus law.

(b) **The proposed development occurs within city limits on a project site of no more than five acres substantially surrounded by urban uses.**

The subject site is wholly within the City of Los Angeles, on a site that is approximately 0.76 acres. Lots adjacent to the subject site are developed with the following urban uses: multi-family dwellings, commercial structures, and a public park.

(c) **The project site has no value as habitat for endangered, rare or threatened species.**

The site is previously disturbed and surrounded by development and therefore is not, and has no value as, a habitat for endangered, rare or threatened species. There are no protected trees on the site, and 3 non-protected on-site and 2 non-protected street trees will be removed and replaced.

(d) **Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality.**

Regulatory Compliance Measures – The project will be subject to Regulatory Compliance Measures (RCMs), which require compliance with the City of Los Angeles Noise Ordinance, pollutant discharge, dewatering, stormwater mitigations; and Best Management Practices for stormwater runoff. More specifically, RCMs include but are not limited to the following, to ensure the project will not have significant impacts:

- **Regulatory Compliance Measure RC-AQ-1 (Demolition, Grading and Construction Activities): Compliance with provisions of the SCAQMD District Rule 403.** The project shall comply with all applicable standards of the Southern California Air Quality Management District, including the following provisions of District Rule 403:
    - All unpaved demolition and construction areas shall be wetted at least twice daily during excavation and construction, and temporary dust covers shall be used to reduce dust emissions and meet SCAQMD District Rule 403. Wetting could reduce fugitive dust by as much as 50 percent.
    - The construction area shall be kept sufficiently dampened to control dust caused by grading and hauling, and at all times provide reasonable control of dust caused by wind.
    - All clearing, earth moving, or excavation activities shall be discontinued during periods of high winds (i.e., greater than 15 mph), so as to prevent excessive amounts of dust.
    - All dirt/soil loads shall be secured by trimming, watering or other appropriate means to prevent spillage and dust.
    - All dirt/soil materials transported off-site shall be either sufficiently watered or securely covered to prevent excessive amount of dust.
    - General contractors shall maintain and operate construction equipment so as to minimize exhaust emissions.
    - Trucks having no current hauling activity shall not idle but be turned off.
- **Regulatory Compliance Measure RC-AQ-2:** In accordance with Sections 2485 in Title 13 of the California Code of Regulations, the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds) during construction shall be limited to five minutes at any location.
- **Regulatory Compliance Measure RC-AQ-3:** In accordance with Section 93115 in Title 17 of the California Code of Regulations, operation of any stationary, diesel-fueled, compression-ignition engines shall meet specified fuel and fuel additive requirements and emission standards.

- **Regulatory Compliance Measure RC-AQ-4:** The Project shall comply with South Coast Air Quality Management District Rule 1113 limiting the volatile organic compound content of architectural coatings.
- **Regulatory Compliance Measure RC-AQ-5:** The Project shall install odor-reducing equipment in accordance with South Coast Air Quality Management District Rule 1138.
- **Regulatory Compliance Measure RC-GEO-1 (Seismic):** The design and construction of the project shall conform to the California Building Code seismic standards as approved by the Department of Building and Safety.
- **Regulatory Compliance Measure RC-NO-1 (Demolition, Grading, and Construction Activities):** The project shall comply with the City of Los Angeles Noise Ordinance and any subsequent ordinances, which prohibit the emission or creation of noise beyond certain levels at adjacent uses unless technically infeasible.

Traffic - A traffic study was prepared by KOA, dated September 2019 which concluded that the project would generate 529 daily trips, 29 a.m. peak hour trips, and 41 p.m. peak hour trips. The Department of Transportation (LADOT) reviewed the 2019 traffic study and confirmed its findings in a memo dated October 24, 2019, confirming that none of the study intersections would be significantly impacted by project-related traffic, and that the project would not result in traffic impacts on any of the studied intersections. Therefore, the project will not have any significant impacts relating to traffic.

Noise – The Project must comply with the adopted City of Los Angeles Noise Ordinances No. 144,331 and 161,574 and LAMC Section 41.40 as indicated above in RC-NO-1, LAMC Section 112.05, as well as any subsequent Ordinances, which prohibit the emission or creation of noise beyond certain levels. These Ordinances cover both operational noise levels (i.e., post-construction), and any construction noise impacts. As a result of this mandatory compliance, the proposed Project will not result in any significant noise impacts. Furthermore, the Noise Impact Analysis prepared by Urban Crossroads dated November 25, 2019 confirmed that the Project would not result in construction-related or operational noise impacts on the environment. The analysis took into account noise from construction activities, operational noise sources, and off-site noise sources. The analysis concluded that the project would not result in any significant effects relating to noise.

Air Quality – An Air Quality and Greenhouse Gas Emissions (GHG) study was prepared by Urban Crossroads, date November 26, 2019 which determined that the construction and operations of the project would result in less than significant impacts associated with air quality and GHG emissions. The Project's potential air quality effects were evaluated by estimating the potential construction and operations emissions of criteria pollutants, and comparing those levels to significance thresholds provided by the Southern California Air Quality Management District (SCAQMD). The Project's emissions were estimated using the CalEEMod 2016.3.2 model for the purposes of evaluating air quality impacts of proposed projects. The analysis took into account construction activity emissions during demolition, site preparation, grading and soil export, building construction, paving, and architectural coating, as well as effects to sensitive receptors. The analysis confirms that the Project would not exceed SCAQMD significance thresholds for air quality impacts. In addition, there are several Regulatory Compliance Measures which regulate air quality-related impacts for projects citywide as noted above.

(e) **The site can be adequately served by all required utilities and public services.**

The project site will be adequately served by all public utilities and services given that the construction of a multi-family residential building will be on a site that has been previously

developed and is consistent with the General Plan. Therefore, the project meets all of the Criteria for the Class 32 Categorical Exemption.

CEQA Section 15300.2: Exceptions to the Use of Categorical Exemptions

There are five (5) Exceptions which must be considered in order to find a project exempt under Class 32:

(a) **Cumulative Impacts.** *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.*

There is a 7-story, 83-foot tall mixed use building with 404 multi-family dwelling units and approximately 5,200 square feet of ground floor commercial space, under construction abutting the subject property to the west at 550 S. Palos Verdes Street. (Case No. DIR-2016-624-CDO-SPR-DD)

While there could potentially be two projects of a similar type in the same place, all projects would be subject to the citywide Regulatory Compliance Measures as noted above. Furthermore, the project will result in less than significant impacts related to traffic, noise, and air quality, as shown above. The traffic study, by KOA, dated September 2019, accounts for ambient growth factors based on a 1.0 percent annual growth rate of existing traffic volumes in addition to trips resulting from 13 other development projects that are located within the study area, and concluded these had no traffic impacts. Therefore, the cumulative impact of successive projects of the same type in the same place, over time is less than significant, and this exception does not apply.

(b) **Significant Effect Due to Unusual Circumstances.** *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.*

The project proposes a mixed-use multi-family building in an area zoned and designated for such development. All adjacent lots are developed with multi-family dwellings, commercial structures, and public amenities including a park, and the subject site is of a similar size and slope to nearby properties. The project proposes a Floor Area Ratio (FAR) of 4.06:1 on a site that is permitted to have an FAR of 6:1 by the site's zoning. The project size and height is not unusual for the vicinity of the subject site, and is similar in scope to other existing multi-family dwellings, including the abutting property to the west which contains a 7-story, 83-foot tall mixed use building with 404 multi-family dwelling units and approximately 5,200 square feet of ground floor commercial space, currently under construction. Thus, there are no unusual circumstances which may lead to a significant effect on the environment.

(c) **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.*

The only State Scenic Highway within the City of Los Angeles is the Topanga Canyon State Scenic Highway, State Route 27, which travels through a portion of Topanga State Park. The State Route 27 is approximately 27 miles northwest of the subject site. Therefore the subject site will not create any impacts within a designated as a state scenic highway.

(d) **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*

According to Envirostor, the State of California's database of Hazardous Waste Sites, neither the subject site, nor any site in the vicinity, is identified as a hazardous waste site.

(e) **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.*

The project site is not listed in the National Register of Historic Places, California Register of Historical Resources, the Los Angeles Historic-Cultural Monuments Register, and/or any local register, and was not found to be a potential historic resource based on the City's HistoricPlacesLA website or SurveyLA, the citywide survey of Los Angeles. Based on this, the project will not result in a substantial adverse change to the significance of a historic resource and this exception does not apply.

PUBLIC HEARING AND COMMUNICATIONS

PUBLIC HEARING

The public hearing was held on January 23, 2019 at approximately 10:00 a.m. at the San Pedro Municipal Building. The hearing was conducted by the Hearing Officer, Alan Como, on behalf of the City Planning Commission in taking testimony for Case No. CPC-2019-2926-DB-SPR and ENV-2019-2927-CE. All interested parties were invited to attend the public hearing at which they could listen, ask questions, or present testimony regarding the project. The purpose of the hearing was to obtain testimony from affected and/or interested parties regarding this application. Interested parties are also invited to submit written comments regarding the request prior to the hearing. The environmental impact was among the matters to be considered at the hearing.

The public hearing was attended by the applicant's representative (Dana Sayles & Jason Friedman, Three6ixty) and 18 members from the community. Twelve speaker cards were submitted for the hearing, but only ten people spoke.

Applicant Presentation. The applicant's representative described the site location, project description, requested entitlements, and community outreach.

- The site was previously a Transit Oriented Communities (TOC) site, however due to the downgrading of a transit line, was determined no longer eligible for TOC.
- The project will help with the ongoing revitalization of Downtown San Pedro.
- There is one existing building on-site and associated parking, which will be demolished.
- The applicant has agreed to implement a parking demand management plan, in conjunction with discussions with the San Pedro Chamber of Commerce and the Central San Pedro Neighborhood Council
- The applicant has agreed to unbundle the residential parking, offering residents the choice to pay for a parking space rather than have one assigned to them automatically.
- Commercial and residential parking would be managed by a parking attendant.
- The applicant has done outreach with the Council Office, Central San Pedro Neighborhood Council, and the San Pedro Chamber of Commerce.

Allen Franz (community member)

- Appreciates the hearing being held in San Pedro and the work the applicant has done to work with Chamber and Neighborhood Council
- There are already 3,000 units in development in San Pedro, more units are not needed
- Project ignores CEQA and the San Pedro Community Plan
- Doesn't see how the project would accommodate children
- Need a more appropriate balance between those outside the community and the Community Plan the residents of San Pedro worked on

Charuni Patibanda (San Pedro Chamber of Commerce)

- Chair of the San Pedro Chamber Parking Subcommittee
- Asked for unbundled parking, glad to see it
- Asked the hearing officer to support the project

Elise Swanson (San Pedro Chamber of Commerce)

- President & CEO of the San Pedro Chamber of Commerce
- Strong support of the project from the Chamber
- There is a demand for housing in the area, speaks regularly with employers who request more/better housing for their employees

- Project is in an appropriate location, and the design reflects recent revitalization in Downtown San Pedro

Javier Gonzalez-Camarillo (Central San Pedro Neighborhood Council)
- Chair of Central San Pedro Neighborhood Council Planning and Land Use Committee
- Supports the project, is the right density and type of project for this area
- Has concerns related to the parking reduction
- Insufficient parking, asks for visitor parking to be added
- If residents pay separately for parking concerned with overflow to street parking
- Project should include a mix of transportation alternatives and incentives for residents
- Encouraged larger sized units
- Encouraged a mix of low/moderate income units in project in addition to the very low income units

Diana Nave (Northwest San Pedro Neighborhood Council)
- Chair of the Northwest San Pedro Neighborhood Council (NWSPNC)
- Corrected applicant's presentation that this Neighborhood Council did delay the meeting with the applicant by one month, however the applicant was still unable to attend the meeting
- Oppose the reduction in parking
- 6 other projects in Downtown Sand Pedro received parking reductions
- Losing nearby private and public parking lots to development
- Concerns with how unbundled parking will work
- Will submit additional requests for the project (read aloud during hearing) via email; requests elaborate on the NWSPNC letter previously submitted to case file

Pat Nave (community member)
- Read excerpts from an article in City Watch (submitted as written statement at hearing)
- Density increases near transit does not reduce automobile use

Lee Williams (San Pedro Chamber of Commerce)
- Chair of the San Pedro Chamber of Commerce
- Looked at measures that would benefit Downtown San Pedro the most
- Strong support for the project
- Recent housing study asked for 5,000 units in San Pedro
- There isn't a viable density right now that would create a vibrant downtown
- Applauds affordable housing
- Native plants should be a strong component of the project
- Cautions against comments/suggestions that the project should be a one-size fits all project
- Comments related to increasing bedroom count and unit size are contrary to parking reduction comments

Steve Brosnan (community member)
- Regular patron of the existing Grinder restaurant, would like it to remain
- Parking problems
- Against the project

Michael Lawler (attorney)
- Attorney for Burt Blender who owns the Grinder restaurant
- Full support, available for questions

Aksel Palacios (Planning Deputy, Council District 15)
- Fully supports project
- This project benefits the community
- This project will be a catalyst for the revitalization of Downtown San Pedro

Dana Sayles (Applicant's representative, Three6ixty)
- Clarified that the project is able to accommodate 118 parking spaces without having to construct underground parking or build a taller building, both of which would add significant construction costs
- The site's grade change makes parking design a challenge
- San Pedro CPIO does not allow driveways on Harbor Boulevard
- CPIO requires at-grade public plaza on Harbor
- Both of these requirements add to parking design difficulties
- Parking attendants could accommodate 20% more capacity than without an attendant
- Unbundling parking would be managed by an attendant with no assigned residential spaces; the project would therefore have "no unused spaces"
- Will examine and discuss viability of parking demand management requests made at hearing
- Aware that the San Pedro Chamber of Commerce is working on a public valet program and this project would be a participant in that program
- Stated that there are approximately 8,000 parking spaces available in the area
- In response to concerns about street parking: proactive parking management, information will be given to tenants regarding parking
- Clarified that the project is well below allowable density and FAR
- Clarified that there is nothing in the project that would preclude families with children

WRITTEN CORRESPONDENCE

Planning Staff received two (2) letters regarding the project, as follows:
- The San Pedro Chamber of Commerce submitted a letter date October 22, 2019 in strong support of the project. The letter included numerous supportive comments for the project and the applicant team working with the Chamber/community.
- The Northwest San Pedro Neighborhood Council (adjacent Neighborhood Council to subject property) submitted a letter date January 15, 2020. The letter had various comments and recommendations, but noted their strong opposition to the requested parking reduction.

On January 29, 2020, Staff received an email from Diana Nave which consisted of the statement she made at the public hearing.

Pat Nave submitted a written statement at the public hearing on January 23, 2020.

These items have been included as Exhibit C.

EXHIBIT A

PROJECT PLANS



1625 OLYMPIC BOULEVARD
SANTA MONICA, CA 90404
310.399.7975
KFALOSANGELES.COM

511 HARBOR

511 S HARBOR BOULEVARD
SAN PEDRO, CA 90731

LAMF 511 HARBOR LLC
8906 W. OLYMPIC BLVD. SUITE 200
BEVERLY HILLS, CA 90211

SUBMITTAL:
ENTITLEMENT SUBMITTAL

SHEET TITLE:
COVER SHEET

SCALE:

DATE:
01.30.20

SHEET NUMBER:
G.000

4/17/2019 3:25:13 PM

FAR AREA

SEE DIAGRAMS ON G.020

LEVEL	AREA (SF)
COMMERCIAL FAR	
1ST FLOOR	2478
	2478
RESIDENTIAL FAR	
1ST FLOOR	8475
2ND FLOOR	3053
3RD FLOOR	2440
4TH FLOOR	23773
5TH FLOOR	23802
6TH FLOOR	23802
7TH FLOOR	23802
8TH FLOOR	23685
	132832
GRAND TOTAL	135310

PARKING

RESIDENTIAL STADARD PARKING 18' - 0" X 8' - 6" MIN.
RESIDENTIAL COMPACT PARKING 15' - 0" X 7' - 6" MIN.

COMMERIAL STANDARD PARKING 18' - 0" X 8' - 4" MIN.
UP TO 40% COMPACT 15' - 0" X 7' - 6" AS ALLOWED PER CODE.

RESIDENTIAL PROPOSED WITH DENSITY BONUS INCENTIVE
0.68 SPACES PER BEDROOM
(25) STUDIO X 0.68 = 17
(85) 1 BEDROOM X 0.68 = 58
(27) 2 BEDROOM X 1.36 = 38
TOTAL RESIDENTIAL = 113

COMMERCIAL REQUIRED
ENTERPRISE ZONE 1 SPACE PER 500 SF
RESTAURANT
2478 SF/500 = 5 SPACE

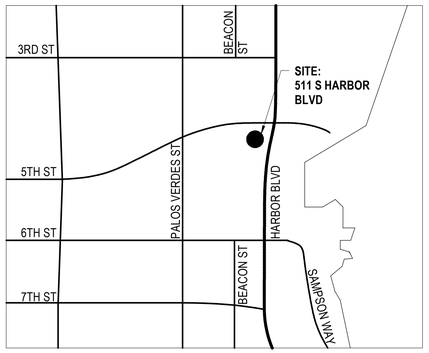
PROVIDED PARKING
113 RESIDENTIAL
5 COMMERCIAL
118 TOTAL

TOTAL PARKING **118 STALLS**

EVCS PARKING PROPOSED / PROVIDED
5% OF 118 RES = 6 STALLS (4.106.4.2 LAMC AMMEND.)
NON-RESIDENTIAL EVCS NOT REQUIRED PER TABLE 5.106.5.3.3 LAMC AMMEND.

TOTAL EVCS PROVIDED **6 STALLS**

VICINITY MAP



UNIT MIX

NUMBER OF BEROOMS	NUMBER
0.5	25
1	85
2	27
GRAND TOTAL	137

OPEN SPACE REQUIRED

PER SAN PEDRO CPIO REGIONAL COMMERCIAL SUBAREA PROJECTS ON PROPERTIES THAT FRONT 200 FEET OR MORE OF A SINGLE STREET SHALL INCLUDE OPEN SPACE THAT IS ALL OF THE FOLLOWING:

A. A MINIMUM OF 5,000 SF

B. LOCATED ON THE GROUND FLOOR WITH DIRECT PEDESTRIAN CONNECTION TO THE ADJACENT STREET.

C. UNENCLOSED BY ANY WALL, FENCE, GATE, OR OTHER OBSTRUCTION.

D. LINED WITH GROUND FLOOR TENANT SPACES, INCLUDING ONE OR MORE RESTAURANTS, ALONG AT LEAST 20% OF THE BUILDING FRONTAGE THAT ABUTS THE OPEN SPACE.

E. AT LEAST 40% LANDSCAPED WITH USEABLE LAWN OR SIMILAR USEABLE GROUND COVER OR ARTIFICIAL GRASS, OR WITH PLANT MATERIALS THAT ARE LOW MAINTENANCE, AND NATIVE OR DROUGHT TOLERANT; AND

F. IMPROVED WITH PEDESTRIAN AMENITIES

*PROJECTS THAT PROVIDE OPEN SPACE UNDER 12.21 G MAY REDUCE REQUIREMENT BY UP TO 50% IF PUBLIC OPEN SPACE MEETS AT LEAST 5 OF THE REQUIREMENTS LISTED ABOVE.

PER LAMC 12.21 G
100SF / UNIT > 3 HABITABLE ROOMS (STUDIO / 1 BR)
125SF / UNIT = 3 HABITABLE ROOMS (2 BR)

UNIT TYPE	# OF UNITS	REQ'D OPEN SPACE
STUDIO	25	2500 SF
1 BR	85	8500 SF
2 BR	27	3375 SF
GRAND TOTAL		14375 SF

PUBLIC OPEN SPACE = 5,000 SF
5,000SF - 20% WAIVER = 4,000SF

OPEN SPACE = 14,375 SF
14,375 - 50% CPIO REDUCTION* = 7,187.5SF

OPEN SPACE PROVIDED

SEE OPEN SPACE DIAGRAMS ON G.021

NAME	LEVEL	AREA (SF)
COMMON OPEN SPACE: GYM	1ST FLOOR	833
COMMON OPEN SPACE: COMMUNITY ROOM	4TH FLOOR	339
COMMON OPEN SPACE: COURTYARD	4TH FLOOR	3643
COMMON OPEN SPACE: ROOF DECK	8TH FLOOR	1745
		6560
PRIVATE OPEN SPACE	4TH FLOOR	700
		700
GRAND TOTAL		7260

LEGAL DESCRIPTION

THE LAND REFEREED TO HEREIN BELOW IS SITUATED IN THE CITY OF LOS ANGELES, IN THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AND DESCRIBED AS FOLLOWS:

PARCEL "D" IN THE CITY OF LOS ANGELES, IN THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP 4479, FILED IN BOOK 112, PAGES 58 AND 59 OF PARCEL MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.

EXCEPT FOR SAID LAND ALL OLD, GAS, HYDROCARBON SUBSTANCES AND MINERALS OF EVERY KIND AND CHARACTER LYING MORE THAN 500 FEET BELOW THE SURFACE OF SAID PROPERTY, TOGETHER WITH THE RIGHT TO DRILL INTO, THOUGH AND TO USE AND OCCUPY ALL PARTS OF SAID PROPERTY LYING FOR THAN 500 FEET BELOW THE SURFACE THEREOF FOR ANY AND ALL PURPOSES INCIDENTAL TO THE EXPLORATION FOR AND PRODUCTION OF OIL, GAS, HYDROCARBON SUBSTANCES, OR MINERALS FROM SAID PROPERTY OF OTHER LANDS, BUT WITHOUT, HOWEVER, ANY RIGHTS TO USE EITHER THE SURFACE OF SAID PROPERTY OR ANY PORTION OF SAID PROPERTY WITHIN 500 FEET OF THE SURFACE FOR ANY PURPOSE OR PURPOSES WHATSOEVER, AS RESERVED BY THE PARTIES NAMES IN DEEDS, LEASES AND OTHER DOCUMENTS OF RECORD, AS RESERVED IN THE DEED EXECUTED BY THE COMMUNITY REDEVELOPMENT AGENCY OF THE CITY OF LOS ANGELES, CALIFORNIA, A PUBLIC BODY, RECORDED JULY 12, 1979 AS INSTRUMENT NO. 79-760500, OFFICIAL RECORDS.

ASSESSOR'S PARCEL NUMBER: 7455-026-051

"D" LIMITATIONS

GROUND FLOOR MINIMUM HEIGHT OF 14' - 0"

5' - 0" STEP BACK OVER 35' - 0"

ALLOWABLE HEIGHT 250'

DENSITY BONUS INCENTIVE REQUESTS

OFF MENU INCENTIVES

PARKING - 0.68 SPACES PER BEDROOM

PARKING - TO ALLOW 37 COMPACT IN LEIU OF STANDARD

WAIVER OF DEVELOPMENT STANDARDS

RAS3 YARDS - 5'-0" AT SIDE YARD (SOUTH)

RAS3 YARDS - 5'-0" AT REAR YARD (WEST)

TRANSITIONAL HEIGHT - BUILDING HEIGHT TO BE STEPPED BACK AT A 45 DEGREE ANGLE FROM A HORIZONTAL PLANE ORIGINATING 15 FEET ABOVE GRADE AT PROPERTY LINE OF ADJACENT LOT IN OS ZONE

PERMIT A 4,000SF OPEN SPACE PLAZA ALONG HARBOR BLVD IN LIEU OF 5,000SF

PROJECT TEAM

OWNER
LAMF 511 HARBOR LLC
8906 W. OLYMPIC BLVD, SUITE 200
BEVERLY HILLS, CA 90211
CONTACT: RAFFI COHEN

ARCHITECT
KFA LLP
1625 OLYMPIC BOULEVARD
SANTA MONICA, CA 90404
310-399-7975
CONTACT: JOHN ARNOLD

LAND USE CONSULTANT
THREE 6IXTY
11287 W. WASHINGTON BLVD
CULVER CITY, CA 90230
(310)204.3500
CONTACT: DANA SAYLES

SHEET INDEX

G.000	COVER SHEET
G.001	PROJECT INFO
G.019	SIGHTLINE DIAGRAMS
G.020	FAR CALCULATIONS
G.021	OPEN SPACE CALCULATIONS
G.022	TOPOGRAPHIC SURVEY
A.000	SITE PLAN
A.110	FIRST FLOOR PLAN
A.120	SECOND FLOOR PLAN
A.130	THIRD FLOOR PLAN
A.140	FOURTH FLOOR PLAN
A.150	FIFTH FLOOR PLAN (6TH, 7TH TYP)
A.180	EIGHTH FLOOR PLAN
A.190	ROOF PLAN
A.200	ELEVATIONS
A.201	ELEVATIONS
A.300	SECTIONS
A.301	SECTIONS
L-1.00	COMPOSITE LANDSCAPE PLAN
L-1.01	GROUND LEVEL LANDSCAPE PLAN
L-1.10	PODIUM LEVEL LANDSCAPE PLAN
L-1.20	ROOF LEVEL LANDSCAPE PLAN
L-2.00	MATERIALS PALETTE

SUMMARY PROJECT INFORMATION

PROJECT NAME	511 HARBOR
ADDRESS	511 SOUTH HARBOR BOULEVARD SAN PEDRO, CA 90731
OWNER	LAMF 511 HARBOR LLC 8906 W. OLYMPIC BLVD. SUITE 200 BEVERLY HILLS, CA 90211
PROJECT DESCRIPTION	5 STORIES OF RESIDENTIAL WITH 3 STORIES ABOVE GRADE PARKING AND PARTIAL GROUND FLOOR COMMERCIAL
CONSTRUCTION TYPE	TYPE I - GROUND THROUGH 3RD FLOOR - PARKING AND COMMERCIALTYPE III - 4TH THROUGH 8TH - RESIDENTIAL
LEGAL DESCRIPTION	PARCEL "D" IN THE CITY OF LOS ANGELES, IN THE COUNTY OF LOS ANGELES, STATE OF CALIFORNIA, AS PER MAP 4479, FILED IN BOOK 112, PAGES 58 AND 59 OF PARCEL MAPS, IN THE OFFICE OF THE COUNTY RECORDER OF SAID COUNTY.
ZONING	C2-2D-CPIO; HARBOR GATEWAY ENTERPRISE ZONE
AFFORDABILITY	11% VLI(16 UNITS)
LAND USE	REGIONAL COMMERCIAL
OVERLAYS	SAN PEDRO CPIO DISTRICT, REGIONAL COMMERCIAL SUBAREA, 2018
LOT AREA GROSS **LOT AREA NET**	33,322 SF (0.765 ACRES) 33,322 SF (0.765 ACRES)
SET BACKS REQUIRED	FRONT (HARBOR) NONE SIDE (5TH STREET) NONE SIDE (SOUTH) 11' - 0" REAR (WEST) 20' - 0"
SET BACKS PROVIDED (WAIVER OF DEVELOPMENT STANDARDS - RAS3 YARDS)	FRONT (HARBOR) NONE SIDE (5TH STREET) NONE SIDE (SOUTH) 5' - 0" REAR (WEST) 5' - 0"
TRANSITIONAL HEIGHT	DENSITY BONUS INCENTIVE - SEE G.021 - SIGHTLINE DIAGRAMS
OCCUPANCY TYPE	R-2 ABOVE S-2 AND M
TOTAL UNITS	137
UNIT MIX	25 - STUDIO; 85 - 1 BR; 27 - 2 BR
HIGHWAY DEDICATIONS	CORNER CUT REQUIRED; OTHERWISE NONE
LOT COVERAGE	NO RESTRICTIONS
ALLOWABLE DENSITY	R5 - 200 SF/DU = 166 DU
PROPOSED DENSITY	137 DU - 1 UNIT / 243 SF OF LOT AREA
ALLOWABLE BLDG HEIGHT	250' PER "D" LIMITATION
PROPOSED BUILDING HEIGHT	92' - 0" (PER LAMC) - 8 STORY
PERMITTED FAR	6 : 1
PERMITTED BUILDING FAR AREA	199,932 SF
COMMERCIAL FAR AREA	2,478 SF
RESIDENTIAL FAR AREA	132,832 SF
TOTAL FAR AREA PROPOSED	135,310 SF
PROPOSED FAR	4.06 : 1
OPEN SPACE REQUIRED 12.21 G	7,187.5SF
OPEN SPACE PROVIDED 12.21 G	7,260SF
PUBLIC OPEN SPACE REQUIRED	4,000SF
PUBLIC OPEN SPACE PROVIDED	4,025SF
RESIDENTIAL PARKING REQUIRED	113 SPACES @ 0.68 PER BEDROOM
COMMERCIAL PARKING REQUIRED	5 SPACES; 2478 SF @ 1 PER 500 SF
TOTAL PARKING REQUIRED	118
TOTAL PARKING PROVIDED	118
RESIDENTIAL BICYCLE REQ'D	93 LT; 7 ST
RESIDENTIAL BICYCLE PARKING	93 LT; 7 ST
COMMERCIAL BICYCLE REQ'D	2 LT; 2 ST
COMMERCIAL BICYCLE PROVIDED	16 LT; 16 ST

KFA

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SANTA MONICA, CA 90404
310.399.7975
KFALOSANGELES.COM

511 HARBOR

511 S HARBOR BOULEVARD
SAN PEDRO, CA 90731

8906 W. OLYMPIC BLVD. SUITE 200
BEVERLY HILLS, CA 90211

SUBMITTAL:
ENTITLEMENT SUBMITTAL

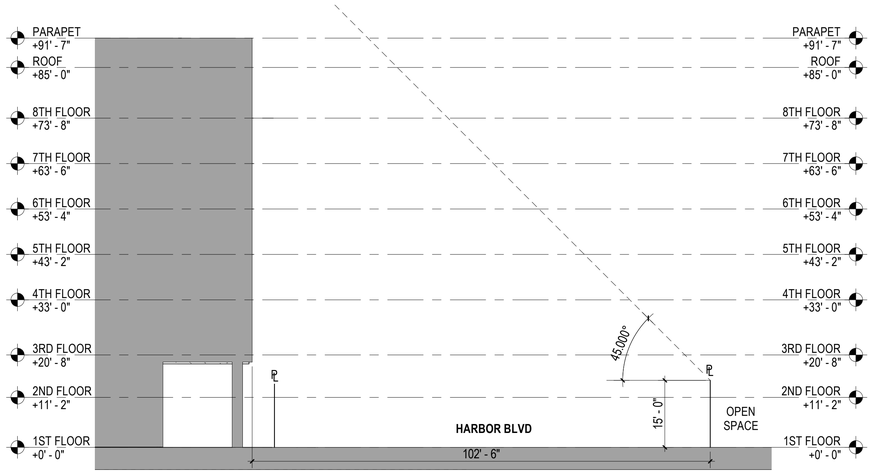
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SCALE:
As indicated

DATE:
01.30.20

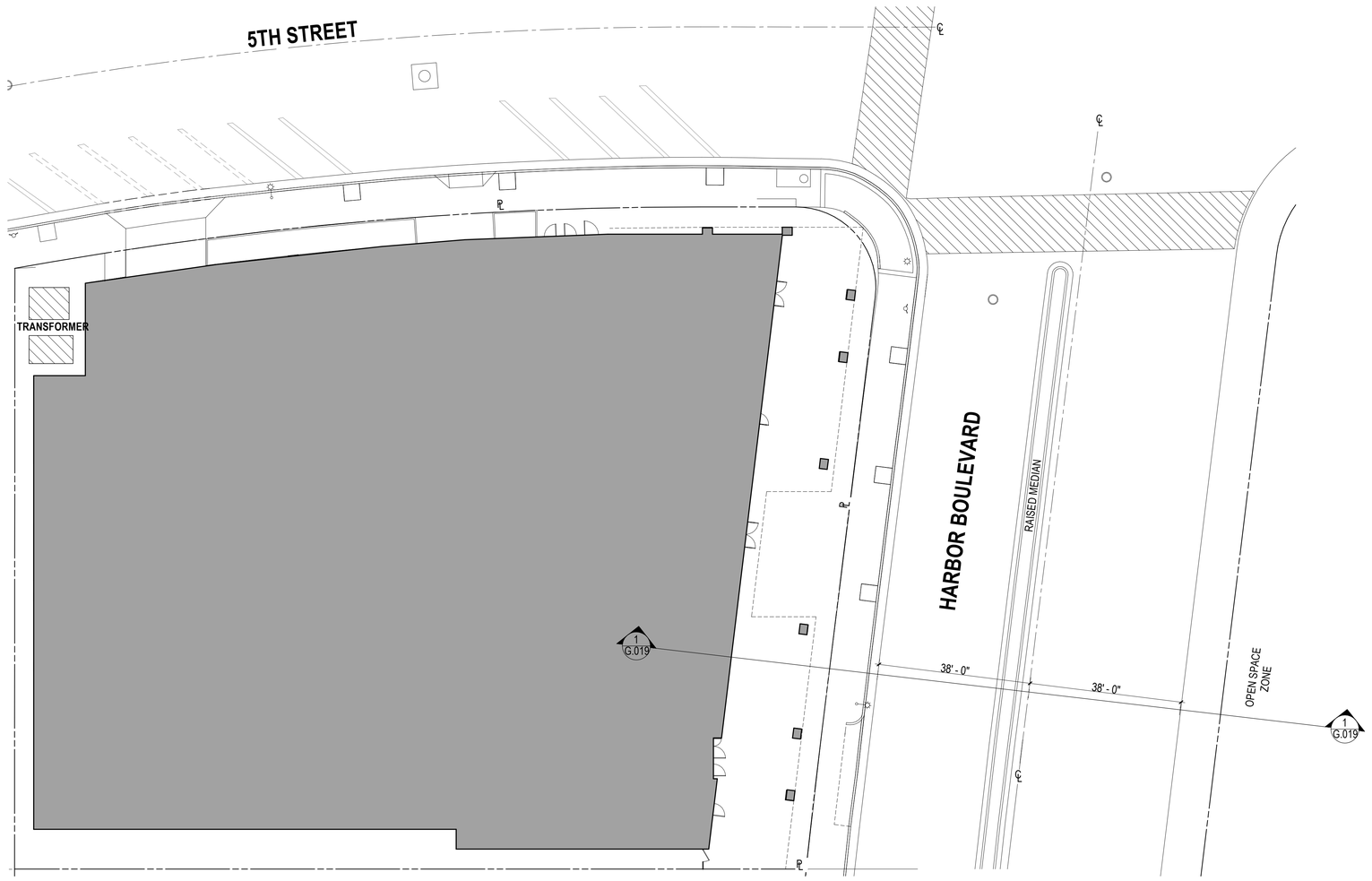
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SECTION - SIGHTLINE DIAGRAM
1/16" = 1'-0"

1



SITE PLAN - SITELINE DIAGRAM
1/16" = 1'-0"

4

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SUBMITTAL:

ENTITLEMENT SUBMITTAL

SHEET TITLE:

SIGHTLINE DIAGRAMS

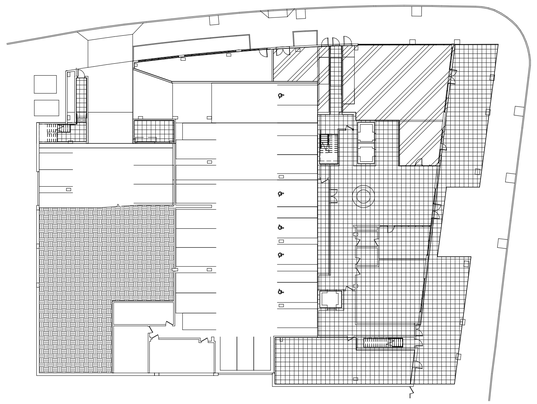
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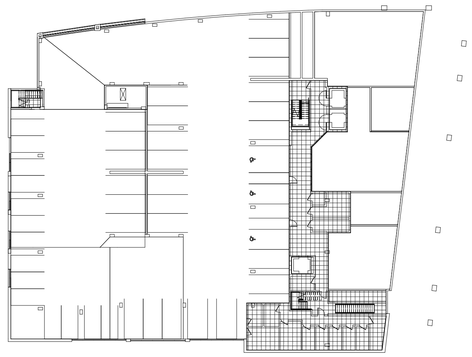
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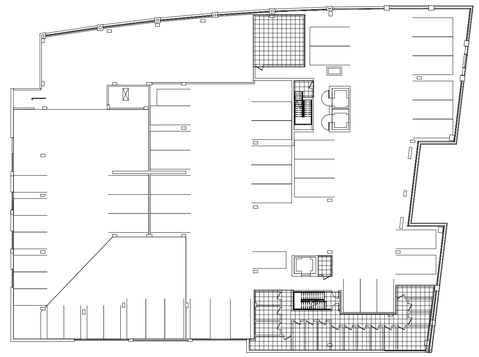
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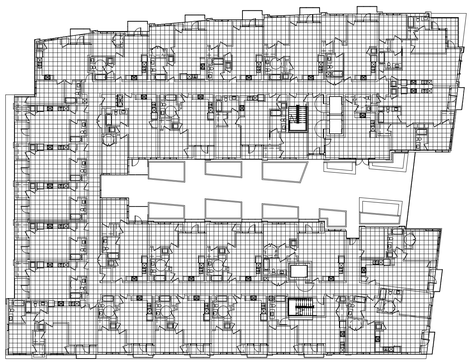
1ST FLOOR FAR PLAN



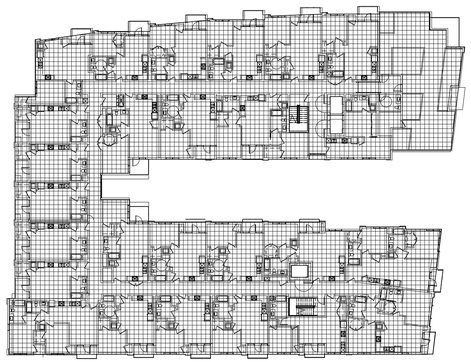
2ND FLOOR FAR PLAN



3RD FLOOR FAR PLAN



4TH FLOOR FAR PLAN (5TH, 6TH, 7TH TYP)



8TH FLOOR FAR PLAN

FAR CALCULATIONS

LOT AREA:
33,322 SF

ALLOWABLE FAR:
6:1 (PER SAN PEDRO CPIO CH. 2)

PROPOSED FAR:
4:06 : 1

SHEET NOTES

MEASUREMENT PER LAMC 12.03:
AREA IN SQUARE FEET CONFINED WITHIN THE EXTERIOR WALLS OF A BUILDING, BUT NOT INCLUDING THE AREA OF THE FOLLOWING: EXTERIOR WALLS, STAIRWAYS, SHAFTS, ROOMS HOUSING BUILDING EQUIPMENT OR MACHINERY, PARKING AREAS WITH ASSOCIATED DRIVEWAYS AND RAMPS, SPACE FOR THE LANDING AND STORAGE OF HELICOPTERS, AND BASEMENT STORAGE AREAS.

PROPOSED FAR

LEVEL	AREA (SF)
COMMERCIAL FAR	
1ST FLOOR	2478
	2478
RESIDENTIAL FAR	
1ST FLOOR	8475
2ND FLOOR	3053
3RD FLOOR	2440
4TH FLOOR	23773
5TH FLOOR	23802
6TH FLOOR	23802
7TH FLOOR	23802
8TH FLOOR	23685
	132832
GRAND TOTAL	135310

LEGEND

COMMERCIAL FAR

NOT FAR

RESIDENTIAL FAR

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BEVERLY HILLS, CA 90211

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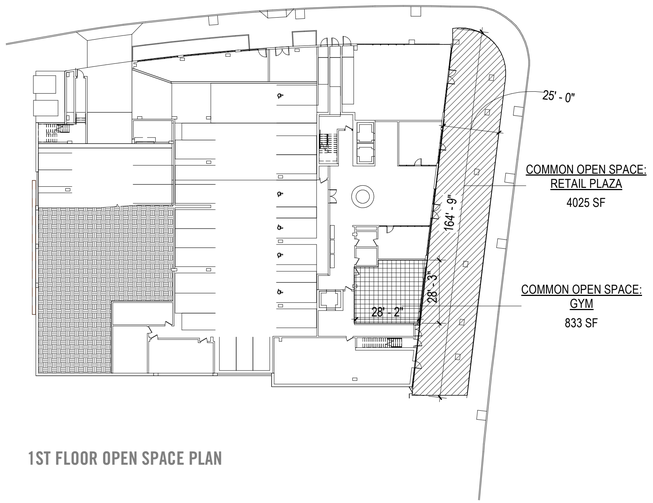
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FAR CALCULATIONS

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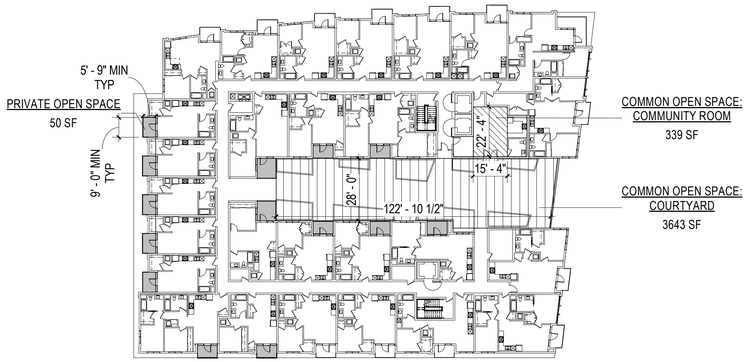
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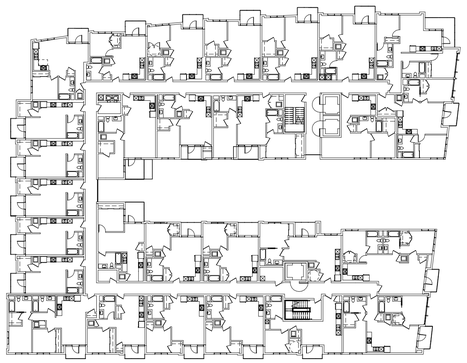
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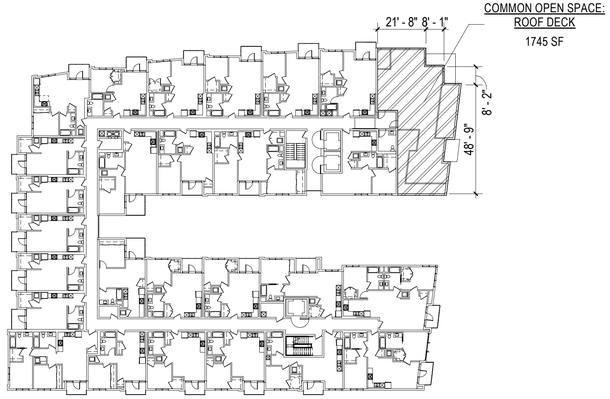
1ST FLOOR OPEN SPACE PLAN



4TH FLOOR OPEN SPACE PLAN



5TH FLOOR OPEN SPACE PLAN (5TH, 6TH, 7TH TYP)



8TH FLOOR OPEN SPACE PLAN

REQUIRED OPEN SPACE

PER SAN PEDRO CPIO REGIONAL COMMERCIAL SUBAREA PROJECTS ON PROPERTIES THAT FRONT 200 FEET OR MORE OF A SINGLE STREET SHALL INCLUDE OPEN SPACE THAT IS ALL OF THE FOLLOWING:

A. A MINIMUM OF 5,000 SF
B.LOCATED ON THE GROUND FLOOR WITH DIRECT PEDESTRIAN CONNECTION TO THE ADJACENT STREET.
C. UNENCLOSED BY ANY WALL, FENCE, GATE, OR OTHER OBSTRUCTION.
D. LINED WITH GROUND FLOOR TENENT SPACES, INCLUDING ONE OR MORE RESTAURANTS, ALONG AT LEAST 20% OF THE BUILDING FRONTAGE THAT ABUTS THE OPEN SPACE.
E.AT LEAST 40% LANDSCAPED WITH USEABLE LAWN OR SIMILAR USEABLE GROUND COVER OR ARTIFICIAL GRASS, OR WITH PLANT MATERIALS THAT ARE LOW MAINTENANCE, AND NATIVE OR ROUGHT TOLERANT; AND
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*PROJECTS THAT PROVIDE OPEN SPACE UNDER 12.21 G MAY REDUCE REQUIREMENT BY UP TO 50% IF PUBLIC OPEN SPACE MEETS AT LEAST 5 OF THE REQUIREMENTS LISTED ABOVE.

PER L.AMC 12.21 G
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PROPOSED OPEN SPACE

NAME	LEVEL	AREA (SF)
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COMMON OPEN SPACE: COURTYARD	4TH FLOOR	3643
COMMON OPEN SPACE: ROOF DECK	8TH FLOOR	1745
		6560
PRIVATE OPEN SPACE	4TH FLOOR	700
		700
GRAND TOTAL		7260

LEGEND

- COMMON OPEN SPACE: COMMUNITY ROOM
- COMMON OPEN SPACE: COURTYARD
- COMMON OPEN SPACE: GYM
- COMMON OPEN SPACE: RETAIL PLAZA
- COMMON OPEN SPACE: ROOF DECK
- PRIVATE OPEN SPACE

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LAMF 511 HARBOR LLC
8906 W. OLYMPIC BLVD. SUITE 200
BEVERLY HILLS, CA 90211

SUBMITTAL:
ENTITLEMENT SUBMITTAL

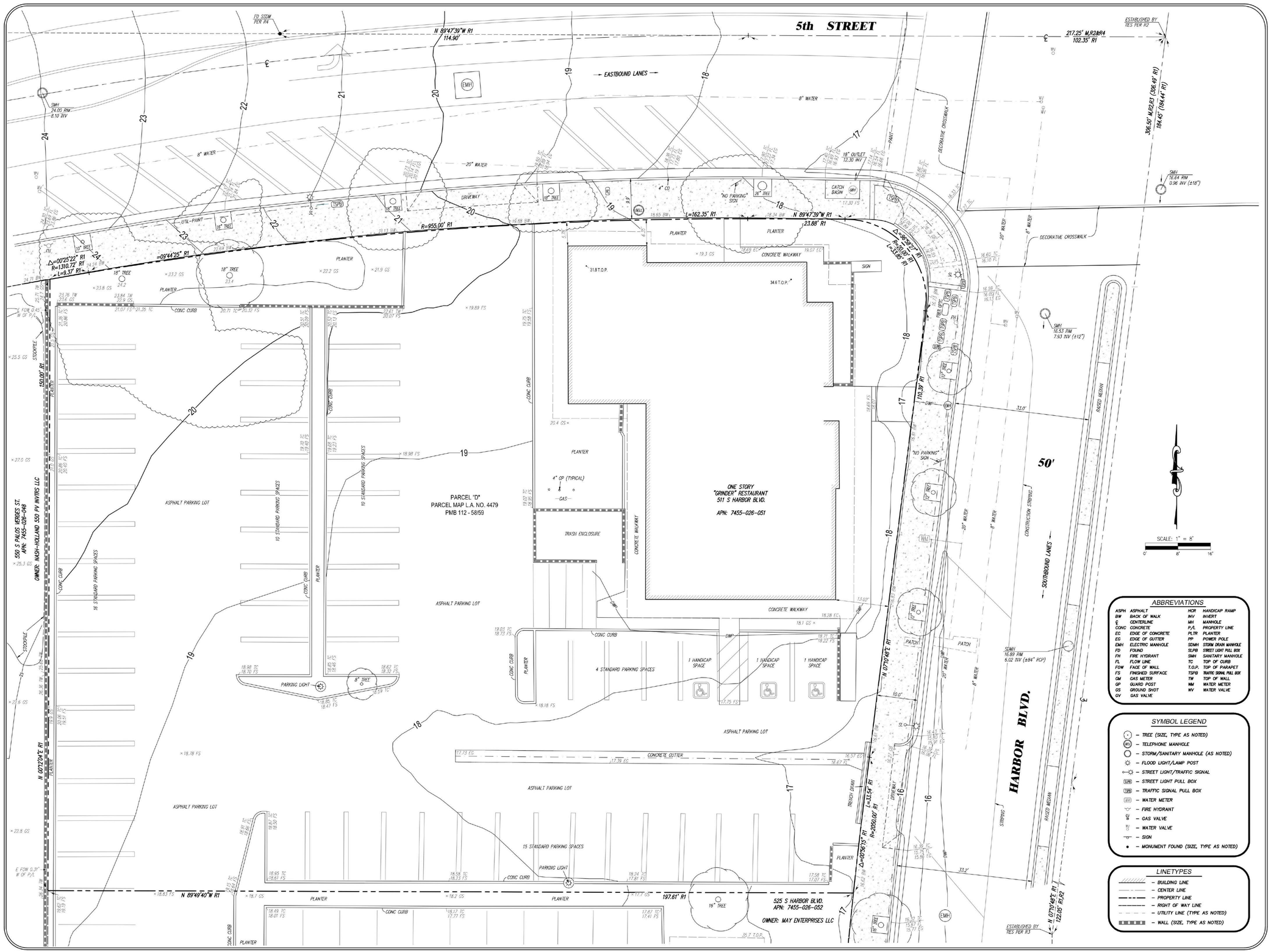
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OPEN SPACE CALCULATIONS

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DATE:
01.30.20

SHEET NUMBER:
G.021

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ABBREVIATIONS

ASPH	ASPHALT	HCR	HANDICAP RAMP
BW	BACK OF WALK	INV	INVERT
℄	CENTERLINE	MH	MANHOLE
CONC	CONCRETE	P/L	PROPERTY LINE
EC	EDGE OF CONCRETE	PLTR	PLANTER
EG	EDGE OF GUTTER	PP	POWER POLE
EMH	ELECTRIC MANHOLE	SDMH	STORM DRAIN MANHOLE
FD	FOUND	SLPB	STREET LIGHT PULL BOX
FH	FIRE HYDRANT	SMH	SANITARY MANHOLE
FL	FLOW LINE	TC	TOP OF CURB
FOW	FACE OF WALL	T.O.P.	TOP OF PARAPET
FS	FINISHED SURFACE	TSPB	TRAFFIC SIGNAL PULL BOX
GM	GAS METER	TW	TOP OF WALL
GP	GUARD POST	WM	WATER METER
GS	GROUND SHOT	WV	WATER VALVE
GV	GAS VALVE		

SYMBOL LEGEND

- TREE (SIZE, TYPE AS NOTED)
- TELEPHONE MANHOLE
- STORM/SANITARY MANHOLE (AS NOTED)
- FLOOD LIGHT/LAMP POST
- STREET LIGHT/TRAFFIC SIGNAL
- STREET LIGHT PULL BOX
- TRAFFIC SIGNAL PULL BOX
- WATER METER
- FIRE HYDRANT
- GAS VALVE
- WATER VALVE
- SIGN
- MONUMENT FOUND (SIZE, TYPE AS NOTED)

LINETYPES

- BUILDING LINE
- CENTER LINE
- PROPERTY LINE
- RIGHT OF WAY LINE
- UTILITY LINE (TYPE AS NOTED)
- WALL (SIZE, TYPE AS NOTED)

REVISIONS:

DATE	BY	DESCRIPTION

Client:
MR. RAFFI COHEN
NU PARC RESIDENCES
8906 W. OLYMPIC BLVD. SUITE 200
BEVERLY HILLS, CA 90211

ALTA/NSPS LAND TITLE SURVEY
511 SOUTH HARBOR BOULEVARD
SAN PEDRO, CA 90731

DATE: 5/5/2018 JOB NO. 18040

YOORHEIS & VOORHEIS, INC.
PROFESSIONAL LAND SURVEYORS SINCE 1972
17049 Sunburst Street, Northridge, CA 91325
Phone: (818) 993-5611
mail@SurveyLA.com

SHEET 2 OF 3

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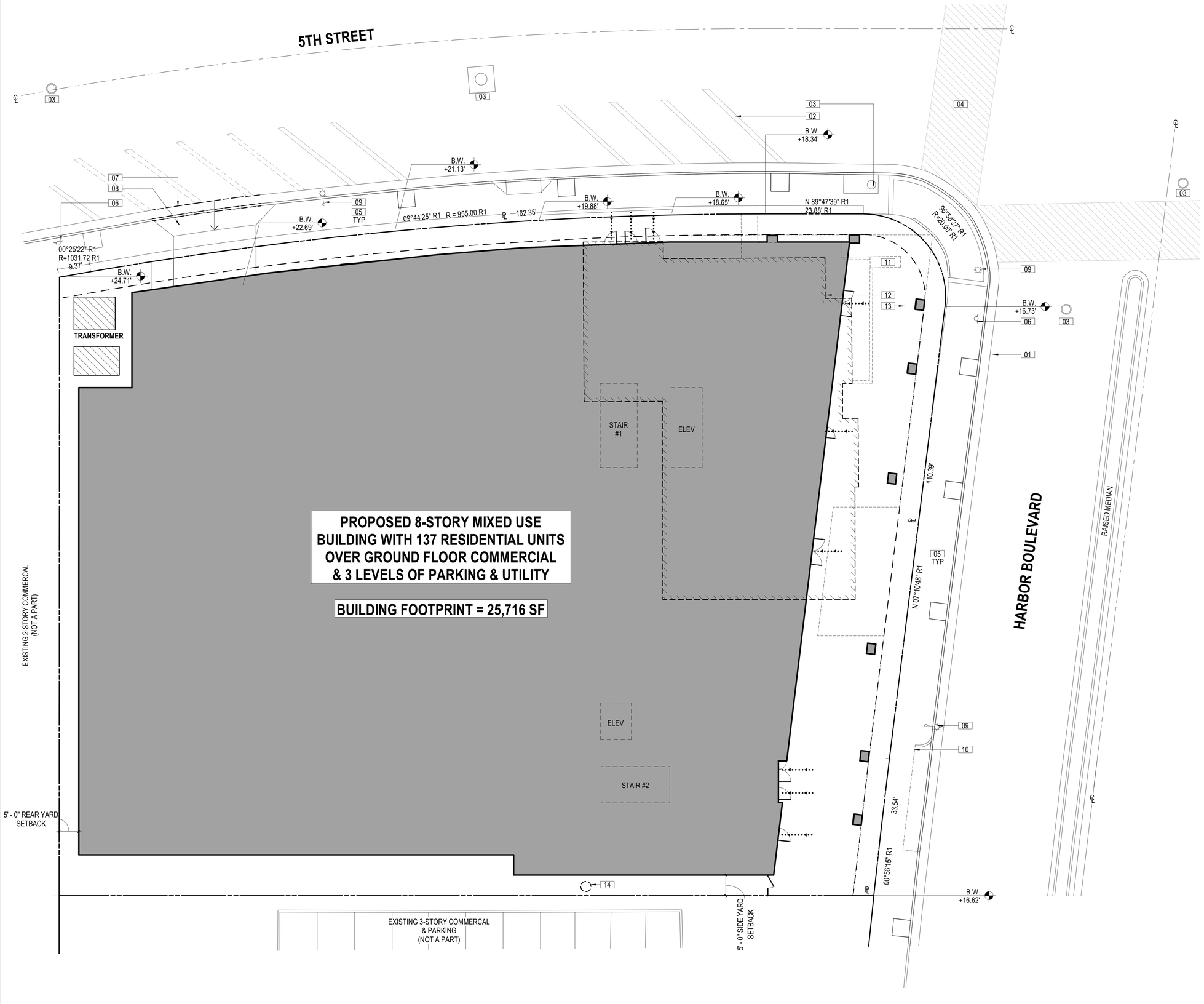
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(FOR REFERENCE ONLY)

SCALE: NTS

DATE: 01.30.20

SHEET NUMBER:
G.022

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NOTES

01 (E) STREET TREE TO REMAIN
02 (E) PARKING STRIPING
03 (E) STORMDRAIN MANHOLE
04 (E) CROSSWALK
05 (E) CONCRETE SIDEWALK
06 (E) FIRE HYDRANT
07 (E) SIDEWALK & STREET TREES TO BE REMOVED
08 (N) DRIVEWAY APPROACH
09 (E) STREET LIGHT
10 (E) DRIVEWAY APPROACH TO BE REMOVED
11 (E) SITE WALL & MONUMENT SIGN TO BE REMOVED
12 (E) 1-STORY BUILDING TO BE REMOVED
13 LINE OF BUILDING ABOVE
14 (E) PARKING LIGHT TO BE REMOVED

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SUBMITTAL:
ENTITLEMENT SUBMITTAL

SHEET TITLE:
SITE PLAN

SCALE:
3/32" = 1'-0"

DATE:
01.30.20

SHEET NUMBER:
A.000

1/6/2020 3:07:09 PM

N

0' 4' 8' 16' 32'



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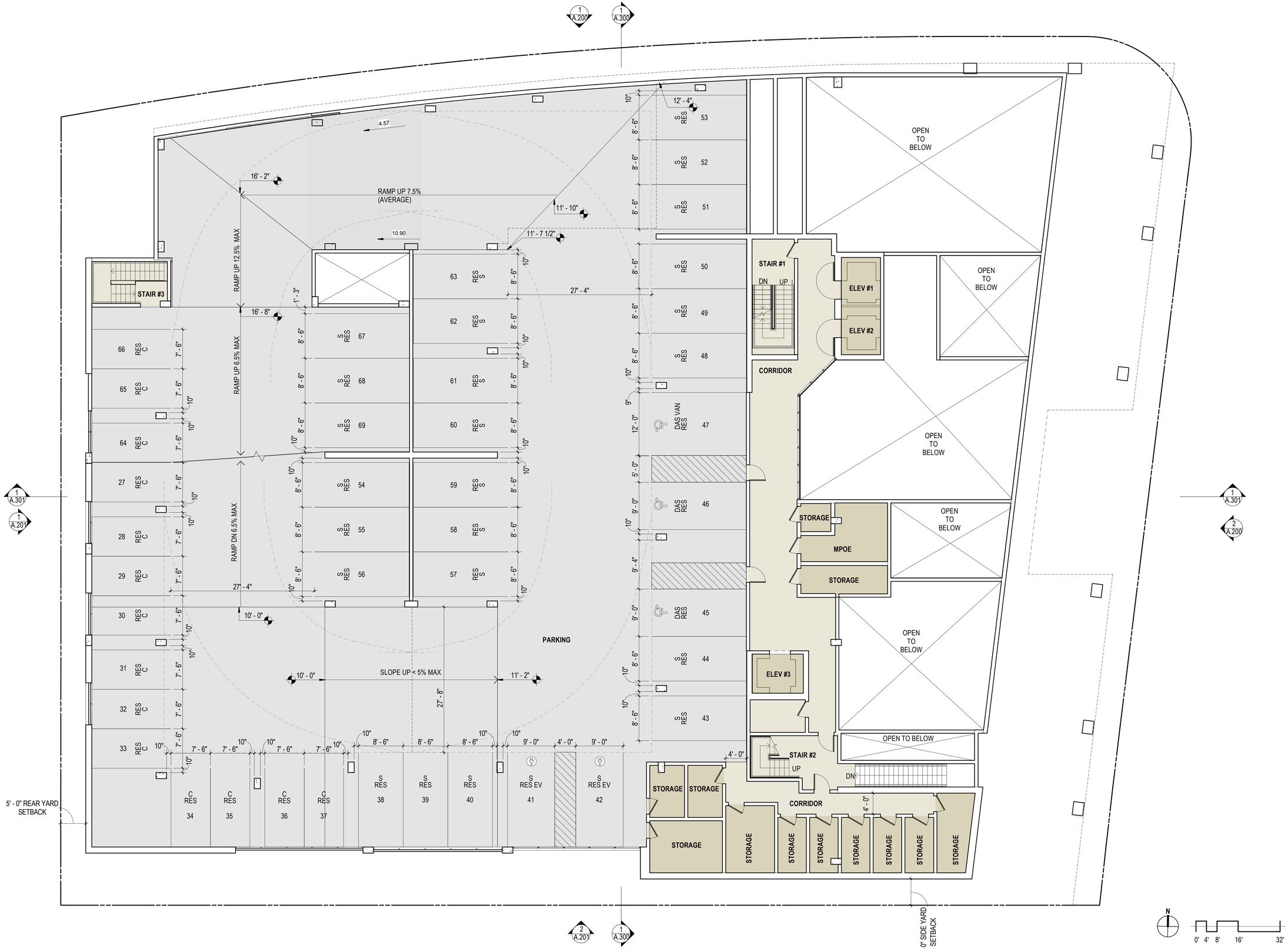
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SHEET NUMBER:
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1/7/2020 11:55:31 AM



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310.399.7975
KFALOSANGELES.COM

511 HARBOR

511 S HARBOR BOULEVARD
SAN PEDRO, CA 90731

8906 W. OLYMPIC BLVD. SUITE 200
BEVERLY HILLS, CA 90211

SUBMITTAL:
ENTITLEMENT SUBMITTAL

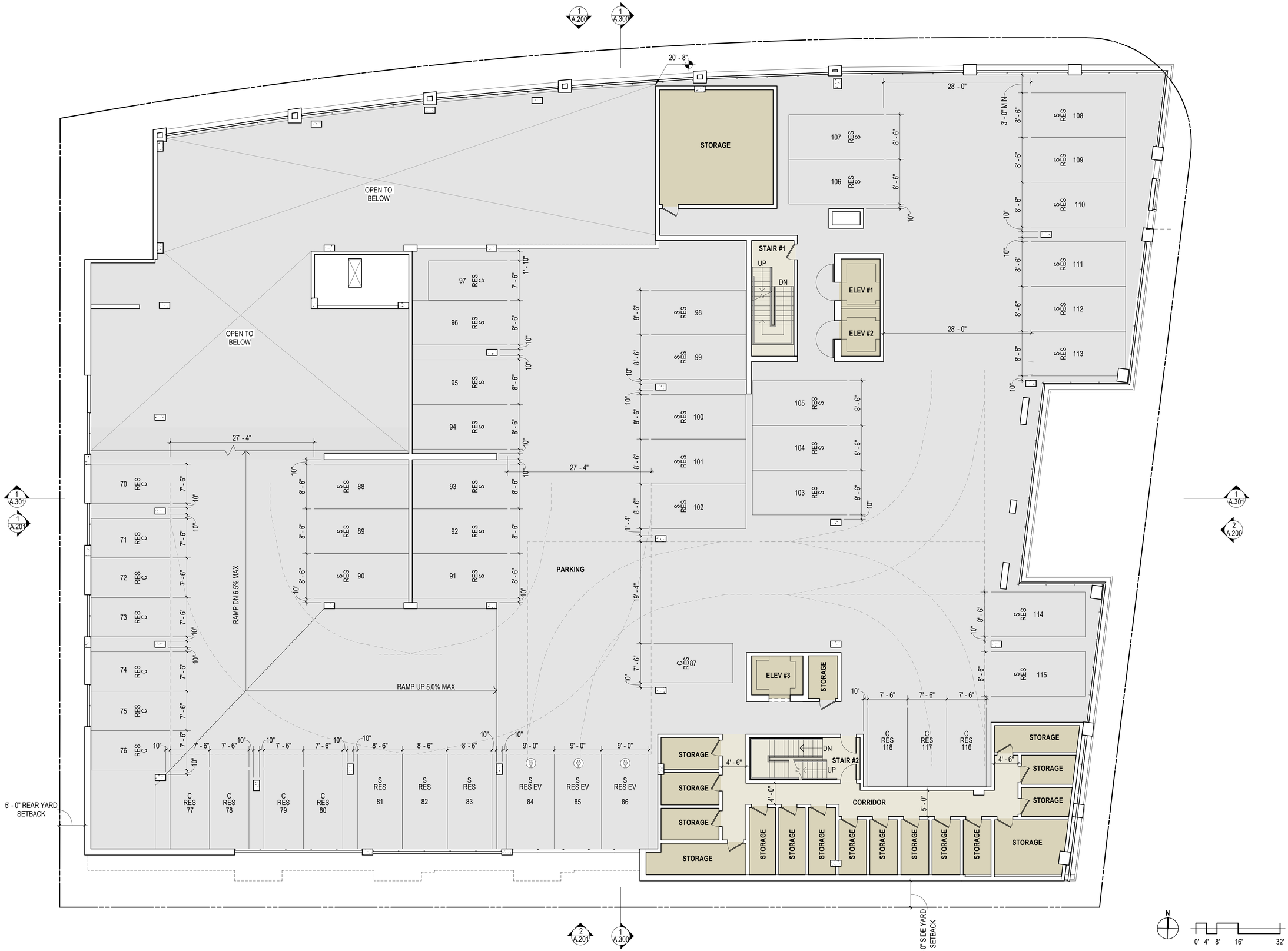
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SECOND FLOOR PLAN

SCALE:
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DATE:
01.30.20

SHEET NUMBER:
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1/7/2020 1:07:06 PM



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SUBMITTAL:
ENTITLEMENT SUBMITTAL

SHEET TITLE:
THIRD FLOOR PLAN

SCALE:
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DATE:
01.30.20

SHEET NUMBER:
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SUBMITTAL:
ENTITLEMENT SUBMITTAL

SHEET TITLE:
FOURTH FLOOR PLAN

SCALE:
1/8" = 1'-0"

DATE:
01.30.20

SHEET NUMBER:
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SUBMITTAL:
ENTITLEMENT SUBMITTAL

SHEET TITLE:
FIFTH FLOOR PLAN (6TH, 7TH TYP)

SCALE:
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DATE:
01.30.20

SHEET NUMBER:
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ENTITLEMENT SUBMITTAL

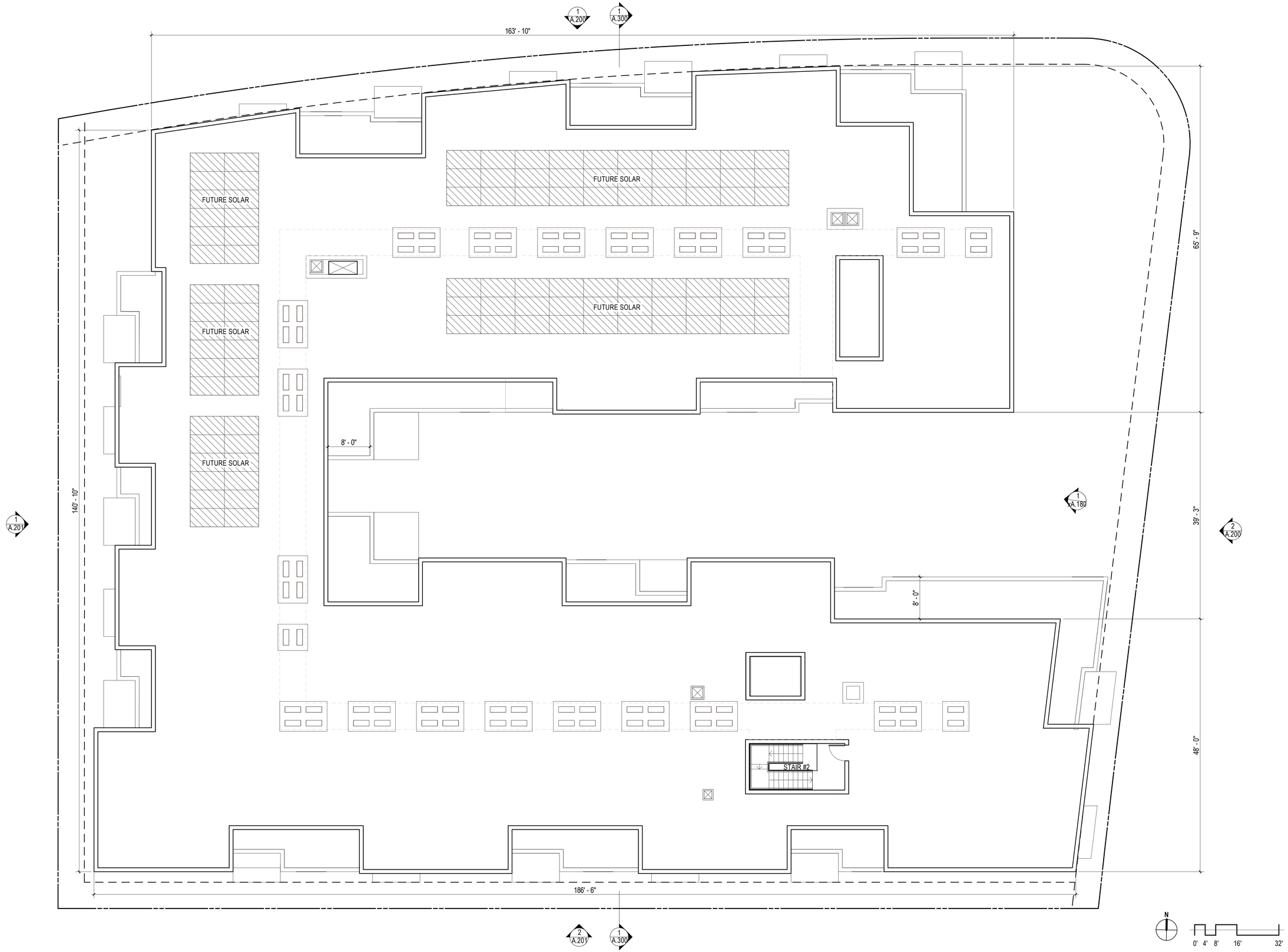
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DATE:
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SHEET NUMBER:
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SUBMITTAL:
ENTITLEMENT SUBMITTAL

SHEET TITLE:
ROOF PLAN

SCALE:
1/8" = 1'-0"

DATE:
01.30.20

SHEET NUMBER:
A.190

4/27/2019 3:24:52 PM



NORTH ELEVATION (5th STREET)



EAST ELEVATION (HARBOR BOULEVARD)

LEGEND

- ST-1 EXTERIOR CEMENT PLASTER - WHITE
- ST-2 EXTERIOR CEMENT PLASTER - GRAY
- ST-3 EXTERIOR CEMENT PLASTER - BLACK
- MTL-1 VERTICAL CORRUGATED METAL PANEL
- MTL-2 2' X 4' FORMED METAL PANEL
- CMU-1 CMU HONED FINISH
- MTL-3 LASER CUT METAL PANELS
- LVR-1 HORIZONTAL PAINTED LOUVERS

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SUBMITTAL:
ENTITLEMENT SUBMITTAL

SHEET TITLE:
EXTERIOR ELEVATIONS

SCALE:
3/32" = 1'-0"

DATE:
01.30.20

SHEET NUMBER:
A.200

4/9/19 3:33:00 PM



WEST ELEVATION



SOUTH ELEVATION

LEGEND

ST-1	EXTERIOR CEMENT PLASTER - WHITE
ST-2	EXTERIOR CEMENT PLASTER - GRAY
ST-3	EXTERIOR CEMENT PLASTER - BLACK
MTL-1	VERTICAL CORRUGATED METAL PANEL
MTL-2	2' X 4' FORMED METAL PANEL
CMU-1	CMU HONED FINISH
MTL-3	LASER CUT METAL PANELS
LVR-1	HORIZONTAL PAINTED LOUVERS

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SUBMITTAL:
KICK-OFF MEETING

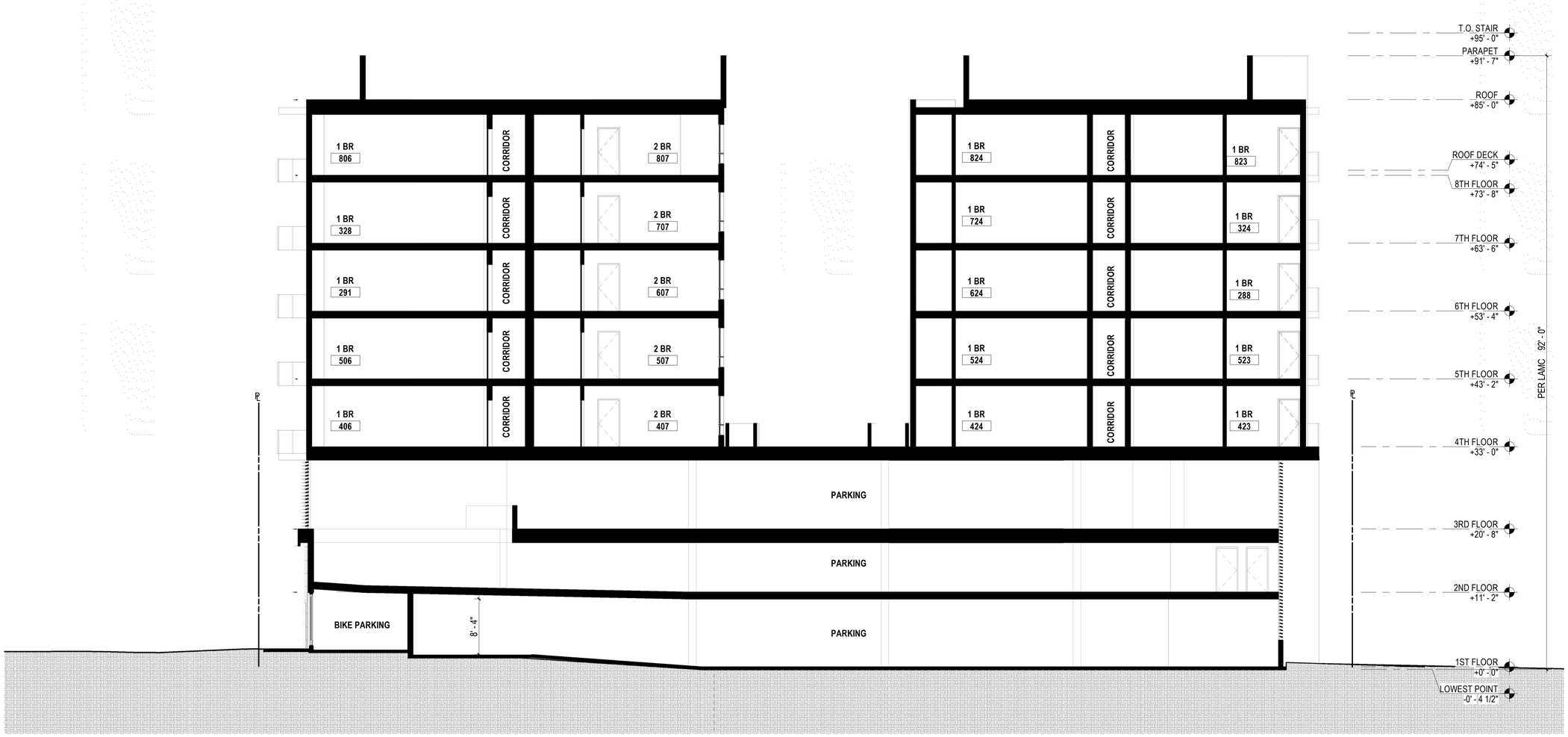
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EXTERIOR ELEVATIONS

SCALE:
3/32" = 1'-0"

DATE:
01.30.20

SHEET NUMBER:
A.201

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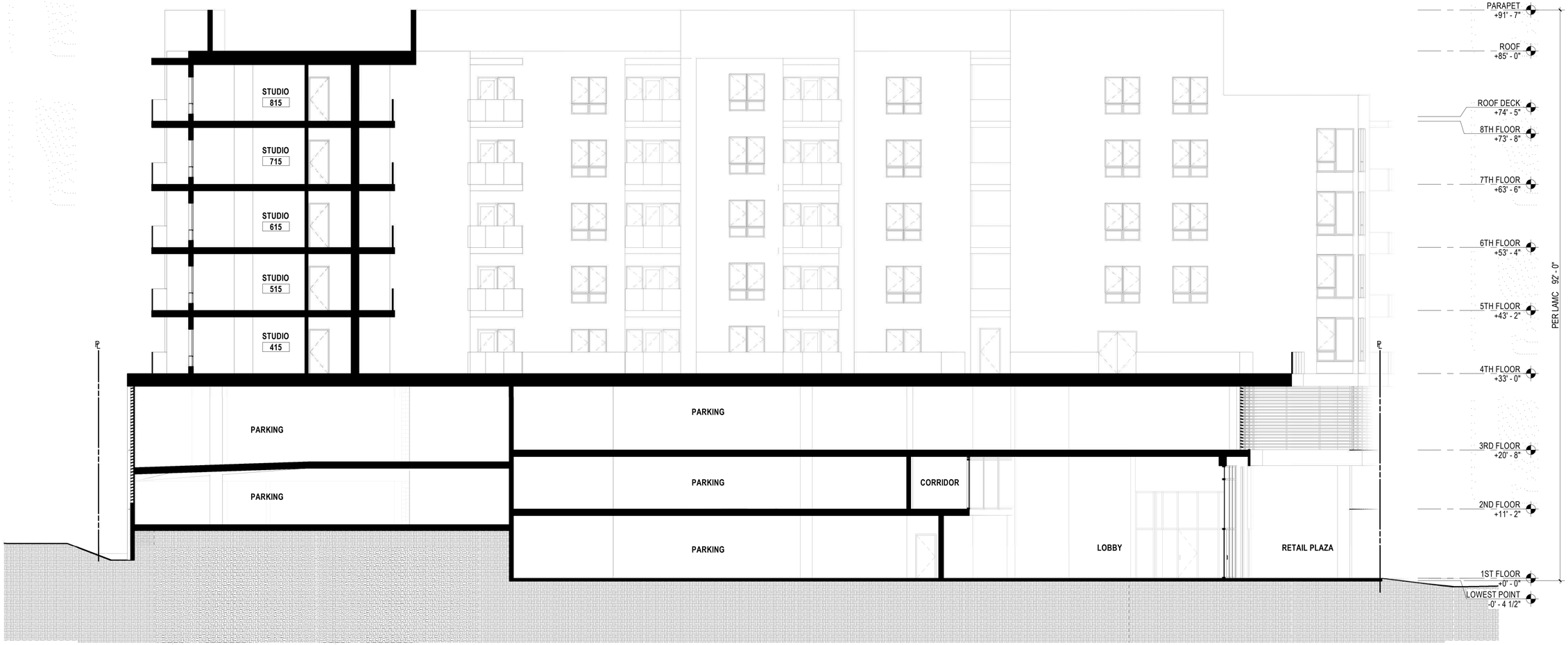
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SECTION

SCALE:
1/8" = 1'-0"

DATE:
01.30.20

SHEET NUMBER:
A.300

4/17/2019 3:25:40 PM



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BEVERLY HILLS, CA 90211

SUBMITTAL:
ENTITLEMENT SUBMITTAL

SHEET TITLE:
SECTION

SCALE:
1/8" = 1'-0"

DATE:
01.30.20

SHEET NUMBER:
A.301

4/27/2019 3:25:12 PM



OPEN SPACE TABLE

LANDSCAPE AREA	
Ground	2615 SF
Podium	1559 SF
Roof Deck	577 SF
Project Total	4751 SF

HYDROZONE AREA	
Very Low	556 SF
Low	3083 SF
Moderate	1112 SF
Total	4751 SF

TREE COUNT

Existing Street Trees	6
Proposed Street Trees	0
Ground	15
Podium	9
Roof Deck	11
Project Total	35

0 2 4 8 16
Scale: 1/8" = 1'-0"

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SUBMITTAL:
ENTITLEMENT SUBMITTAL

SHEET TITLE:
COMPOSITE LANDSCAPE PLAN

SCALE:

DATE:
01.30.20

SHEET NUMBER:
L-1.00



Legend

1. Retail Plaza
2. Existing Trees and Streetscape (per city standards)
3. Planter Area
4. Built-In Seating
5. Lobby Entry Plaza
6. Enhanced Precast Concrete Pavers
7. Ornamental Pottery

0 2 4 8 16

Scale: 1/8" = 1'-0"

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SUBMITTAL:
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SHEET TITLE:
GROUND LEVEL LANDSCAPE PLAN

SCALE:

DATE:
01.30.20

SHEET NUMBER:
L-1.01



Legend

1. Residential Patio
2. Community Courtyard
3. Fountain
4. Built-In Bench
5. Fire Element
6. Overlook Terrace
7. Low Planter
8. Planting Area

0 2 4 8 16
Scale: 1/8" = 1'-0"

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SUBMITTAL:
ENTITLEMENT SUBMITTAL

SHEET TITLE:
PODIUM LEVEL LANDSCAPE PLAN

SCALE:

DATE:
01.30.20

SHEET NUMBER:
L-1.10



Legend

1. Fire Pit
2. Garden Screen
3. Outdoor BBQ
4. Seating Area
5. Overlook Terrace
6. Planting Area

0 1 2 4 8
Scale: 1/4" = 1'-0"

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BEVERLY HILLS, CA 90211

SUBMITTAL:
ENTITLEMENT SUBMITTAL

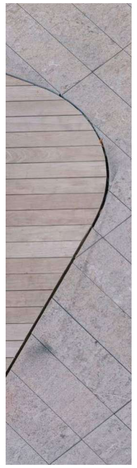
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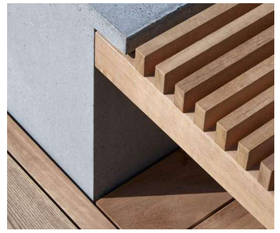
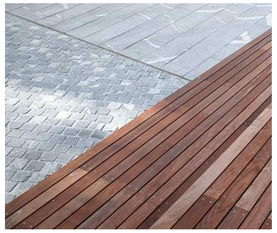
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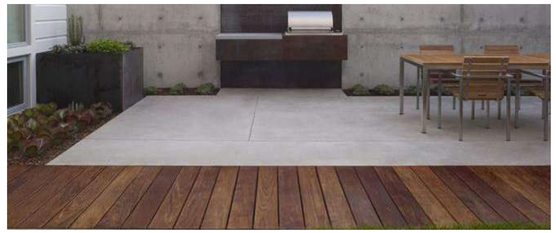
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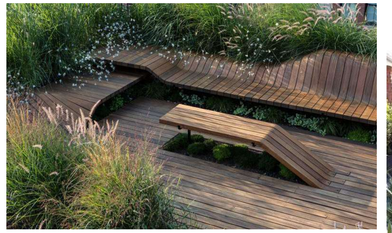
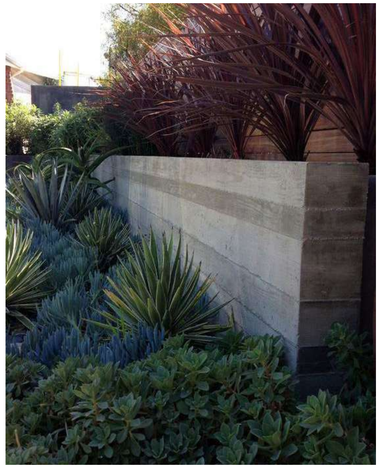
Materiality



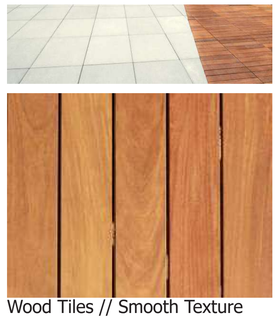
Planting Aesthetic



Paving


Ipe


Wood Tiles // Smooth Texture


Porcelain Stone Finish Pavers
Colors: Rapids and Mantle

Linear Concrete Pavers
Colors: Venetian Gray , Light Gray, Silversmoke

Walls

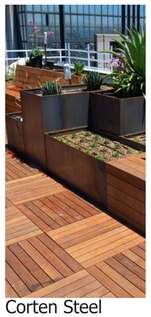

Green Wall


Green Wall Cable System


Board-Formed Concrete

Pottery


Corten Steel Planters


Corten Steel Planters


Corten Steel Planters


Planter Pots // Color: Gunmetal

Trees


Agonis flexuosa // Peppermint Tree


Dracaena draco // Dragon Tree


Acacia podalyriifolia // Pearl Acacia


Melaleuca nesophila // Pink Melaleuca

Shrubs


Agave americana // Century Plant


Agave attenuata // Foxtail Agave

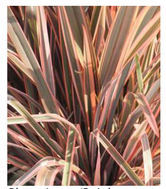

Aloe 'Blue Elf' // Blue Elf Aloe


Juncus p. 'Elk Blue' // Elk Blue Gray Rush


Leymus c. 'Canyon Prince' // Canyon Prince Wild Rye


Muhlenbergia c. 'Regal Mist' // Regal Mist Pink Muhly


Muhlenbergia rigens // Deer Grass


Phormium t. 'Rainbow Queen' // Rainbow Queen New Zealand Flax


Phormium t. 'Jack Spratt' // Jack Spratt Flax


Phormium t. 'Golden Ray' // Golden Ray New Zealand Flax


Sansevieria trifasciata // Snake Plant


Heuchera 'Cherry Cola' // Cherry Cola Coral Bells


Feijoa sellowiana // Pineapple Guava

Groundcovers // Grasses

Carex pansa // Dune Sedge

Festuca glauca // Blue Fescue

Senecio cylindricus // Narrow-Leaf Chalksticks

Senecio serpens // Blue Chalksticks

Sedum aldolphii // Golden Sedum

Lomandra l. 'Dwarf Breeze' // Dwarf Mat Rush

Sesleria autumnalis // Autumn Moor Grass

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SUBMITTAL:
ENTITLEMENT SUBMITTAL

SHEET TITLE:
MATERIALS PALETTE

SCALE:

DATE:
01.30.20

SHEET NUMBER:
L-2.00

EXHIBIT B

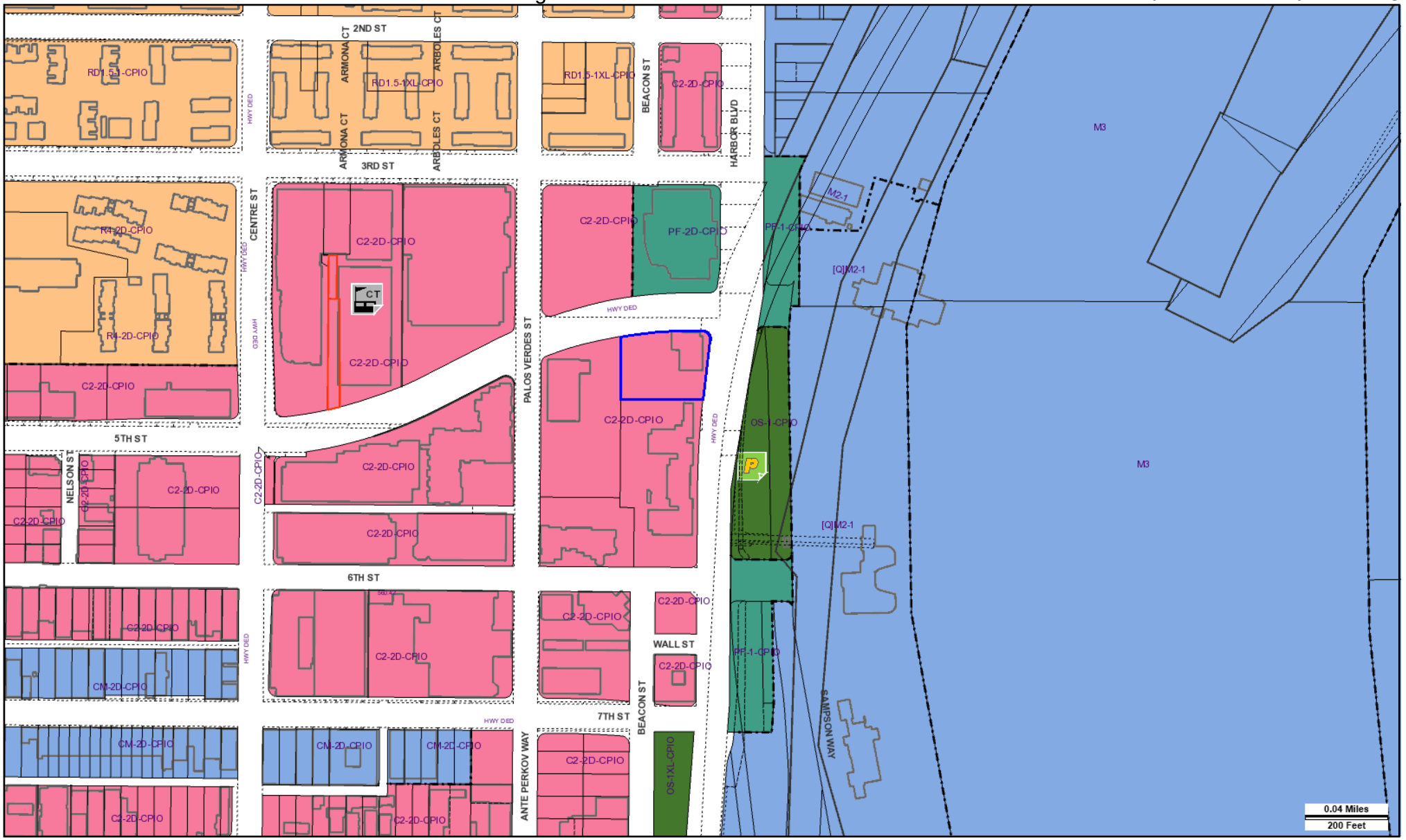
MAP AND SITE PHOTOS

ZIMAS INTRANET

Generalized Zoning

02/03/2020

City of Los Angeles
Department of City Planning



Address: 511 S HARBOR BLVD
APN: 7455026051
PIN #: 015B201 34

Tract: P M 4479
Block: None
Lot: D
Arb: None

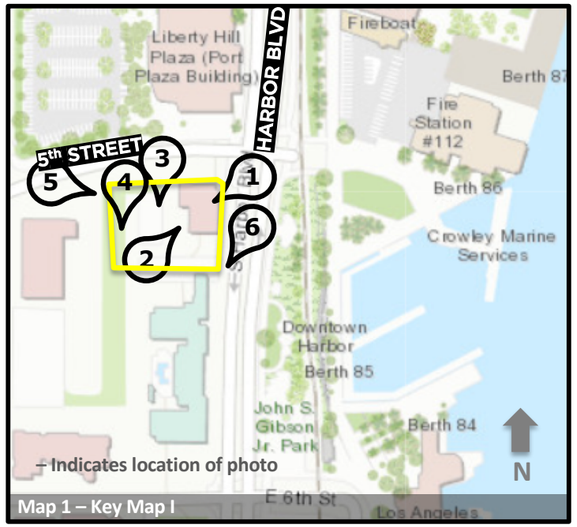
Zoning: C2-2D-CPIO
General Plan: Regional Commercial

N
W
E
S

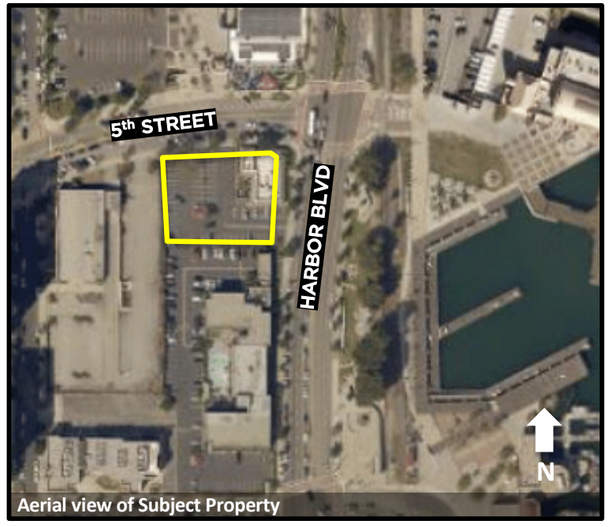
CITY OF LOS ANGELES FOUNDED 1781

SITE PHOTOGRAPHIC SURVEY

511 S. HARBOR BOULEVARD, SAN PEDRO, CALIFORNIA 90731
APRIL 2019 | PAGE 1 OF 2



Map 1 – Key Map I



Aerial view of Subject Property



"Birds eye" view of Project Site



1. View of existing restaurant, looking southwest



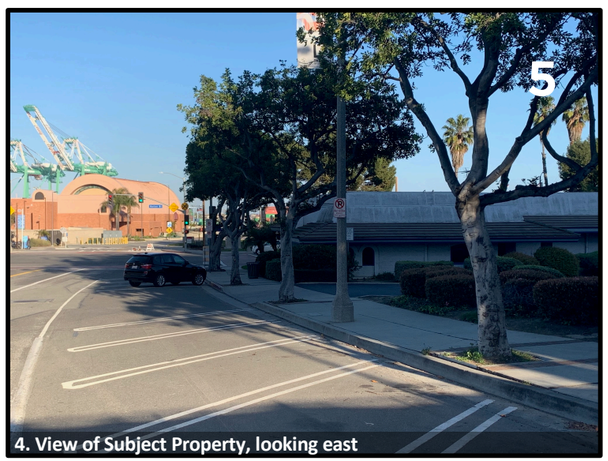
2. View of Subject Property, looking northeast



3. View of adjacent properties, looking south



4. View of adjacent properties, looking south

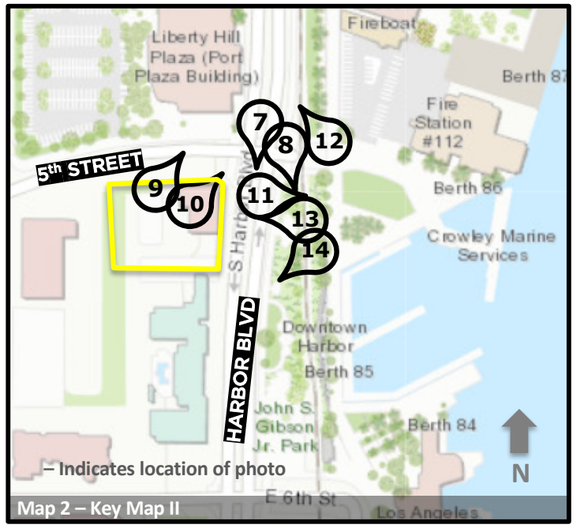


4. View of Subject Property, looking east



6. View of adjacent property to the south., looking southwest

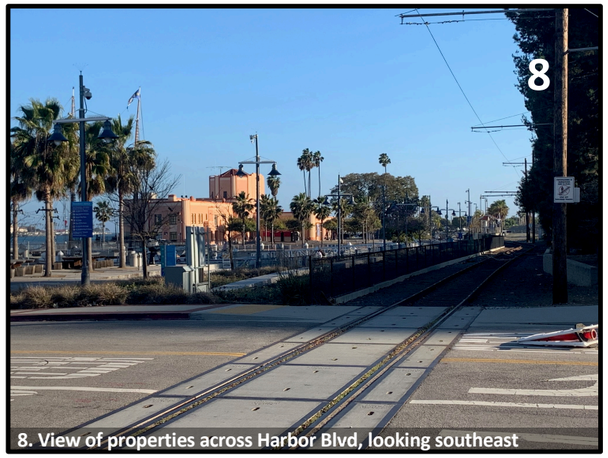
three6ixty



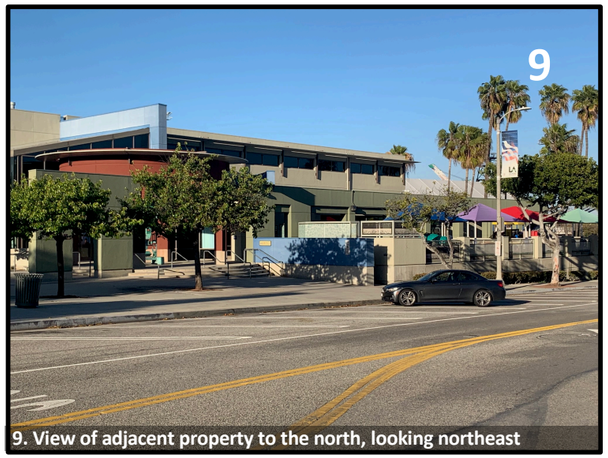
Map 2 – Key Map II



7. View down Harbor Blvd, looking south



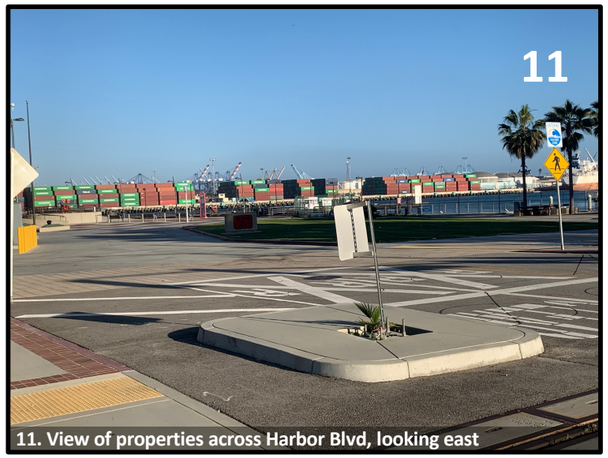
8. View of properties across Harbor Blvd, looking southeast



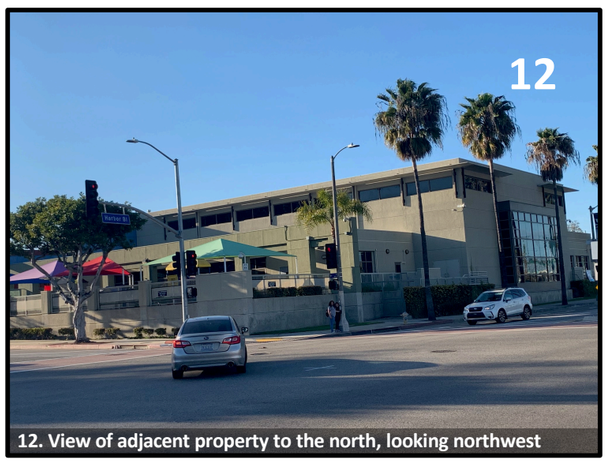
9. View of adjacent property to the north, looking northeast



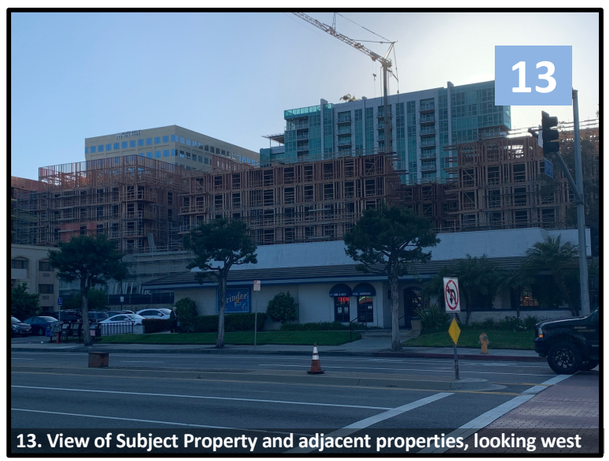
10. View of Harbor Blvd/5th Street intersection, looking northeast



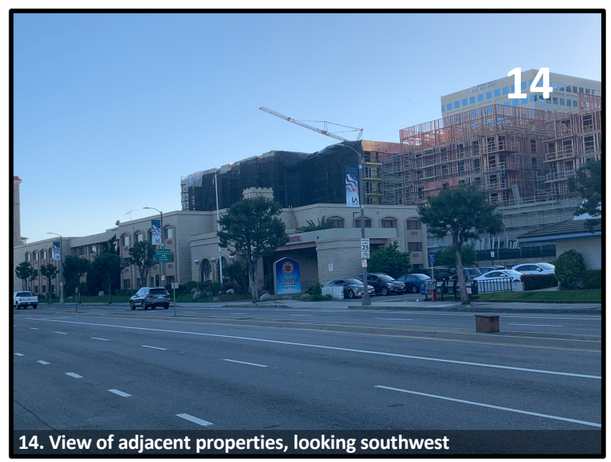
11. View of properties across Harbor Blvd, looking east



12. View of adjacent property to the north, looking northwest



13. View of Subject Property and adjacent properties, looking west



14. View of adjacent properties, looking southwest

SITE PHOTOGRAPHIC SURVEY

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APRIL 2019 | PAGE 2 OF 2

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EXHIBIT C

Public Correspondence

San Pedro CHAMBER of COMMERCE

SUBMITTED AT HEARING 1/23

October 22, 2019

Mr. Sergio Ibarra
Los Angeles Department of City Planning
200 N. Spring Street, Room 721
Los Angeles, CA 90012

RE: CPC-2019-2926-DB-SPR / ENV-2019-2927-EAF
511 S. Harbor Boulevard, San Pedro 90731
Proposed 137-Unit Mixed-Use Project

Dear Mr. Ibarra,

The San Pedro Chamber of Commerce strongly supports the 137-Unit Mixed-Use development project being proposed at 511 S. Harbor Boulevard, San Pedro. After careful study and review, the Board of Directors voted to support the project at its October 16, 2019 meeting. The development consists of an 8-story 135,310 square-foot mixed-use building with 137 residential apartment units; including, 16 units that will be set aside for Very Low-Income households. The project is located on a prominent corner at 5th Street and Harbor Boulevard and will provide new commercial uses on the ground floor that will activate the street front on Harbor Boulevard, create synergies with the downtown San Pedro core, the LA Waterfront, and adjacent neighborhoods

The developer has proposed a project with a thoughtful design that will be an asset to the neighborhood. The project provides a mix of high-quality housing for the area, including 16 affordable units. The proposed ground-floor commercial uses will serve the local community, while helping to stimulate the local economy. Additionally, the proposed public open space plaza will encourage pedestrianism and other forms of active transportation and increase the overall quality of life for residents and visitors alike. The project will also be sustainably designed with drought-tolerant landscaping, low-energy appliances, and bicycle facilities which exceed those required by code.

The developer has committed considerable time and resources to working with the Chamber to gain its support and has agreed to continue to work with us on the development of a parking valet system to facilitate parking solutions during high parking demand times. We especially appreciate the developer's commitment to working with the neighborhood by initiating dialogue with residents and providing an opportunity for comments and feedback. We look forward to continuing this relationship as they advance the proposed project toward construction.

Sincerely,

Elise Swanson

Elise Swanson
President/CEO
San Pedro Chamber of Commerce

Ray Regalado, President
Laurie Jacobs, Vice President
Melanie Labrecque, Treasurer
Cynthia Gonyea, Secretary

Northwest San Pedro Neighborhood Council

Certified Neighborhood Council
Certification Date 02-12-02
NW San Pedro Neighborhood Council
638 S. Beacon Street, Box 688
San Pedro, CA 90731

TELEPHONE: **(310) 918-8650** • WEBSITE: NWSanPedro.org • E-MAIL: BOARD@NWSanPedro.org

January 15, 2020

Alan Como, City Planner
221 N. Figueroa Street, Room 1350
Los Angeles, CA 90012

Via Email to alan.como@lacity.org

RE: CPC-2019-2926-DB-SPR

The Northwest San Pedro Neighborhood Council has reviewed the proposed project at 511 S. Harbor Blvd. in San Pedro. It is our understanding that they are proposing an 8-story building with 137 apartments, including 16 very low-income units, with ground floor amenities and a restaurant. There would be 118 parking spaces, however by unbundling the parking and using a parking attendant they can increase the parking. The parking would serve both residents and restaurant customers. There would be no parking available for visitors or employees. In addition, they would provide 95 long-term and 20 short-term bicycle parking spaces and 12 scooter parking spots. The Harbor Blvd. side of the building would feature a 25-foot wide public plaza with landscaping and benches. They are asking for 2 off-menu incentives and 5 development standard waivers.

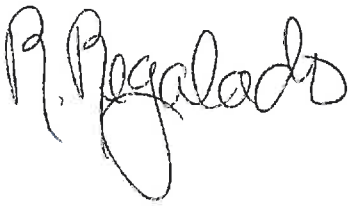
Our comments include the following:

- The public plaza is a nice feature
- **We strongly oppose the requested reduction in parking.** Insufficient parking in the building means increased usage of the already limited parking in our downtown area. In our San Pedro experience, insufficient parking can lead to a number of problems including vehicular vandalism and direct conflicts resulting from "aggressive" parking. Additionally the shortage of street parking sometimes results in double parking that presents an obstacle for emergency vehicles and is a hazard to other drivers and pedestrians.
- We appreciate the fact that the developers have agreed to unbundle the parking but we are still concerned that it is insufficient parking for the residents, restaurant customers, employees, and visitors. The developer should contract with a parking provider such as the Topaz Building and valet parking should be mandated for all restaurant customers and restaurant staff. At least 5 parking spots should be provided for visitors or they should be given free valet parking. Furthermore, we are concerned that by having to pay separately for a parking space, residents will opt to park on the street acerbating an already difficult parking situation. Street parking needs to be available for visitors to our downtown and the waterfront. What steps will be taken to avoid this situation. Will the lease limit the number of cars per unit to those paid spaces?
- Given the closeness to Harbor Blvd, the exits from the parking areas should be designated as right turn only.
- We appreciate the provision of short-term bicycle and scooter parking. The building management should provide the bicycles and scooters rather than relying on a non-existing outside entity to do so. Additionally at least half of the bicycles should be electric and there should be at least 5 cargo type bicycles.
- Consider requesting approval to replace some of the long-term bicycle parking spaces with motorcycle parking spaces.

- We would encourage a mix of transportation alternatives and incentives such as pre-loaded tap cards. The building should house a zip car or similar shared vehicle.
- This development is on what is probably the most prime piece of property in downtown San Pedro with an unblockable Harbor View and in walking distance of downtown restaurants, shops, and theaters. Additionally, there is a plethora of small apartments being developed throughout the downtown area. We strongly recommend that the developer reconsider the mix of unit types and increase the number of larger units, including providing some three-bedroom units. Not only would this increase the availability of housing types, but it could also help alleviate the parking problem.
- Consider adding a rooftop restaurant to take advantage of the great views
- Consider providing more separation between buildings for privacy
- We encourage the use of native plants. The San Pedro Greening Plan has identified species that are appropriate for San Pedro. These can be found at https://agreensanpedro.com/appendices

Thank you for this opportunity to comment on this project that will impact our community.

Sincerely,



Ray Regalado, President
On behalf of the Northwest San Pedro Neighborhood Council Board

cc: Alison Becker, Aksel Palacios, Jason Freidman

CPC-2019-2926-DB-SPR
511 S Harbor San Pedro

Statement of Diana Nave
Chair, Northwest San Pedro Neighborhood Council (NWSPNC) Planning and Land Use Committee speaking on behalf of the NWSPNC

First I need to correct some information that the applicant just provided. They correctly stated that this project was on our Board agenda on December 9, 2019 and that we provided them with only one-day notice of the meeting. What they did not tell you was that at their request we postponed the item to our January meeting. Unfortunately they were not able to attend the January meeting. We had, however, heard their presentation previously at our Committee meeting.

The Northwest San Pedro Neighborhood Council has reviewed the proposed project. We were impressed by the overall appearance, particularly the public plaza on Harbor Blvd, however we **strongly oppose the requested reduction in parking.** We understand the widely held belief that people will give up their cars. In fact this appears to be a fallacy.

Insufficient parking in the building would mean increased pressure on the already limited parking in our small downtown. Meanwhile, we are working hard to attract more visitors as part of the revitalization of our downtown core. Six new and/or planned projects in the downtown core have requested or received reduced parking requirements and we are losing one public and three private parking lots, including the one where this project would be built. In addition, at least two more existing public parking lots have been designated for development.

While we applaud the City for its efforts to encourage people to use alternate forms of transportation, according to a 2018 study by the Institute of Transportation at UCLA those attempts have failed. In spite of all of the investment in public transit and significant population growth, overall metro ridership is lower now that it was 30 years ago. More relevant, the study found that per capita car ownership in Los Angeles has soared since the year 2000 with the greatest growth being among low-income families. The study concludes that the future of public transit in our region will be shaped less by people who do not use vehicles and more by encouraging vehicle-owning households to use transit more. In other words, even if we are successful in

increasing transit use, and I hope we are, there will still be a need for residential parking.

While we commend the applicant for being creative in unbundling their parking we are concerned that by pricing a parking space separate from the apartment, some people may be encouraged to find parking on the street rather than pay the additional cost.

In 2012, the average two-person household in LA owned about 1.6 cars. It is unconscionable to approve a project with fewer parking spots than residential units to say nothing about the lack of parking for their visitors and restaurant staff and patrons.

In addition, to requiring at least one parking space per unit, we request that the following be conditions of any approval:

1) Mandate valet parking for all restaurant staff and customers in a private parking lot such as the Topaz Building with a contract in place prior to opening of the restaurant. This would open up 5 additional parking spaces for residents.
2) Require management to provide bicycles and scooters including electric bicycles and cargo type bicycles for use by residents.
3) Require the building management to provide a zip car or similar shared vehicles.
4) Allow some of the required long-term bicycle parking spaces to be replaced with motorcycle parking spaces.
5) Given the closeness to Harbor Blvd, designate the exit from the building as right turn only.
6) Designate the ride share zone in the plans prior to their approval

As the applicant stated, this development is on a prime property in downtown San Pedro with an unblockable Harbor View and in walking distance of downtown restaurants, shops, and theaters. We strongly recommend that the developer reconsider the mix of unit types and increase the number of larger units, including providing some three-bedroom units. Not only would this increase the availability of housing types in the downtown area, but it would also reduce the required parking.

Thank you for your consideration of our request.

SUBMITTED AT HEARING
1/23

The following is an excerpt from the January 20, 2020 edition of "CityWatch".

In summary, it indicates that density, infill projects, and mass transit does not reduce the use of vehicles and parking for those vehicles.

"For years the LA City Council and Department of City Planning have been pushing high-density residential near transit, arguing incessantly that they're doing what's necessary to get Angelenos out of their cars. How has this worked out?

It's been a disaster. In spite of the City's repeated claims that they're promoting transit-oriented development, transit ridership has been declining for years. According to the LA Department of Building and Safety, the City has issued permits for over 190,000 residential units since the beginning of this century, and many thousands of those new units have been built near major transit hubs. Large new apartment buildings have risen near Red/Purple Line stops in Downtown, Koreatown, Hollywood and North Hollywood, but instead of increasing boardings the numbers have gone down.

Ridership on the Red/Purple Line went from 47,434,969 in 2010 to 43,301,200 in 2018. In Central Hollywood, a transit hub, over 2,000 new units have been constructed over the last decade, but ridership on bus lines that serve the area is in steep decline. Overall Metro ridership is lower now than it was 30 years ago, despite the fact that City and County population numbers have grown substantially during that period. At the same time, a 2018 report from UCLA's Institute of Transportation Studies shows that per capita car ownership has soared since the year 2000. This makes it pretty clear that LA City Planning's claim that they've been promoting transit ridership by up-zoning near transit hubs has no basis in reality.

The numbers for San Francisco aren't as bad as they are in LA, but they don't show any evidence that dense new housing near rail and bus lines has boosted transit ridership. Since 2000, San Francisco's population has grown by more than 10% and, according to U.S. Census data, the City has built over 33,000 new housing units. San Francisco is already a fairly compact urban area which is well served by bus and rail. But according to the SFMTA's 2018 Mobility Trends Report, the number of average weekday transit trips on Muni, BART and Caltrain have declined during that same period. In fact, per capita transit ridership is lower than it was in the early 90s. And while car ownership has not grown at the same rate as the population has, this has not led to a decrease in car trips."

Pat Nave
San Pedro

EXHIBIT D

ENVIRONMENTAL CLEARANCE

DEPARTMENT OF CITY PLANNING

COMMISSION OFFICE
(213) 978-1300

CITY PLANNING COMMISSION

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JUSTIFICATION FOR PROJECT EXEMPTION
CASE NO. ENV-2019-2927-CE

The Planning Department determined that the City of Los Angeles Guidelines for the implementation of the California Environmental Quality Act of 1970 and the State CEQA Guidelines designate the subject project as Categorically Exempt under State CEQA Guidelines, Article 19, Section 15332 (Class 32), Case No. ENV-2019-2927-CE. The Notice of Exemption was issued on February 3, 2020.

The proposed project is the construction of a mixed-use building containing 137 dwelling units (11% or 16 units restricted to Very Low Income households) and 2,478 square feet of commercial. The project will be 8 stories and 92 feet in height, and have a Floor Area Ratio ("FAR") of 4.06:1, with 135,310 square feet of floor area. The project will provide 118 total parking spaces in three above-grade parking levels. The project will involve the demolition of the existing restaurant building, removal of 3 non-protected on-site and 2 non-protected street trees, and export of approximately 919 cubic yards of soil.

As a mixed-use, multi-family residential building, and a project which is characterized as in-fill development, the project qualifies for the Class 32 Categorical Exemption.

CEQA Determination – Class 32 Categorical Exemption Applies

A project qualifies for a Class 32 Categorical Exemption if it is developed on an infill site and meets the following criteria:

(a) **The project is consistent with the applicable general plan designation and all applicable general plan policies as well as with the applicable zoning designation and regulations.**

The subject site is located within the San Pedro Community Plan and is designated for Regional Commercial Land Uses. The site is zoned C2-2D-CPIO and is consistent with the land use designation. As shown in the case file and summarized below, the project is consistent with the General Plan, the applicable San Pedro Community Plan designation and policies, and all applicable zoning designations and regulations as permitted by Density Bonus law.

Framework Element

The General Plan designates the subject site with Regional Commercial land use designation. Regional Commercial areas are mixed-use centers that provide jobs, entertainment, culture, and serve the region. The Regional Commercial land use designation corresponds to the C2 zone, which also allows for R4 (High Medium Residential) land uses.

Per the Framework Element's Long Range Land Use Diagram for the West/Coastal Los Angeles area, the site is also within a Regional Center. A Regional Center is described as "a focal point of regional commerce, identity and activity and containing a diversity of uses such as corporate and professional offices, residential, retail commercial malls, government buildings, major health facilities, major entertainment and cultural facilities and supporting services. Generally, different types of Regional Centers will fall within the range of floor area ratios from 1.5:1 to 6.0:1. Some will only be commercially oriented; others will contain a mix of residential and commercial uses. Generally, Regional Centers are characterized by 6- to 20-stories (or higher). Regional Centers are usually major transportation hubs".

Therefore, as a 8-story mixed-use development with a maximum 4.06:1 FAR and containing a combination of residential and commercial uses as allowed by the Community Plan, the proposed project is consistent with the General Plan Framework.

Land Use Element – San Pedro Community Plan

The San Pedro CPIO District is the implementing ordinance of the San Pedro Community Plan. The intent of the San Pedro CPIO District is to preserve and strengthen the appearance, vitality, and compatibility of San Pedro's commercial, industrial, and multi-family residential areas. It provides use and design standards to shape new development and improvements to existing properties. The San Pedro CPIO District incorporates the Downtown San Pedro Community Design Overlay guidelines to further shape future development. The Regional Commercial Subarea of the CPIO seeks an airy aesthetic through well-designed, medium to high-rise buildings that preserve upland views, and maximize public spaces and connections to the waterfront. This Subarea creates an active, pedestrian-oriented district through building orientation, façade articulation, and ground floor transparency to commercial and community uses.

The proposed project is the construction of a mixed-use building containing 137 dwelling units (11% or 16 units restricted to Very Low Income households) and 2,478 square feet of commercial. The project will be 8 stories and 92 feet in height, and have an FAR of 4.06:1, with 135,310 square feet of floor area. The project will provide 118 total parking spaces in three above-grade parking levels. The project site is located at the southwest corner of Harbor Boulevard and 5th Street in the San Pedro Community Plan area. The San Pedro Community Plan Map designates the site for Regional Commercial use with corresponding zones of C2, C4, R4, RAS4, and R5. The property is zoned C2-2D-CPIO. The Regional Commercial land use and C2 zone allow mixed-use projects of the type proposed, and the subject site is located in an area where this density and project size are appropriate. Directly adjacent to the west of the subject property there is an under-construction project for a seven-story mixed-use development comprised of 404 multi-family dwelling units an approximately 5,200 square feet of ground floor commercial uses in an 83 foot tall building. Additionally, at the southwest corner of 5th Street and Palos Verdes Street, to the west of the project site is a 16-story 170-foot tall building containing 318 multi-family dwelling units and a 5-level 60-foot tall parking structure.

The project is oriented towards Harbor Boulevard with a 4,025 square foot publically accessible retail plaza, directly adjacent to the right-of-way. Section II-2.E.3 of the CPIO requires Projects with frontage on Harbor Boulevard to locate the required open space adjacent to Harbor Boulevard. Additionally, the open space shall be visible and accessible from the sidewalk and include Pedestrian Amenities and/or landscaped areas. The proposed covered retail plaza meets the intent of the Community Plan goals and policies.

Housing Element

The proposed project will result in a net increase of 137 new residential units to the City's housing stock and conforms with the applicable provisions of the Housing Element. The applicant has requested deviations from code requirements under the Density Bonus program for reduced parking, reduced setbacks, waiver of transitional height requirements, and waiver of a CPIO requirement for publically accessible open space, thereby allowing the creation of affordable units around transit stops. Pursuant to Density Bonus requirements, 11 percent (16 units) of the total units, will be set aside for Very Low Income units. Additionally, this mixed-use development in close proximity to transportation options including transit stops, and a variety of retail, commercial, entertainment, recreational, and employment opportunities. Locating new housing in this portion of San Pedro will allow residents to have better access to employment centers and places of interest in area.

In addition, the site has been identified in the 2013-2021 Housing Element's Inventory of Sites for Housing prepared by the Department of City Planning. The Inventory of Sites for Housing identifies parcels suitable for additional residential development without the need for any discretionary zoning action by the City. Therefore, the project is consistent with the Housing Element's vision of providing housing on these applicable sites.

Therefore, the proposed project is consistent with the purposes, intent and provisions of the General Plan, San Pedro Community Plan, Housing Element, and the Residential Citywide Design Guidelines by meeting several of its goals, objectives, and policies. Specifically, the project would accommodate necessary residential growth and provide a mix of apartment sizes and affordability levels, including restricted very low income units; and reinforce an existing mixed-use corridor by providing an array of retail choices, streetscape, and landscaping opportunities, and wide sidewalk that would be inviting to nearby residents and pedestrians along Harbor Boulevard, specifically through the addition of a 4,025 square foot publically accessible retail plaza adjacent to the public right-of-way.

(b) **The proposed development occurs within city limits on a project site of no more than five acres substantially surrounded by urban uses.**

The subject site is wholly within the City of Los Angeles, on a site that is approximately 0.76 acres. Lots adjacent to the subject site are developed with the following urban uses: multi-family dwellings, commercial structures, and a public park.

(c) **The project site has no value as habitat for endangered, rare or threatened species.**

The site is previously disturbed and surrounded by development and therefore is not, and has no value as, a habitat for endangered, rare or threatened species. There are no protected trees on the site, and 3 non-protected on-site and 2 non-protected street trees will be removed and replaced.

(d) **Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality.**

Regulatory Compliance Measures – The project will be subject to Regulatory Compliance Measures (RCMs), which require compliance with the City of Los Angeles Noise Ordinance, pollutant discharge, dewatering, stormwater mitigations; and Best Management Practices for stormwater runoff. More specifically, RCMs include but are not limited to the following, to ensure the project will not have significant impacts:

- **Regulatory Compliance Measure RC-AQ-1 (Demolition, Grading and Construction Activities): Compliance with provisions of the SCAQMD District Rule 403.** The project shall comply with all applicable standards of the Southern California Air Quality Management District, including the following provisions of District Rule 403:
  - All unpaved demolition and construction areas shall be wetted at least twice daily during excavation and construction, and temporary dust covers shall be used to reduce dust emissions and meet SCAQMD District Rule 403. Wetting could reduce fugitive dust by as much as 50 percent.
  - The construction area shall be kept sufficiently dampened to control dust caused by grading and hauling, and at all times provide reasonable control of dust caused by wind.
  - All clearing, earth moving, or excavation activities shall be discontinued during periods of high winds (i.e., greater than 15 mph), so as to prevent excessive amounts of dust.
  - All dirt/soil loads shall be secured by trimming, watering or other appropriate means to prevent spillage and dust.
  - All dirt/soil materials transported off-site shall be either sufficiently watered or securely covered to prevent excessive amount of dust.
  - General contractors shall maintain and operate construction equipment so as to minimize exhaust emissions.
  - Trucks having no current hauling activity shall not idle but be turned off.
- **Regulatory Compliance Measure RC-AQ-2:** In accordance with Sections 2485 in Title 13 of the California Code of Regulations, the idling of all diesel-fueled commercial vehicles (weighing over 10,000 pounds) during construction shall be limited to five minutes at any location.
- **Regulatory Compliance Measure RC-AQ-3:** In accordance with Section 93115 in Title 17 of the California Code of Regulations, operation of any stationary, diesel-fueled, compression-ignition engines shall meet specified fuel and fuel additive requirements and emission standards.
- **Regulatory Compliance Measure RC-AQ-4:** The Project shall comply with South Coast Air Quality Management District Rule 1113 limiting the volatile organic compound content of architectural coatings.
- **Regulatory Compliance Measure RC-AQ-5:** The Project shall install odor-reducing equipment in accordance with South Coast Air Quality Management District Rule 1138.
- **Regulatory Compliance Measure RC-GEO-1 (Seismic):** The design and construction of the project shall conform to the California Building Code seismic standards as approved by the Department of Building and Safety.
- **Regulatory Compliance Measure RC-NO-1 (Demolition, Grading, and Construction Activities):** The project shall comply with the City of Los Angeles Noise Ordinance and any subsequent ordinances, which prohibit the emission or creation of noise beyond certain levels at adjacent uses unless technically infeasible.

Traffic - A traffic study was prepared by KOA, dated September 2019 which concluded that the project would generate 529 daily trips, 29 a.m. peak hour trips, and 41 p.m. peak hour trips. The Department of Transportation (LADOT) reviewed the 2019 traffic study and confirmed its findings in a memo dated October 24, 2019, confirming that none of the study intersections would be significantly impacted by project-related traffic, and that the project would not result in traffic impacts on any of the studied intersections. Therefore, the project will not have any significant impacts relating to traffic.

Noise – The Project must comply with the adopted City of Los Angeles Noise Ordinances No. 144,331 and 161,574 and LAMC Section 41.40 as indicated above in RC-NO-1, LAMC Section 112.05, as well as any subsequent Ordinances, which prohibit the emission or creation of noise beyond certain levels. These Ordinances cover both operational noise levels (i.e., post-construction), and any construction noise impacts. As a result of this mandatory compliance, the proposed Project will not result in any significant noise impacts. Furthermore, the Noise Impact Analysis prepared by Urban Crossroads dated November 25, 2019 confirmed that the Project would not result in construction-related or operational noise impacts on the environment. The analysis took into account noise from construction activities, operational noise sources, and off-site noise sources. The analysis concluded that the project would not result in any significant effects relating to noise.

Air Quality – An Air Quality and Greenhouse Gas Emissions (GHG) study was prepared by Urban Crossroads, date November 26, 2019 which determined that the construction and operations of the project would result in less than significant impacts associated with air quality and GHG emissions. The Project's potential air quality effects were evaluated by estimating the potential construction and operations emissions of criteria pollutants, and comparing those levels to significance thresholds provided by the Southern California Air Quality Management District (SCAQMD). The Project's emissions were estimated using the CalEEMod 2016.3.2 model for the purposes of evaluating air quality impacts of proposed projects. The analysis took into account construction activity emissions during demolition, site preparation, grading and soil export, building construction, paving, and architectural coating, as well as effects to sensitive receptors. The analysis confirms that the Project would not exceed SCAQMD significance thresholds for air quality impacts. In addition, there are several Regulatory Compliance Measures which regulate air quality-related impacts for projects citywide as noted above.

(e) **The site can be adequately served by all required utilities and public services.**

The project site will be adequately served by all public utilities and services given that the construction of a multi-family residential building will be on a site that has been previously developed and is consistent with the General Plan. Therefore, the project meets all of the Criteria for the Class 32 Categorical Exemption.

CEQA Section 15300.2: Exceptions to the Use of Categorical Exemptions

There are five (5) Exceptions which must be considered in order to find a project exempt under Class 32:

(a) **Cumulative Impacts.** *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.*

There is a 7-story, 83-foot tall mixed use building with 404 multi-family dwelling units and approximately 5,200 square feet of ground floor commercial space, under construction abutting the subject property to the west at 550 S. Palos Verdes Street. (Case No. DIR-2016-624-CDO-SPR-DD)

While there could potentially be two projects of a similar type in the same place, all projects would be subject to the citywide Regulatory Compliance Measures as noted above. Furthermore, the project will result in less than significant impacts related to traffic, noise, and air quality, as shown above. The traffic study, by KOA, dated September 2019, accounts for ambient growth factors based on a 1.0 percent annual growth rate of existing traffic volumes in addition to trips resulting from 13 other development projects that are located within the study area, and concluded these had no traffic impacts. Therefore, the cumulative impact of successive projects of the same type in the same place, over time is less than significant, and this exception does not apply.

(b) **Significant Effect Due to Unusual Circumstances.** *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.*

The project proposes a mixed-use multi-family building in an area zoned and designated for such development. All adjacent lots are developed with multi-family dwellings, commercial structures, and public amenities including a park, and the subject site is of a similar size and slope to nearby properties. The project proposes a Floor Area Ratio (FAR) of 4.06:1 on a site that is permitted to have an FAR of 6:1 by the site's zoning. The project size and height is not unusual for the vicinity of the subject site, and is similar in scope to other existing multi-family dwellings, including the abutting property to the west which contains a 7-story, 83-foot tall mixed use building with 404 multi-family dwelling units and approximately 5,200 square feet of ground floor commercial space, currently under construction. Thus, there are no unusual circumstances which may lead to a significant effect on the environment.

(c) **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.*

The only State Scenic Highway within the City of Los Angeles is the Topanga Canyon State Scenic Highway, State Route 27, which travels through a portion of Topanga State Park. The State Route 27 is approximately 27 miles northwest of the subject site. Therefore the subject site will not create any impacts within a designated as a state scenic highway.

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

According to Envirostor, the State of California's database of Hazardous Waste Sites, neither the subject site, nor any site in the vicinity, is identified as a hazardous waste site.

(e) **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.*

The project site is not listed in the National Register of Historic Places, California Register of Historical Resources, the Los Angeles Historic-Cultural Monuments Register, and/or any local register, and was not found to be a potential historic resource based on the City's HistoricPlacesLA website or SurveyLA, the citywide survey of Los Angeles. Based on this, the project will not result in a substantial adverse change to the significance of a historic resource and this exception does not apply.

COUNTY CLERK'S USE

CITY OF LOS ANGELES
OFFICE OF THE CITY CLERK
200 NORTH SPRING STREET, ROOM 360
LOS ANGELES, CALIFORNIA 90012
CALIFORNIA ENVIRONMENTAL QUALITY ACT

CITY CLERK'S USE

NOTICE OF EXEMPTION

(California Environmental Quality Act Section 15062)

Filing of this form is optional. If filed, the form shall be filed with the County Clerk, 12400 E. Imperial Highway, Norwalk, CA 90650, pursuant to Public Resources Code Section 21152 (b). Pursuant to Public Resources Code Section 21167 (d), the filing of this notice starts a 35-day statute of limitations on court challenges to the approval of the project. Failure to file this notice with the County Clerk results in the statute of limitations being extended to 180 days.

LEAD CITY AGENCY	COUNCIL DISTRICT
City of Los Angeles Department of City Planning	15 – Buscaino

PROJECT TITLE	LOG REFERENCE
511 Harbor	ENV-2019-2927-CE

PROJECT LOCATION
511 South Harbor Boulevard, Los Angeles, CA 90731

DESCRIPTION OF NATURE, PURPOSE, AND BENEFICIARIES OF PROJECT:
The proposed project is a 7-story, 85-foot tall mixed-use development containing 79 residential dwelling units (including 10 percent of the total dwelling units for Very Low Income households) and approximately 9,807 square feet of ground-floor retail. The building will be approximately 104,535 square feet with a Floor Area Ratio ("FAR") of 3.75:1. The project provides 100 parking spaces located in one at-grade level, one mezzanine level, and one subterranean level of parking, with vehicular access off 38th Street. The project also provides 85 long-term and 10 short-term bicycle parking spaces. The main pedestrian entrance is provided on Figueroa Street. The existing commercial building and apartment building are proposed to be demolished. The project involves the removal of 8 non-protected on-site trees and 1 street tree, and export of approximately 15,000 cubic yards of soil.

NAME OF PERSON OR AGENCY CARRYING OUT PROJECT, IF OTHER THAN LEAD CITY AGENCY:
LAMF 511 Harbor, LLC

CONTACT PERSON	AREA CODE	TELEPHONE NUMBER	EXT.
Alan Como	213	847-3633	

EXEMPT STATUS: (Check One)

		STATE CEQA GUIDELINES
☐	MINISTERIAL	Sec. 15268
☐	DECLARED EMERGENCY	Sec. 15269
☐	EMERGENCY PROJECT	Sec. 15269 (b) & (c)
X	CATEGORICAL EXEMPTION	Sec. 15300 *et seq.*

Section **15332** Class **32** (State CEQA Guidelines)
Section _____ Class _____ (State CEQA Guidelines)

☐ OTHER (See Public Resources Code Sec. 21080 (b) and set forth state and City guideline provision.

JUSTIFICATION FOR PROJECT EXEMPTION (Class 32): In-fill development meeting the conditions described in CEQA Guidelines 15332: (a) The project is consistent with the applicable general plan designation and all applicable general plan policies as well as with the 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 value as 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. (e) The site can be adequately served by all required utilities and public services.

IF FILED BY APPLICANT, ATTACH CERTIFIED DOCUMENT ISSUED BY THE CITY PLANNING DEPARTMENT STATING THAT THE DEPARTMENT HAS FOUND THE PROJECT TO BE EXEMPT.

SIGNATURE	TITLE	DATE
	City Planner	01/30/2020

FEE:	RECEIPT NO.	REC'D. BY	DATE
$ 5,774	0102041058		05/16/2019

DISTRIBUTION: (1) County Clerk, (2) City Clerk, (3) Agency Record
Rev. 12-13-18

IF FILED BY THE APPLICANT:

_____ NAME (PRINTED)

_____ SIGNATURE

_____ DATE

CITY OF LOS ANGELES

INTER-DEPARTMENTAL MEMORANDUM

511 South Harbor Boulevard
DOT Case No. HRB19-108366

DATE: October 24, 2019

TO: Luciralia Ibarra, Senior City Planner,
Department of City Planning

FROM: Hamed Sandoghdar, Transportation Engineer
Department of Transportation

SUBJECT: **TRAFFIC IMPACT ASSESSMENT FOR THE PROPOSED MIXED USE RESIDENTIAL/RETAIL PROJECT LOCATED AT 511 SOUTH HARBOR BOULEVARD**

The Department of Transportation (DOT) has completed the traffic assessment of the proposed mixed use residential/retail project located at 511 South Harbor Boulevard. The project is located on the southwest corner of 5th Street and Harbor Boulevard in the community of San Pedro. This traffic assessment is based on the traffic impact analysis report prepared by KOA Corporation, received September 30, 2019. Based on DOT's traffic impact criteria, the study included the detailed analysis of four (4) signalized intersections. After a review of the pertinent data, DOT has determined that the traffic study adequately describes the project-related impacts of the proposed development.

PROJECT DESCRIPTION

The proposed project is for the construction of a mixed residential/retail complex consisting of 137 residential units, 2,129 square feet of restaurant, and 349 square feet of retail space. The existing site is currently occupied by 4,160 square feet of restaurant which will be demolished to accommodate the new development. Access for the project is proposed via a single driveway on 5st Street. The project is anticipated to be completed by the year 2021.

DISCUSSION AND FINDINGS

Trip Generation

The proposed project is estimated to generate a net increase of 529 daily trips, a net increase of 29 A.M. peak hour trips, and a net increase of 41 P.M. peak hour trips. The trip generation rates are based upon formulas published by the Institute of Transportation Engineers (ITE) Trip Generation, 10th Edition, 2017. A copy of the project study trip generation table (Table 4) is provided as **Attachment "A"** to this report.

Traffic Impacts

Based on DOT's traffic impact criteria[1], the proposed project is not expected to impose a significant level of impact at any of the four (4) study intersections. A copy of the project study intersections capacity

[1] Per the DOT Traffic Study Policies and Procedures, a significant impact is identified as an increase in the Critical Movement Analysis (CMA) value, due to project related traffic, of 0.01 or more when the final ("with project") Level of Service (LOS) is LOS E or F; an increase of 0.020 or more when the final LOS is LOS D; or an increase of 0.040 or more when the final LOS is LOS C.

and level-of-service (LOS) analysis summary tables (Tables 9 and 10) is provided as **Attachment "B"** to this report.

Congestion Management Program (CMP)

In accordance with the state-mandated Congestion Management Program (CMP), an increase in the freeway volume by 150 vehicles per hour during the A.M. or P.M. peak hours in any direction requires further analysis. A substantial change in freeway segments is defined as an increase or decrease of 2% in the demand capacity ratio when at LOS F. For purposes of CMP intersections, an increase of 50 vehicles or more during the A.M. or P.M. peak hour requires further analysis. Since the project is generating less than 50 trips during both A.M. and P.M. peak, no further analysis is needed.

PROJECT REQUIREMENTS

In response to the findings of the traffic study, DOT recommends that the following project requirements be adopted as conditions of project approval.

A. **Highway Dedication and Physical Street Improvements**
All un-improved sidewalk area adjacent to the project site shall be improved by the project. The applicant should check with the Bureau of Engineering's (BOE) Land Development Group to determine the specific highway dedication, street widening and/or sidewalk requirements for this project. These requirements must be guaranteed before issuance of any building permit through the B-permit process of the Bureau of Engineering, Department of Public Works. They must be constructed prior to issuance of any certificate of occupancy to the satisfaction of DOT and the Bureau of Engineering.

B. **Parking Requirements**
The applicant should check with the Department of Building and Safety on the number of Code-required parking spaces needed for the project.

C. **Construction Impacts**
DOT recommends that a construction work site traffic control plan be submitted to DOT's Citywide Temporary Traffic Control Office for review and approval prior to the start of any construction work. The plan should show the location of any roadway or sidewalk closures, traffic detours, haul routes, hours of operation, protective devices, warning signs and access to abutting properties. DOT also recommends that construction related traffic be restricted to off-peak hours.

D. **Site Access and Internal Circulation**
This determination does not include approval of the driveways, internal circulation and parking scheme. Adverse traffic impacts could occur due to access and circulation issues. The applicant is advised to consult with DOT for driveway locations and specifications prior to the commencement of any architectural plans, as they may affect building design. Final DOT approval shall be obtained prior to issuance of any building permits. This should be accomplished by submitting detailed site/driveway plans, at a scale of at least 1" = 40', separately to DOT's WLA/Coastal Development Review Section at 7166 West Manchester Avenue, Los Angeles 90045 as soon as possible but prior to submittal of building plans for plan check to the Department of Building and Safety. In order to minimize and prevent last minute building design changes, the applicant should contact DOT, prior to the commencement of building or parking layout design efforts, for driveway width and internal circulation requirements so that such traffic flow considerations are designed and incorporated early into

the building and parking layout plans. New driveways should be dimension per the Department of Public Works Case 2 design standard with respective 30-foot and 16-foot widths for two-way and one-way operations.

E. Development Review Fees

An ordinance adding Section 19.15 to the Los Angeles Municipal Code relative to application fees paid to DOT to permit issuance activities was adopted by the Los Angeles City Council in 2009. This ordinance identifies specific fees for traffic study review, condition clearance, and permit issuance. The applicant shall comply with any applicable fees per this ordinance.

If you have any questions, please contact me at the DOT West L.A. Planning Office at (213) 485-1062.

HS:pa

Attachments

cc: Jacob Haik, Fifteenth Council District
Crystal Killian, DOT
David Weintraub, DCP
Crystal Lee, BOE
Brian Marchetti, KOA Corporation

3. PROJECT TRAFFIC

This section defines the traffic that would be generated by the proposed Project in a three-step process including trip generation, trip distribution and trip assignment.

3.1 PROJECT TRIP GENERATION

The trip generation of the Project was calculated using nationally-accepted rates defined by *Trip Generation (10th edition)*, published by the Institute of Transportation Engineers (ITE), and is provided in Table 4.

The Project would generate 529 daily net trips, including 29 vehicle trips during the weekday a.m. peak-hour (2 inbound trips and 27 outbound trips) and 41 vehicle trips during the weekday p.m. peak-hour (25 inbound trips and 16 outbound trips). Existing land-use credits were included. All rates were based on rates defined by surveys conducted for the ITE *Trip Generation* source.

Table 4 – Project Trip Generation

Land Use	Intensity	Units	Daily	AM Peak			PM Peak		
			Total	Total	In	Out	Total	In	Out
Trip Generation Rates									
Multifamily Housing (Mid-Rise)	-	d.u.	5.44	0.36	26%	74%	0.44	61%	38%
High Turnover (Sit-Down) Restaurant	-	1,000 Sq. Ft.GFA	112.18	9.94	55%	45%	9.77	62%	38%
Shopping Center	-	1,000 Sq. Ft. GLA	37.75	0.94	62%	38%	3.81	48%	52%
Trip Generation Estimates - Proposed Uses									
Multifamily Housing (Mid-Rise)	137	d.u.	745	49	13	36	60	37	23
Proposed High Turnover (Sit-Down) Restaurant	2.129	1,000 Sq. Ft.GFA	239	21	12	9	21	13	8
Shopping Center	0.349	1,000 Sq. Ft. GLA	13	0	0	0	1	0	1
Trip Generation Credit Estimate - Existing Uses									
Existing High Turnover (Sit-Down) Restaurant	-4.169	1,000 Sq. Ft.GFA	-468	-41	-23	-18	-41	-25	-16
Total			**529**	**29**	**2**	**27**	**41**	**25**	**16**

Rates Source: ITE Trip Generation Manual, 10th Edition

3.2 PROJECT TRIP DISTRIBUTION

Trip distribution is the process of assigning the directions from which traffic will access the Project site. Trip distribution is dependent upon the land use characteristics of the Project, the local roadway network, and the general locations of other land uses to which Project trips would originate or terminate.

Figure 6 illustrates the trip distribution percentages that were utilized for the Project traffic.

3.3 PROJECT TRIP ASSIGNMENT

Based on the trip generation and distribution assumptions described above, Project traffic was assigned to the roadway system. The peak hour Project trip assignment is illustrated on Figure 7.

7. PROJECT TRAFFIC IMPACTS

7.1 DETERMINATION OF TRAFFIC IMPACTS

Traffic impacts are identified if operations of a project would result in a significant change in traffic conditions at analyzed locations.

The City of Los Angeles Department of Transportation has established specific thresholds for project-related increases in the volume-to-capacity ratio (V/C) of signalized study intersections. The following increases in peak-hour V/C ratios are considered significant impacts:

Level of Service	Volume/Capacity Ratio	Project-Related Increase in ICU Value
C	< 0.700 – 0.800	Equal to or greater than 0.040
D	< 0.800 – 0.900	Equal to or greater than 0.020
E and F	0.900 or more	Equal to or greater than 0.010

Note: Final V/C is the V/C ratio at an intersection, considering impacts from the project, ambient growth, trips from area/cumulative projects, but without proposed traffic impact mitigations

7.2 PROJECT TRAFFIC IMPACTS – EXISTING PLUS PROJECT

Table 9 provides a summary of the Project impacts under existing conditions. Traffic impacts created by the proposed Project were determined by comparing the existing scenario conditions to the existing with-Project scenario conditions.

The proposed Project would not create any significant traffic impacts at the study intersections under existing with-Project conditions, during either the weekday a.m. or p.m. peak hours. Project mitigation measures, therefore, are not required for existing conditions.

Table 9 – Determination of Project Impacts – Existing With-Project Conditions

	Study Intersections	Peak Hour	Existing Conditions		Existing with Project		Change in V/C	Sig Impact?
			CMA or Delay	LOS	CMA or Delay	LOS		
1	Gaffey St and 5th Street	AM	0.686	B	0.696	B	0.010	No
		PM	0.618	B	0.623	B	0.005	No
2	Pacific Avenue and 5th Street	AM	0.581	A	0.588	A	0.007	No
		PM	0.563	A	0.573	A	0.010	No
3	Valencia Street & 6th Street	AM	0.362	A	0.367	A	0.005	No
		PM	0.397	A	0.402	A	0.005	No
4	Witmer Street & 6th Street	AM	0.500	A	0.503	A	0.003	No
		PM	0.407	A	0.409	A	0.002	No

LOS = Level of Service; V/C = Volume to Capacity ratio shown in X.XXX format.

7.3 PROJECT TRAFFIC IMPACTS – FUTURE WITH PROJECT

Table 10 provides a summary of the Project impacts under future conditions. Traffic impacts created by the Project were determined by comparing the future without-Project conditions to the future with-Project conditions.

The proposed Project would not create any significant traffic impacts at the study intersections under future with-Project conditions, during either the weekday a.m. or p.m. peak hours. Project mitigation measures, therefore, are not required for future conditions.

Table 10 – Determination of Project Impacts – Future With-Project

	Study Intersections	Peak Hour	Existing Conditions		Future Without Project		Future with Project		Change in V/C or Delay	Sig Impact?
			V/C	LOS	CMA or Delay	LOS	CMA or Delay	LOS		
1	Gaffey St and 5th Street	AM	0.686	B	0.866	D	0.876	D	0.010	No
		PM	0.618	B	0.771	C	0.783	C	0.012	No
2	Pacific Avenue and 5th Street	AM	0.581	A	0.861	D	0.873	D	0.012	No
		PM	0.563	A	0.805	D	0.814	D	0.009	No
3	Valencia Street & 6th Street	AM	0.362	A	0.478	A	0.482	A	0.004	No
		PM	0.397	A	0.543	A	0.548	A	0.005	No
4	Witmer Street & 6th Street	AM	0.500	A	0.636	B	0.639	B	0.003	No
		PM	0.407	A	0.534	A	0.536	A	0.002	No

LOS = Level of Service; V/C = Volume to Capacity ratio shown in X.XXX format.

TRAFFIC IMPACT STUDY

511 South Harbor Boulevard, San Pedro, Los Angeles

September 2019

Prepared For:
LAMF 511 Harbor LLC
8906 West Olympic Boulevard, Suite 200
Beverly Hills, CA 90211

JB91170

Rev. 1

Prepared by:

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EXECUTIVE SUMMARY

The following summarizes the traffic study results, conclusions and recommendations:

- The traffic impact analysis methodology and data sources were defined by a Project Memorandum of Understanding (MOU), executed by the City of Los Angeles Department of Transportation (LADOT) on August 22, 2019.

- The site is located at the southwest corner of the 5th Street and Harbor Boulevard intersection, within the San Pedro area in the City of Los Angeles. The proposed Project would construct an eight-story, mixed-use building with 137 residential units, 349 square feet of retail space and 2,129 square feet of restaurant space. Currently, the Project site is occupied by a sit-down restaurant that would be demolished for the construction of the Project.

- The Project is anticipated to be completed and occupied within the year 2021.

- The Project would generate 529 daily net trips, including 29 vehicle trips during the weekday a.m. peak-hour (2 inbound trips and 27 outbound trips) and 41 vehicle trips during the weekday p.m. peak-hour (25 inbound trips and 16 outbound trips).

- Based on LADOT significant traffic impact criteria, the proposed Project would not create any significant traffic impacts at the study intersections under existing with-Project and future with-Project conditions. Therefore, mitigation measures are not required.

- The proposed Project is not anticipated to cause a significant traffic impact on any CMP arterial monitoring intersections and mainline freeway monitoring locations.

1. INTRODUCTION

KOA has been retained by LAMF 511 Harbor LLC to analyze the potential traffic impacts associated with the project. The scope and methodologies used for this traffic study were developed in consultation with City of Los Angeles staff.

KOA executed a Memorandum of Understanding (MOU) with the City of Los Angeles, via Department of Transportation (LADOT) Development Review staff, on August 22, 2019. Four intersections were defined as the study area, and new peak-period traffic counts were compiled to analyze impacts.

1.1 PROJECT DESCRIPTION

The proposed project would construct a mixed-use building at 511 South Harbor Boulevard in San Pedro within the City of Los Angeles, located at the northeast corner of the Harbor Boulevard and 5th Street intersection. The land uses include 137 residential units, 2,129 sq. ft. of sit-down restaurant and 349 sq. ft. of retail space. The Project would require demolition of an existing 4,160 sq. ft. sit-down restaurant. Project driveway access would be located on 5th street (north side of the site).

The Project is anticipated to be completed and operational within the year 2021. The proposed Project site plan is illustrated on Figure 1.

1.2 PROJECT STUDY AREA

The project study area includes the following four study intersections, located on routes between the Project site and local and regional travel routes:

1. 5th Street and Gaffey Street
2. 5th Street and Pacific Avenue
3. Harbor Boulevard and 5th Street
4. Harbor Boulevard and 1st Street

Figure 2 illustrates the study area and the locations of the study intersections.

1.3 ANALYZED SCENARIOS

Traffic impacts associated with operations of the proposed Project were analyzed at the study intersections for the weekday a.m. and p.m. peak-hour periods.

The study included the analysis of the following traffic scenarios:

- Existing
- Existing with-Project
- Future without-Project
- Future with-Project

FIGURE 1

511 Harbor San Pedro Mixed-Use

Project Site Plan

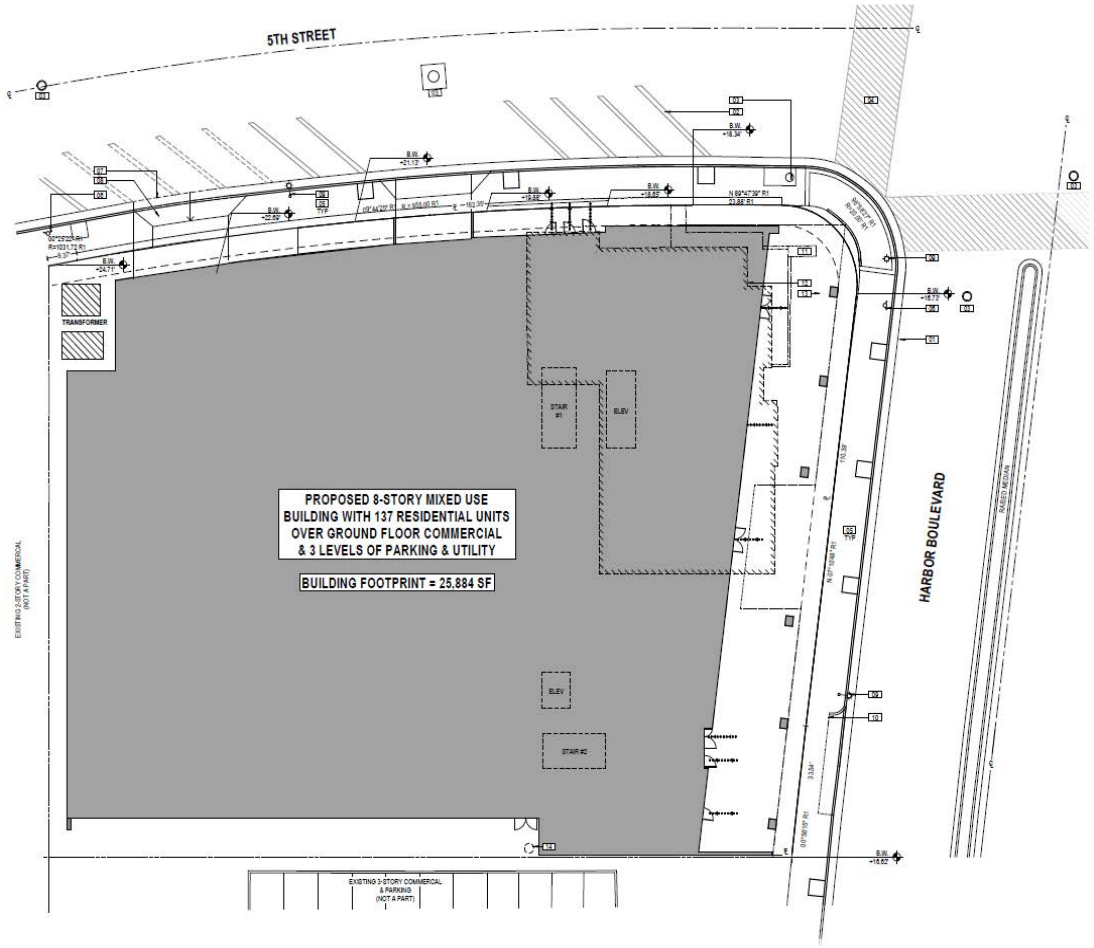
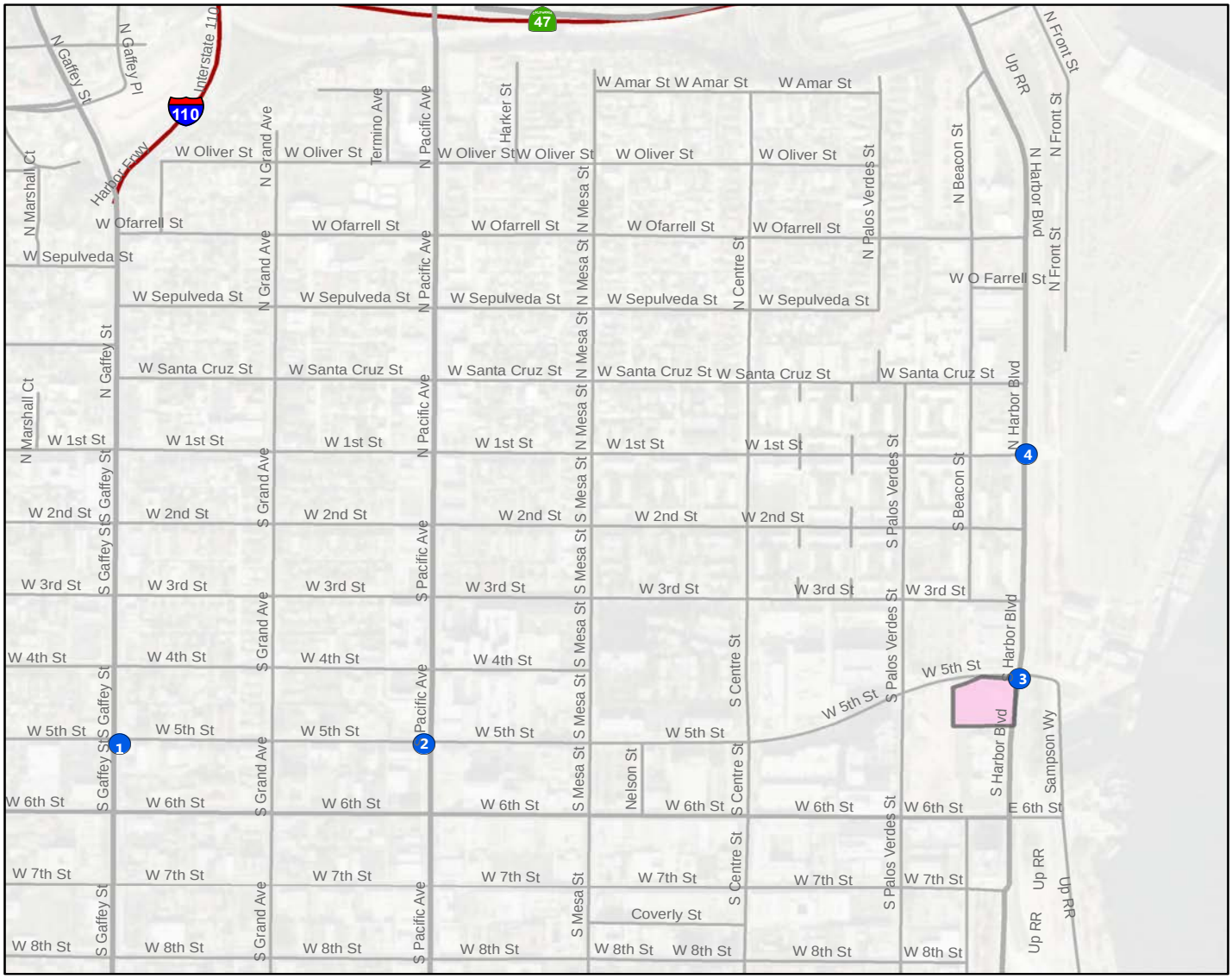


FIGURE 2

511 Harbor San Pedro Mixed-Use

Location of Study Intersections



0 0.25 0.5 Miles

Study Intersections

- Study Intersection
- Project Site

1.4 ANALYSIS METHODOLOGY

KOA coordinated with City staff as the first step in the traffic analysis, in order to define the study area and other major details through the Project traffic MOU. The following text describes the study methodology for this report.

Existing Conditions

Existing traffic conditions were defined by new traffic counts. Traffic counts were conducted on Wednesday September 11, 2019 between 7:00 a.m. to 10:00 a.m. and 3:00 p.m. to 6:00 p.m. Fieldwork within the study area was undertaken to identify the condition of key study area roadways including traffic control and approach lane configurations at each study intersection, and on-street parking restrictions.

The existing level of service (LOS) at each of the study intersections is discussed in Section 2 of this report.

Project Trip Generation and Distribution

Project trip generation was based on land use intensities and trip rates defined by *Trip Generation, 10th Edition,* published by the Institute of Transportation Engineers (ITE). The trip generation and distribution calculations are discussed in Section 3 of this report.

Existing with-Project Conditions

Based on the projected Project traffic and the traffic count totals, an Existing plus-Proposed Project conditions scenario was analyzed to provide a California Environmental Quality Act (CEQA) analysis that included existing baseline conditions.

The level of service for existing with-Project conditions at the study intersections is discussed in Section 4 of this report.

Future without-Project Conditions

In order to account for traffic growth in the study area, an ambient/background traffic growth rate was applied to the traffic counts. Traffic from related/cumulative projects (approved and pending developments) was also added to the study area. The levels of service at the study intersections for future without-Project conditions are discussed in Section 5 of this report.

Future with-Project Conditions

Based on the future without-Project volumes plus traffic from the proposed Project, the future with-Project traffic volume conditions were determined and analyzed. The levels of service for this scenario are discussed in Section 6 of this report.

Level of Service Methodology

For analysis of Level of Service (LOS) at signalized intersections, LADOT has designated the Circular 212 Planning methodology as the desired tool. The concept of roadway level of service under the Circular 212 methodology is calculated as the volume of vehicles that pass through the facility divided by the capacity of that facility. A facility is "at capacity" (V/C of 1.00 or greater) when extreme congestion occurs. This volume/capacity ratio value is a function of hourly volumes, signal phasing, and approach lane configuration on each leg of the intersection.

Level of service values range from LOS A to LOS F. LOS A indicates excellent operating conditions with little delay to motorists, whereas LOS F represents congested conditions with excessive vehicle delay. LOS E is typically defined as the operating "capacity" of a roadway. Table 1 defines the level of service criteria applied to the study intersections.

Table 1 defines the level of service criteria applied to the study intersections.

Table 1 – Level of Service Definitions

Level of Service	Definition	Volume-to-Capacity Ratio
A	Excellent operation. Free-flow speeds prevail. Vehicles are almost unimpeded in their ability to maneuver within the traffic stream.	0.00–0.600
B	Very good operation. Reasonably free-flow speeds are maintained. The ability to maneuver within traffic is only slightly restricted.	0.601–0.700
C	Good operation. Flow with speeds at or near free-flow speed of the roadway. Freedom to maneuver within the traffic stream is noticeably restricted and lane changes require more care and vigilance on the part of the driver.	0.701–0.800
D	Fair operation. Speeds begin to decline slightly with increasing flows. In this range, density begins to increase somewhat more quickly with increasing flow. Freedom to maneuver within the traffic stream is noticeably limited.	0.801–0.900
E	Poor operation. Operation at capacity with no usable gaps in the traffic stream. Any disruption to the traffic stream has little or no room to dissipate.	0.901–1.000
F	Forced flow. Represents jammed conditions. Backups from locations downstream or on the cross street may restrict or prevent movements of vehicles out of the intersection approach lanes; therefore, volumes carried are not predictable. Potential for stop and go type traffic flow.	> 1.000

Source: Highway Capacity Manual, Special Report 209, Transportation Researach Board, Washington D.C., 2000 and Interim Materials on Highway Capacity, NCHRP Circular 2012, 1982

Significant Traffic Impacts

Traffic impacts are identified if a proposed development will result in a significant change in traffic conditions at a study intersection. A significant impact is typically identified if project-related traffic will cause service levels to deteriorate beyond a threshold limit specified by the overseeing agency. Impacts can also be significant if an intersection is already operating below acceptable level of service values and project traffic will cause a further decline below a threshold.

As defined by the LADOT traffic study guidelines, significant impacts of a proposed project on a facility must be mitigated to a level of insignificance, where feasible. Determination of potential significant traffic impacts due to the proposed Project is discussed in Section 7 of this report.

2. EXISTING CONDITIONS

This section describes the existing conditions within the study area in terms of roadway facilities, transit service and traffic operating conditions.

2.1 EXISTING ROADWAY SYSTEM

All the roadway classifications are based off the Mobility plan 2035 element from the City of Los Angeles General Plan. The key roadways within the study area are described here. The discussion is limited to specific roadways that traverse the study intersections and serve the Project site. Figure 3 illustrates the existing traffic controls and approach lane geometries at the study intersections.

Gaffey Street is classified as a Boulevard II roadway north of 9th street and an Avenue II south of 9th Street. This roadway provides two travel lanes in each direction. On-street parking is generally prohibited on both sides of the roadway with the exception of the block north of 5th street where parking is permitted on the east side of the street. The posted speed limit is typically 35 miles per hour.

Harbor Boulevard is classified as an Avenue I roadway and runs north to south along the study area. It provides two travel lanes in both directions. On-street parking is generally permitted on both sides of the roadway. The posted speed limit is 35 miles per hour.

Pacific Avenue is classified as an Avenue II roadway. It provides one travel lane in each direction between 6th street and Wilshire Blvd. On-street parking is permitted on both sides of the roadway. The posted speed limit is 35 miles per hour.

1st Street is classified as an Avenue II roadway. It provides one travel lane in each direction. On-street parking is permitted. The posted speed limit is 30 miles per hour.

5th Street is classified as an Avenue II roadway that runs east to west along the study area. It provides one travel lane in each direction. On-street parking is permitted on both sides of the roadway. The posted speed limit is 25 miles per hour.

2.2 EXISTING TRANSIT SERVICE

The Project study area is served by public bus transit lines operated by the Los Angeles County Metropolitan Transit Authority (Metro), the City of Los Angeles as DASH, Palos Verdes Peninsula Transit Authority and Amtrak Thruway Service. Table 2 summarizes the Project study area transit services.

Table 2 – Existing Transit Service

Agency	Line	From	To	Via	Peak Frequency
Amtrak	Thruway Connector	San Pedro Public Library	Los Angeles (Union Station)	Gaffey St and 9th St	*
LADOT	Commuter Express - 142	Long Beach	LA Water Front	Ocean Blvd, CA-47, Gaffey, 7th St, Sampson Way	30 minutes
LADOT	Dash San Pedro	Northwest San Pedro	Central San Pedro	Western Ave, Summerland Ave, Gaffey St, 19th St, 25th St	20 minutes
Metro	246	Harbor Gateway Transit Center	Point Fermin	Avalon Blvd and Pacific Avenue	25 minutes
Metro	Silverline 950	El Monte Station	San Pedro	I-110 Harbor Transitway	15 minutes
Metro	205	Willowbrook/Rosa Park Station	San Pedro Waterfront	Wilmington Ave, Vermont Ave, Western Ave	29 minutes
Metro	550	DTLA	San Pedro	Harbor Transitway, Normandie Ave, Gaffey St	30 minutes
PVPTA	225	Torrance	7th/Pacific	Palos Verdes Dr North	45-50 minutes

** Amtrak Thruway Connections are based on individual ticket reservations which vary with the purchase of a train ticket and cannot be sold as bus service alone*

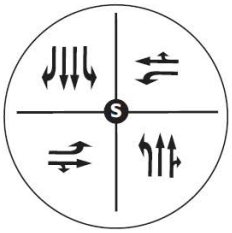
The routes of these transit services are illustrated on Figure 4.

FIGURE 3

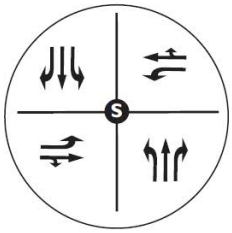
511 Harbor San Pedro Mixed-Use

Existing Lane Configuration

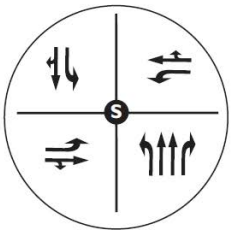
#1 Gaffey Street & 5th Street



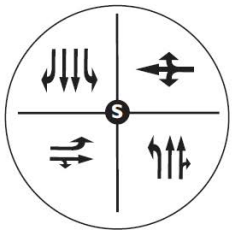
#2 Pacific Avenue & 5th Street



#3 Harbor Boulevard & 5th Street



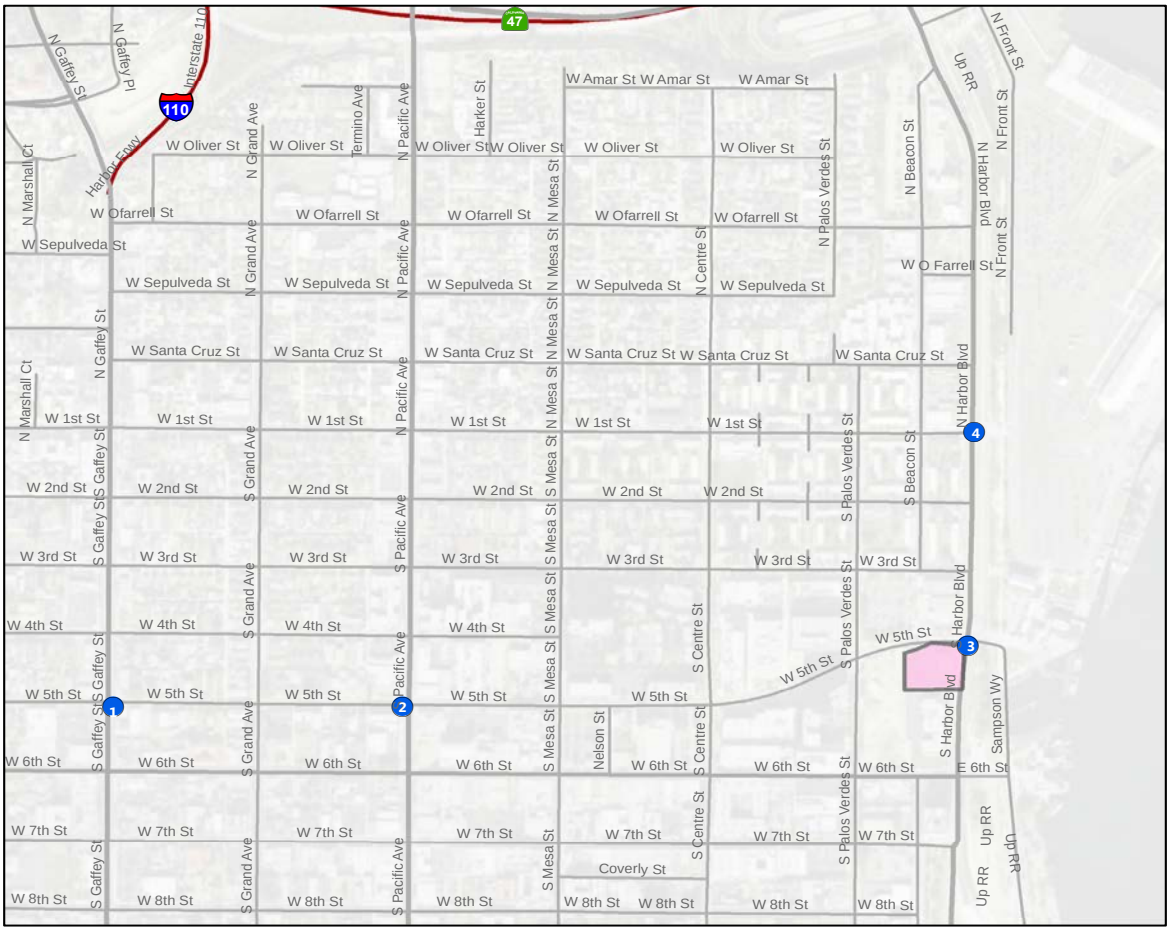
#4 Harbor Boulevard & 1st Street



LANE CONFIGURATION

Signalized Intersection

Intersection Lane Geometry



Study Intersections

Study Intersection

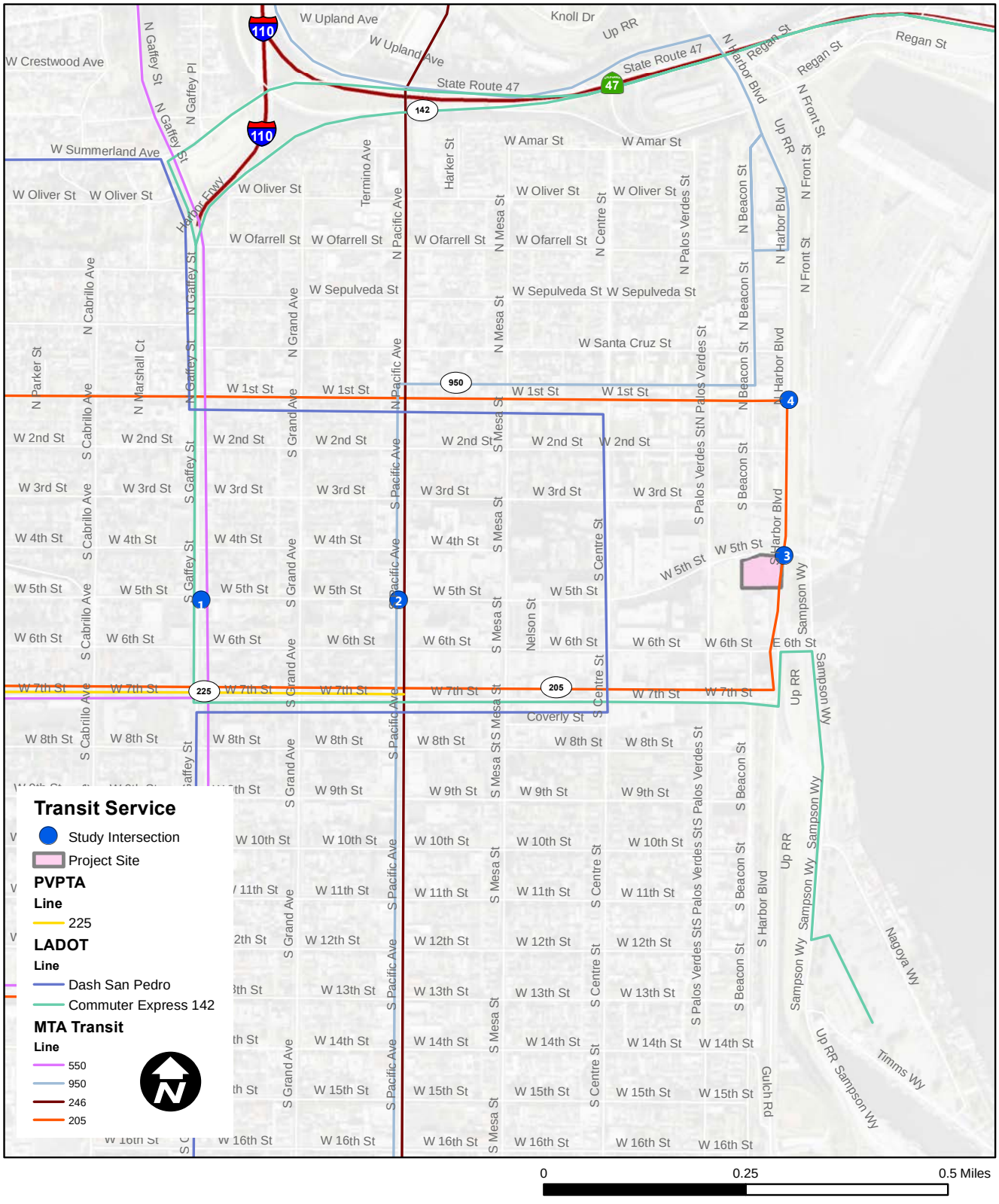
Project Site

0 0.25 0.5 Miles

FIGURE 4

511 Harbor San Pedro Mixed-Use

Existing Transit Services



2.3 EXISTING TRAFFIC VOLUMES

New traffic counts were conducted on the weekday of September 11, 2019 during the 7:00 a.m. to 10:00 a.m. and 3:00 p.m. to 6:00 p.m. timeframes. The traffic count data sheets are provided in Appendix B.

2.4 EXISTING INTERSECTION LEVEL OF SERVICE

Based on the intersection lane configurations and the existing traffic volumes, volume-to-capacity ratios and corresponding levels of service (LOS) were determined for each of the study intersections during the weekday a.m. and p.m. peak hours.

Table 3 summarizes the volume-to-capacity ratios and LOS values for existing traffic conditions.

Table 3 – Intersection Performance – Existing Conditions

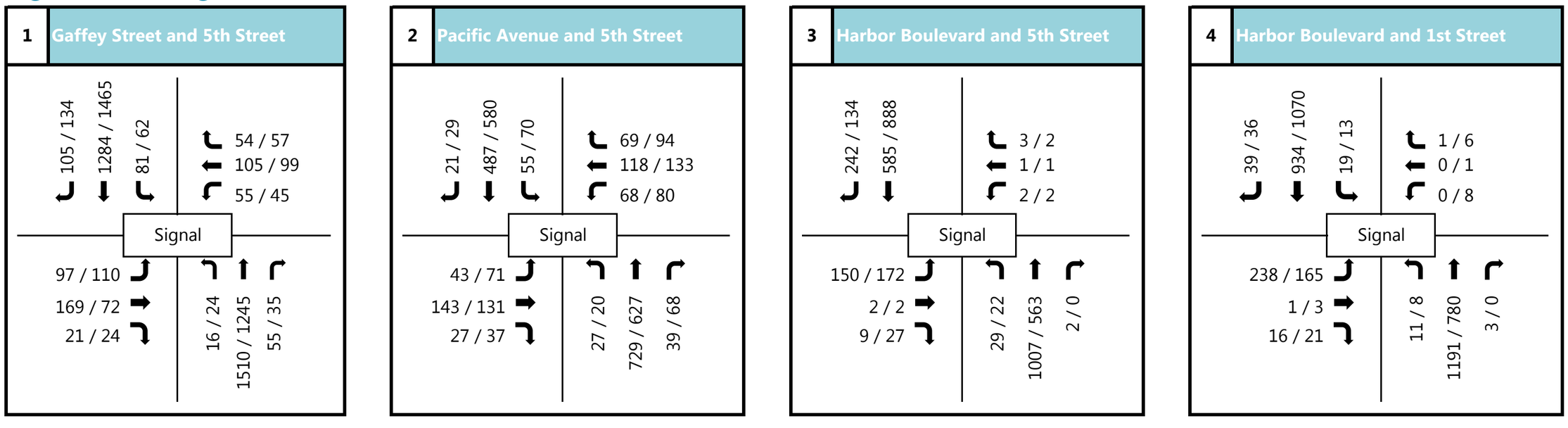
Study Intersections		AM Peak		PM Peak	
		V/C	LOS	V/C	LOS
1	Gaffey St and 5th Street	0.686	B	0.618	B
2	Pacific Avenue and 5th Street	0.581	A	0.563	A
3	Valencia Street & 6th Street	0.362	A	0.397	A
4	Witmer Street & 6th Street	0.500	A	0.407	A

LOS = Level of Service; V/C = Volume to Capacity ratio shown in X.XXX format.

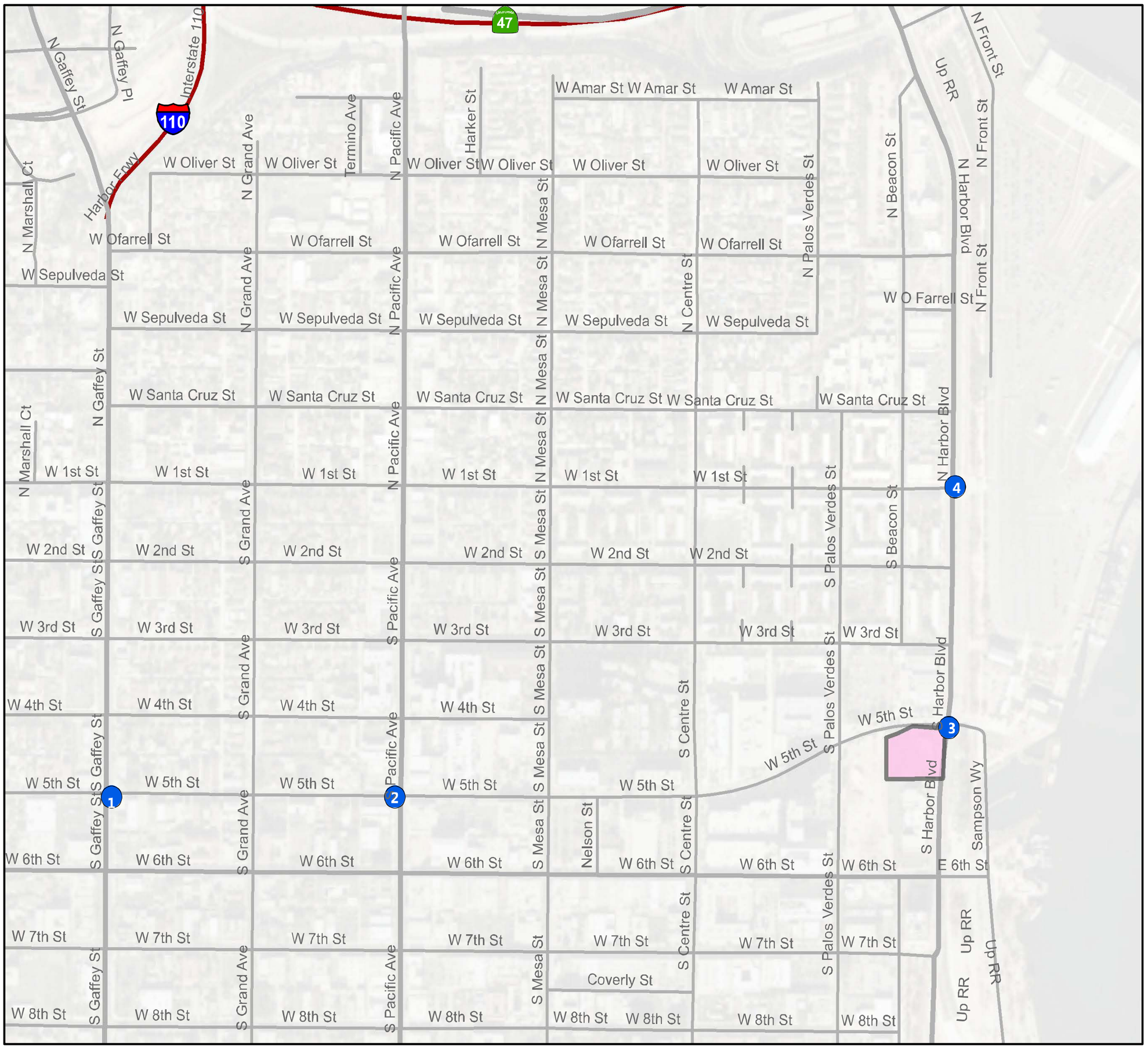
All of the study intersections are currently operating at acceptable LOS B or better during the weekday a.m. and p.m. peak hours.

The existing weekday p.m. peak-hour and peak hour turning movement volumes are illustrated on Figure 5. The existing traffic analysis scenario worksheets are provided in Appendix C.

Figure 5 - Existing AM/PM Peak Hour Traffic Volumes



XX/XX AM /PM Peak Hour Traffic Volumes



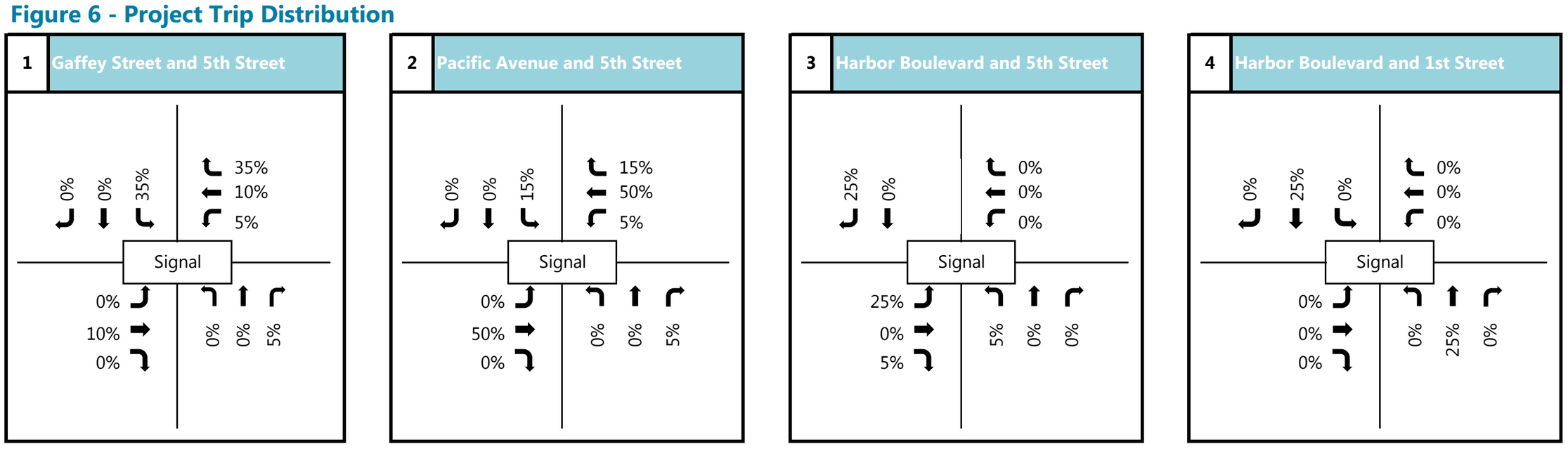
Study Intersections

Study Intersection

Project Site

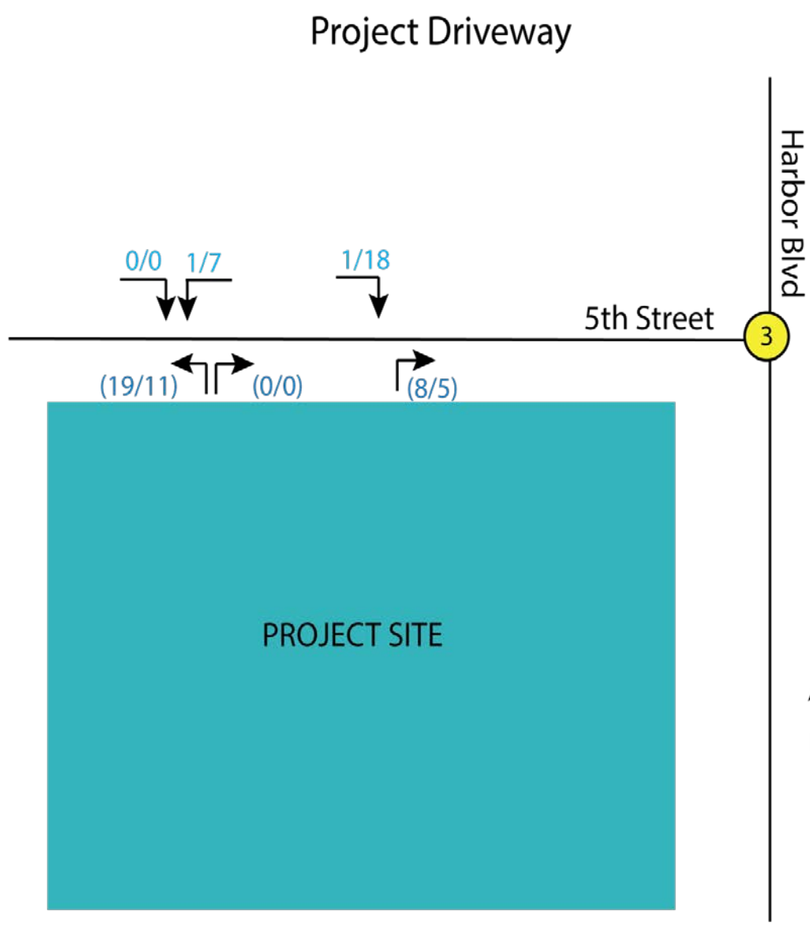
0 0.25 0.5 Miles

Figure 6 - Project Trip Distribution



XX% Project Trip Distribution





Study Intersections

- Study Intersection
- Project Site

0 0.25 0.5 Miles

AM/PM -Inbound Trips
(AM/PM) -Outbound Trips
(#) -Study Intersection

3. PROJECT TRAFFIC

This section defines the traffic that would be generated by the proposed Project in a three-step process including trip generation, trip distribution and trip assignment.

3.1 PROJECT TRIP GENERATION

The trip generation of the Project was calculated using nationally-accepted rates defined by *Trip Generation (10th edition)*, published by the Institute of Transportation Engineers (ITE), and is provided in Table 4.

The Project would generate 529 daily net trips, including 29 vehicle trips during the weekday a.m. peak-hour (2 inbound trips and 27 outbound trips) and 41 vehicle trips during the weekday p.m. peak-hour (25 inbound trips and 16 outbound trips). Existing land-use credits were included. All rates were based on rates defined by surveys conducted for the ITE *Trip Generation* source.

Table 4 – Project Trip Generation

Land Use	Intensity	Units	Daily	AM Peak			PM Peak		
			Total	Total	In	Out	Total	In	Out
Trip Generation Rates									
Multifamily Housing (Mid-Rise)	-	d.u.	5.44	0.36	26%	74%	0.44	61%	38%
High Turnover (Sit-Down) Restaurant	-	1,000 Sq. Ft.GFA	112.18	9.94	55%	45%	9.77	62%	38%
Shopping Center	-	1,000 Sq. Ft. GLA	37.75	0.94	62%	38%	3.81	48%	52%
Trip Generation Estimates - Proposed Uses									
Multifamily Housing (Mid-Rise)	137	d.u.	745	49	13	36	60	37	23
Proposed High Turnover (Sit-Down) Restaurant	2.129	1,000 Sq. Ft.GFA	239	21	12	9	21	13	8
Shopping Center	0.349	1,000 Sq. Ft. GLA	13	0	0	0	1	0	1
Trip Generation Credit Estimate - Existing Uses									
Existing High Turnover (Sit-Down) Restaurant	-4.169	1,000 Sq. Ft.GFA	-468	-41	-23	-18	-41	-25	-16
Total			**529**	**29**	**2**	**27**	**41**	**25**	**16**

Rates Source: ITE Trip Generation Manual, 10th Edition

3.2 PROJECT TRIP DISTRIBUTION

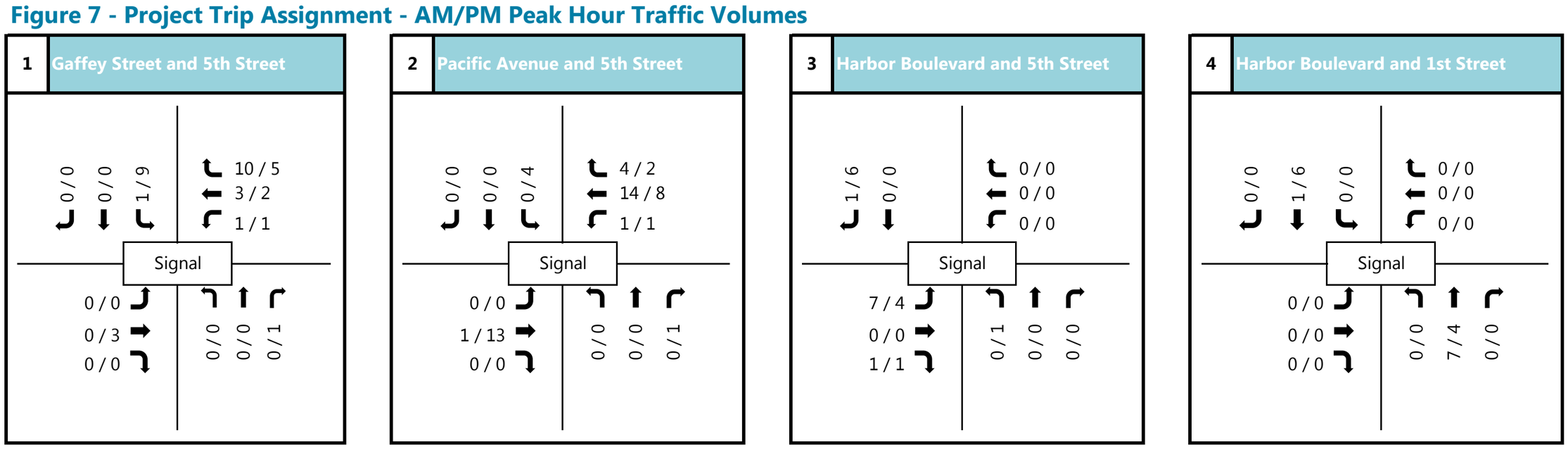
Trip distribution is the process of assigning the directions from which traffic will access the Project site. Trip distribution is dependent upon the land use characteristics of the Project, the local roadway network, and the general locations of other land uses to which Project trips would originate or terminate.

Figure 6 illustrates the trip distribution percentages that were utilized for the Project traffic.

3.3 PROJECT TRIP ASSIGNMENT

Based on the trip generation and distribution assumptions described above, Project traffic was assigned to the roadway system. The peak hour Project trip assignment is illustrated on Figure 7.

Figure 7 - Project Trip Assignment - AM/PM Peak Hour Traffic Volumes



XX/XX AM /PM Peak Hour Traffic Volumes

4. EXISTING WITH PROJECT CONDITIONS

This section documents existing traffic conditions at the study intersections with the addition of Project-generated traffic. Traffic volumes for these conditions were derived by adding Project trips to the existing traffic volumes.

Table 5 summarizes the resulting operational data for the study intersections under existing with-Project conditions. The traffic analysis output for this scenario is provided within the CMA worksheets in Appendix C.

Table 5 – Intersection Performance –
Existing With-Project

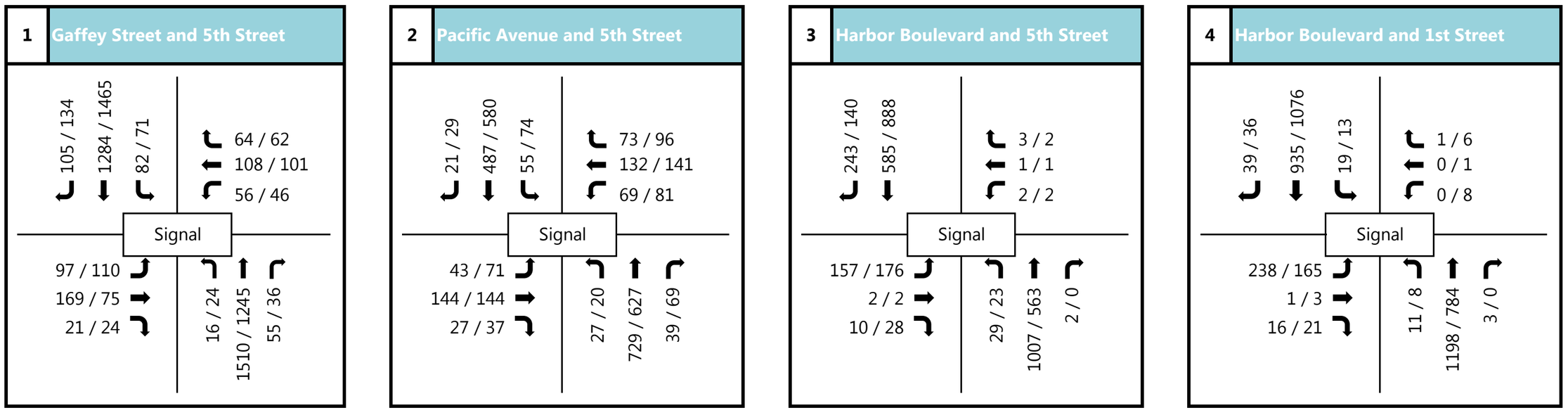
Study Intersections		AM Peak		PM Peak	
		V/C	LOS	V/C	LOS
1	Gaffey St and 5th Street	0.696	B	0.623	B
2	Pacific Avenue and 5th Street	0.588	A	0.573	A
3	Valencia Street & 6th Street	0.367	A	0.402	A
4	Witmer Street & 6th Street	0.503	A	0.409	A

LOS = Level of Service; V/C = Volume to Capacity ratio shown in X.XXX format.

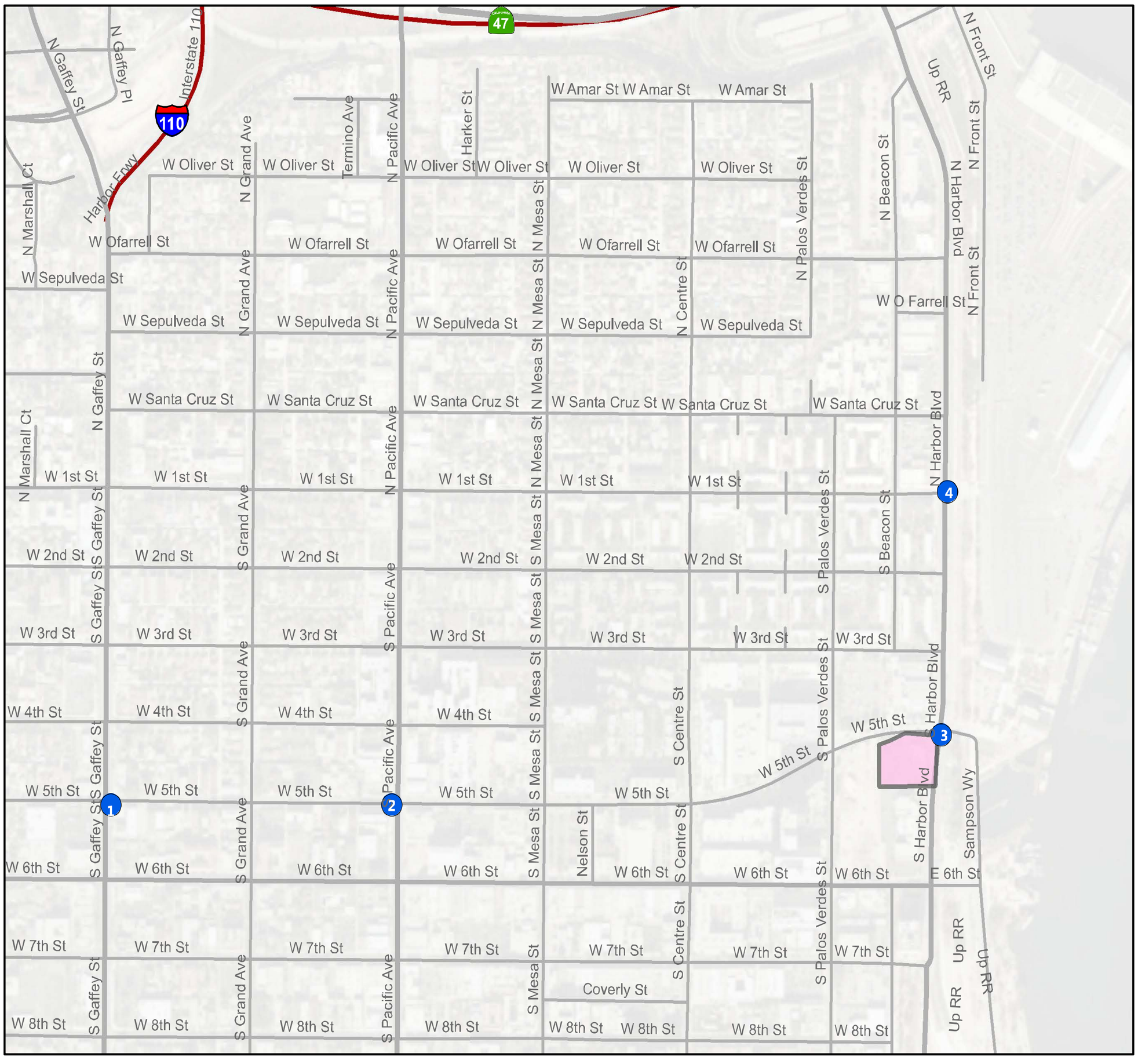
All of the study intersections would continue to operate at acceptable LOS B or better during the weekday a.m. and p.m. peak hour periods.

The existing with-Project traffic volumes for the analyzed peak hours are illustrated on Figure 8.

Figure 8 - Existing With-Project - AM/PM Peak Hour Traffic Volumes



XX/XX AM /PM Peak Hour Traffic Volumes



Study Intersections

- Study Intersection
- Project Site

0 0.25 0.5 Miles

5. FUTURE WITHOUT PROJECT CONDITIONS

This section provides an analysis of future traffic conditions in the study area with cumulative/area project trips and background growth added, but without Project traffic. The proposed Project is anticipated to be completed by 2021, and therefore this defined the future analysis year.

5.1 AMBIENT GROWTH

In order to acknowledge regional population and employment growth outside of the study area, an ambient/background traffic growth rate of one percent per year was applied to the existing traffic counts.

5.2 AREA PROJECTS

Traffic from related/area projects (approved and pending developments) was also included in the analysis. A total of 13 related projects in the City of Los Angeles were identified for inclusion.

Table 6 provides the trip generation estimates for the related/area projects that were identified during coordination with the City of Los Angeles, and the project locations are illustrated on Figure 9.

Table 6 – Area Projects Trip Generation Estimate

No	Project Name	Address	Land Use	Intensity	Units	Daily	AM Peak Hour			PM Peak Hour		
							Total	% In	% Out	Total	% In	% Out
1	City Dock #1 *	2200 S Signal Street	Industrial	87.603	Square Foot Gross Area (1,000s)	1,037	104	52	52	104	52	52
				234.780		1,889	189	94	94	189	94	94
				234.780		2,926	293	146	146	293	146	146
2	Gas Station with 24hr-Mini Mart	305 N Gaffey Street	Gas/Service Station with Convenience Market	12	Fueling Positions	1,953	122	61	61	161	80	81
3	Public Charter High School	461 W 9th Street	High School	600	Students	713	239	163	76	59	28	31
4	550 S Palos Verdes	550 S Palos Verdes Street	Multifamily Housing (Mid-Rise)	412	Dwelling Units	2,740	210	42	168	255	166	89
			Retail	38.000	Square Foot Gross Area (1,000s)	2,902	214	44	170	261	169	92
			General Office	14.875		(164)	-23	-20	-3	-22	-4	-18
5	Mixed Use	533 S Nelson Street	Multifamily Housing (Mid-Rise)	47.000	Dwelling Units	752	67	34	33	76	41	35
6	Fast Food Restaurant with Drive- Thru	670 W 4th Street	Fast-Food with Drive-Thru Window	2.619	Square Foot Gross Leasable Area (1,000s)	630	57	29	28	41	21	20
7	COU for Historic Assisted Living to Mixed Use	921 S Beacon Street	Mixed Use	-	Other	1,114	98	43	55	96	64	32
8	New Mixed Use-98 Apts	444 W 5th Street	Multifamily Housing (Mid-Rise)	106	Occupied Units	504	45	12	33	45	29	16
			Shopping Center	3.000	KSF GLA	113	3	2	1	11	5	6
9	Condominium 94 Units	319 N Harbor Blvd	Multifamily Housing (Low Rise)	94	Dwelling Units	688	43	5	33	53	33	20
10	Hotel	544 S Pacific Avenue	Hotel	80	Rooms	757	35	21	14	67	31	36
11	CD 15 Beacon Street Bridge HSG	515 N Beacon Street	Other	102	Beds	130	14	6	8	14	8	6
12	Harbor Highlands Homes	1363 N Gaffey Street	Single-Family Homes	135	Dwelling Units	1,150	77	8	69	115	79	36
13	CD 15 Storage at Harbor Police	2175 W John S Gibson Blvd	Other	165	Dwelling Units	30	4	2	2	4	2	2
TOTAL						**19,864**	**1,790**	**745**	**1,041**	**1,821**	**1,045**	**777**

Project and trips source: LADOT Development Review

** Peak-hour trips not provided. 10 percent of daily factor assumed for each peak hour.*

The area project trip assignment volumes for the a.m. and p.m. peak hours are provided on Figure 10.

5.3 FUTURE WITHOUT PROJECT INTERSECTION LEVEL OF SERVICE

Table 7 summarizes the resulting operational data at the study intersections under this scenario. Levels of service would worsen to LOS D at some locations.

The traffic analysis output for this scenario is provided within the CMA worksheets in Appendix C.

Table 7 – Intersection Performance –
Future without-Project

Study Intersections		AM Peak		PM Peak	
		V/C	LOS	V/C	LOS
1	Gaffey St and 5th Street	0.866	D	0.771	C
2	Pacific Avenue and 5th Street	0.861	D	0.805	D
3	Valencia Street & 6th Street	0.478	A	0.543	A
4	Witmer Street & 6th Street	0.636	B	0.534	A

LOS = Level of Service; V/C = Volume to Capacity ratio shown in X.XXX format.

Intersection 1 would operate at an LOS of D during the a.m. peak hour period while Intersection 2 would operate at an LOS of D during the a.m. and p.m. peak hour period, the remaining two study intersections would continue to operate at LOS B or better during the weekday p.m. peak hour and peak hour period.

The future without-Project traffic volumes for the weekday a.m. and p.m. peak hours are illustrated on Figure 11.

FIGURE 9

511 Harbor San Pedro Mixed-Use

Location of Related Projects

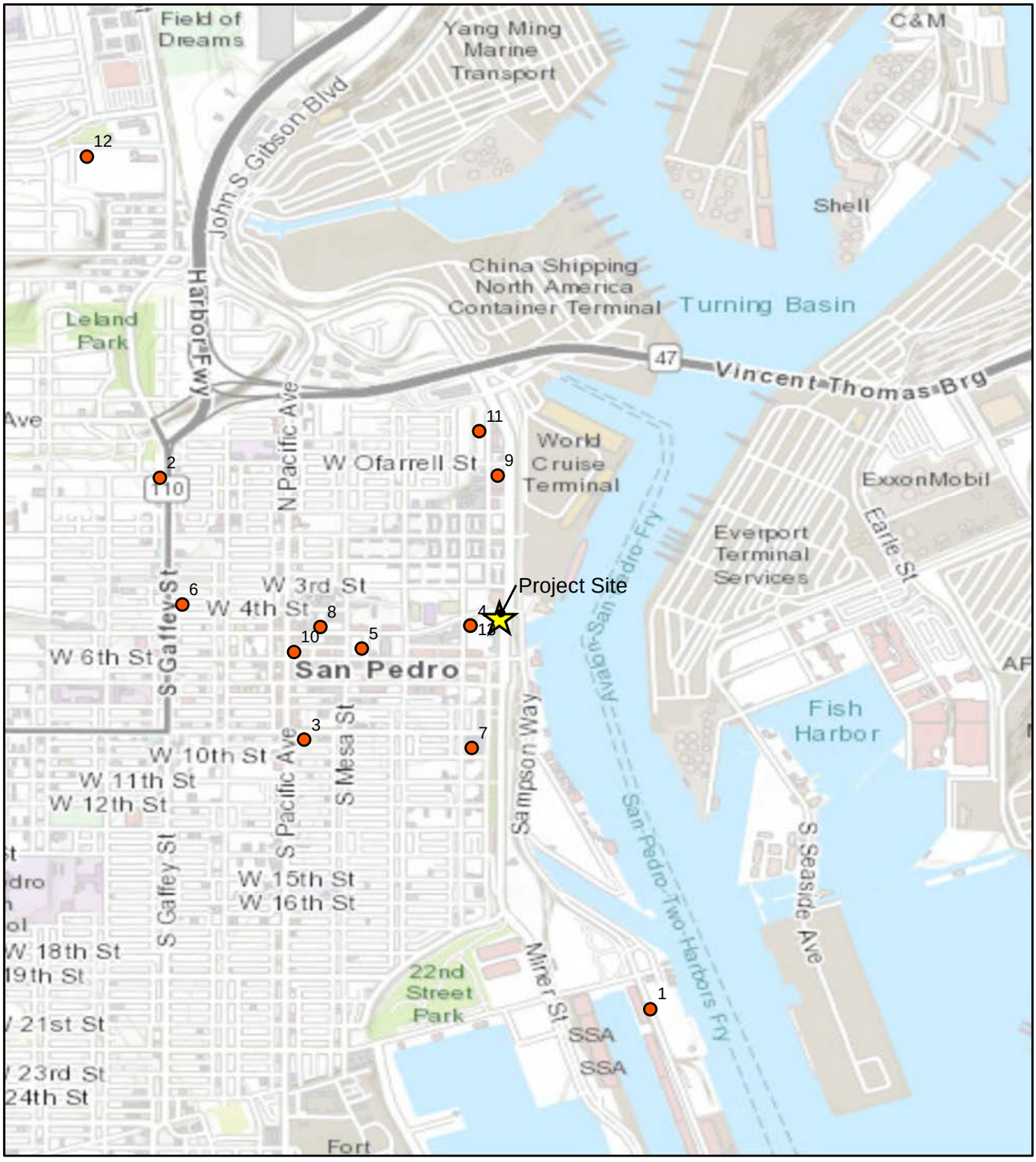
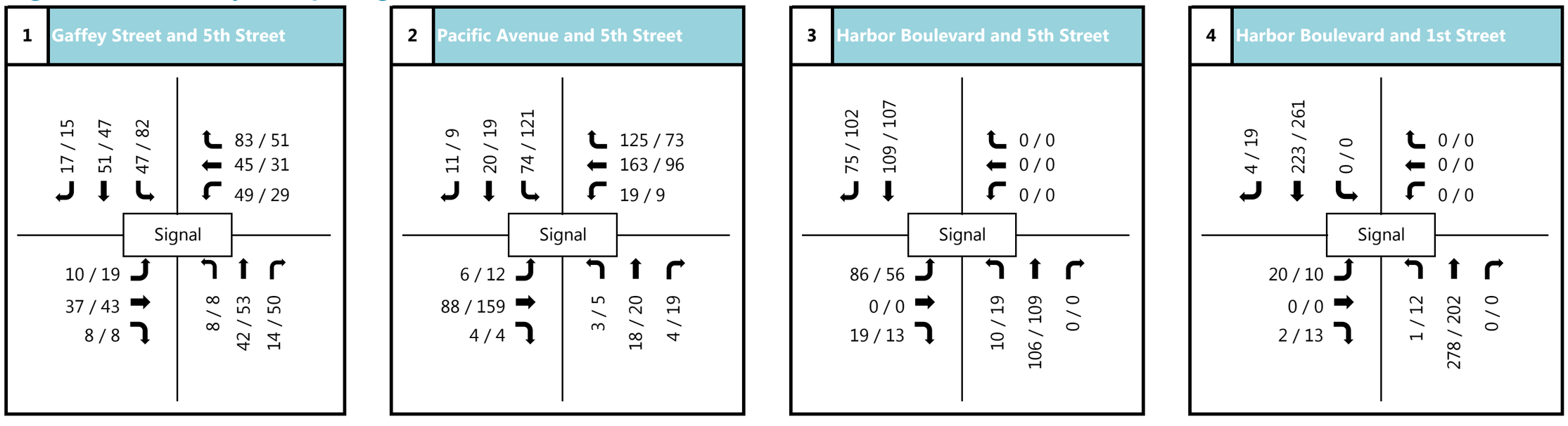
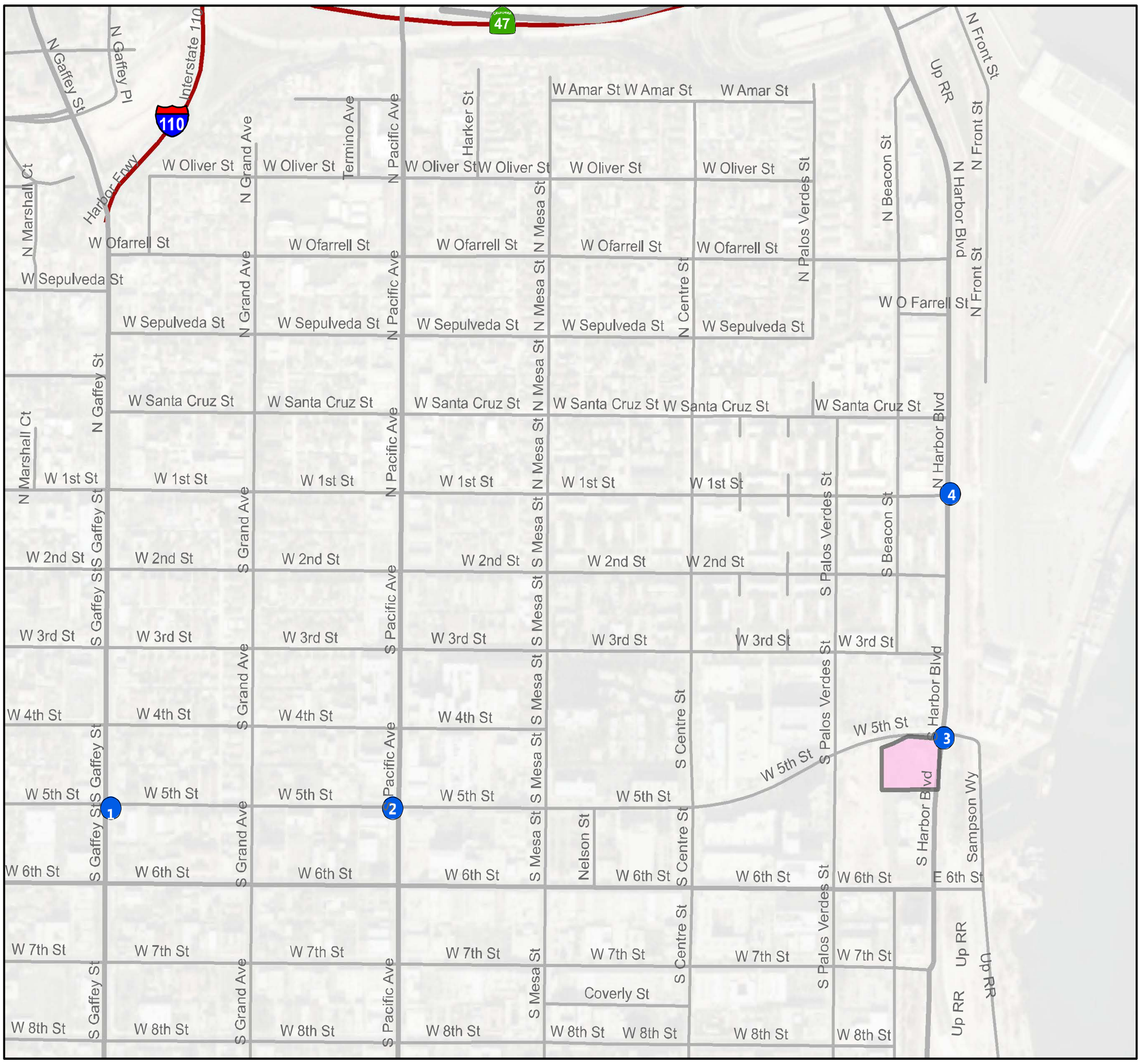


Figure 10 - Area Project Trip Assignment - AM/PM Peak Hour



XX/XX AM /PM Peak Hour Traffic Volumes

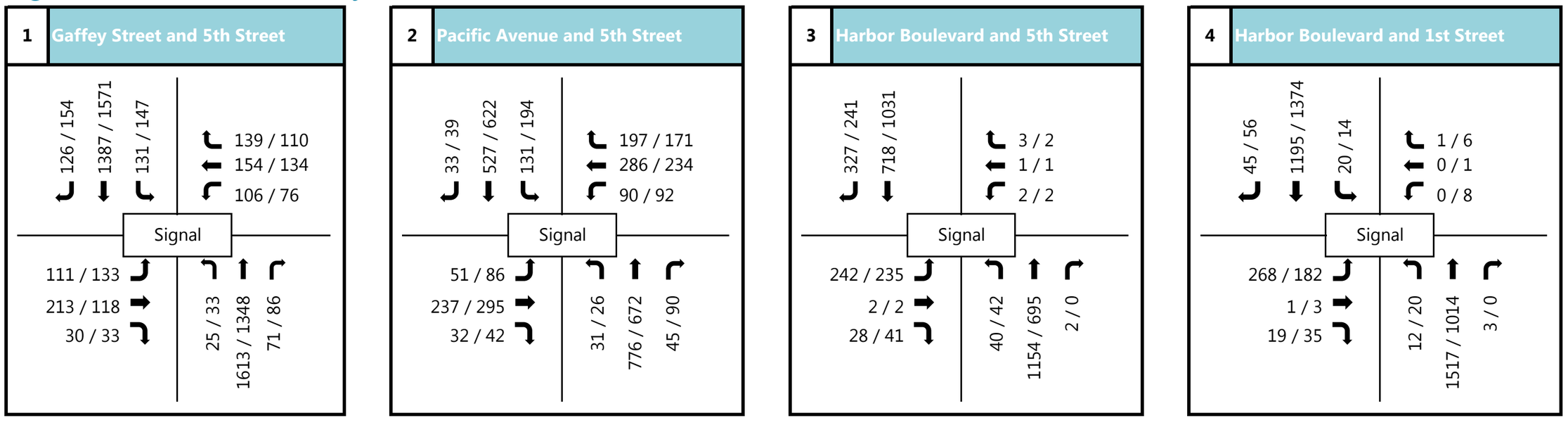


Study Intersections

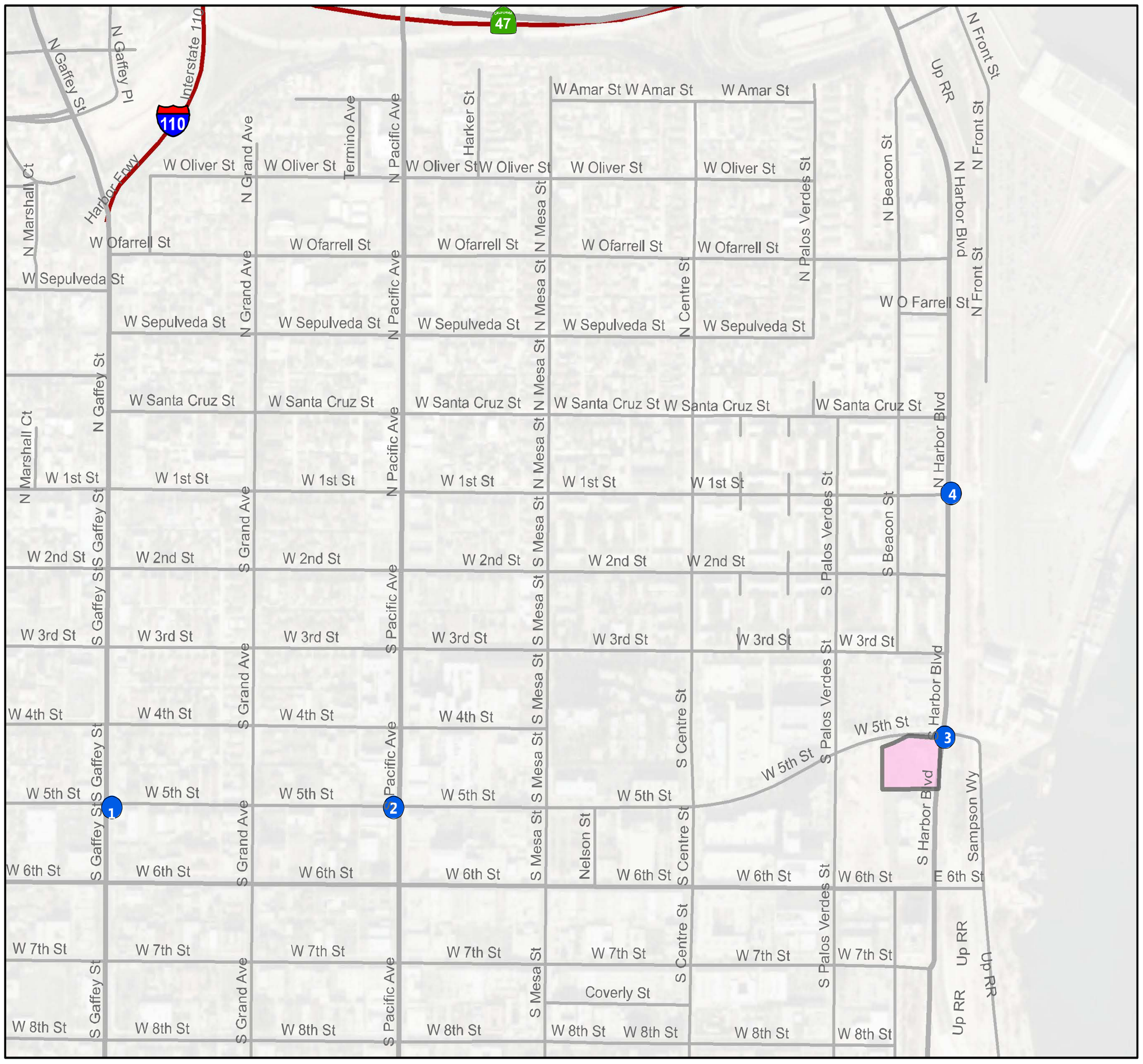
- Study Intersection
- Project Site

0 0.25 0.5 Miles

Figure 11 - Future Without Project - AM/PM Peak Hour Traffic Volumes



XX/XX AM /PM Peak Hour Traffic Volumes



Study Intersections

- Study Intersection
- Project Site

0 0.25 0.5 Miles

6. FUTURE WITH PROJECT CONDITIONS

This section documents future traffic conditions at the study intersections with the addition of Project-generated traffic. Traffic volumes for these conditions were derived by adding Project trips to the future without-Project scenario volumes.

Table 8 summarizes the resulting operational data at the study intersections for future with-Project traffic conditions. The traffic analysis output for this scenario is provided within the CMA worksheets in Appendix C.

Table 8 – Intersection Performance –
Future with-Project

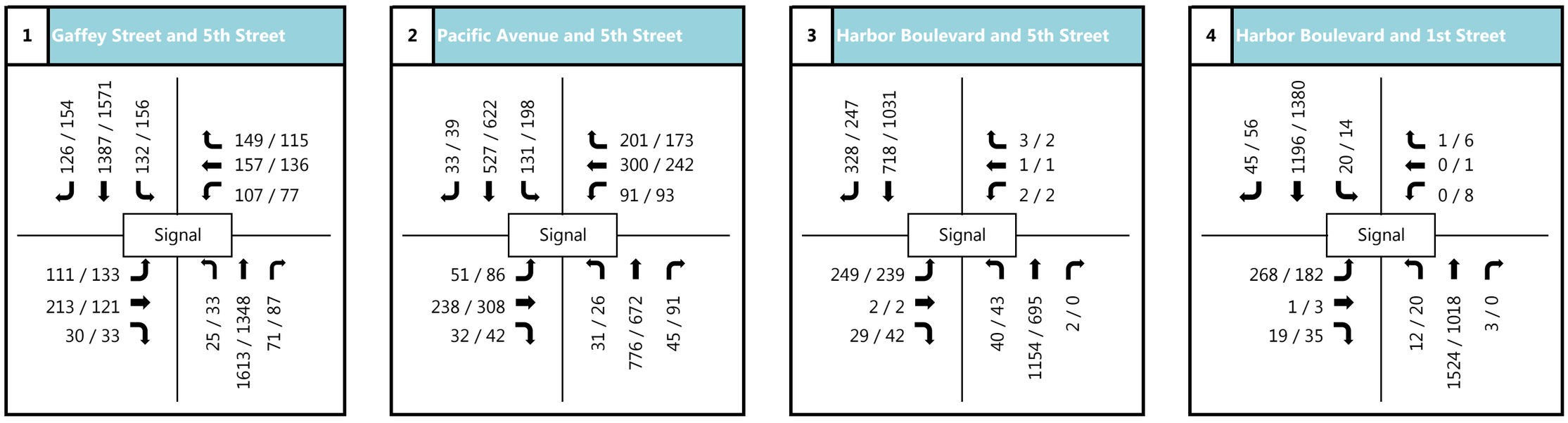
Study Intersections		AM Peak		PM Peak	
		V/C	LOS	V/C	LOS
1	Gaffey St and 5th Street	0.876	D	0.783	C
2	Pacific Avenue and 5th Street	0.873	D	0.814	D
3	Valencia Street & 6th Street	0.482	A	0.548	A
4	Witmer Street & 6th Street	0.639	B	0.536	A

LOS = Level of Service; V/C = Volume to Capacity ratio shown in X.XXX format.

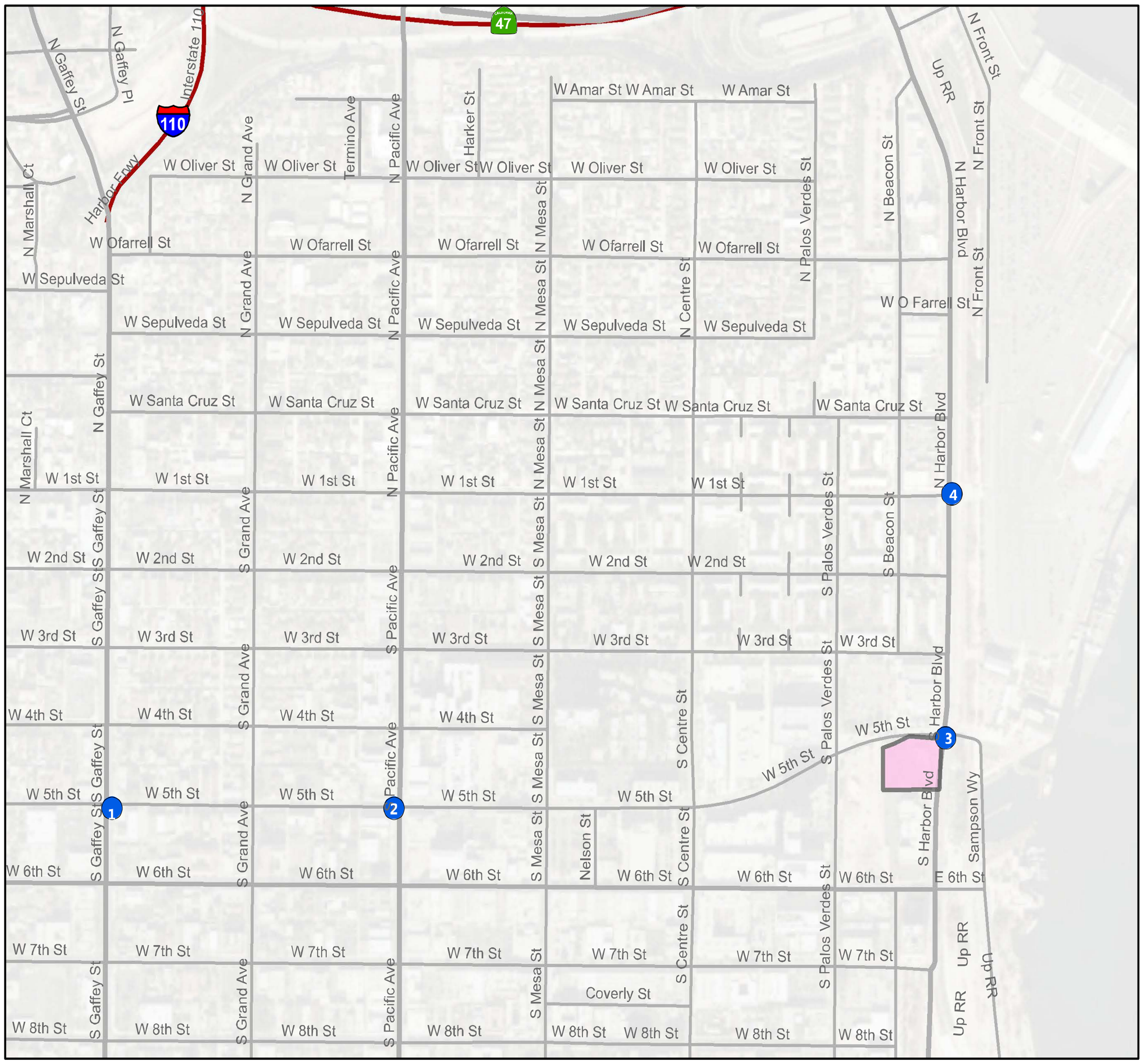
Intersection 1 would operate at an LOS of D during the a.m. peak hour period while Intersection 2 would operate at an LOS of D during the a.m. and p.m. peak hour periods. The remaining two study intersections would continue to operate at LOS B or better during the weekday p.m. peak hour and peak hour period.

The future with-Project traffic volumes for the weekday a.m. and p.m. peak hours are illustrated on Figure 12.

Figure 12 – Future With-Project - AM/PM Peak Hour Traffic Volumes



XX/XX AM /PM Peak Hour Traffic Volumes



Study Intersections

- Study Intersection
- Project Site

0 0.25 0.5 Miles

7. PROJECT TRAFFIC IMPACTS

7.1 DETERMINATION OF TRAFFIC IMPACTS

Traffic impacts are identified if operations of a project would result in a significant change in traffic conditions at analyzed locations.

The City of Los Angeles Department of Transportation has established specific thresholds for project-related increases in the volume-to-capacity ratio (V/C) of signalized study intersections. The following increases in peak-hour V/C ratios are considered significant impacts:

Level of Service	Volume/Capacity Ratio	Project-Related Increase in ICU Value
C	< 0.700 – 0.800	Equal to or greater than 0.040
D	< 0.800 – 0.900	Equal to or greater than 0.020
E and F	0.900 or more	Equal to or greater than 0.010

Note: Final V/C is the V/C ratio at an intersection, considering impacts from the project, ambient growth, trips from area/cumulative projects, but without proposed traffic impact mitigations

7.2 PROJECT TRAFFIC IMPACTS – EXISTING PLUS PROJECT

Table 9 provides a summary of the Project impacts under existing conditions. Traffic impacts created by the proposed Project were determined by comparing the existing scenario conditions to the existing with-Project scenario conditions.

The proposed Project would not create any significant traffic impacts at the study intersections under existing with-Project conditions, during either the weekday a.m. or p.m. peak hours. Project mitigation measures, therefore, are not required for existing conditions.

Table 9 – Determination of Project Impacts – Existing With-Project Conditions

	Study Intersections	Peak Hour	Existing Conditions		Existing with Project		Change in V/C	Sig Impact?
			CMA or Delay	LOS	CMA or Delay	LOS		
1	Gaffey St and 5th Street	AM	0.686	B	0.696	B	0.010	No
		PM	0.618	B	0.623	B	0.005	No
2	Pacific Avenue and 5th Street	AM	0.581	A	0.588	A	0.007	No
		PM	0.563	A	0.573	A	0.010	No
3	Valencia Street & 6th Street	AM	0.362	A	0.367	A	0.005	No
		PM	0.397	A	0.402	A	0.005	No
4	Witmer Street & 6th Street	AM	0.500	A	0.503	A	0.003	No
		PM	0.407	A	0.409	A	0.002	No

LOS = Level of Service; V/C = Volume to Capacity ratio shown in X.XXX format.

7.3 PROJECT TRAFFIC IMPACTS – FUTURE WITH PROJECT

Table 10 provides a summary of the Project impacts under future conditions. Traffic impacts created by the Project were determined by comparing the future without-Project conditions to the future with-Project conditions.

The proposed Project would not create any significant traffic impacts at the study intersections under future with-Project conditions, during either the weekday a.m. or p.m. peak hours. Project mitigation measures, therefore, are not required for future conditions.

Table 10 – Determination of Project Impacts – Future With-Project

	Study Intersections	Peak Hour	Existing Conditions		Future Without Project		Future with Project		Change in V/C or Delay	Sig Impact?
			V/C	LOS	CMA or Delay	LOS	CMA or Delay	LOS		
1	Gaffey St and 5th Street	AM	0.686	B	0.866	D	0.876	D	0.010	No
		PM	0.618	B	0.771	C	0.783	C	0.012	No
2	Pacific Avenue and 5th Street	AM	0.581	A	0.861	D	0.873	D	0.012	No
		PM	0.563	A	0.805	D	0.814	D	0.009	No
3	Valencia Street & 6th Street	AM	0.362	A	0.478	A	0.482	A	0.004	No
		PM	0.397	A	0.543	A	0.548	A	0.005	No
4	Witmer Street & 6th Street	AM	0.500	A	0.636	B	0.639	B	0.003	No
		PM	0.407	A	0.534	A	0.536	A	0.002	No

LOS = Level of Service; V/C = Volume to Capacity ratio shown in X.XXX format.

8. CONGESTION MANAGEMENT PROGRAM

This section provides study conformance with the regional impact analysis procedures mandated by the County of Los Angeles Congestion Management Program (CMP).

The CMP was created statewide because of Proposition 111 and was implemented locally by the Los Angeles County Metropolitan Transportation Authority (Metro). The CMP for Los Angeles County requires that the traffic impact of individual development projects of potentially regional significance be analyzed. A specific system of arterial roadways plus all freeways comprises the CMP system. Per CMP Transportation Impact Analysis (TIA) Guidelines, a traffic impact analysis is conducted where:

- At CMP arterial monitoring intersections, including freeway on-ramps or off-ramps, where the proposed Project will add 50 or more vehicle trips during either a.m. or p.m. weekday peak hours.

- At CMP mainline freeway-monitoring locations, where the Project will add 150 or more trips, in either direction, during either the a.m. or p.m. weekday peak hours.

CMP Roadway Impacts

Based on the Project trip generation, it is not expected that 50 or more new Project trips per hour would be added to the nearest CMP intersections, which are listed below. Therefore, no further analysis of potential CMP impacts is required.

- CMP ID 45 – Gaffey Street and 9th Street, approximately .77 miles southwest of the Project site
- CMP ID 84 – Western Avenue and 9th Street, approximately 2.11 miles south west of the Project site
- CMP ID 128 – Western Avenue and Toscanini Drive, approximate 2.30 miles northwest of the Project site

In addition, the proposed Project is expected to add less than 150 new trips per hour, in either direction, of the I-110 (Harbor Freeway) segments based on the Project trip generation defined in Table 4. Therefore, no further analysis of CMP freeway monitoring stations is required.

- CMP ID 1045 – 110 freeway west of C street, approximately 2.17 miles north of the Project site

Transit Service Impacts

There are seven existing public bus transit lines that are in close vicinity to the project site, including Metro local bus lines, the Metro Silver Line, LADOT Dash and LADOT Commuter Express lines, and a Palos Verdes Peninsula Transit Authority bus line. The Metro Silver Line is designated as a CMP transit route and is monitored for performance under the CMP program.

The project trip generation, as defined in Section 3, is 529 daily weekday trips including 29 trips during the a.m. peak hour and 41 trips during the p.m. peak hour.

The trip generation was adjusted by values defined by the CMP to calculate estimated transit trips. The CMP defines higher transit mode splits for developments located near or adjacent to

a CMP transit center, which is a stop served by designated CMP transit lines. For primarily residential developments, this higher rate is 10 percent

The following calculations were made, based on the defined CMP methodology:

- Project person trips (1.4 times vehicle trips) would be 741 on a daily basis, including 41 trips in the a.m. peak hour and 57 trips in the p.m. peak hour.
- Applying a 10 percent mode split for commercial uses near CMP transit to the person trips, the project transit trips would be 74 daily trips, including 4 trips in the a.m. peak hour and 6 trips in the p.m. peak hour.

It is anticipated that the existing transit service in the project area would be able to accommodate the project generated transit trips, based on the multiple transit lines available in the area and the low overall transit trip demand of less than ten peak hour trips anticipated for the proposed project.

Therefore, given the number of transit trips generated by the project and the four existing transit routes in the project vicinity, it is concluded that the existing public transit system would not be significantly impacted by the proposed Project.

APPENDIX A
Memorandum of Understanding with LADOT

Transportation Impact Study Memorandum of Understanding (MOU)

This MOU acknowledges that the Transportation Impact Study for the following Project will be prepared in accordance with the latest version of LADOT's Transportation Impact Study Guidelines:

I. PROJECT INFORMATION

Project Name: 511 Harbor

Project Address:511 Harbor Boulevard, San Pedro

Project Description: Project land uses include 137 mid-rise residential units, 2,129 sq.ft. of sit-down restaurant, and 349 sq.ft. of retail space. The project would require demolition of an existing 4,160 sq.ft. sit-down restaurant. Project driveway access would be located on 5th Street (north side of site).

Project Case Number: HRB19-108366 Project Site Plan attached? *(Required)* ☑ Yes ☐ No

II. TRIP GENERATION

Geographic Distribution: N 75 % S 15 % E 0 % W 10 %

Illustration of Project trip distribution percentages at Study intersections attached? *(Required)* ☑ Yes ☐ No

Trip Generation Adjustments *(Exact amount of credit subject to approval by LADOT)*

	Yes	No
Transit Usage	☐	☐
Transportation Demand Management	☐	☐
Existing Active Land Use	☑	☐
Previous Land Use	☐	☐
Internal Trip	☐	☐
Pass-By Trip	☐	☐

Trip Generation Rate(s): ITE 9th Edition / Other: ITE 10th Edition

Trip generation table including a description of the proposed land uses, ITE rates, estimated morning and afternoon peak hour volumes (ins/outs/totals), proposed trip credits, etc. attached? *(Required)* ☐ Yes ☐ No

	IN	OUT	TOTAL
AM Trips	2	27	29
PM Trips	25	16	41

III. STUDY AREA AND ASSUMPTIONS

Project Buildout Year: 2021 Ambient or CMP Growth Rate: 1.0 % Per Yr.

Related Projects List, researched by the consultant and approved by LADOT, attached? *(Required)* ☐ Yes ☐ No

Map of Study Intersections attached? *(May be subject to LADOT revision after initial impact analysis)* ☑ Yes ☐ No

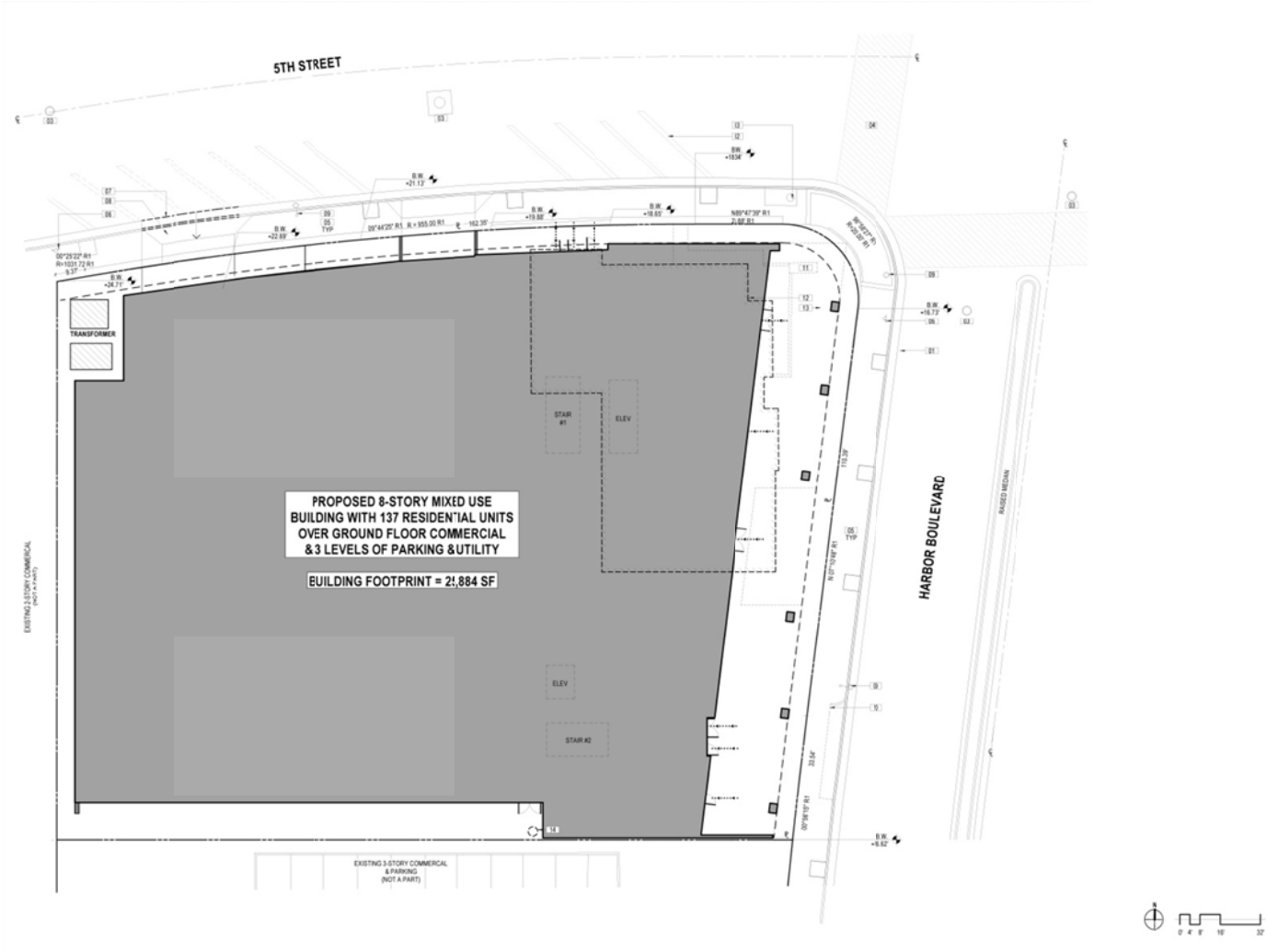
Is this Project located on a street within the High Injury Network? ☐ Yes ☑ No

IV. CONTACT INFORMATION

	CONSULTANT	DEVELOPER
Name:	Brian Marchetti, AICP	Raffi Cohen
Address:	1100 Corporate Center Drive, Suite 201	LAMF 511 Harbor LLC
	Monterey Park, CA 91754	8906 West Olympic Boulevard, Suite 200
Phone Number:	(323) 260-4703	Beverly Hills, California 90211
E-Mail:	bmarchetti@koacorp.com	(310) 273-7233

Approved by:	x	8/14/19	x	8/22/19
	Consultant's Representative	Date	LADOT Representative	Date

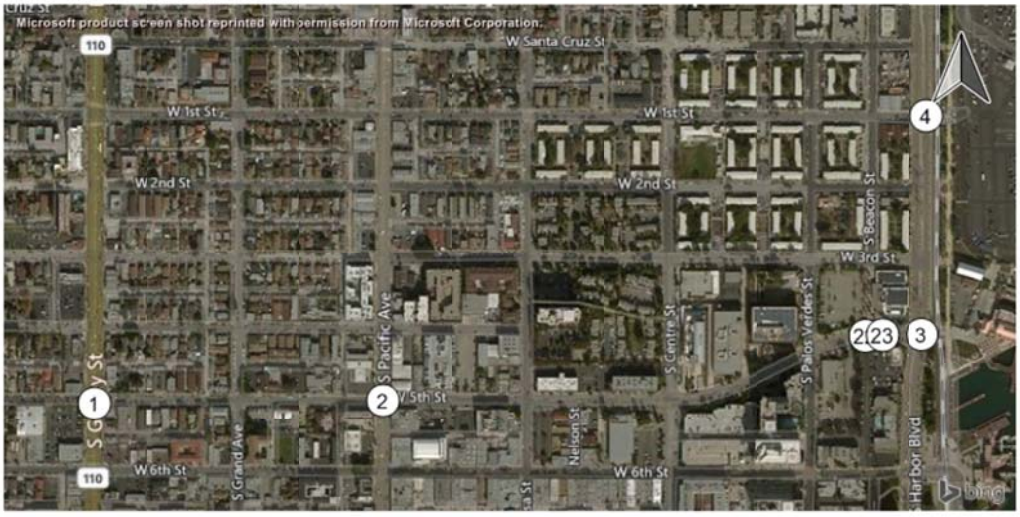
ATTACHMENT A –
PROJECT SITE PLAN



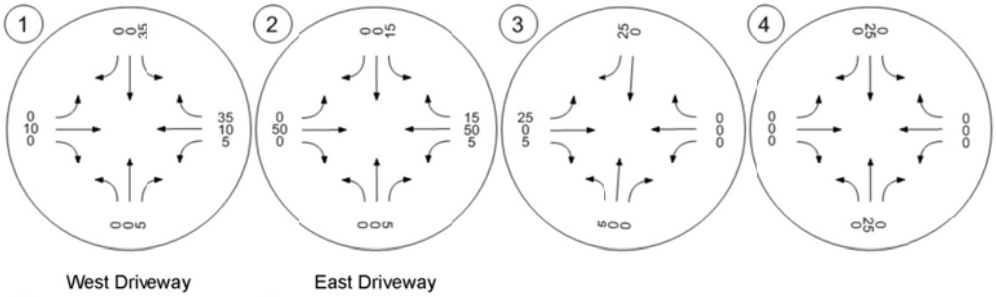
ATTACHMENT B –

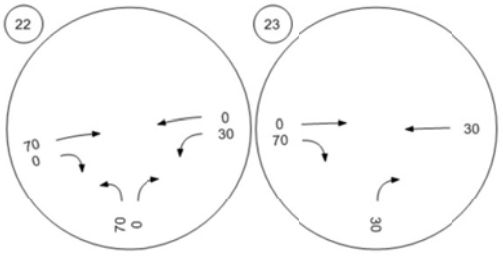
PROJECT TRIP DISTRIBUTION PERCENTAGES AT STUDY INTERSECTIONS

Traffic Volume - Net New Site Trips



Gaffey Street and 5th Street Pacific Avenue and 5th Street 5th Street and Harbor Boulev 1st Street and Harbor Boulev





ATTACHMENT C –

RELATED PROJECTS LIST

No	Project Name	Address	Land Use	Intensity	Units	Daily	AM Peak Hour			PM Peak Hour		
							Total	% In	% Out	Total	% In	% Out
1	City Dock #1 *	2200 S Signal Street	Industrial	87.603	Square Foot Gross Area (1,000s)	1,037	104	52	52	104	52	52
				234.780		1,889	189	94	94	189	94	94
				234.780		2,926	293	146	146	293	146	146
2	Gas Station with 24hr-Mini Mart	305 N Gaffey Street	Gas/Service Station with Convenience Market	12	Fueling Positions	1,953	122	61	61	161	80	81
3	Public Charter High School	461 W 9th Street	High School	600	Students	713	239	163	76	59	28	31
4	550 S Palos Verdes	550 S Palos Verdes Street	Multifamily Housing (Mid-Rise)	412	Dwelling Units	2,740	210	42	168	255	166	89
			Retail	38.000	Square Foot Gross Area (1,000s)	2,902	214	44	170	261	169	92
			General Office	14.875		(164)	-23	-20	-3	-22	-4	-18
5	Mixed Use	533 S Nelson Street	Multifamily Housing (Mid-Rise)	47.000	Dwelling Units	752	67	34	33	76	41	35
6	Fast Food Restaurant with Drive- Thru	670 W 4th Street	Fast-Food with Drive-Thru Window	2.619	Square Foot Gross Leasable Area (1,000s)	630	57	29	28	41	21	20
7	COU for Historic Assisted Living to Mixed Use	921 S Beacon Street	Mixed Use	-	Other	1,114	98	43	55	96	64	32
8	New Mixed Use-98 Apts	444 W 5th Street	Multifamily Housing (Mid-Rise)	106	Occupied Units	504	45	12	33	45	29	16
			Shopping Center	3.000	KSF GLA	113	3	2	1	11	5	6
9	Condominium 94 Units	319 N Harbor Blvd	Multifamily Housing (Low Rise)	94	Dwelling Units	688	43	5	33	53	33	20
10	Hotel	544 S Pacific Avenue	Hotel	80	Rooms	757	35	21	14	67	31	36
11	CD 15 Beacon Street Bridge HSG	515 N Beacon Street	Other	102	Beds	130	14	6	8	14	8	6
12	Harbor Highlands Homes	1363 N Gaffey Street	Single-Family Homes	135	Dwelling Units	1,150	77	8	69	115	79	36
13	CD 15 Storage at Harbor Police	2175 W John S Gibson Blvd	Other	165	Dwelling Units	30	4	2	2	4	2	2
TOTAL						**19,864**	**1,790**	**745**	**1,041**	**1,821**	**1,045**	**777**

Project and trips source: LADOT Development Review

** Peak-hour trips not provided. 10 percent of daily factor assumed for each peak hour.*

ATTACHMENT D –

PROJECT TRIP GENERATION SUMMARY

Land Use	Intensity	Units	Daily	AM Peak			PM Peak		
			Total	Total	In	Out	Total	In	Out
Trip Generation Rates									
Multifamily Housing (Mid-Rise)	-	d.u.	5.44	0.36	26%	74%	0.44	61%	38%
High Turnover (Sit-Down) Restaurant	-	1,000 Sq. Ft.GFA	112.18	9.94	55%	45%	9.77	62%	38%
Shopping Center	-	1,000 Sq. Ft. GLA	37.75	0.94	62%	38%	3.81	48%	52%
Trip Generation Estimates - Proposed Uses									
Multifamily Housing (Mid-Rise)	137	d.u.	745	49	13	36	60	37	23
Proposed High Turnover (Sit-Down) Restaurant	2.129	1,000 Sq. Ft.GFA	239	21	12	9	21	13	8
Shopping Center	0.349	1,000 Sq. Ft. GLA	13	0	0	0	1	0	1
Trip Generation Credit Estimate - Existing Uses									
Existing High Turnover (Sit-Down) Restaurant	-4.169	1,000 Sq. Ft.GFA	-468	-41	-23	-18	-41	-25	-16
Total			**529**	**29**	**2**	**27**	**41**	**25**	**16**

Rates Source: ITE Trip Generation Manual, 10th Edition

APPENDIX B
Traffic Count Data

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Los Angeles
N/S: Gaffey Street
E/W: West 5th Street
Weather: Clear

File Name : 01_LAC_Gaffey_5th AM
Site Code : 04119599
Start Date : 9/11/2019
Page No : 1

Groups Printed- Passenger Vehicles - Dual Wheeled - Buses

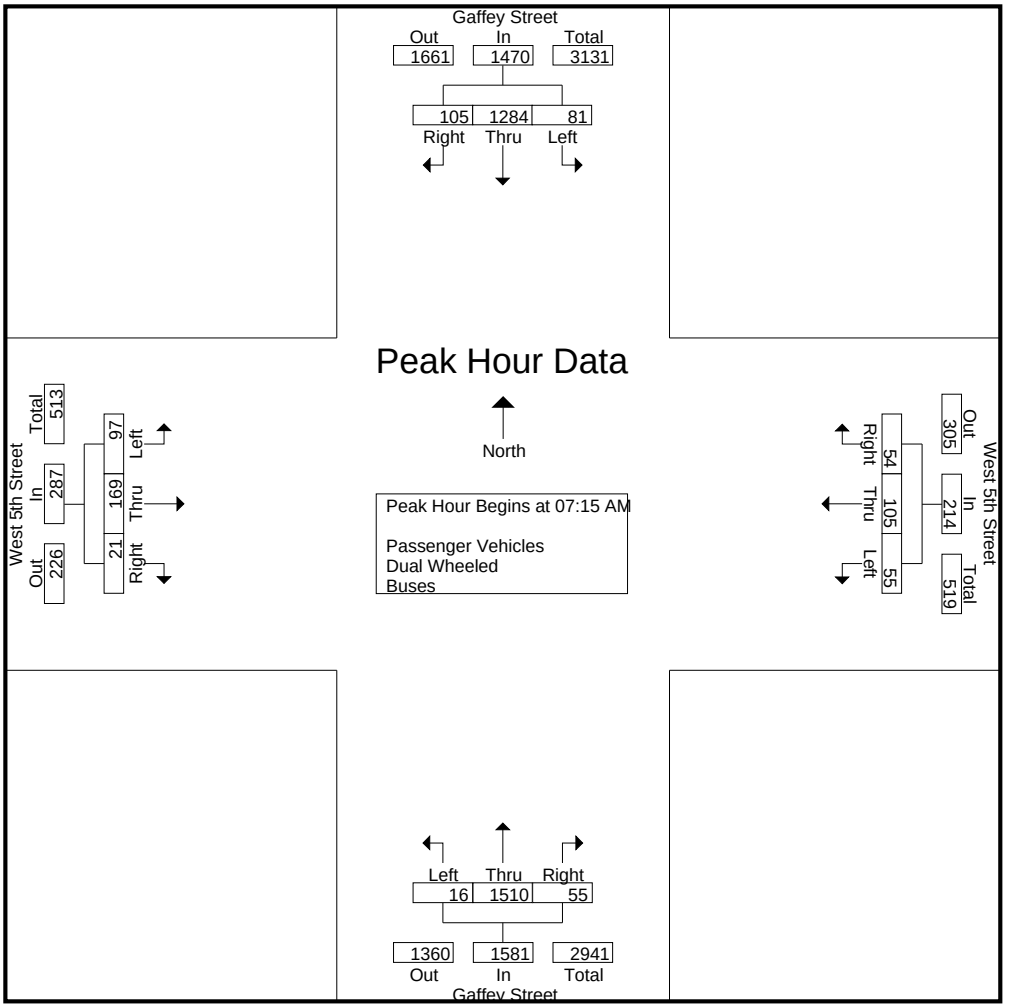
	Gaffey Street Southbound				West 5th Street Westbound				Gaffey Street Northbound				West 5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	15	225	23	263	5	7	8	20	3	421	14	438	19	17	0	36	757
07:15 AM	17	313	18	348	8	18	12	38	6	416	17	439	16	27	2	45	870
07:30 AM	17	338	25	380	14	20	14	48	4	367	18	389	29	49	7	85	902
07:45 AM	29	339	44	412	18	45	15	78	1	359	9	369	29	58	7	94	953
Total	78	1215	110	1403	45	90	49	184	14	1563	58	1635	93	151	16	260	3482
08:00 AM	18	294	18	330	15	22	13	50	5	368	11	384	23	35	5	63	827
08:15 AM	23	258	21	302	7	15	11	33	6	350	19	375	16	23	2	41	751
08:30 AM	21	310	18	349	7	10	16	33	3	372	19	394	15	25	4	44	820
08:45 AM	26	273	26	325	6	16	13	35	6	313	10	329	13	21	3	37	726
Total	88	1135	83	1306	35	63	53	151	20	1403	59	1482	67	104	14	185	3124
09:00 AM	12	235	16	263	6	8	12	26	10	295	14	319	22	13	3	38	646
09:15 AM	17	221	15	253	3	12	10	25	7	297	12	316	19	7	7	33	627
09:30 AM	16	219	12	247	4	12	9	25	2	276	13	291	12	10	0	22	585
09:45 AM	21	234	21	276	7	13	13	33	3	268	12	283	12	16	2	30	622
Total	66	909	64	1039	20	45	44	109	22	1136	51	1209	65	46	12	123	2480
Grand Total	232	3259	257	3748	100	198	146	444	56	4102	168	4326	225	301	42	568	9086
Apprch %	6.2	87	6.9		22.5	44.6	32.9		1.3	94.8	3.9		39.6	53	7.4		
Total %	2.6	35.9	2.8	41.3	1.1	2.2	1.6	4.9	0.6	45.1	1.8	47.6	2.5	3.3	0.5	6.3	
Passenger Vehicles	219	3121	254	3594	96	194	136	426	56	4026	167	4249	225	299	39	563	8832
% Passenger Vehicles	94.4	95.8	98.8	95.9	96	98	93.2	95.9	100	98.1	99.4	98.2	100	99.3	92.9	99.1	97.2
Dual Wheeled	13	108	2	123	3	4	9	16	0	54	1	55	0	2	3	5	199
% Dual Wheeled	5.6	3.3	0.8	3.3	3	2	6.2	3.6	0	1.3	0.6	1.3	0	0.7	7.1	0.9	2.2
Buses	0	30	1	31	1	0	1	2	0	22	0	22	0	0	0	0	55
% Buses	0	0.9	0.4	0.8	1	0	0.7	0.5	0	0.5	0	0.5	0	0	0	0	0.6

	Gaffey Street Southbound				West 5th Street Westbound				Gaffey Street Northbound				West 5th 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 09:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	17	313	18	348	8	18	12	38	**6**	**416**	17	**439**	16	27	2	45	870
07:30 AM	17	338	25	380	14	20	14	48	4	367	**18**	389	**29**	49	**7**	85	902
07:45 AM	**29**	**339**	**44**	**412**	**18**	**45**	**15**	**78**	1	359	9	369	29	**58**	7	**94**	**953**
08:00 AM	18	294	18	330	15	22	13	50	5	368	11	384	23	35	5	63	827
Total Volume	81	1284	105	1470	55	105	54	214	16	1510	55	1581	97	169	21	287	3552
% App. Total	5.5	87.3	7.1		25.7	49.1	25.2		1	95.5	3.5		33.8	58.9	7.3		
PHF	.698	.947	.597	.892	.764	.583	.900	.686	.667	.907	.764	.900	.836	.728	.750	.763	.932

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Los Angeles
N/S: Gaffey Street
E/W: West 5th Street
Weather: Clear

File Name : 01_LAC_Gaffey_5th AM
Site Code : 04119599
Start Date : 9/11/2019
Page No : 2



Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:00 AM				07:15 AM			
+0 mins.	17	313	18	348	8	18	12	38	3	**421**	14	438	16	27	2	45
+15 mins.	17	338	25	380	14	20	14	48	**6**	416	17	**439**	**29**	49	**7**	85
+30 mins.	**29**	**339**	**44**	**412**	**18**	**45**	**15**	**78**	4	367	**18**	389	29	**58**	7	**94**
+45 mins.	18	294	18	330	15	22	13	50	1	359	9	369	23	35	5	63
Total Volume	81	1284	105	1470	55	105	54	214	14	1563	58	1635	97	169	21	287
% App. Total	5.5	87.3	7.1		25.7	49.1	25.2		0.9	95.6	3.5		33.8	58.9	7.3	
PHF	.698	.947	.597	.892	.764	.583	.900	.686	.583	.928	.806	.931	.836	.728	.750	.763

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File Name : 01_LAC_Gaffey_5th AM
Site Code : 04119599
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Page No : 1

Groups Printed- Passenger Vehicles

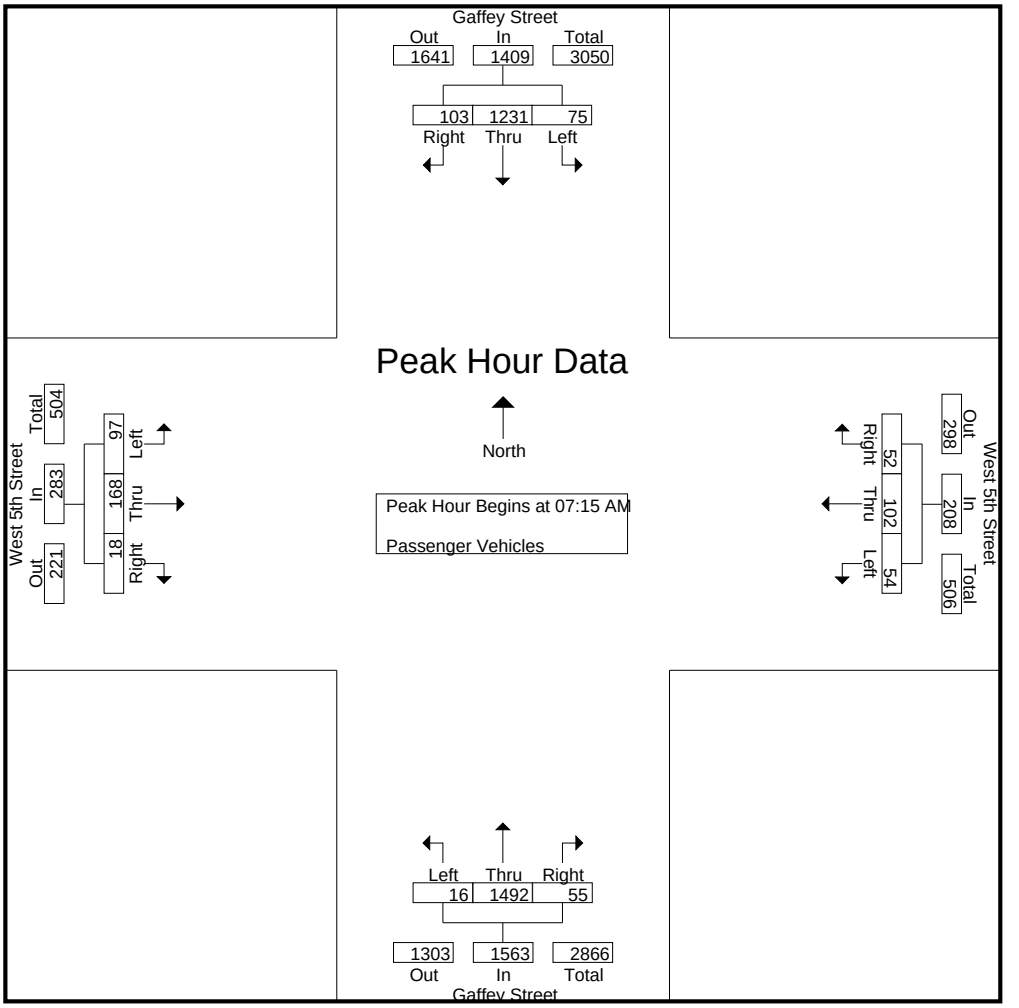
	Gaffey Street Southbound				West 5th Street Westbound				Gaffey Street Northbound				West 5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	15	210	22	247	5	7	8	20	3	417	14	434	19	17	0	36	737
07:15 AM	14	290	18	322	7	16	10	33	6	414	17	437	16	27	2	45	837
07:30 AM	17	331	24	372	14	20	14	48	4	361	18	383	29	48	5	82	885
07:45 AM	28	330	43	401	18	44	15	77	1	357	9	367	29	58	7	94	939
Total	74	1161	107	1342	44	87	47	178	14	1549	58	1621	93	150	14	257	3398
08:00 AM	16	280	18	314	15	22	13	50	5	360	11	376	23	35	4	62	802
08:15 AM	19	247	21	287	6	15	9	30	6	346	19	371	16	22	2	40	728
08:30 AM	21	299	18	338	7	10	15	32	3	362	19	384	15	25	4	44	798
08:45 AM	25	264	26	315	5	16	10	31	6	305	10	321	13	21	3	37	704
Total	81	1090	83	1254	33	63	47	143	20	1373	59	1452	67	103	13	183	3032
09:00 AM	12	228	16	256	6	8	12	26	10	291	13	314	22	13	3	38	634
09:15 AM	16	206	15	237	3	11	9	23	7	286	12	305	19	7	7	33	598
09:30 AM	15	208	12	235	4	12	9	25	2	268	13	283	12	10	0	22	565
09:45 AM	21	228	21	270	6	13	12	31	3	259	12	274	12	16	2	30	605
Total	64	870	64	998	19	44	42	105	22	1104	50	1176	65	46	12	123	2402
Grand Total	219	3121	254	3594	96	194	136	426	56	4026	167	4249	225	299	39	563	8832
Apprch %	6.1	86.8	7.1		22.5	45.5	31.9		1.3	94.8	3.9		40	53.1	6.9		
Total %	2.5	35.3	2.9	40.7	1.1	2.2	1.5	4.8	0.6	45.6	1.9	48.1	2.5	3.4	0.4	6.4	

	Gaffey Street Southbound				West 5th Street Westbound				Gaffey Street Northbound				West 5th 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 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	14	290	18	322	7	16	10	33	**6**	**414**	17	**437**	16	27	2	45	837
07:30 AM	17	**331**	24	372	14	20	14	48	4	361	**18**	383	**29**	48	5	82	885
07:45 AM	**28**	330	**43**	**401**	**18**	**44**	**15**	**77**	1	357	9	367	29	**58**	**7**	**94**	**939**
08:00 AM	16	280	18	314	15	22	13	50	5	360	11	376	23	35	4	62	802
Total Volume	75	1231	103	1409	54	102	52	208	16	1492	55	1563	97	168	18	283	3463
% App. Total	5.3	87.4	7.3		26	49	25		1	95.5	3.5		34.3	59.4	6.4		
PHF	.670	.930	.599	.878	.750	.580	.867	.675	.667	.901	.764	.894	.836	.724	.643	.753	.922

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City of Los Angeles
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Page No : 2



Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	14	290	18	322	7	16	10	33	**6**	**414**	17	**437**	16	27	2	45
+15 mins.	17	**331**	24	372	14	20	14	48	4	361	**18**	383	**29**	48	5	82
+30 mins.	**28**	330	**43**	**401**	**18**	**44**	**15**	**77**	1	357	9	367	29	**58**	**7**	**94**
+45 mins.	16	280	18	314	15	22	13	50	5	360	11	376	23	35	4	62
Total Volume	75	1231	103	1409	54	102	52	208	16	1492	55	1563	97	168	18	283
% App. Total	5.3	87.4	7.3		26	49	25		1	95.5	3.5		34.3	59.4	6.4	
PHF	.670	.930	.599	.878	.750	.580	.867	.675	.667	.901	.764	.894	.836	.724	.643	.753

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City of Los Angeles
N/S: Gaffey Street
E/W: West 5th Street
Weather: Clear

File Name : 01_LAC_Gaffey_5th AM
Site Code : 04119599
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Page No : 1

Groups Printed- Dual Wheeled

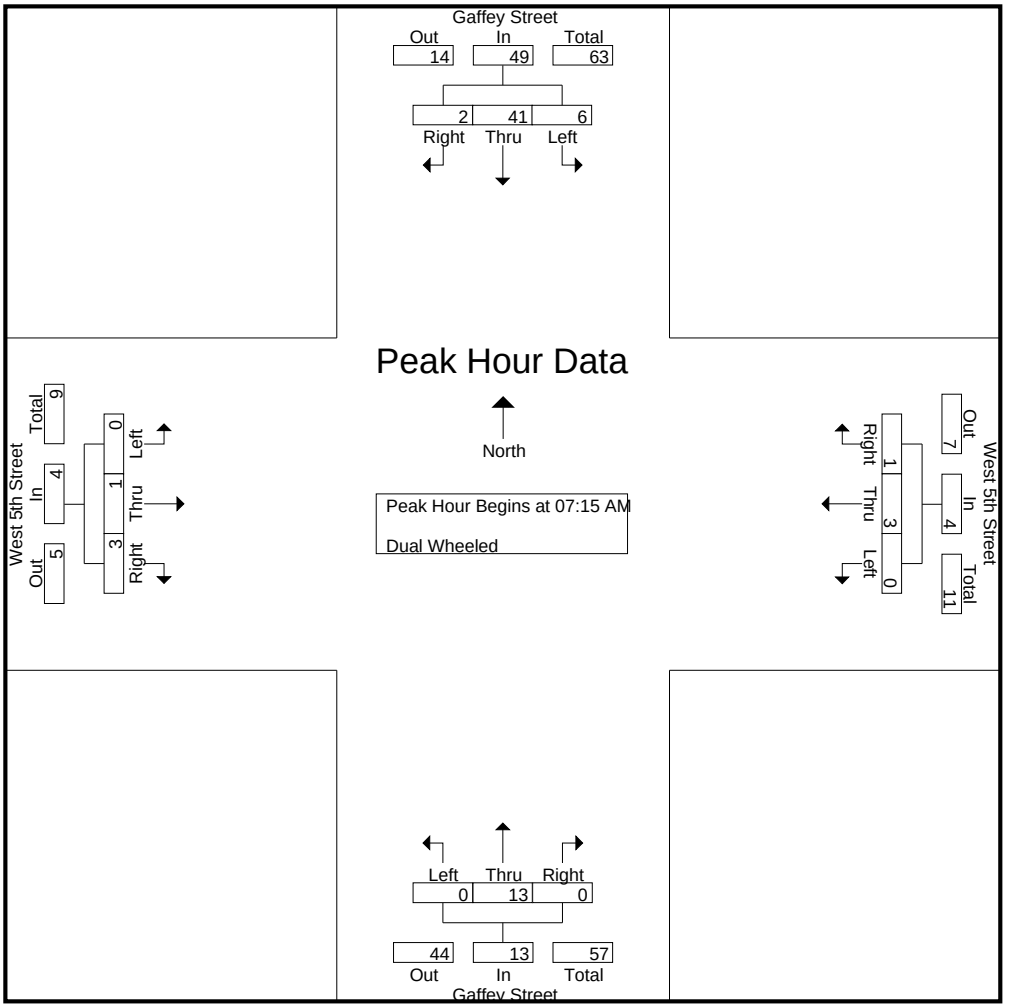
	Gaffey Street Southbound				West 5th Street Westbound				Gaffey Street Northbound				West 5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	12	0	12	0	0	0	0	0	2	0	2	0	0	0	0	14
07:15 AM	3	18	0	21	0	2	1	3	0	1	0	1	0	0	0	0	25
07:30 AM	0	2	1	3	0	0	0	0	0	4	0	4	0	1	2	3	10
07:45 AM	1	8	1	10	0	1	0	1	0	1	0	1	0	0	0	0	12
Total	4	40	2	46	0	3	1	4	0	8	0	8	0	1	2	3	61
08:00 AM	2	13	0	15	0	0	0	0	0	7	0	7	0	0	1	1	23
08:15 AM	4	8	0	12	1	0	2	3	0	3	0	3	0	1	0	1	19
08:30 AM	0	11	0	11	0	0	1	1	0	7	0	7	0	0	0	0	19
08:45 AM	1	5	0	6	1	0	3	4	0	6	0	6	0	0	0	0	16
Total	7	37	0	44	2	0	6	8	0	23	0	23	0	1	1	2	77
09:00 AM	0	5	0	5	0	0	0	0	0	2	1	3	0	0	0	0	8
09:15 AM	1	12	0	13	0	1	1	2	0	9	0	9	0	0	0	0	24
09:30 AM	1	10	0	11	0	0	0	0	0	5	0	5	0	0	0	0	16
09:45 AM	0	4	0	4	1	0	1	2	0	7	0	7	0	0	0	0	13
Total	2	31	0	33	1	1	2	4	0	23	1	24	0	0	0	0	61
Grand Total	13	108	2	123	3	4	9	16	0	54	1	55	0	2	3	5	199
Apprch %	10.6	87.8	1.6		18.8	25	56.2		0	98.2	1.8		0	40	60		
Total %	6.5	54.3	1	61.8	1.5	2	4.5	8	0	27.1	0.5	27.6	0	1	1.5	2.5	

	Gaffey Street Southbound				West 5th Street Westbound				Gaffey Street Northbound				West 5th 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 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**3**	**18**	0	**21**	0	**2**	**1**	**3**	0	1	0	1	0	0	0	0	**25**
07:30 AM	0	2	**1**	3	0	0	0	0	0	4	0	4	0	**1**	**2**	**3**	10
07:45 AM	1	8	1	10	0	1	0	1	0	1	0	1	0	0	0	0	12
08:00 AM	2	13	0	15	0	0	0	0	0	**7**	0	**7**	0	0	1	1	23
Total Volume	6	41	2	49	0	3	1	4	0	13	0	13	0	1	3	4	70
% App. Total	12.2	83.7	4.1		0	75	25		0	100	0		0	25	75		
PHF	.500	.569	.500	.583	.000	.375	.250	.333	.000	.464	.000	.464	.000	.250	.375	.333	.700

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Site Code : 04119599
Start Date : 9/11/2019
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	**3**	**18**	0	**21**	0	**2**	**1**	**3**	0	1	0	1	0	0	0	0
+15 mins.	0	2	**1**	3	0	0	0	0	0	4	0	4	0	**1**	**2**	**3**
+30 mins.	1	8	1	10	0	1	0	1	0	1	0	1	0	0	0	0
+45 mins.	2	13	0	15	0	0	0	0	0	**7**	0	**7**	0	0	1	1
Total Volume	6	41	2	49	0	3	1	4	0	13	0	13	0	1	3	4
% App. Total	12.2	83.7	4.1		0	75	25		0	100	0		0	25	75	
PHF	.500	.569	.500	.583	.000	.375	.250	.333	.000	.464	.000	.464	.000	.250	.375	.333

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Site Code : 04119599
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Groups Printed- Buses

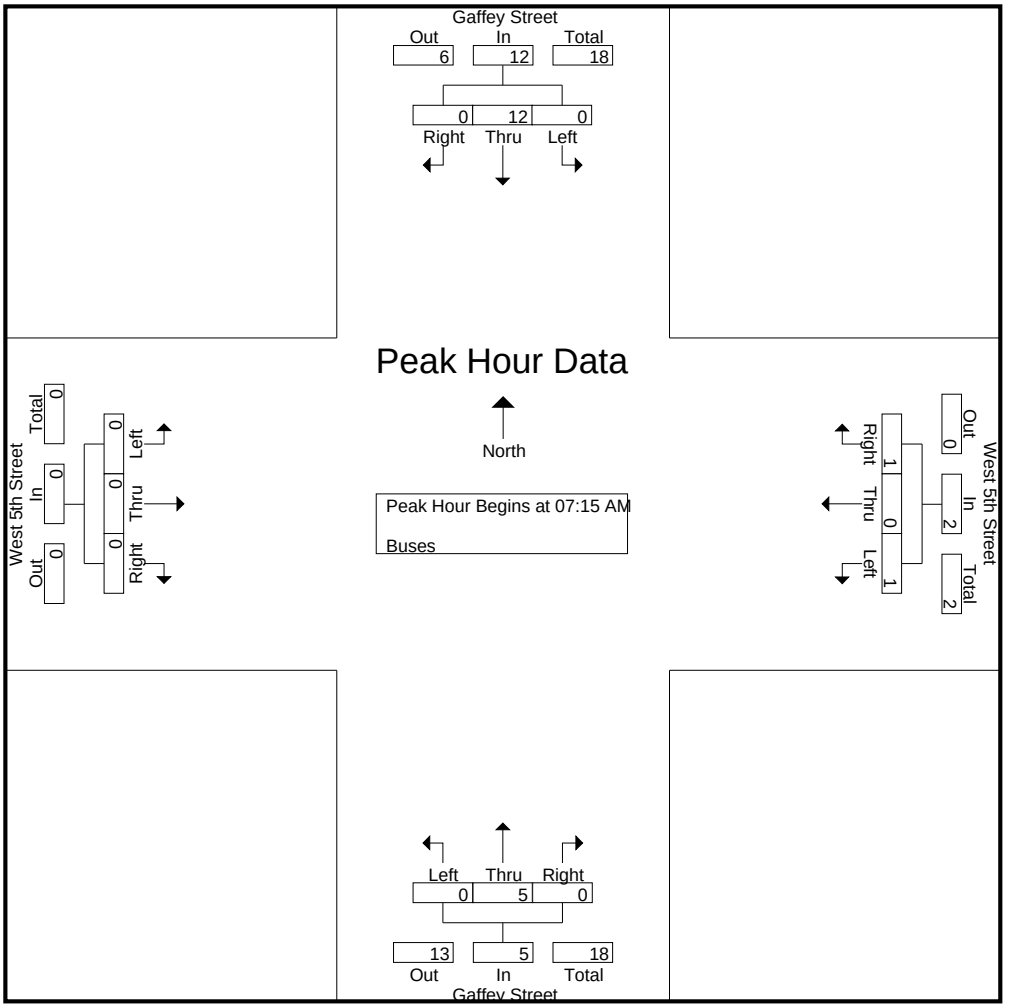
	Gaffey Street Southbound				West 5th Street Westbound				Gaffey Street Northbound				West 5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	3	1	4	0	0	0	0	0	2	0	2	0	0	0	0	6
07:15 AM	0	5	0	5	1	0	1	2	0	1	0	1	0	0	0	0	8
07:30 AM	0	5	0	5	0	0	0	0	0	2	0	2	0	0	0	0	7
07:45 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total	0	14	1	15	1	0	1	2	0	6	0	6	0	0	0	0	23
08:00 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
08:15 AM	0	3	0	3	0	0	0	0	0	1	0	1	0	0	0	0	4
08:30 AM	0	0	0	0	0	0	0	0	0	3	0	3	0	0	0	0	3
08:45 AM	0	4	0	4	0	0	0	0	0	2	0	2	0	0	0	0	6
Total	0	8	0	8	0	0	0	0	0	7	0	7	0	0	0	0	15
09:00 AM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
09:15 AM	0	3	0	3	0	0	0	0	0	2	0	2	0	0	0	0	5
09:30 AM	0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0	4
09:45 AM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
Total	0	8	0	8	0	0	0	0	0	9	0	9	0	0	0	0	17
Grand Total	0	30	1	31	1	0	1	2	0	22	0	22	0	0	0	0	55
Apprch %	0	96.8	3.2		50	0	50		0	100	0		0	0	0		
Total %	0	54.5	1.8	56.4	1.8	0	1.8	3.6	0	40	0	40	0	0	0	0	

	Gaffey Street Southbound				West 5th Street Westbound				Gaffey Street Northbound				West 5th 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 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	**5**	0	**5**	**1**	0	**1**	**2**	0	1	0	1	0	0	0	0	**8**
07:30 AM	0	5	0	5	0	0	0	0	0	**2**	0	**2**	0	0	0	0	7
07:45 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
08:00 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total Volume	0	12	0	12	1	0	1	2	0	5	0	5	0	0	0	0	19
% App. Total	0	100	0		50	0	50		0	100	0		0	0	0		
PHF	.000	.600	.000	.600	.250	.000	.250	.250	.000	.625	.000	.625	.000	.000	.000	.000	.594

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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	**5**	0	**5**	**1**	0	**1**	**2**	0	1	0	1	0	0	0	0
+15 mins.	0	5	0	5	0	0	0	0	0	**2**	0	**2**	0	0	0	0
+30 mins.	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0
Total Volume	0	12	0	12	1	0	1	2	0	5	0	5	0	0	0	0
% App. Total	0	100	0		50	0	50		0	100	0		0	0	0	
PHF	.000	.600	.000	.600	.250	.000	.250	.250	.000	.625	.000	.625	.000	.000	.000	.000

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File Name : 01_LAC_Gaffey_5th PM
Site Code : 04119599
Start Date : 9/11/2019

Groups Printed- Passenger Vehicles - Dual Wheeled - Buses

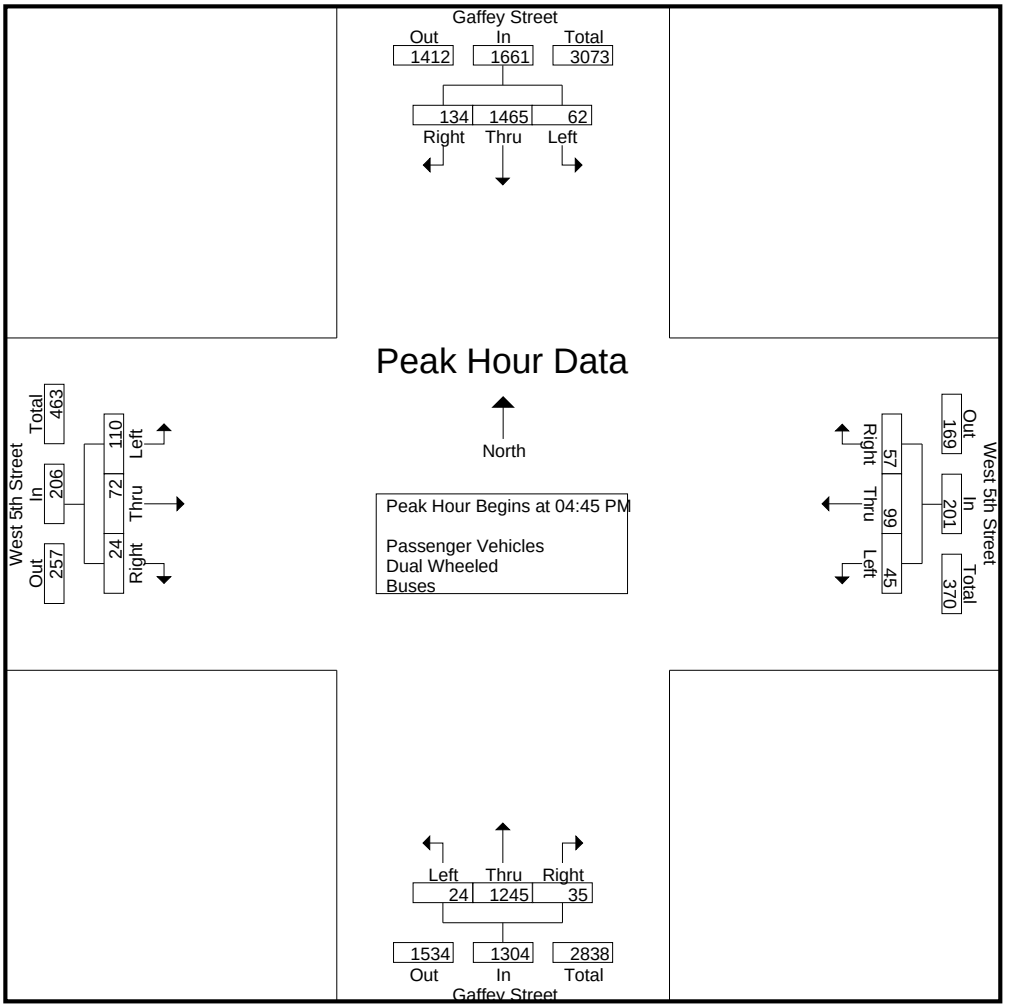
	Gaffey Street Southbound				West 5th Street Westbound				Gaffey Street Northbound				West 5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	20	253	26	299	11	27	16	54	14	295	20	329	35	32	10	77	759
03:15 PM	28	223	16	267	12	35	17	64	8	257	9	274	25	35	8	68	673
03:30 PM	26	258	19	303	7	29	28	64	13	259	16	288	27	24	8	59	714
03:45 PM	13	335	32	380	5	27	11	43	6	263	19	288	19	27	4	50	761
Total	87	1069	93	1249	35	118	72	225	41	1074	64	1179	106	118	30	254	2907
04:00 PM	21	355	34	410	5	23	14	42	8	304	12	324	31	26	5	62	838
04:15 PM	11	384	30	425	11	24	16	51	6	326	13	345	24	25	2	51	872
04:30 PM	20	376	31	427	10	16	9	35	5	275	7	287	26	20	2	48	797
04:45 PM	24	371	25	420	9	26	9	44	6	296	12	314	26	19	3	48	826
Total	76	1486	120	1682	35	89	48	172	25	1201	44	1270	107	90	12	209	3333
05:00 PM	17	336	44	397	17	26	22	65	6	338	6	350	30	27	6	63	875
05:15 PM	11	385	39	435	9	22	11	42	8	299	11	318	26	12	7	45	840
05:30 PM	10	373	26	409	10	25	15	50	4	312	6	322	28	14	8	50	831
05:45 PM	16	353	44	413	7	28	8	43	6	305	6	317	24	19	3	46	819
Total	54	1447	153	1654	43	101	56	200	24	1254	29	1307	108	72	24	204	3365
Grand Total	217	4002	366	4585	113	308	176	597	90	3529	137	3756	321	280	66	667	9605
Apprch %	4.7	87.3	8		18.9	51.6	29.5		2.4	94	3.6		48.1	42	9.9		
Total %	2.3	41.7	3.8	47.7	1.2	3.2	1.8	6.2	0.9	36.7	1.4	39.1	3.3	2.9	0.7	6.9	
Passenger Vehicles	216	3961	364	4541	112	304	175	591	90	3458	135	3683	317	279	66	662	9477
% Passenger Vehicles	99.5	99	99.5	99	99.1	98.7	99.4	99	100	98	98.5	98.1	98.8	99.6	100	99.3	98.7
Dual Wheeled	0	21	2	23	1	3	0	4	0	46	2	48	4	1	0	5	80
% Dual Wheeled	0	0.5	0.5	0.5	0.9	1	0	0.7	0	1.3	1.5	1.3	1.2	0.4	0	0.7	0.8
Buses	1	20	0	21	0	1	1	2	0	25	0	25	0	0	0	0	48
% Buses	0.5	0.5	0	0.5	0	0.3	0.6	0.3	0	0.7	0	0.7	0	0	0	0	0.5

	Gaffey Street Southbound				West 5th Street Westbound				Gaffey Street Northbound				West 5th 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 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**24**	371	25	420	9	**26**	9	44	6	296	**12**	314	26	19	3	48	826
05:00 PM	17	336	**44**	397	**17**	26	**22**	**65**	6	**338**	6	**350**	**30**	**27**	6	**63**	**875**
05:15 PM	11	**385**	39	**435**	9	22	11	42	**8**	299	11	318	26	12	7	45	840
05:30 PM	10	373	26	409	10	25	15	50	4	312	6	322	28	14	**8**	50	831
Total Volume	62	1465	134	1661	45	99	57	201	24	1245	35	1304	110	72	24	206	3372
% App. Total	3.7	88.2	8.1		22.4	49.3	28.4		1.8	95.5	2.7		53.4	35	11.7		
PHF	.646	.951	.761	.955	.662	.952	.648	.773	.750	.921	.729	.931	.917	.667	.750	.817	.963

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Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:00 PM				03:00 PM				05:00 PM				03:00 PM			
+0 mins.	21	355	**34**	410	11	27	16	54	6	**338**	6	**350**	**35**	32	**10**	**77**
+15 mins.	11	**384**	30	425	**12**	**35**	17	**64**	**8**	299	**11**	318	25	**35**	8	68
+30 mins.	20	376	31	**427**	7	29	**28**	64	4	312	6	322	27	24	8	59
+45 mins.	**24**	371	25	420	5	27	11	43	6	305	6	317	19	27	4	50
Total Volume	76	1486	120	1682	35	118	72	225	24	1254	29	1307	106	118	30	254
% App. Total	4.5	88.3	7.1		15.6	52.4	32		1.8	95.9	2.2		41.7	46.5	11.8	
PHF	.792	.967	.882	.985	.729	.843	.643	.879	.750	.928	.659	.934	.757	.843	.750	.825

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Groups Printed- Passenger Vehicles

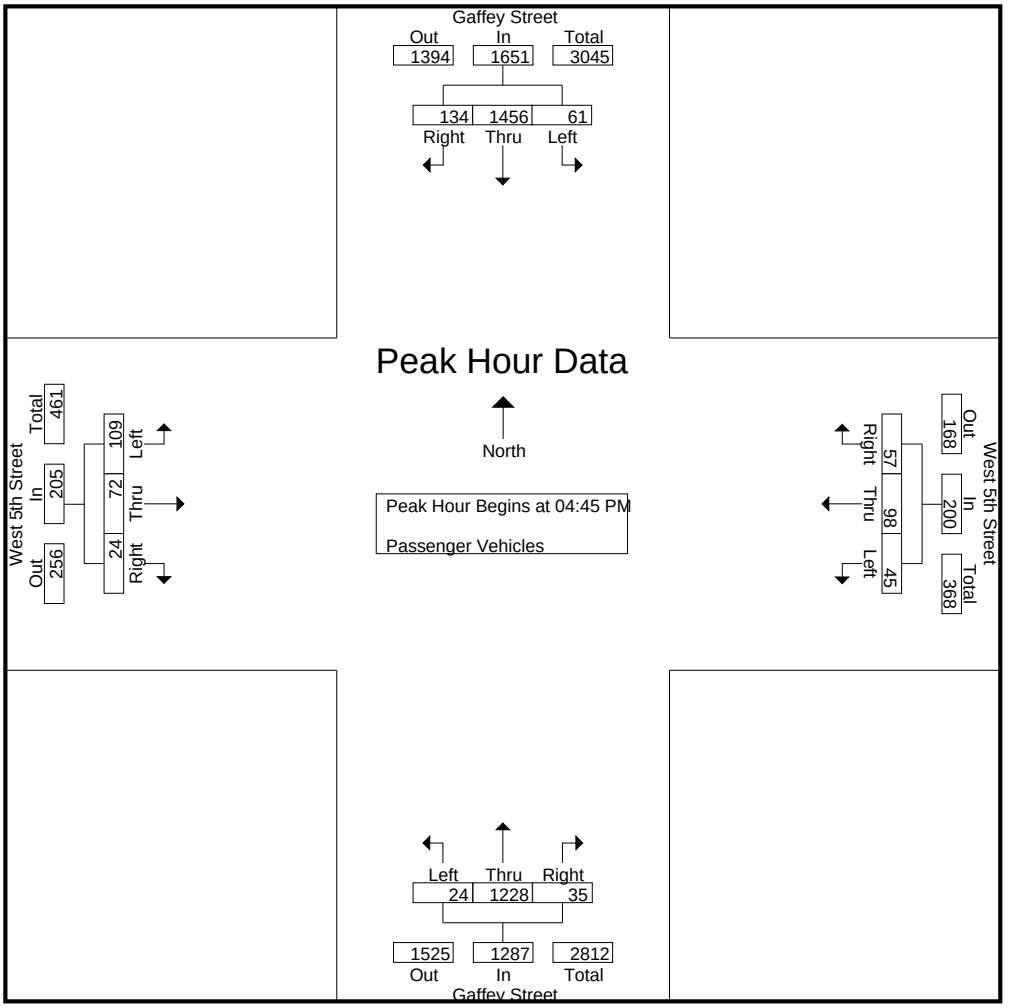
	Gaffey Street Southbound				West 5th Street Westbound				Gaffey Street Northbound				West 5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	20	249	25	294	11	27	16	54	14	285	20	319	34	32	10	76	743
03:15 PM	28	221	16	265	12	34	17	63	8	253	9	270	24	35	8	67	665
03:30 PM	26	256	19	301	7	29	28	64	13	246	16	275	27	24	8	59	699
03:45 PM	13	329	32	374	5	27	10	42	6	255	18	279	19	27	4	50	745
Total	87	1055	92	1234	35	117	71	223	41	1039	63	1143	104	118	30	252	2852
04:00 PM	21	351	33	405	5	22	14	41	8	294	11	313	31	26	5	62	821
04:15 PM	11	377	30	418	11	23	16	50	6	322	13	341	23	24	2	49	858
04:30 PM	20	372	31	423	10	16	9	35	5	271	7	283	26	20	2	48	789
04:45 PM	23	368	25	416	9	25	9	43	6	293	12	311	26	19	3	48	818
Total	75	1468	119	1662	35	86	48	169	25	1180	43	1248	106	89	12	207	3286
05:00 PM	17	334	44	395	17	26	22	65	6	330	6	342	29	27	6	62	864
05:15 PM	11	383	39	433	9	22	11	42	8	295	11	314	26	12	7	45	834
05:30 PM	10	371	26	407	10	25	15	50	4	310	6	320	28	14	8	50	827
05:45 PM	16	350	44	410	6	28	8	42	6	304	6	316	24	19	3	46	814
Total	54	1438	153	1645	42	101	56	199	24	1239	29	1292	107	72	24	203	3339
Grand Total	216	3961	364	4541	112	304	175	591	90	3458	135	3683	317	279	66	662	9477
Apprch %	4.8	87.2	8		19	51.4	29.6		2.4	93.9	3.7		47.9	42.1	10		
Total %	2.3	41.8	3.8	47.9	1.2	3.2	1.8	6.2	0.9	36.5	1.4	38.9	3.3	2.9	0.7	7	

	Gaffey Street Southbound				West 5th Street Westbound				Gaffey Street Northbound				West 5th 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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**23**	368	25	416	9	25	9	43	6	293	**12**	311	26	19	3	48	818
05:00 PM	17	334	**44**	395	**17**	**26**	**22**	**65**	6	**330**	6	**342**	**29**	**27**	6	**62**	**864**
05:15 PM	11	**383**	39	**433**	9	22	11	42	**8**	295	11	314	26	12	7	45	834
05:30 PM	10	371	26	407	10	25	15	50	4	310	6	320	28	14	**8**	50	827
Total Volume	61	1456	134	1651	45	98	57	200	24	1228	35	1287	109	72	24	205	3343
% App. Total	3.7	88.2	8.1		22.5	49	28.5		1.9	95.4	2.7		53.2	35.1	11.7		
PHF	.663	.950	.761	.953	.662	.942	.648	.769	.750	.930	.729	.941	.940	.667	.750	.827	.967

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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	**23**	368	25	416	9	25	9	43	6	293	**12**	311	26	19	3	48
+15 mins.	17	334	**44**	395	**17**	**26**	**22**	**65**	6	**330**	6	**342**	**29**	**27**	6	**62**
+30 mins.	11	**383**	39	**433**	9	22	11	42	**8**	295	11	314	26	12	7	45
+45 mins.	10	371	26	407	10	25	15	50	4	310	6	320	28	14	**8**	50
Total Volume	61	1456	134	1651	45	98	57	200	24	1228	35	1287	109	72	24	205
% App. Total	3.7	88.2	8.1		22.5	49	28.5		1.9	95.4	2.7		53.2	35.1	11.7	
PHF	.663	.950	.761	.953	.662	.942	.648	.769	.750	.930	.729	.941	.940	.667	.750	.827

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Site Code : 04119599
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Groups Printed- Dual Wheeled

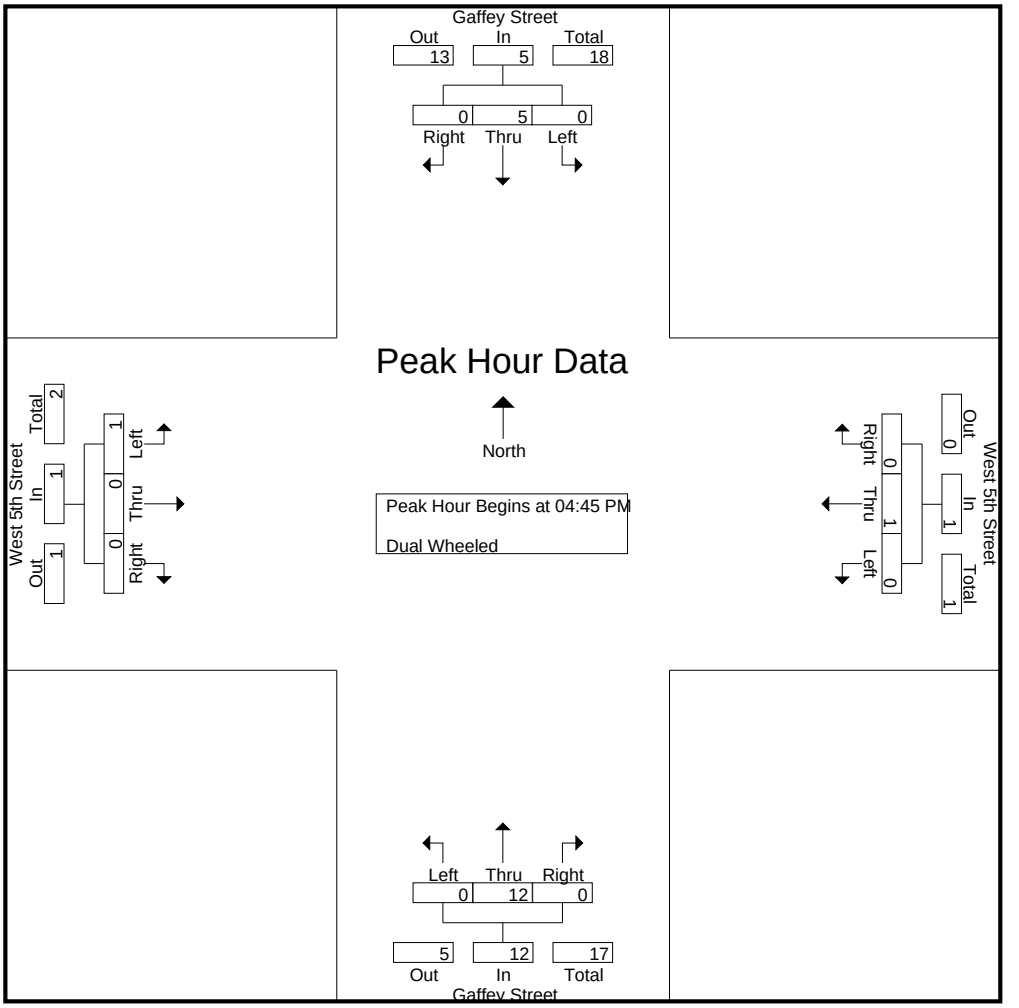
	Gaffey Street Southbound				West 5th Street Westbound				Gaffey Street Northbound				West 5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	2	1	3	0	0	0	0	0	8	0	8	1	0	0	1	12
03:15 PM	0	0	0	0	0	0	0	0	0	4	0	4	1	0	0	1	5
03:30 PM	0	1	0	1	0	0	0	0	0	5	0	5	0	0	0	0	6
03:45 PM	0	4	0	4	0	0	0	0	0	5	1	6	0	0	0	0	10
Total	0	7	1	8	0	0	0	0	0	22	1	23	2	0	0	2	33
04:00 PM	0	2	1	3	0	1	0	1	0	5	1	6	0	0	0	0	10
04:15 PM	0	4	0	4	0	1	0	1	0	3	0	3	1	1	0	2	10
04:30 PM	0	2	0	2	0	0	0	0	0	3	0	3	0	0	0	0	5
04:45 PM	0	1	0	1	0	1	0	1	0	2	0	2	0	0	0	0	4
Total	0	9	1	10	0	3	0	3	0	13	1	14	1	1	0	2	29
05:00 PM	0	1	0	1	0	0	0	0	0	6	0	6	1	0	0	1	8
05:15 PM	0	2	0	2	0	0	0	0	0	3	0	3	0	0	0	0	5
05:30 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
05:45 PM	0	1	0	1	1	0	0	1	0	1	0	1	0	0	0	0	3
Total	0	5	0	5	1	0	0	1	0	11	0	11	1	0	0	1	18
Grand Total	0	21	2	23	1	3	0	4	0	46	2	48	4	1	0	5	80
Apprch %	0	91.3	8.7		25	75	0		0	95.8	4.2		80	20	0		
Total %	0	26.2	2.5	28.8	1.2	3.8	0	5	0	57.5	2.5	60	5	1.2	0	6.2	

	Gaffey Street Southbound				West 5th Street Westbound				Gaffey Street Northbound				West 5th 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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	1	0	1	0	**1**	0	**1**	0	2	0	2	0	0	0	0	4
05:00 PM	0	1	0	1	0	0	0	0	0	**6**	0	**6**	**1**	0	0	**1**	**8**
05:15 PM	0	**2**	0	**2**	0	0	0	0	0	3	0	3	0	0	0	0	5
05:30 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total Volume	0	5	0	5	0	1	0	1	0	12	0	12	1	0	0	1	19
% App. Total	0	100	0		0	100	0		0	100	0		100	0	0		
PHF	.000	.625	.000	.625	.000	.250	.000	.250	.000	.500	.000	.500	.250	.000	.000	.250	.594

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Weather: Clear

File Name : 01_LAC_Gaffey_5th PM
Site Code : 04119599
Start Date : 9/11/2019
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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	1	0	1	0	**1**	0	**1**	0	2	0	2	0	0	0	0
+15 mins.	0	1	0	1	0	0	0	0	0	**6**	0	**6**	**1**	0	0	**1**
+30 mins.	0	**2**	0	**2**	0	0	0	0	0	3	0	3	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0
Total Volume	0	5	0	5	0	1	0	1	0	12	0	12	1	0	0	1
% App. Total	0	100	0		0	100	0		0	100	0		100	0	0	
PHF	.000	.625	.000	.625	.000	.250	.000	.250	.000	.500	.000	.500	.250	.000	.000	.250

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Weather: Clear

File Name : 01_LAC_Gaffey_5th PM
Site Code : 04119599
Start Date : 9/11/2019
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Groups Printed- Buses

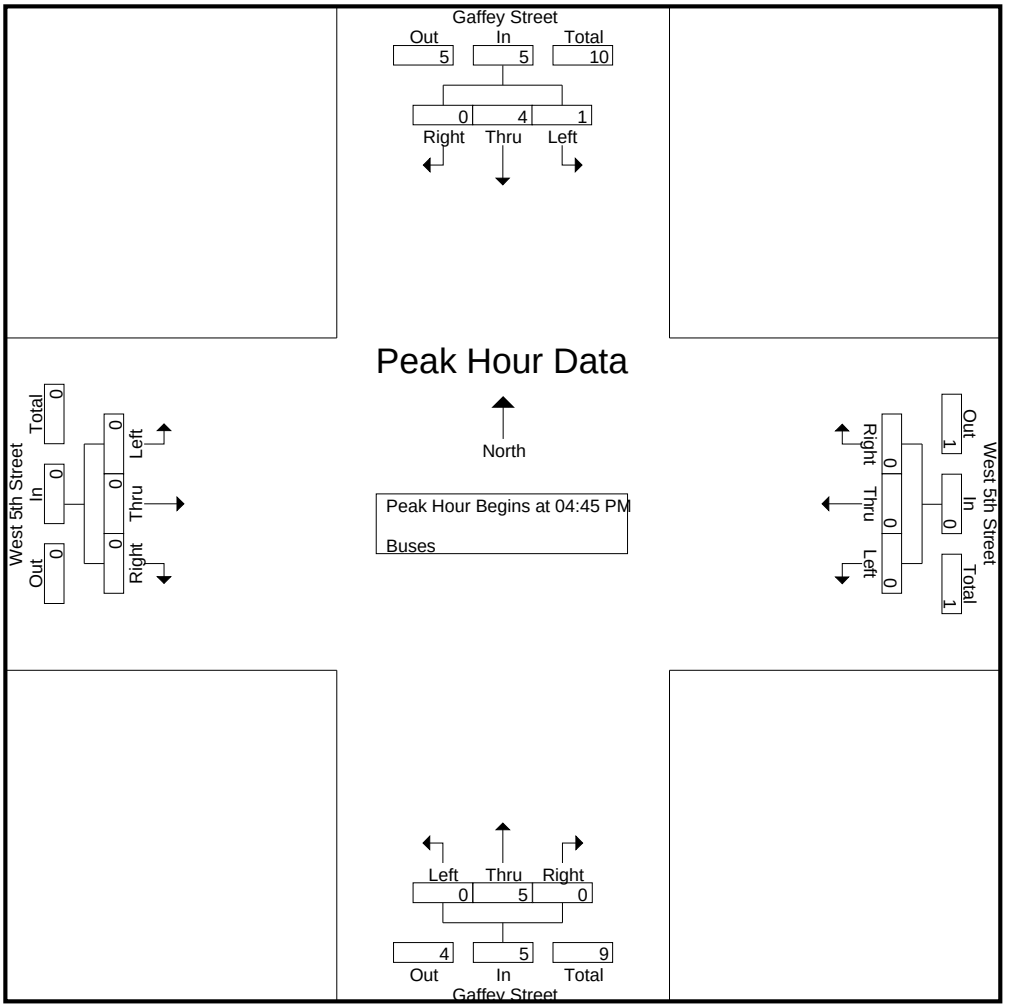
	Gaffey Street Southbound				West 5th Street Westbound				Gaffey Street Northbound				West 5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
03:15 PM	0	2	0	2	0	1	0	1	0	0	0	0	0	0	0	0	3
03:30 PM	0	1	0	1	0	0	0	0	0	8	0	8	0	0	0	0	9
03:45 PM	0	2	0	2	0	0	1	1	0	3	0	3	0	0	0	0	6
Total	0	7	0	7	0	1	1	2	0	13	0	13	0	0	0	0	22
04:00 PM	0	2	0	2	0	0	0	0	0	5	0	5	0	0	0	0	7
04:15 PM	0	3	0	3	0	0	0	0	0	1	0	1	0	0	0	0	4
04:30 PM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
04:45 PM	1	2	0	3	0	0	0	0	0	1	0	1	0	0	0	0	4
Total	1	9	0	10	0	0	0	0	0	8	0	8	0	0	0	0	18
05:00 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
05:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:30 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
05:45 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Total	0	4	0	4	0	0	0	0	0	4	0	4	0	0	0	0	8
Grand Total	1	20	0	21	0	1	1	2	0	25	0	25	0	0	0	0	48
Apprch %	4.8	95.2	0		0	50	50		0	100	0		0	0	0		
Total %	2.1	41.7	0	43.8	0	2.1	2.1	4.2	0	52.1	0	52.1	0	0	0	0	

	Gaffey Street Southbound				West 5th Street Westbound				Gaffey Street Northbound				West 5th 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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	**1**	**2**	0	**3**	0	0	0	0	0	1	0	1	0	0	0	0	**4**
05:00 PM	0	1	0	1	0	0	0	0	0	**2**	0	**2**	0	0	0	0	3
05:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
05:30 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total Volume	1	4	0	5	0	0	0	0	0	5	0	5	0	0	0	0	10
% App. Total	20	80	0		0	0	0		0	100	0		0	0	0		
PHF	.250	.500	.000	.417	.000	.000	.000	.000	.000	.625	.000	.625	.000	.000	.000	.000	.625

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Site Code : 04119599
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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	**1**	**2**	0	**3**	0	0	0	0	0	1	0	1	0	0	0	0
+15 mins.	0	1	0	1	0	0	0	0	0	**2**	0	**2**	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0
Total Volume	1	4	0	5	0	0	0	0	0	5	0	5	0	0	0	0
% App. Total	20	80	0		0	0	0		0	100	0		0	0	0	
PHF	.250	.500	.000	.417	.000	.000	.000	.000	.000	.625	.000	.625	.000	.000	.000	.000

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City of Los Angeles
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Weather: Clear

File Name : 02_LAC_Pacific_5th AM
Site Code : 04119599
Start Date : 9/11/2019

Groups Printed- Passenger Vehicles - Dual Wheeled - Buses

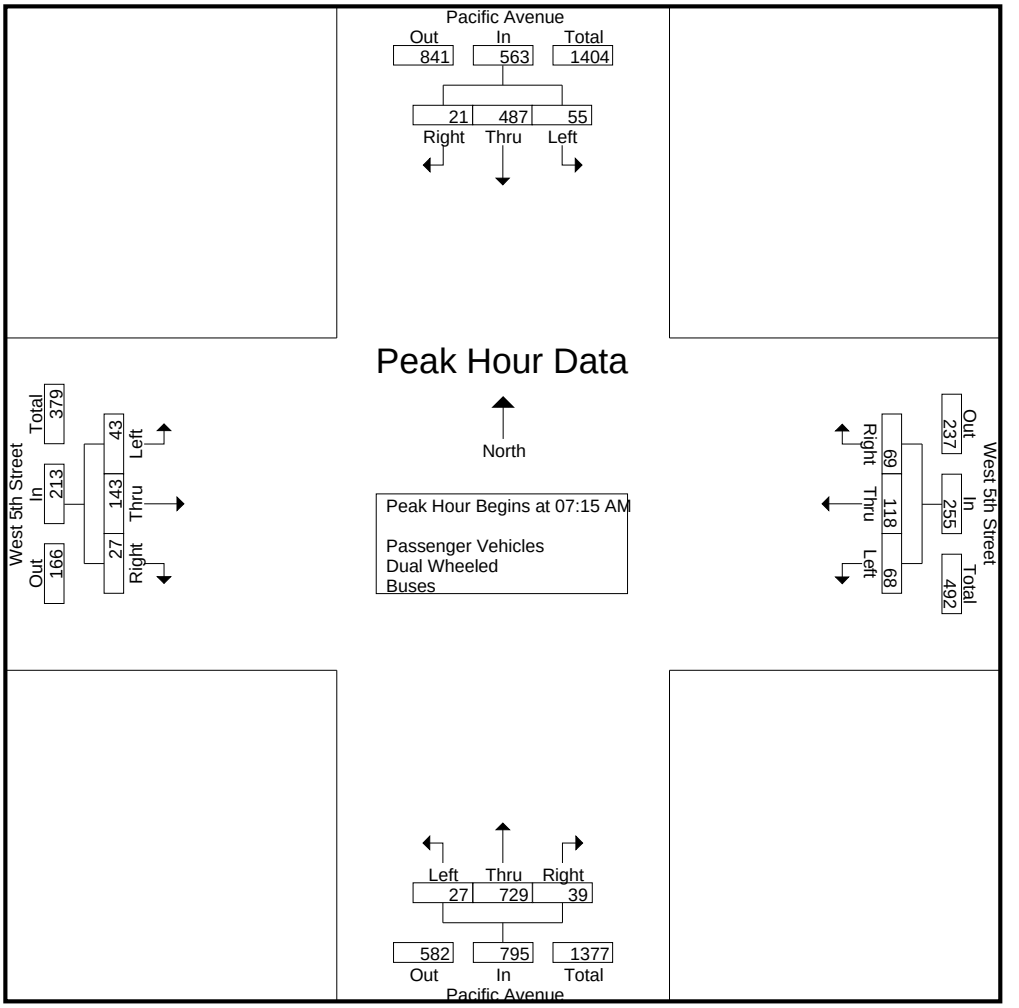
	Pacific Avenue Southbound				West 5th Street Westbound				Pacific Avenue Northbound				West 5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	5	59	3	67	3	8	14	25	7	144	6	157	9	15	7	31	280
07:15 AM	9	114	3	126	13	11	10	34	10	192	7	209	4	25	6	35	404
07:30 AM	18	124	4	146	25	31	17	73	3	172	6	181	15	40	9	64	464
07:45 AM	16	138	8	162	22	50	27	99	10	186	16	212	10	47	3	60	533
Total	48	435	18	501	63	100	68	231	30	694	35	759	38	127	25	190	1681
08:00 AM	12	111	6	129	8	26	15	49	4	179	10	193	14	31	9	54	425
08:15 AM	4	78	2	84	17	18	15	50	6	154	13	173	11	25	10	46	353
08:30 AM	12	75	5	92	3	15	12	30	6	128	12	146	11	19	10	40	308
08:45 AM	9	92	4	105	7	14	10	31	9	127	6	142	8	38	9	55	333
Total	37	356	17	410	35	73	52	160	25	588	41	654	44	113	38	195	1419
09:00 AM	13	80	4	97	8	16	20	44	7	117	11	135	8	9	5	22	298
09:15 AM	9	77	3	89	8	12	11	31	4	112	9	125	6	13	7	26	271
09:30 AM	6	89	2	97	9	14	13	36	6	115	5	126	6	12	8	26	285
09:45 AM	4	75	6	85	12	19	8	39	8	113	11	132	7	18	6	31	287
Total	32	321	15	368	37	61	52	150	25	457	36	518	27	52	26	105	1141
Grand Total	117	1112	50	1279	135	234	172	541	80	1739	112	1931	109	292	89	490	4241
Apprch %	9.1	86.9	3.9		25	43.3	31.8		4.1	90.1	5.8		22.2	59.6	18.2		
Total %	2.8	26.2	1.2	30.2	3.2	5.5	4.1	12.8	1.9	41	2.6	45.5	2.6	6.9	2.1	11.6	
Passenger Vehicles	110	1056	46	1212	135	221	166	522	79	1687	111	1877	108	279	84	471	4082
% Passenger Vehicles	94	95	92	94.8	100	94.4	96.5	96.5	98.8	97	99.1	97.2	99.1	95.5	94.4	96.1	96.3
Dual Wheeled	7	36	4	47	0	13	6	19	0	32	0	32	1	13	5	19	117
% Dual Wheeled	6	3.2	8	3.7	0	5.6	3.5	3.5	0	1.8	0	1.7	0.9	4.5	5.6	3.9	2.8
Buses	0	20	0	20	0	0	0	0	1	20	1	22	0	0	0	0	42
% Buses	0	1.8	0	1.6	0	0	0	0	1.2	1.2	0.9	1.1	0	0	0	0	1

	Pacific Avenue Southbound				West 5th Street Westbound				Pacific Avenue Northbound				West 5th 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 09:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	9	114	3	126	13	11	10	34	**10**	**192**	7	209	4	25	6	35	404
07:30 AM	**18**	124	4	146	**25**	31	17	73	3	172	6	181	**15**	40	**9**	**64**	464
07:45 AM	16	**138**	**8**	**162**	22	**50**	**27**	**99**	10	186	**16**	**212**	10	**47**	3	60	**533**
08:00 AM	12	111	6	129	8	26	15	49	4	179	10	193	14	31	9	54	425
Total Volume	55	487	21	563	68	118	69	255	27	729	39	795	43	143	27	213	1826
% App. Total	9.8	86.5	3.7		26.7	46.3	27.1		3.4	91.7	4.9		20.2	67.1	12.7		
PHF	.764	.882	.656	.869	.680	.590	.639	.644	.675	.949	.609	.938	.717	.761	.750	.832	.856

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Site Code : 04119599
Start Date : 9/11/2019



Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:30 AM				07:15 AM				07:30 AM			
+0 mins.	9	114	3	126	**25**	31	17	73	**10**	**192**	7	209	**15**	40	9	**64**
+15 mins.	**18**	124	4	146	22	**50**	**27**	**99**	3	172	6	181	10	**47**	3	60
+30 mins.	16	**138**	**8**	**162**	8	26	15	49	10	186	**16**	**212**	14	31	9	54
+45 mins.	12	111	6	129	17	18	15	50	4	179	10	193	11	25	**10**	46
Total Volume	55	487	21	563	72	125	74	271	27	729	39	795	50	143	31	224
% App. Total	9.8	86.5	3.7		26.6	46.1	27.3		3.4	91.7	4.9		22.3	63.8	13.8	
PHF	.764	.882	.656	.869	.720	.625	.685	.684	.675	.949	.609	.938	.833	.761	.775	.875

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Weather: Clear

File Name : 02_LAC_Pacific_5th AM
Site Code : 04119599
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Groups Printed- Passenger Vehicles

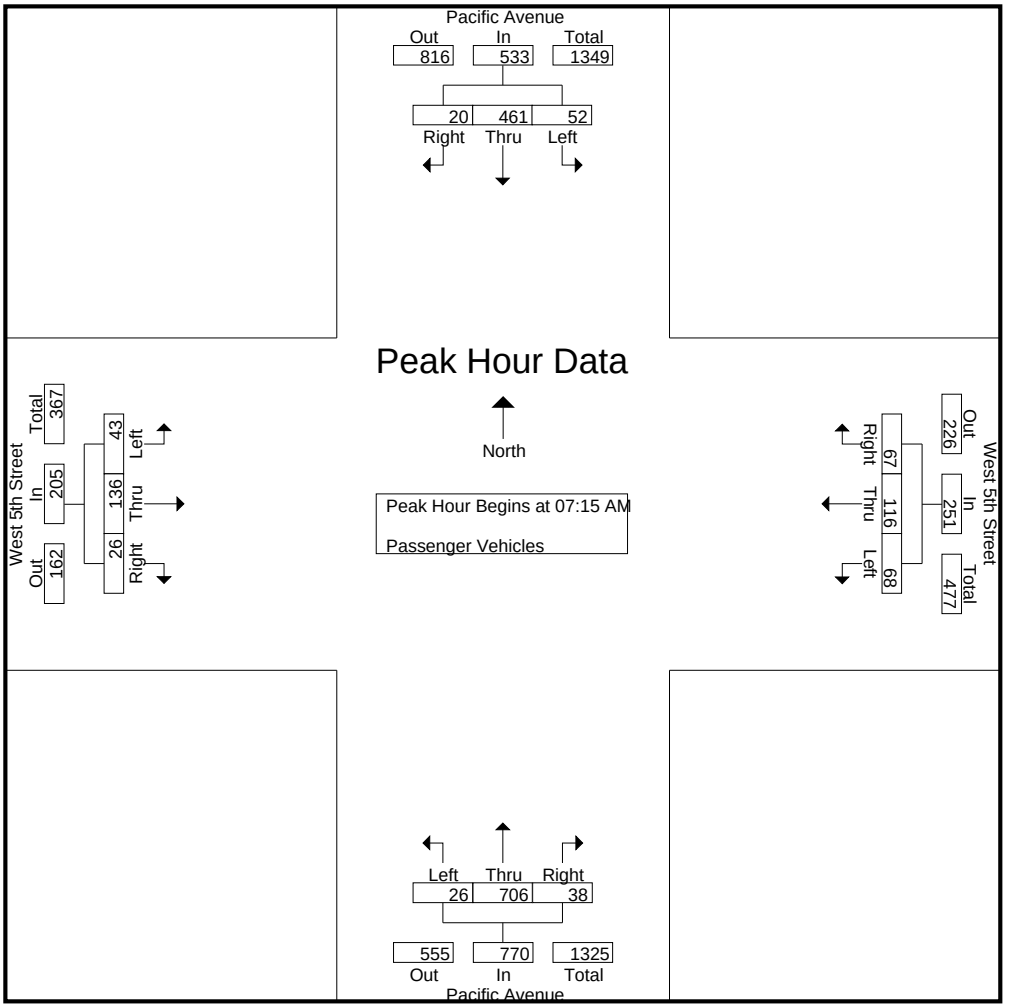
	Pacific Avenue Southbound				West 5th Street Westbound				Pacific Avenue Northbound				West 5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	5	55	3	63	3	8	14	25	7	140	6	153	8	15	7	30	271
07:15 AM	8	107	2	117	13	10	8	31	9	185	7	201	4	23	6	33	382
07:30 AM	17	117	4	138	25	31	17	73	3	164	6	173	15	38	9	62	446
07:45 AM	16	131	8	155	22	49	27	98	10	184	15	209	10	46	3	59	521
Total	46	410	17	473	63	98	66	227	29	673	34	736	37	122	25	184	1620
08:00 AM	11	106	6	123	8	26	15	49	4	173	10	187	14	29	8	51	410
08:15 AM	4	76	2	82	17	16	14	47	6	152	13	171	11	22	9	42	342
08:30 AM	11	73	4	88	3	12	12	27	6	123	12	141	11	19	10	40	296
08:45 AM	8	88	3	99	7	11	10	28	9	124	6	139	8	36	9	53	319
Total	34	343	15	392	35	65	51	151	25	572	41	638	44	106	36	186	1367
09:00 AM	12	77	4	93	8	16	18	42	7	111	11	129	8	9	5	22	286
09:15 AM	9	73	3	85	8	10	11	29	4	109	9	122	6	12	6	24	260
09:30 AM	5	84	2	91	9	14	13	36	6	112	5	123	6	12	7	25	275
09:45 AM	4	69	5	78	12	18	7	37	8	110	11	129	7	18	5	30	274
Total	30	303	14	347	37	58	49	144	25	442	36	503	27	51	23	101	1095
Grand Total	110	1056	46	1212	135	221	166	522	79	1687	111	1877	108	279	84	471	4082
Apprch %	9.1	87.1	3.8		25.9	42.3	31.8		4.2	89.9	5.9		22.9	59.2	17.8		
Total %	2.7	25.9	1.1	29.7	3.3	5.4	4.1	12.8	1.9	41.3	2.7	46	2.6	6.8	2.1	11.5	

	Pacific Avenue Southbound				West 5th Street Westbound				Pacific Avenue Northbound				West 5th 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 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	8	107	2	117	13	10	8	31	9	**185**	7	201	4	23	6	33	382
07:30 AM	**17**	117	4	138	**25**	31	17	73	3	164	6	173	**15**	38	**9**	**62**	446
07:45 AM	16	**131**	**8**	**155**	22	**49**	**27**	**98**	**10**	184	**15**	**209**	10	**46**	3	59	**521**
08:00 AM	11	106	6	123	8	26	15	49	4	173	10	187	14	29	8	51	410
Total Volume	52	461	20	533	68	116	67	251	26	706	38	770	43	136	26	205	1759
% App. Total	9.8	86.5	3.8		27.1	46.2	26.7		3.4	91.7	4.9		21	66.3	12.7		
PHF	.765	.880	.625	.860	.680	.592	.620	.640	.650	.954	.633	.921	.717	.739	.722	.827	.844

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Site Code : 04119599
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	8	107	2	117	13	10	8	31	9	**185**	7	201	4	23	6	33
+15 mins.	**17**	117	4	138	**25**	31	17	73	3	164	6	173	**15**	38	**9**	**62**
+30 mins.	16	**131**	**8**	**155**	22	**49**	**27**	**98**	**10**	184	**15**	**209**	10	**46**	3	59
+45 mins.	11	106	6	123	8	26	15	49	4	173	10	187	14	29	8	51
Total Volume	52	461	20	533	68	116	67	251	26	706	38	770	43	136	26	205
% App. Total	9.8	86.5	3.8		27.1	46.2	26.7		3.4	91.7	4.9		21	66.3	12.7	
PHF	.765	.880	.625	.860	.680	.592	.620	.640	.650	.954	.633	.921	.717	.739	.722	.827

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Site Code : 04119599
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Groups Printed- Dual Wheeled

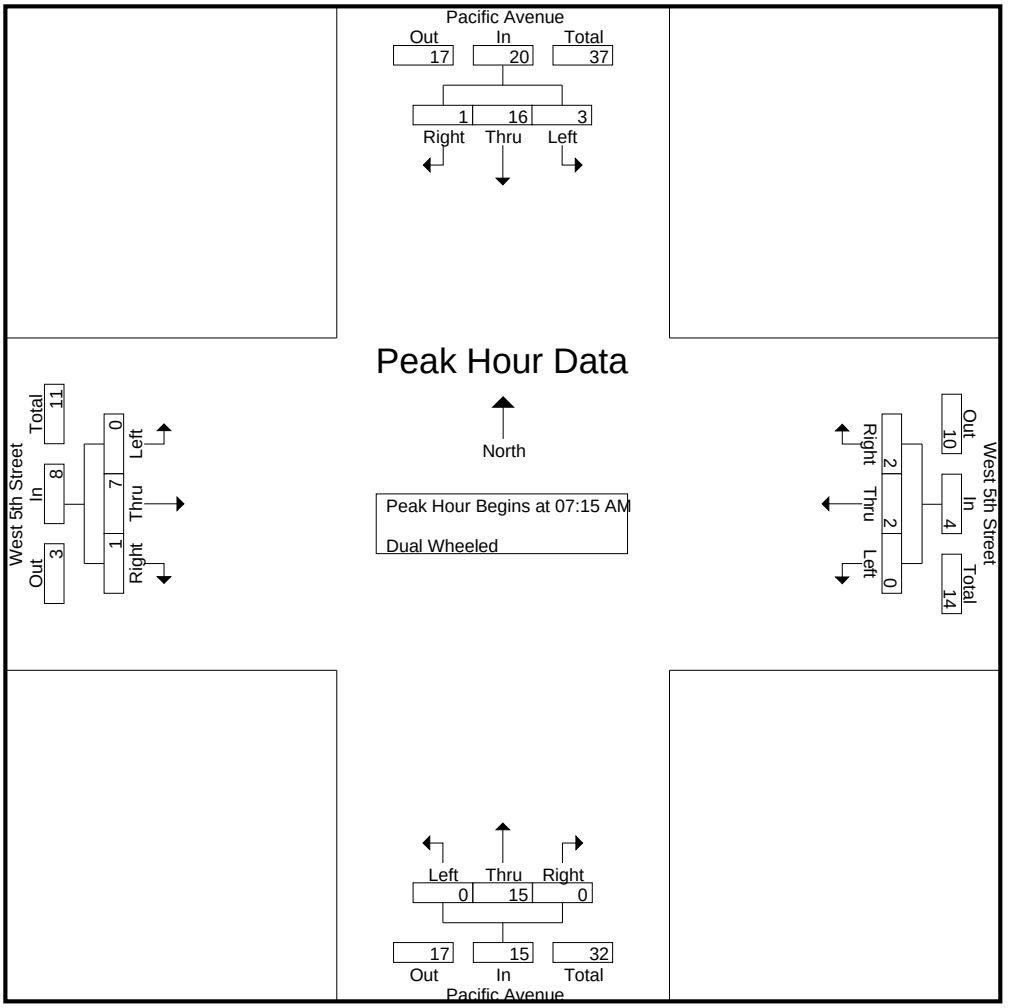
	Pacific Avenue Southbound				West 5th Street Westbound				Pacific Avenue Northbound				West 5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
07:15 AM	1	5	1	7	0	1	2	3	0	3	0	3	0	2	0	2	15
07:30 AM	1	3	0	4	0	0	0	0	0	6	0	6	0	2	0	2	12
07:45 AM	0	4	0	4	0	1	0	1	0	1	0	1	0	1	0	1	7
Total	2	13	1	16	0	2	2	4	0	10	0	10	1	5	0	6	36
08:00 AM	1	4	0	5	0	0	0	0	0	5	0	5	0	2	1	3	13
08:15 AM	0	1	0	1	0	2	1	3	0	1	0	1	0	3	1	4	9
08:30 AM	1	1	1	3	0	3	0	3	0	2	0	2	0	0	0	0	8
08:45 AM	1	4	1	6	0	3	0	3	0	3	0	3	0	2	0	2	14
Total	3	10	2	15	0	8	1	9	0	11	0	11	0	7	2	9	44
09:00 AM	1	2	0	3	0	0	2	2	0	4	0	4	0	0	0	0	9
09:15 AM	0	2	0	2	0	2	0	2	0	2	0	2	0	1	1	2	8
09:30 AM	1	5	0	6	0	0	0	0	0	3	0	3	0	0	1	1	10
09:45 AM	0	4	1	5	0	1	1	2	0	2	0	2	0	0	1	1	10
Total	2	13	1	16	0	3	3	6	0	11	0	11	0	1	3	4	37
Grand Total	7	36	4	47	0	13	6	19	0	32	0	32	1	13	5	19	117
Apprch %	14.9	76.6	8.5		0	68.4	31.6		0	100	0		5.3	68.4	26.3		
Total %	6	30.8	3.4	40.2	0	11.1	5.1	16.2	0	27.4	0	27.4	0.9	11.1	4.3	16.2	

	Pacific Avenue Southbound				West 5th Street Westbound				Pacific Avenue Northbound				West 5th 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 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**1**	**5**	**1**	**7**	0	**1**	**2**	**3**	0	3	0	3	0	**2**	0	2	**15**
07:30 AM	1	3	0	4	0	0	0	0	0	**6**	0	**6**	0	2	0	2	12
07:45 AM	0	4	0	4	0	1	0	1	0	1	0	1	0	1	0	1	7
08:00 AM	1	4	0	5	0	0	0	0	0	5	0	5	0	2	**1**	**3**	13
Total Volume	3	16	1	20	0	2	2	4	0	15	0	15	0	7	1	8	47
% App. Total	15	80	5		0	50	50		0	100	0		0	87.5	12.5		
PHF	.750	.800	.250	.714	.000	.500	.250	.333	.000	.625	.000	.625	.000	.875	.250	.667	.783

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Site Code : 04119599
Start Date : 9/11/2019
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	**1**	**5**	**1**	**7**	0	**1**	**2**	**3**	0	3	0	3	0	**2**	0	2
+15 mins.	1	3	0	4	0	0	0	0	0	**6**	0	**6**	0	2	0	2
+30 mins.	0	4	0	4	0	1	0	1	0	1	0	1	0	1	0	1
+45 mins.	1	4	0	5	0	0	0	0	0	5	0	5	0	2	**1**	**3**
Total Volume	3	16	1	20	0	2	2	4	0	15	0	15	0	7	1	8
% App. Total	15	80	5		0	50	50		0	100	0		0	87.5	12.5	
PHF	.750	.800	.250	.714	.000	.500	.250	.333	.000	.625	.000	.625	.000	.875	.250	.667

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Groups Printed- Buses

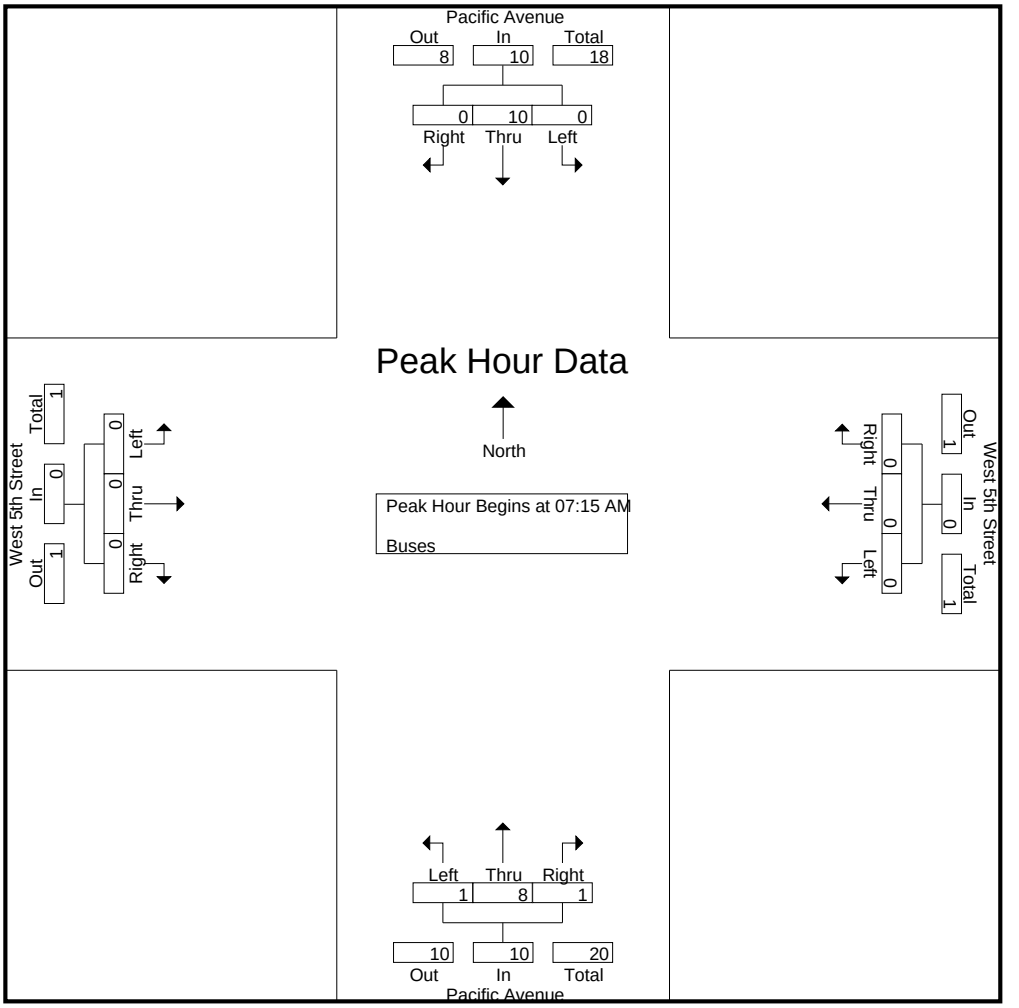
	Pacific Avenue Southbound				West 5th Street Westbound				Pacific Avenue Northbound				West 5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	3	0	3	0	0	0	0	0	4	0	4	0	0	0	0	7
07:15 AM	0	2	0	2	0	0	0	0	1	4	0	5	0	0	0	0	7
07:30 AM	0	4	0	4	0	0	0	0	0	2	0	2	0	0	0	0	6
07:45 AM	0	3	0	3	0	0	0	0	0	1	1	2	0	0	0	0	5
Total	0	12	0	12	0	0	0	0	1	11	1	13	0	0	0	0	25
08:00 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
08:15 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
08:30 AM	0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0	4
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	3	0	3	0	0	0	0	0	5	0	5	0	0	0	0	8
09:00 AM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
09:15 AM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
09:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:45 AM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
Total	0	5	0	5	0	0	0	0	0	4	0	4	0	0	0	0	9
Grand Total	0	20	0	20	0	0	0	0	1	20	1	22	0	0	0	0	42
Apprch %	0	100	0		0	0	0		4.5	90.9	4.5		0	0	0		
Total %	0	47.6	0	47.6	0	0	0	0	2.4	47.6	2.4	52.4	0	0	0	0	

	Pacific Avenue Southbound				West 5th Street Westbound				Pacific Avenue Northbound				West 5th 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 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	2	0	2	0	0	0	0	**1**	**4**	0	**5**	0	0	0	0	**7**
07:30 AM	0	**4**	0	**4**	0	0	0	0	0	2	0	2	0	0	0	0	6
07:45 AM	0	3	0	3	0	0	0	0	0	1	**1**	2	0	0	0	0	5
08:00 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total Volume	0	10	0	10	0	0	0	0	1	8	1	10	0	0	0	0	20
% App. Total	0	100	0		0	0	0		10	80	10		0	0	0		
PHF	.000	.625	.000	.625	.000	.000	.000	.000	.250	.500	.250	.500	.000	.000	.000	.000	.714

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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	2	0	2	0	0	0	0	**1**	**4**	0	**5**	0	0	0	0
+15 mins.	0	**4**	0	**4**	0	0	0	0	0	2	0	2	0	0	0	0
+30 mins.	0	3	0	3	0	0	0	0	0	1	**1**	2	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0
Total Volume	0	10	0	10	0	0	0	0	1	8	1	10	0	0	0	0
% App. Total	0	100	0		0	0	0		10	80	10		0	0	0	
PHF	.000	.625	.000	.625	.000	.000	.000	.000	.250	.500	.250	.500	.000	.000	.000	.000

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File Name : 02_LAC_Pacific_5th PM
Site Code : 04119599
Start Date : 9/11/2019

Groups Printed- Passenger Vehicles - Dual Wheeled - Buses

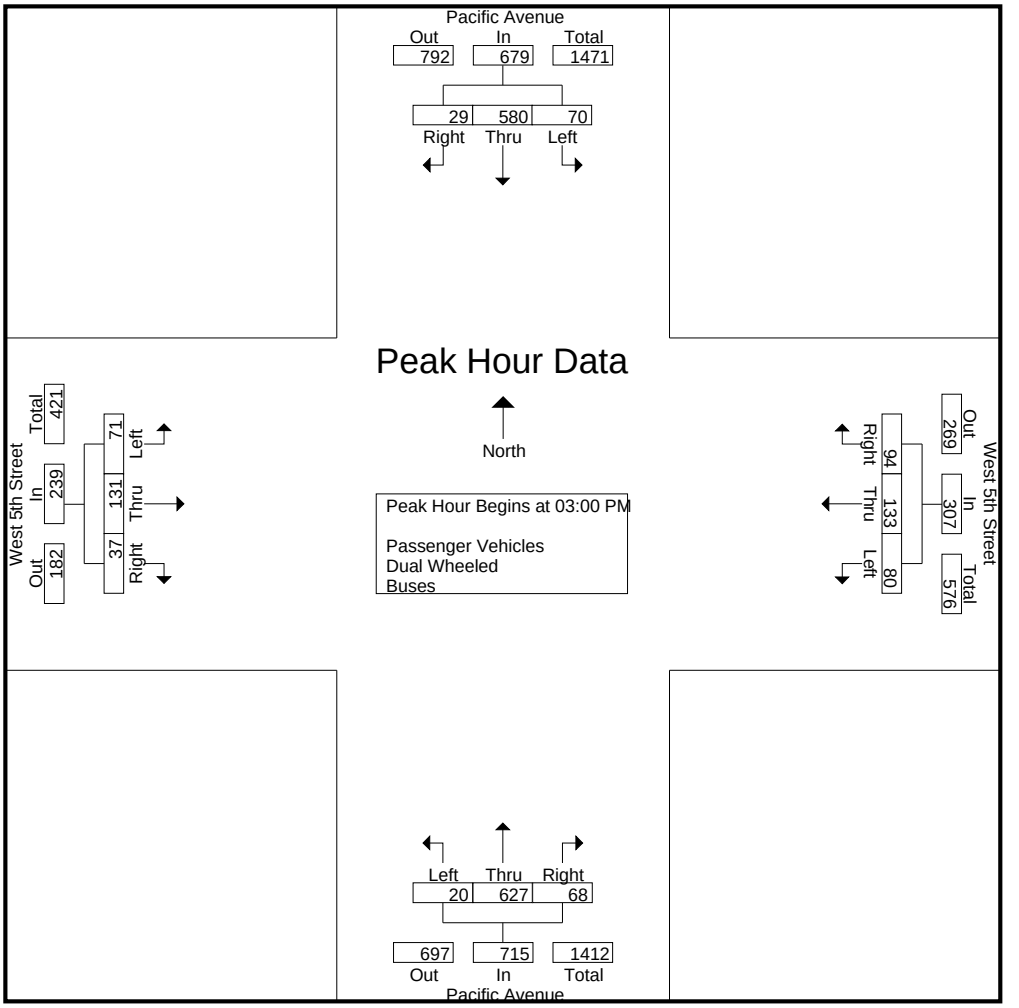
	Pacific Avenue Southbound				West 5th Street Westbound				Pacific Avenue Northbound				West 5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	19	142	10	171	22	37	19	78	2	153	17	172	17	41	7	65	486
03:15 PM	17	132	6	155	19	36	33	88	7	169	21	197	18	35	8	61	501
03:30 PM	17	146	8	171	25	38	20	83	4	159	17	180	19	28	11	58	492
03:45 PM	17	160	5	182	14	22	22	58	7	146	13	166	17	27	11	55	461
Total	70	580	29	679	80	133	94	307	20	627	68	715	71	131	37	239	1940
04:00 PM	20	139	2	161	8	23	20	51	5	146	14	165	10	23	7	40	417
04:15 PM	14	149	5	168	14	25	15	54	4	133	11	148	15	22	9	46	416
04:30 PM	15	144	3	162	14	19	25	58	3	129	12	144	8	26	6	40	404
04:45 PM	17	154	5	176	15	26	20	61	3	135	15	153	7	36	10	53	443
Total	66	586	15	667	51	93	80	224	15	543	52	610	40	107	32	179	1680
05:00 PM	13	154	4	171	16	48	21	85	5	130	11	146	9	34	6	49	451
05:15 PM	10	170	6	186	25	31	15	71	3	125	20	148	5	22	8	35	440
05:30 PM	19	149	4	172	15	30	17	62	8	134	16	158	3	16	5	24	416
05:45 PM	20	149	11	180	27	23	10	60	10	134	10	154	6	17	12	35	429
Total	62	622	25	709	83	132	63	278	26	523	57	606	23	89	31	143	1736
Grand Total	198	1788	69	2055	214	358	237	809	61	1693	177	1931	134	327	100	561	5356
Apprch %	9.6	87	3.4		26.5	44.3	29.3		3.2	87.7	9.2		23.9	58.3	17.8		
Total %	3.7	33.4	1.3	38.4	4	6.7	4.4	15.1	1.1	31.6	3.3	36.1	2.5	6.1	1.9	10.5	
Passenger Vehicles	191	1744	68	2003	213	355	236	804	61	1642	173	1876	132	324	100	556	5239
% Passenger Vehicles	96.5	97.5	98.6	97.5	99.5	99.2	99.6	99.4	100	97	97.7	97.2	98.5	99.1	100	99.1	97.8
Dual Wheeled	7	27	1	35	1	2	1	4	0	21	4	25	2	2	0	4	68
% Dual Wheeled	3.5	1.5	1.4	1.7	0.5	0.6	0.4	0.5	0	1.2	2.3	1.3	1.5	0.6	0	0.7	1.3
Buses	0	17	0	17	0	1	0	1	0	30	0	30	0	1	0	1	49
% Buses	0	1	0	0.8	0	0.3	0	0.1	0	1.8	0	1.6	0	0.3	0	0.2	0.9

	Pacific Avenue Southbound				West 5th Street Westbound				Pacific Avenue Northbound				West 5th 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 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	**19**	142	**10**	171	22	37	19	78	2	153	17	172	17	**41**	7	**65**	486
03:15 PM	17	132	6	155	19	36	**33**	**88**	**7**	**169**	**21**	**197**	18	35	8	61	**501**
03:30 PM	17	146	8	171	**25**	**38**	20	83	4	159	17	180	**19**	28	**11**	58	492
03:45 PM	17	**160**	5	**182**	14	22	22	58	7	146	13	166	17	27	11	55	461
Total Volume	70	580	29	679	80	133	94	307	20	627	68	715	71	131	37	239	1940
% App. Total	10.3	85.4	4.3		26.1	43.3	30.6		2.8	87.7	9.5		29.7	54.8	15.5		
PHF	.921	.906	.725	.933	.800	.875	.712	.872	.714	.928	.810	.907	.934	.799	.841	.919	.968

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Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	05:00 PM				03:00 PM				03:00 PM				03:00 PM			
+0 mins.	13	154	4	171	22	37	19	78	2	153	17	172	17	**41**	7	**65**
+15 mins.	10	**170**	6	**186**	19	36	**33**	**88**	**7**	**169**	**21**	**197**	18	35	8	61
+30 mins.	19	149	4	172	**25**	**38**	20	83	4	159	17	180	**19**	28	**11**	58
+45 mins.	**20**	149	**11**	180	14	22	22	58	7	146	13	166	17	27	11	55
Total Volume	62	622	25	709	80	133	94	307	20	627	68	715	71	131	37	239
% App. Total	8.7	87.7	3.5		26.1	43.3	30.6		2.8	87.7	9.5		29.7	54.8	15.5	
PHF	.775	.915	.568	.953	.800	.875	.712	.872	.714	.928	.810	.907	.934	.799	.841	.919

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Site Code : 04119599
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Groups Printed- Passenger Vehicles

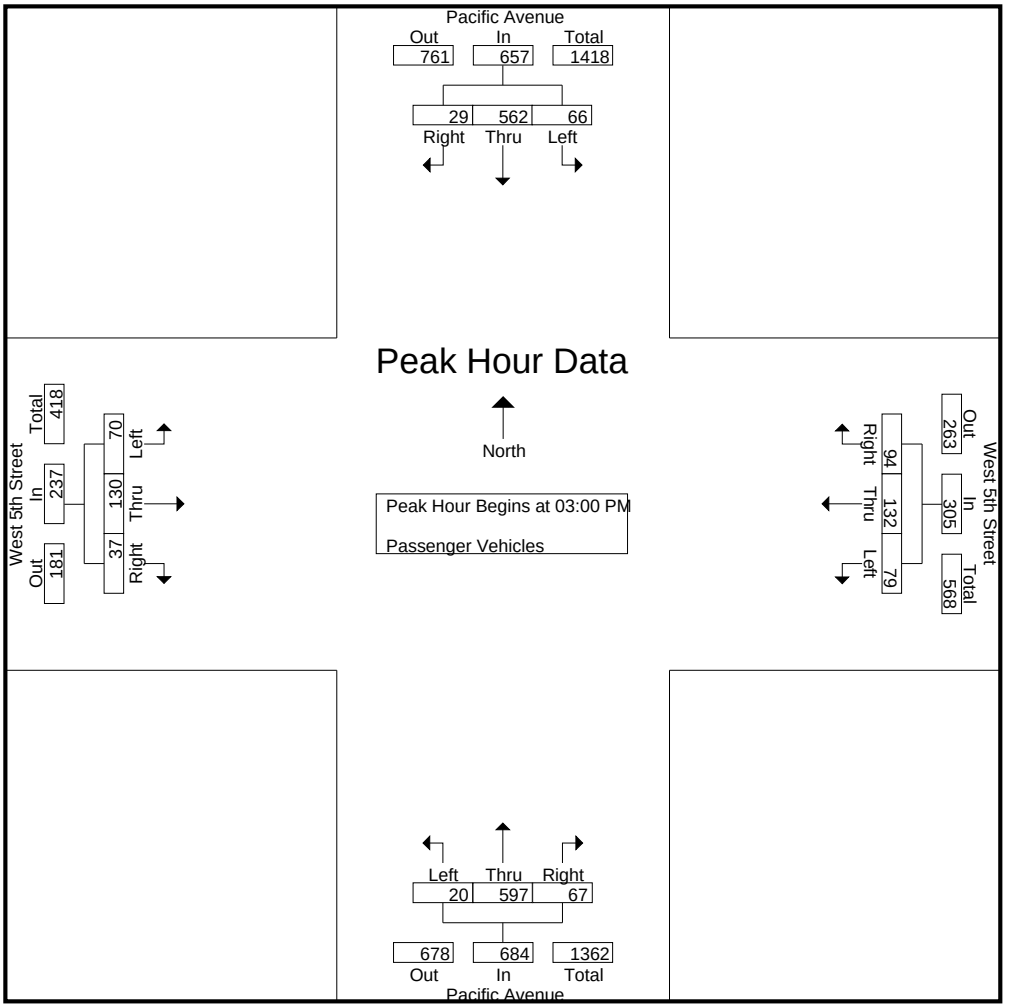
	Pacific Avenue Southbound				West 5th Street Westbound				Pacific Avenue Northbound				West 5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	18	136	10	164	22	37	19	78	2	146	17	165	17	41	7	65	472
03:15 PM	17	130	6	153	19	35	33	87	7	163	20	190	18	34	8	60	490
03:30 PM	16	141	8	165	24	38	20	82	4	147	17	168	19	28	11	58	473
03:45 PM	15	155	5	175	14	22	22	58	7	141	13	161	16	27	11	54	448
Total	66	562	29	657	79	132	94	305	20	597	67	684	70	130	37	237	1883
04:00 PM	18	136	1	155	8	23	20	51	5	143	14	162	10	22	7	39	407
04:15 PM	14	147	5	166	14	25	15	54	4	131	9	144	14	22	9	45	409
04:30 PM	15	139	3	157	14	19	25	58	3	124	12	139	8	26	6	40	394
04:45 PM	17	151	5	173	15	26	19	60	3	134	15	152	7	35	10	52	437
Total	64	573	14	651	51	93	79	223	15	532	50	597	39	105	32	176	1647
05:00 PM	13	147	4	164	16	47	21	84	5	127	11	143	9	34	6	49	440
05:15 PM	10	168	6	184	25	31	15	71	3	122	19	144	5	22	8	35	434
05:30 PM	18	146	4	168	15	30	17	62	8	133	16	157	3	16	5	24	411
05:45 PM	20	148	11	179	27	22	10	59	10	131	10	151	6	17	12	35	424
Total	61	609	25	695	83	130	63	276	26	513	56	595	23	89	31	143	1709
Grand Total	191	1744	68	2003	213	355	236	804	61	1642	173	1876	132	324	100	556	5239
Apprch %	9.5	87.1	3.4		26.5	44.2	29.4		3.3	87.5	9.2		23.7	58.3	18		
Total %	3.6	33.3	1.3	38.2	4.1	6.8	4.5	15.3	1.2	31.3	3.3	35.8	2.5	6.2	1.9	10.6	

	Pacific Avenue Southbound				West 5th Street Westbound				Pacific Avenue Northbound				West 5th 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 03:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	**18**	136	**10**	164	22	37	19	78	2	146	17	165	17	**41**	7	**65**	472
03:15 PM	17	130	6	153	19	35	**33**	**87**	**7**	**163**	**20**	**190**	18	34	8	60	**490**
03:30 PM	16	141	8	165	**24**	**38**	20	82	4	147	17	168	**19**	28	**11**	58	473
03:45 PM	15	**155**	5	**175**	14	22	22	58	7	141	13	161	16	27	11	54	448
Total Volume	66	562	29	657	79	132	94	305	20	597	67	684	70	130	37	237	1883
% App. Total	10	85.5	4.4		25.9	43.3	30.8		2.9	87.3	9.8		29.5	54.9	15.6		
PHF	.917	.906	.725	.939	.823	.868	.712	.876	.714	.916	.838	.900	.921	.793	.841	.912	.961

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Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM				03:00 PM				03:00 PM				03:00 PM			
+0 mins.	**18**	136	**10**	164	22	37	19	78	2	146	17	165	17	**41**	7	**65**
+15 mins.	17	130	6	153	19	35	**33**	**87**	**7**	**163**	**20**	**190**	18	34	8	60
+30 mins.	16	141	8	165	**24**	**38**	20	82	4	147	17	168	**19**	28	**11**	58
+45 mins.	15	**155**	5	**175**	14	22	22	58	7	141	13	161	16	27	11	54
Total Volume	66	562	29	657	79	132	94	305	20	597	67	684	70	130	37	237
% App. Total	10	85.5	4.4		25.9	43.3	30.8		2.9	87.3	9.8		29.5	54.9	15.6	
PHF	.917	.906	.725	.939	.823	.868	.712	.876	.714	.916	.838	.900	.921	.793	.841	.912

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City of Los Angeles
N/S: Pacific Avenue
E/W: West 5th Street
Weather: Clear

File Name : 02_LAC_Pacific_5th PM
Site Code : 04119599
Start Date : 9/11/2019
Page No : 1

Groups Printed- Dual Wheeled

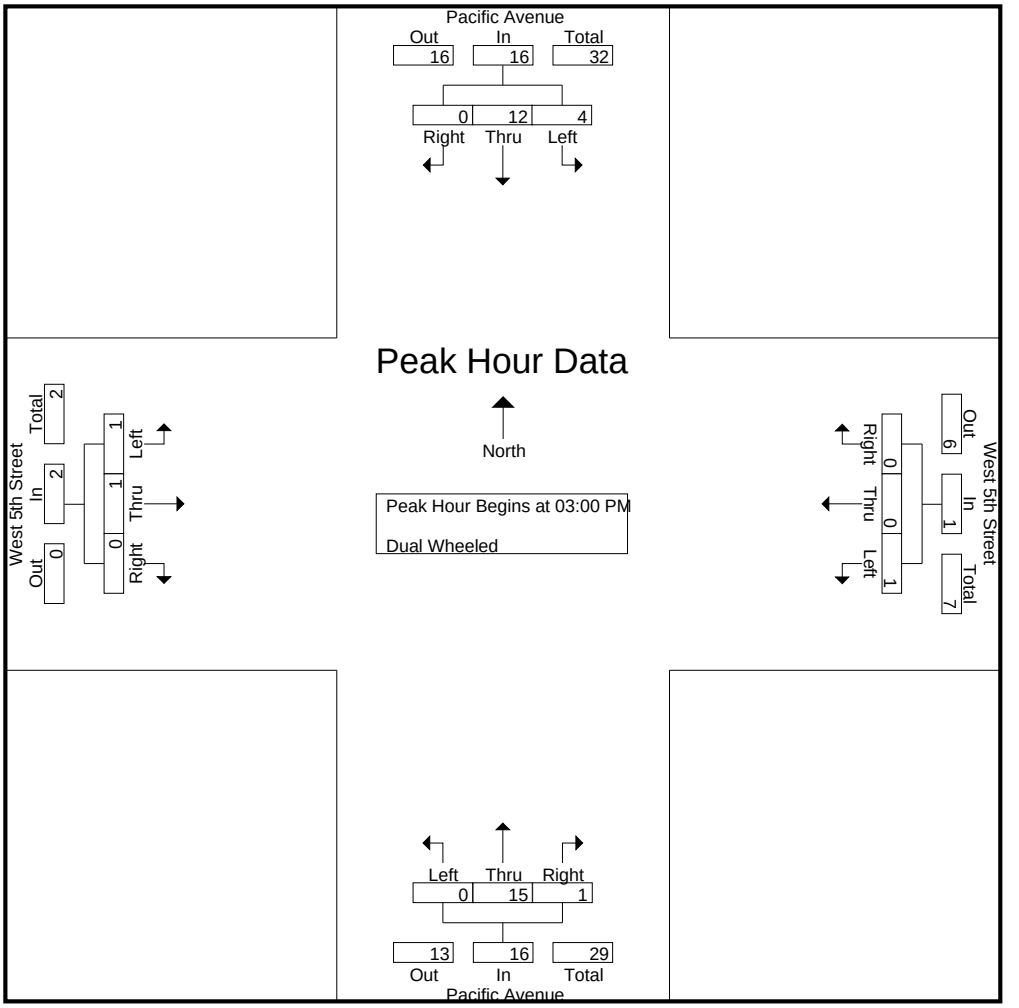
	Pacific Avenue Southbound				West 5th Street Westbound				Pacific Avenue Northbound				West 5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	1	4	0	5	0	0	0	0	0	3	0	3	0	0	0	0	8
03:15 PM	0	1	0	1	0	0	0	0	0	5	1	6	0	1	0	1	8
03:30 PM	1	4	0	5	1	0	0	1	0	4	0	4	0	0	0	0	10
03:45 PM	2	3	0	5	0	0	0	0	0	3	0	3	1	0	0	1	9
Total	4	12	0	16	1	0	0	1	0	15	1	16	1	1	0	2	35
04:00 PM	2	3	1	6	0	0	0	0	0	1	0	1	0	1	0	1	8
04:15 PM	0	2	0	2	0	0	0	0	0	1	2	3	1	0	0	1	6
04:30 PM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
04:45 PM	0	2	0	2	0	0	1	1	0	0	0	0	0	0	0	0	3
Total	2	9	1	12	0	0	1	1	0	4	2	6	1	1	0	2	21
05:00 PM	0	4	0	4	0	1	0	1	0	1	0	1	0	0	0	0	6
05:15 PM	0	1	0	1	0	0	0	0	0	0	1	1	0	0	0	0	2
05:30 PM	1	1	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
05:45 PM	0	0	0	0	0	1	0	1	0	1	0	1	0	0	0	0	2
Total	1	6	0	7	0	2	0	2	0	2	1	3	0	0	0	0	12
Grand Total	7	27	1	35	1	2	1	4	0	21	4	25	2	2	0	4	68
Apprch %	20	77.1	2.9		25	50	25		0	84	16		50	50	0		
Total %	10.3	39.7	1.5	51.5	1.5	2.9	1.5	5.9	0	30.9	5.9	36.8	2.9	2.9	0	5.9	

	Pacific Avenue Southbound				West 5th Street Westbound				Pacific Avenue Northbound				West 5th 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 03:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	1	**4**	0	**5**	0	0	0	0	0	3	0	3	0	0	0	0	8
03:15 PM	0	1	0	1	0	0	0	0	0	**5**	**1**	**6**	0	**1**	0	**1**	8
03:30 PM	1	4	0	5	**1**	0	0	**1**	0	4	0	4	0	0	0	0	**10**
03:45 PM	**2**	3	0	5	0	0	0	0	0	3	0	3	**1**	0	0	1	9
Total Volume	4	12	0	16	1	0	0	1	0	15	1	16	1	1	0	2	35
% App. Total	25	75	0		100	0	0		0	93.8	6.2		50	50	0		
PHF	.500	.750	.000	.800	.250	.000	.000	.250	.000	.750	.250	.667	.250	.250	.000	.500	.875

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Site Code : 04119599
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Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM				03:00 PM				03:00 PM				03:00 PM			
+0 mins.	1	**4**	0	**5**	0	0	0	0	0	3	0	3	0	0	0	0
+15 mins.	0	1	0	1	0	0	0	0	0	**5**	**1**	**6**	0	**1**	0	**1**
+30 mins.	1	4	0	5	**1**	0	0	**1**	0	4	0	4	0	0	0	0
+45 mins.	**2**	3	0	5	0	0	0	0	0	3	0	3	**1**	0	0	1
Total Volume	4	12	0	16	1	0	0	1	0	15	1	16	1	1	0	2
% App. Total	25	75	0		100	0	0		0	93.8	6.2		50	50	0	
PHF	.500	.750	.000	.800	.250	.000	.000	.250	.000	.750	.250	.667	.250	.250	.000	.500

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Site Code : 04119599
Start Date : 9/11/2019
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Groups Printed- Buses

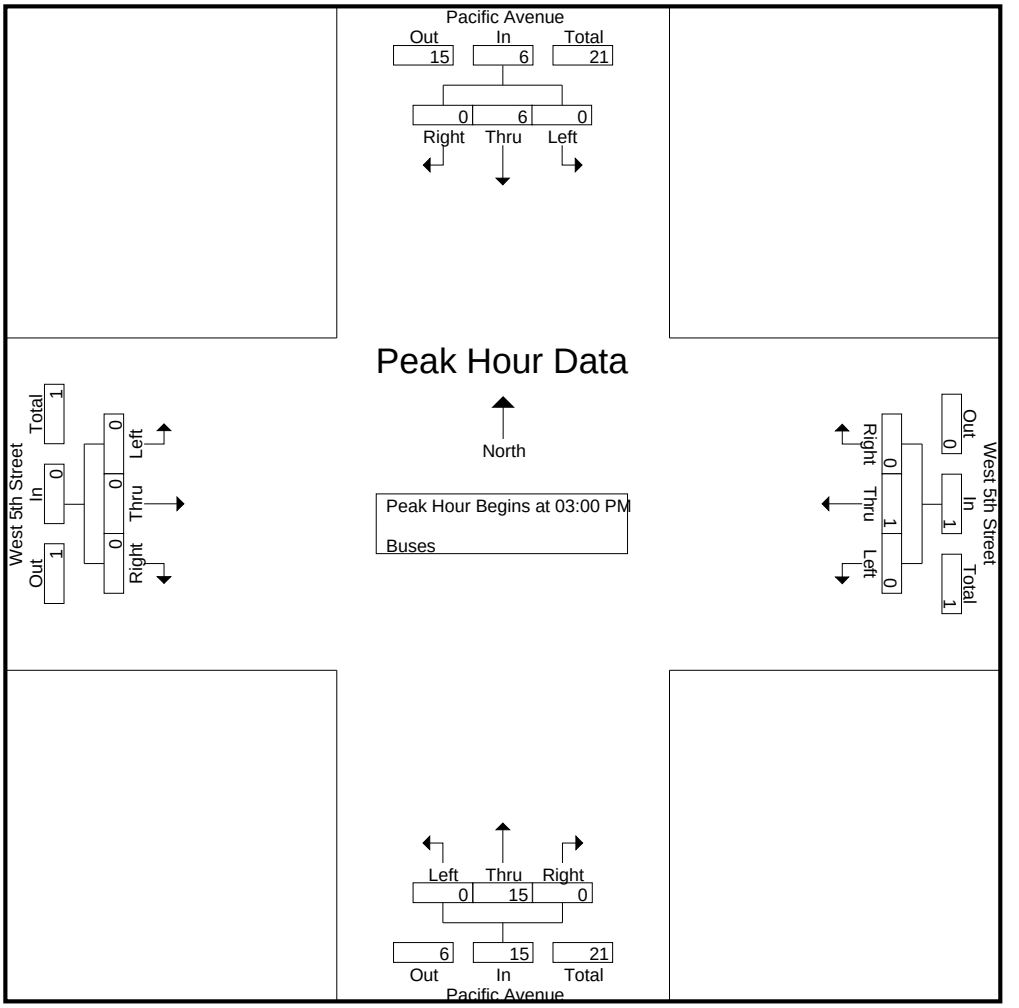
	Pacific Avenue Southbound				West 5th Street Westbound				Pacific Avenue Northbound				West 5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	2	0	2	0	0	0	0	0	4	0	4	0	0	0	0	6
03:15 PM	0	1	0	1	0	1	0	1	0	1	0	1	0	0	0	0	3
03:30 PM	0	1	0	1	0	0	0	0	0	8	0	8	0	0	0	0	9
03:45 PM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
Total	0	6	0	6	0	1	0	1	0	15	0	15	0	0	0	0	22
04:00 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
04:15 PM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
04:30 PM	0	3	0	3	0	0	0	0	0	3	0	3	0	0	0	0	6
04:45 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	1	0	1	3
Total	0	4	0	4	0	0	0	0	0	7	0	7	0	1	0	1	12
05:00 PM	0	3	0	3	0	0	0	0	0	2	0	2	0	0	0	0	5
05:15 PM	0	1	0	1	0	0	0	0	0	3	0	3	0	0	0	0	4
05:30 PM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
05:45 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
Total	0	7	0	7	0	0	0	0	0	8	0	8	0	0	0	0	15
Grand Total	0	17	0	17	0	1	0	1	0	30	0	30	0	1	0	1	49
Apprch %	0	100	0		0	100	0		0	100	0		0	100	0		
Total %	0	34.7	0	34.7	0	2	0	2	0	61.2	0	61.2	0	2	0	2	

	Pacific Avenue Southbound				West 5th Street Westbound				Pacific Avenue Northbound				West 5th 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 03:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	0	**2**	0	**2**	0	0	0	0	0	4	0	4	0	0	0	0	6
03:15 PM	0	1	0	1	0	**1**	0	**1**	0	1	0	1	0	0	0	0	3
03:30 PM	0	1	0	1	0	0	0	0	0	**8**	0	**8**	0	0	0	0	**9**
03:45 PM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
Total Volume	0	6	0	6	0	1	0	1	0	15	0	15	0	0	0	0	22
% App. Total	0	100	0		0	100	0		0	100	0		0	0	0		
PHF	.000	.750	.000	.750	.000	.250	.000	.250	.000	.469	.000	.469	.000	.000	.000	.000	.611

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Site Code : 04119599
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Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	03:00 PM				03:00 PM				03:00 PM				03:00 PM			
+0 mins.	0	**2**	0	**2**	0	0	0	0	0	4	0	4	0	0	0	0
+15 mins.	0	1	0	1	0	**1**	0	**1**	0	1	0	1	0	0	0	0
+30 mins.	0	1	0	1	0	0	0	0	0	**8**	0	**8**	0	0	0	0
+45 mins.	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0
Total Volume	0	6	0	6	0	1	0	1	0	15	0	15	0	0	0	0
% App. Total	0	100	0		0	100	0		0	100	0		0	0	0	
PHF	.000	.750	.000	.750	.000	.250	.000	.250	.000	.469	.000	.469	.000	.000	.000	.000

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City of Los Angeles
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File Name : 03_LAC_Harbor_5th AM
Site Code : 04119599
Start Date : 9/11/2019
Page No : 1

Groups Printed- Passenger Vehicles - Dual Wheeled - Buses

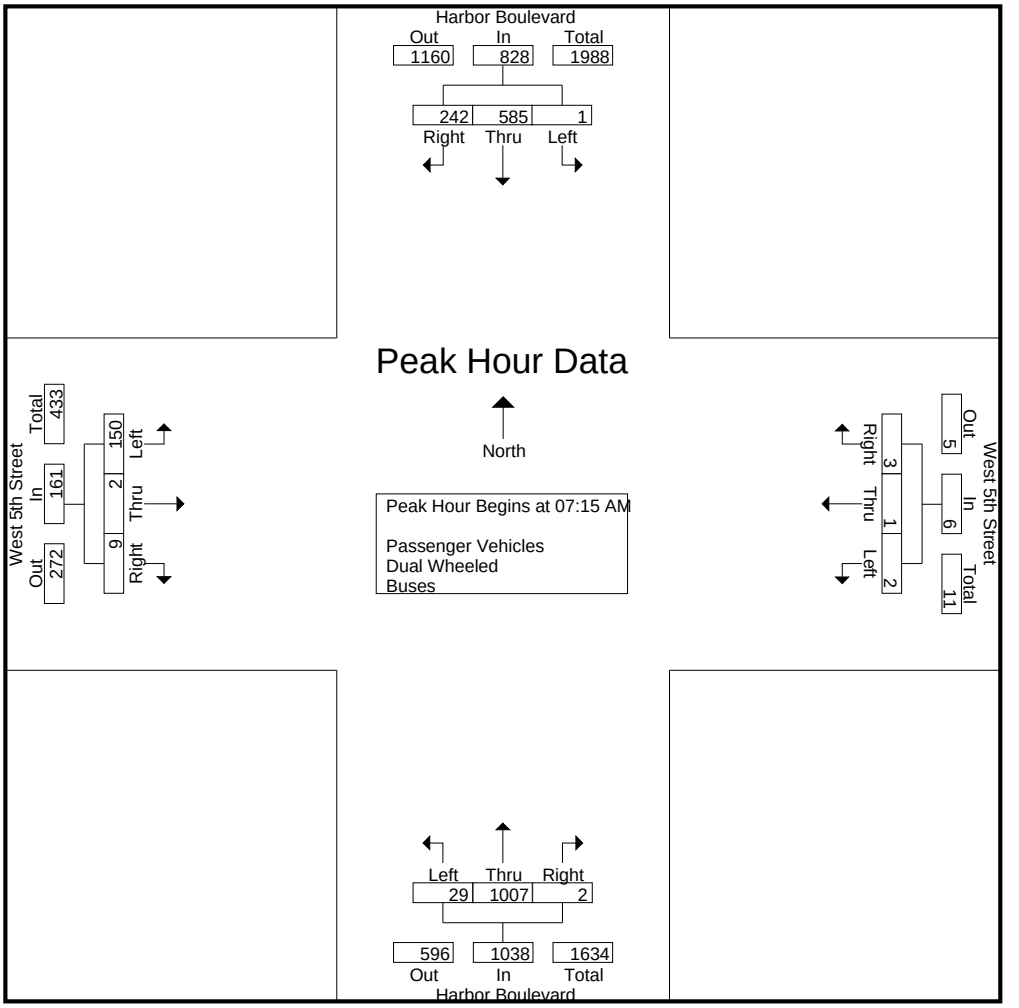
	Harbor Boulevard Southbound				West 5th Street Westbound				Harbor Boulevard Northbound				West 5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	104	23	127	1	0	0	1	7	156	3	166	27	1	0	28	322
07:15 AM	0	119	51	170	1	0	1	2	4	228	1	233	41	0	1	42	447
07:30 AM	0	141	76	217	1	0	1	2	6	300	1	307	46	1	1	48	574
07:45 AM	0	154	89	243	0	0	0	0	17	243	0	260	36	0	4	40	543
Total	0	518	239	757	3	0	2	5	34	927	5	966	150	2	6	158	1886
08:00 AM	1	171	26	198	0	1	1	2	2	236	0	238	27	1	3	31	469
08:15 AM	0	131	22	153	0	1	0	1	5	149	1	155	25	0	1	26	335
08:30 AM	0	124	22	146	0	0	1	1	2	133	1	136	11	0	1	12	295
08:45 AM	1	75	15	91	0	0	0	0	4	96	0	100	14	0	6	20	211
Total	2	501	85	588	0	2	2	4	13	614	2	629	77	1	11	89	1310
09:00 AM	0	104	24	128	0	0	0	0	3	97	0	100	18	0	2	20	248
09:15 AM	1	98	14	113	1	0	0	1	3	90	0	93	14	0	5	19	226
09:30 AM	0	97	27	124	0	0	0	0	2	83	2	87	20	0	0	20	231
09:45 AM	0	109	22	131	0	1	0	1	4	78	1	83	12	0	4	16	231
Total	1	408	87	496	1	1	0	2	12	348	3	363	64	0	11	75	936
Grand Total	3	1427	411	1841	4	3	4	11	59	1889	10	1958	291	3	28	322	4132
Apprch %	0.2	77.5	22.3		36.4	27.3	36.4		3	96.5	0.5		90.4	0.9	8.7		
Total %	0.1	34.5	9.9	44.6	0.1	0.1	0.1	0.3	1.4	45.7	0.2	47.4	7	0.1	0.7	7.8	
Passenger Vehicles	2	1375	406	1783	3	2	4	9	59	1854	9	1922	285	3	28	316	4030
% Passenger Vehicles	66.7	96.4	98.8	96.8	75	66.7	100	81.8	100	98.1	90	98.2	97.9	100	100	98.1	97.5
Dual Wheeled	1	44	5	50	1	1	0	2	0	27	1	28	6	0	0	6	86
% Dual Wheeled	33.3	3.1	1.2	2.7	25	33.3	0	18.2	0	1.4	10	1.4	2.1	0	0	1.9	2.1
Buses	0	8	0	8	0	0	0	0	0	8	0	8	0	0	0	0	16
% Buses	0	0.6	0	0.4	0	0	0	0	0	0.4	0	0.4	0	0	0	0	0.4

	Harbor Boulevard Southbound				West 5th Street Westbound				Harbor Boulevard Northbound				West 5th 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 09:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	119	51	170	**1**	0	**1**	**2**	4	228	**1**	233	41	0	1	42	447
07:30 AM	0	141	76	217	1	0	1	2	6	**300**	1	**307**	**46**	**1**	1	**48**	**574**
07:45 AM	0	154	**89**	**243**	0	0	0	0	**17**	243	0	260	36	0	**4**	40	543
08:00 AM	**1**	**171**	26	198	0	**1**	1	2	2	236	0	238	27	1	3	31	469
Total Volume	1	585	242	828	2	1	3	6	29	1007	2	1038	150	2	9	161	2033
% App. Total	0.1	70.7	29.2		33.3	16.7	50		2.8	97	0.2		93.2	1.2	5.6		
PHF	.250	.855	.680	.852	.500	.250	.750	.750	.426	.839	.500	.845	.815	.500	.563	.839	.885

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Site Code : 04119599
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Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	119	51	170	**1**	0	**1**	**2**	4	228	**1**	233	41	0	1	42
+15 mins.	0	141	76	217	1	0	1	2	6	**300**	1	**307**	**46**	**1**	1	**48**
+30 mins.	0	154	**89**	**243**	0	0	0	0	**17**	243	0	260	36	0	**4**	40
+45 mins.	**1**	**171**	26	198	0	**1**	1	2	2	236	0	238	27	1	3	31
Total Volume	1	585	242	828	2	1	3	6	29	1007	2	1038	150	2	9	161
% App. Total	0.1	70.7	29.2		33.3	16.7	50		2.8	97	0.2		93.2	1.2	5.6	
PHF	.250	.855	.680	.852	.500	.250	.750	.750	.426	.839	.500	.845	.815	.500	.563	.839

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Groups Printed- Passenger Vehicles

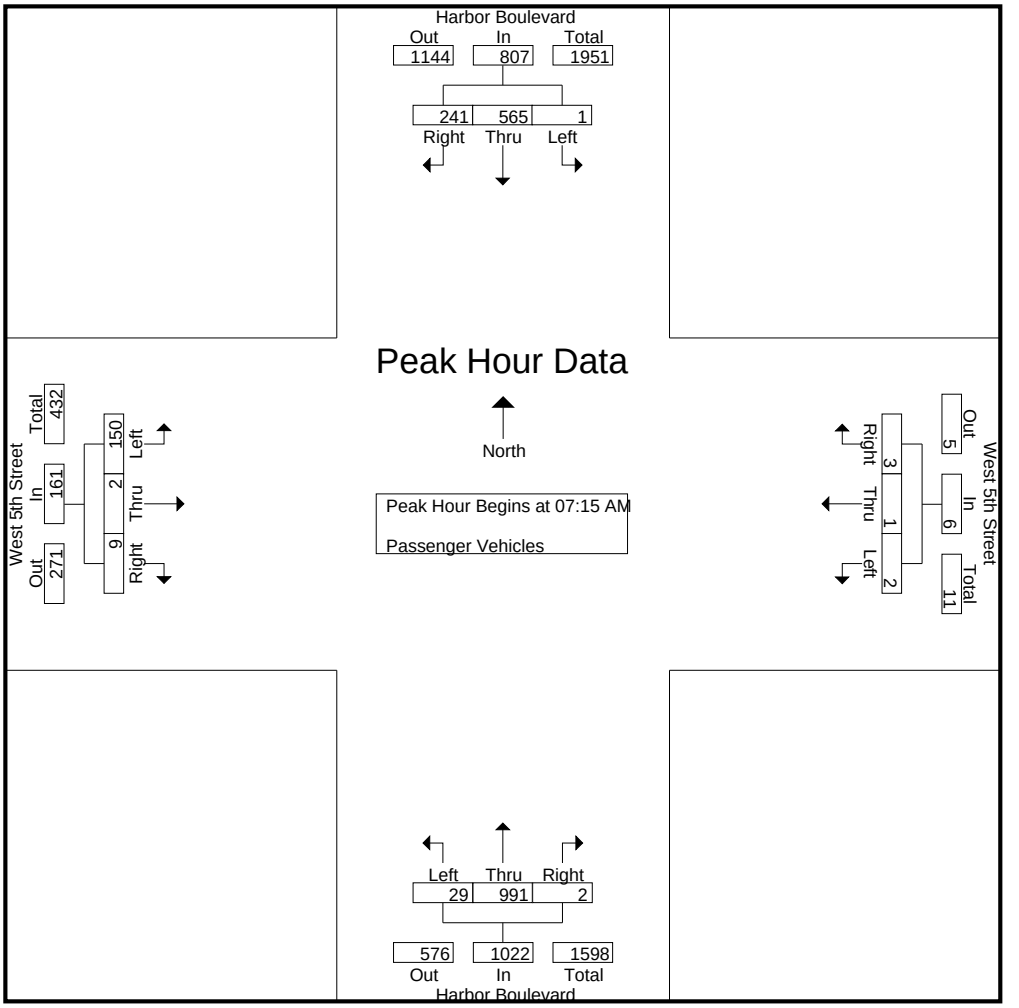
	Harbor Boulevard Southbound				West 5th Street Westbound				Harbor Boulevard Northbound				West 5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	103	23	126	1	0	0	1	7	156	3	166	26	1	0	27	320
07:15 AM	0	119	51	170	1	0	1	2	4	225	1	230	41	0	1	42	444
07:30 AM	0	134	76	210	1	0	1	2	6	296	1	303	46	1	1	48	563
07:45 AM	0	144	88	232	0	0	0	0	17	239	0	256	36	0	4	40	528
Total	0	500	238	738	3	0	2	5	34	916	5	955	149	2	6	157	1855
08:00 AM	1	168	26	195	0	1	1	2	2	231	0	233	27	1	3	31	461
08:15 AM	0	124	21	145	0	1	0	1	5	148	1	154	23	0	1	24	324
08:30 AM	0	120	22	142	0	0	1	1	2	130	1	133	11	0	1	12	288
08:45 AM	0	69	15	84	0	0	0	0	4	96	0	100	14	0	6	20	204
Total	1	481	84	566	0	2	2	4	13	605	2	620	75	1	11	87	1277
09:00 AM	0	101	23	124	0	0	0	0	3	91	0	94	18	0	2	20	238
09:15 AM	1	95	14	110	0	0	0	0	3	88	0	91	13	0	5	18	219
09:30 AM	0	93	25	118	0	0	0	0	2	78	1	81	18	0	0	18	217
09:45 AM	0	105	22	127	0	0	0	0	4	76	1	81	12	0	4	16	224
Total	1	394	84	479	0	0	0	0	12	333	2	347	61	0	11	72	898
Grand Total	2	1375	406	1783	3	2	4	9	59	1854	9	1922	285	3	28	316	4030
Apprch %	0.1	77.1	22.8		33.3	22.2	44.4		3.1	96.5	0.5		90.2	0.9	8.9		
Total %	0	34.1	10.1	44.2	0.1	0	0.1	0.2	1.5	46	0.2	47.7	7.1	0.1	0.7	7.8	

	Harbor Boulevard Southbound				West 5th Street Westbound				Harbor Boulevard Northbound				West 5th 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 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	119	51	170	**1**	0	**1**	**2**	4	225	**1**	230	41	0	1	42	444
07:30 AM	0	134	76	210	1	0	1	2	6	**296**	1	**303**	**46**	**1**	1	**48**	**563**
07:45 AM	0	144	**88**	**232**	0	0	0	0	**17**	239	0	256	36	0	**4**	40	528
08:00 AM	**1**	**168**	26	195	0	**1**	1	2	2	231	0	233	27	1	3	31	461
Total Volume	1	565	241	807	2	1	3	6	29	991	2	1022	150	2	9	161	1996
% App. Total	0.1	70	29.9		33.3	16.7	50		2.8	97	0.2		93.2	1.2	5.6		
PHF	.250	.841	.685	.870	.500	.250	.750	.750	.426	.837	.500	.843	.815	.500	.563	.839	.886

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Site Code : 04119599
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	119	51	170	**1**	0	**1**	**2**	4	225	**1**	230	41	0	1	42
+15 mins.	0	134	76	210	1	0	1	2	6	**296**	1	**303**	**46**	**1**	1	**48**
+30 mins.	0	144	**88**	**232**	0	0	0	0	**17**	239	0	256	36	0	**4**	40
+45 mins.	**1**	**168**	26	195	0	**1**	1	2	2	231	0	233	27	1	3	31
Total Volume	1	565	241	807	2	1	3	6	29	991	2	1022	150	2	9	161
% App. Total	0.1	70	29.9		33.3	16.7	50		2.8	97	0.2		93.2	1.2	5.6	
PHF	.250	.841	.685	.870	.500	.250	.750	.750	.426	.837	.500	.843	.815	.500	.563	.839

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City of Los Angeles
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E/W: West 5th Street
Weather: Clear

File Name : 03_LAC_Harbor_5th AM
Site Code : 04119599
Start Date : 9/11/2019
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Groups Printed- Dual Wheeled

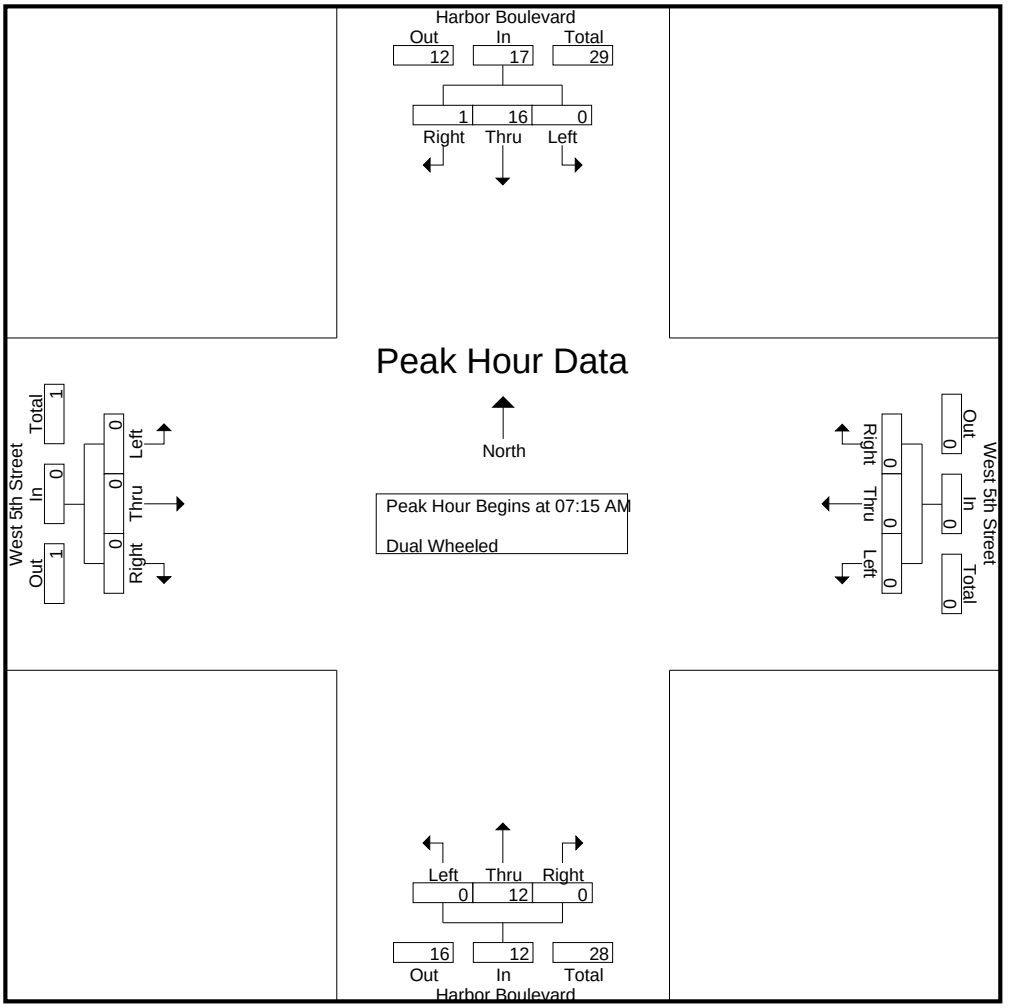
	Harbor Boulevard Southbound				West 5th Street Westbound				Harbor Boulevard Northbound				West 5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	1	0	0	1	2
07:15 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
07:30 AM	0	5	0	5	0	0	0	0	0	2	0	2	0	0	0	0	7
07:45 AM	0	9	1	10	0	0	0	0	0	3	0	3	0	0	0	0	13
Total	0	15	1	16	0	0	0	0	0	7	0	7	1	0	0	1	24
08:00 AM	0	2	0	2	0	0	0	0	0	5	0	5	0	0	0	0	7
08:15 AM	0	6	1	7	0	0	0	0	0	1	0	1	2	0	0	2	10
08:30 AM	0	4	0	4	0	0	0	0	0	2	0	2	0	0	0	0	6
08:45 AM	1	5	0	6	0	0	0	0	0	0	0	0	0	0	0	0	6
Total	1	17	1	19	0	0	0	0	0	8	0	8	2	0	0	2	29
09:00 AM	0	3	1	4	0	0	0	0	0	4	0	4	0	0	0	0	8
09:15 AM	0	3	0	3	1	0	0	1	0	2	0	2	1	0	0	1	7
09:30 AM	0	2	2	4	0	0	0	0	0	4	1	5	2	0	0	2	11
09:45 AM	0	4	0	4	0	1	0	1	0	2	0	2	0	0	0	0	7
Total	0	12	3	15	1	1	0	2	0	12	1	13	3	0	0	3	33
Grand Total	1	44	5	50	1	1	0	2	0	27	1	28	6	0	0	6	86
Apprch %	2	88	10		50	50	0		0	96.4	3.6		100	0	0		
Total %	1.2	51.2	5.8	58.1	1.2	1.2	0	2.3	0	31.4	1.2	32.6	7	0	0	7	

	Harbor Boulevard Southbound				West 5th Street Westbound				Harbor Boulevard Northbound				West 5th 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 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
07:30 AM	0	5	0	5	0	0	0	0	0	2	0	2	0	0	0	0	7
07:45 AM	0	**9**	**1**	**10**	0	0	0	0	0	3	0	3	0	0	0	0	**13**
08:00 AM	0	2	0	2	0	0	0	0	0	**5**	0	**5**	0	0	0	0	7
Total Volume	0	16	1	17	0	0	0	0	0	12	0	12	0	0	0	0	29
% App. Total	0	94.1	5.9		0	0	0		0	100	0		0	0	0		
PHF	.000	.444	.250	.425	.000	.000	.000	.000	.000	.600	.000	.600	.000	.000	.000	.000	.558

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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0
+15 mins.	0	5	0	5	0	0	0	0	0	2	0	2	0	0	0	0
+30 mins.	0	**9**	**1**	**10**	0	0	0	0	0	3	0	3	0	0	0	0
+45 mins.	0	2	0	2	0	0	0	0	0	**5**	0	**5**	0	0	0	0
Total Volume	0	16	1	17	0	0	0	0	0	12	0	12	0	0	0	0
% App. Total	0	94.1	5.9		0	0	0		0	100	0		0	0	0	
PHF	.000	.444	.250	.425	.000	.000	.000	.000	.000	.600	.000	.600	.000	.000	.000	.000

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Groups Printed- Buses

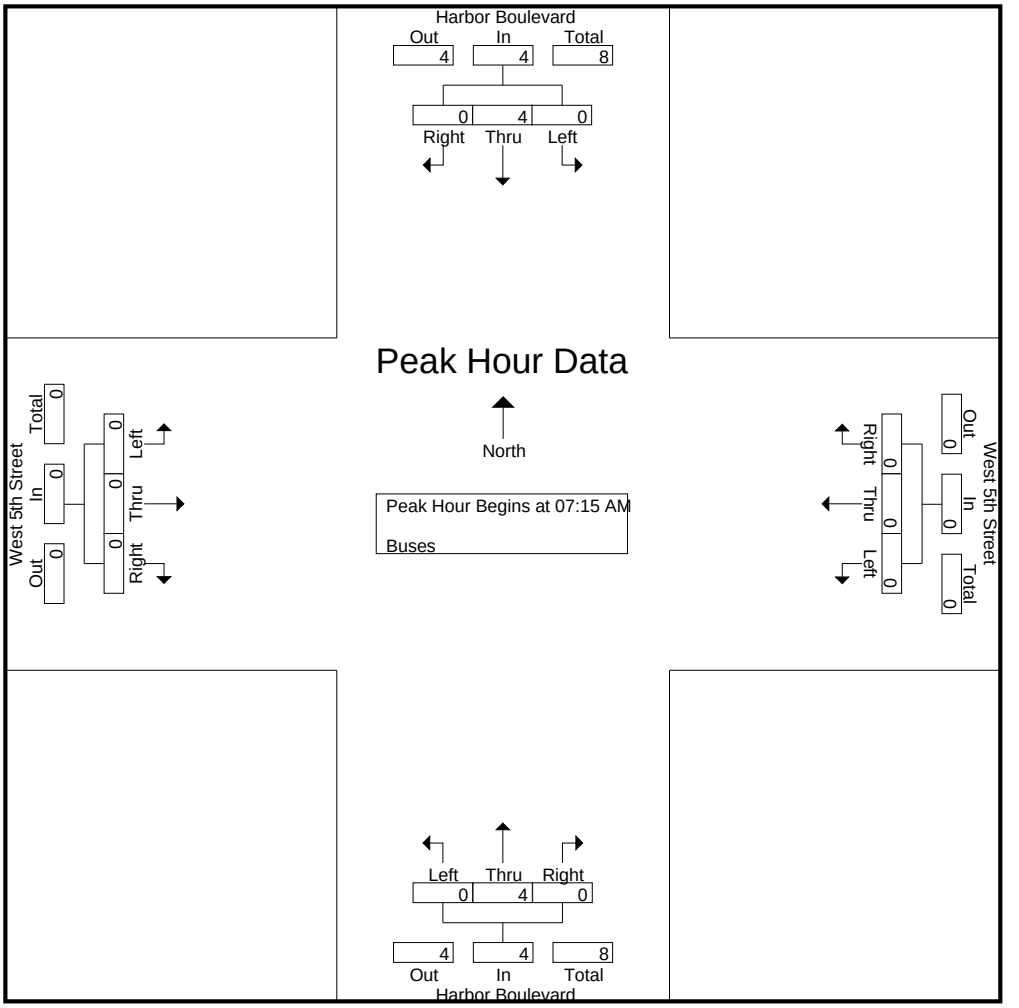
	Harbor Boulevard Southbound				West 5th Street Westbound				Harbor Boulevard Northbound				West 5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:30 AM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
07:45 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total	0	3	0	3	0	0	0	0	0	4	0	4	0	0	0	0	7
08:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:15 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:30 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
08:45 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	3	0	3	0	0	0	0	0	1	0	1	0	0	0	0	4
09:00 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	2	0	2	0	0	0	0	0	3	0	3	0	0	0	0	5
Grand Total	0	8	0	8	0	0	0	0	0	8	0	8	0	0	0	0	16
Apprch %	0	100	0		0	0	0		0	100	0		0	0	0		
Total %	0	50	0	50	0	0	0	0	0	50	0	50	0	0	0	0	

	Harbor Boulevard Southbound				West 5th Street Westbound				Harbor Boulevard Northbound				West 5th 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 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	1
07:30 AM	0	**2**	0	**2**	0	0	0	0	0	**2**	0	**2**	0	0	0	0	**4**
07:45 AM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
08:00 AM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Total Volume	0	4	0	4	0	0	0	0	0	4	0	4	0	0	0	0	8
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.500

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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0
+15 mins.	0	**2**	0	**2**	0	0	0	0	0	**2**	0	**2**	0	0	0	0
+30 mins.	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0
Total Volume	0	4	0	4	0	0	0	0	0	4	0	4	0	0	0	0
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0	
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000

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File Name : 03_LAC_Harbor_5th PM
Site Code : 04119599
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Groups Printed- Passenger Vehicles - Dual Wheeled - Buses

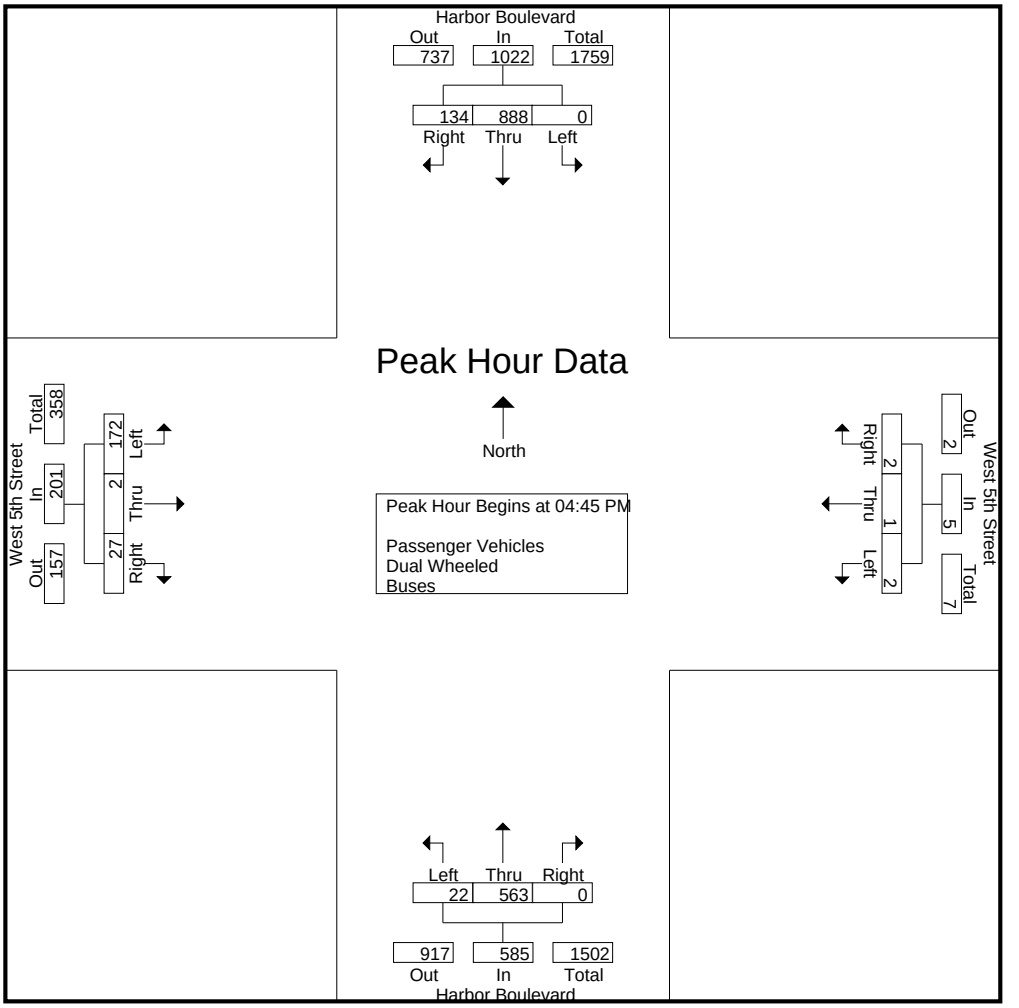
	Harbor Boulevard Southbound				West 5th Street Westbound				Harbor Boulevard Northbound				West 5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	194	51	245	1	1	0	2	5	154	1	160	72	0	4	76	483
03:15 PM	0	175	44	219	0	0	0	0	5	175	0	180	53	0	1	54	453
03:30 PM	0	164	37	201	1	0	0	1	2	149	0	151	59	0	3	62	415
03:45 PM	0	145	23	168	0	0	0	0	3	127	0	130	41	0	6	47	345
Total	0	678	155	833	2	1	0	3	15	605	1	621	225	0	14	239	1696
04:00 PM	0	104	13	117	1	0	1	2	0	138	0	138	48	0	7	55	312
04:15 PM	0	163	36	199	1	0	0	1	2	162	0	164	48	1	2	51	415
04:30 PM	0	204	37	241	1	0	0	1	4	121	0	125	54	1	3	58	425
04:45 PM	0	236	41	277	0	0	1	1	5	118	0	123	44	1	7	52	453
Total	0	707	127	834	3	0	2	5	11	539	0	550	194	3	19	216	1605
05:00 PM	0	222	36	258	2	1	1	4	3	172	0	175	50	1	3	54	491
05:15 PM	0	202	33	235	0	0	0	0	8	136	0	144	44	0	12	56	435
05:30 PM	0	228	24	252	0	0	0	0	6	137	0	143	34	0	5	39	434
05:45 PM	0	178	23	201	0	0	1	1	4	102	0	106	20	0	14	34	342
Total	0	830	116	946	2	1	2	5	21	547	0	568	148	1	34	183	1702
Grand Total	0	2215	398	2613	7	2	4	13	47	1691	1	1739	567	4	67	638	5003
Apprch %	0	84.8	15.2		53.8	15.4	30.8		2.7	97.2	0.1		88.9	0.6	10.5		
Total %	0	44.3	8	52.2	0.1	0	0.1	0.3	0.9	33.8	0	34.8	11.3	0.1	1.3	12.8	
Passenger Vehicles	0	2182	394	2576	6	2	4	12	47	1654	1	1702	561	3	67	631	4921
% Passenger Vehicles	0	98.5	99	98.6	85.7	100	100	92.3	100	97.8	100	97.9	98.9	75	100	98.9	98.4
Dual Wheeled	0	22	2	24	1	0	0	1	0	28	0	28	6	1	0	7	60
% Dual Wheeled	0	1	0.5	0.9	14.3	0	0	7.7	0	1.7	0	1.6	1.1	25	0	1.1	1.2
Buses	0	11	2	13	0	0	0	0	0	9	0	9	0	0	0	0	22
% Buses	0	0.5	0.5	0.5	0	0	0	0	0	0.5	0	0.5	0	0	0	0	0.4

	Harbor Boulevard Southbound				West 5th Street Westbound				Harbor Boulevard Northbound				West 5th 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 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	**236**	**41**	**277**	0	0	**1**	1	5	118	0	123	44	**1**	7	52	453
05:00 PM	0	222	36	258	**2**	**1**	1	**4**	3	**172**	0	**175**	**50**	1	3	54	**491**
05:15 PM	0	202	33	235	0	0	0	0	**8**	136	0	144	44	0	**12**	**56**	435
05:30 PM	0	228	24	252	0	0	0	0	6	137	0	143	34	0	5	39	434
Total Volume	0	888	134	1022	2	1	2	5	22	563	0	585	172	2	27	201	1813
% App. Total	0	86.9	13.1		40	20	40		3.8	96.2	0		85.6	1	13.4		
PHF	.000	.941	.817	.922	.250	.250	.500	.313	.688	.818	.000	.836	.860	.500	.563	.897	.923

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Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:15 PM				03:00 PM				03:00 PM			
+0 mins.	0	**236**	**41**	**277**	1	0	0	1	**5**	154	**1**	160	**72**	0	4	**76**
+15 mins.	0	222	36	258	1	0	0	1	5	**175**	0	**180**	53	0	1	54
+30 mins.	0	202	33	235	0	0	**1**	1	2	149	0	151	59	0	3	62
+45 mins.	0	228	24	252	**2**	**1**	1	**4**	3	127	0	130	41	0	**6**	47
Total Volume	0	888	134	1022	4	1	2	7	15	605	1	621	225	0	14	239
% App. Total	0	86.9	13.1		57.1	14.3	28.6		2.4	97.4	0.2		94.1	0	5.9	
PHF	.000	.941	.817	.922	.500	.250	.500	.438	.750	.864	.250	.863	.781	.000	.583	.786

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Groups Printed- Passenger Vehicles

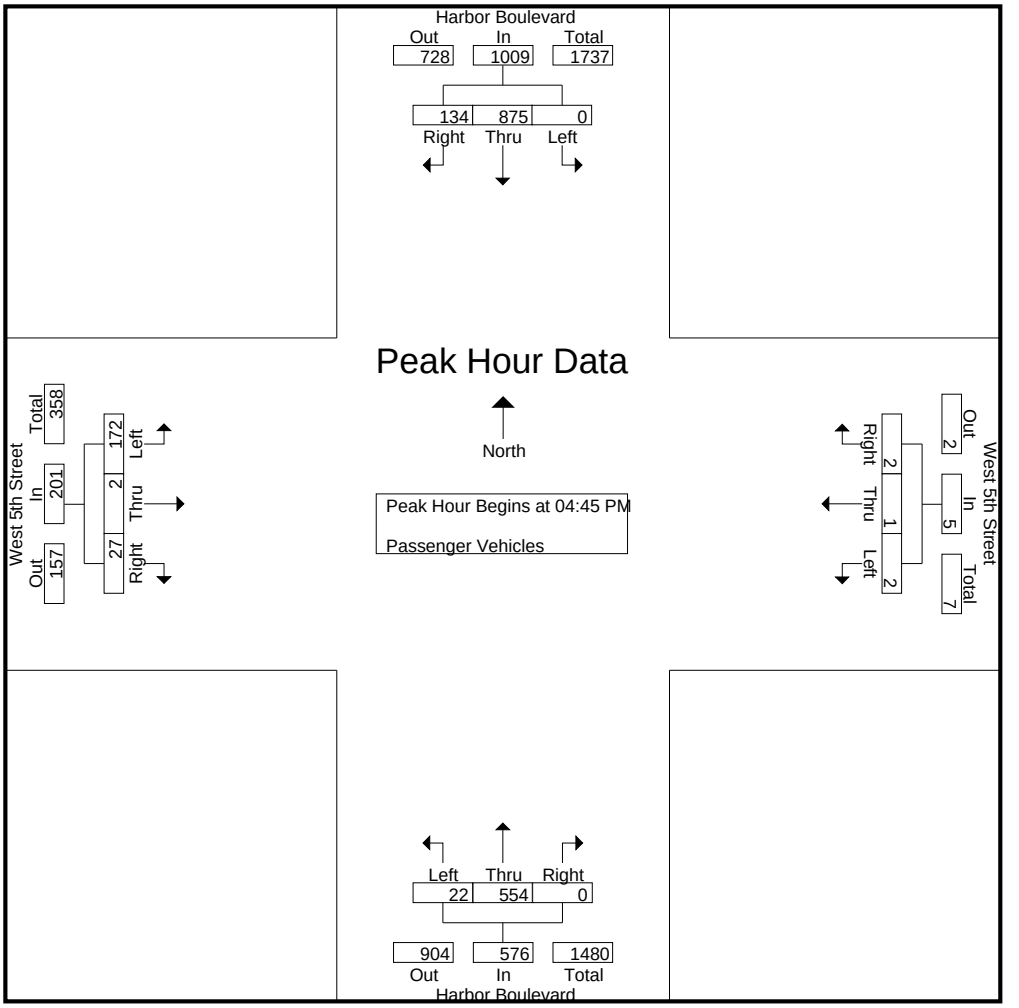
	Harbor Boulevard Southbound				West 5th Street Westbound				Harbor Boulevard Northbound				West 5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	190	51	241	1	1	0	2	5	151	1	157	70	0	4	74	474
03:15 PM	0	170	42	212	0	0	0	0	5	168	0	173	52	0	1	53	438
03:30 PM	0	162	37	199	0	0	0	0	2	147	0	149	57	0	3	60	408
03:45 PM	0	142	23	165	0	0	0	0	3	121	0	124	41	0	6	47	336
Total	0	664	153	817	1	1	0	2	15	587	1	603	220	0	14	234	1656
04:00 PM	0	103	13	116	1	0	1	2	0	135	0	135	48	0	7	55	308
04:15 PM	0	162	36	198	1	0	0	1	2	159	0	161	47	0	2	49	409
04:30 PM	0	203	36	239	1	0	0	1	4	120	0	124	54	1	3	58	422
04:45 PM	0	232	41	273	0	0	1	1	5	115	0	120	44	1	7	52	446
Total	0	700	126	826	3	0	2	5	11	529	0	540	193	2	19	214	1585
05:00 PM	0	221	36	257	2	1	1	4	3	171	0	174	50	1	3	54	489
05:15 PM	0	199	33	232	0	0	0	0	8	134	0	142	44	0	12	56	430
05:30 PM	0	223	24	247	0	0	0	0	6	134	0	140	34	0	5	39	426
05:45 PM	0	175	22	197	0	0	1	1	4	99	0	103	20	0	14	34	335
Total	0	818	115	933	2	1	2	5	21	538	0	559	148	1	34	183	1680
Grand Total	0	2182	394	2576	6	2	4	12	47	1654	1	1702	561	3	67	631	4921
Apprch %	0	84.7	15.3		50	16.7	33.3		2.8	97.2	0.1		88.9	0.5	10.6		
Total %	0	44.3	8	52.3	0.1	0	0.1	0.2	1	33.6	0	34.6	11.4	0.1	1.4	12.8	

	Harbor Boulevard Southbound				West 5th Street Westbound				Harbor Boulevard Northbound				West 5th 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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	**232**	**41**	**273**	0	0	**1**	1	5	115	0	120	44	**1**	7	52	446
05:00 PM	0	221	36	257	**2**	**1**	1	**4**	3	**171**	0	**174**	**50**	1	3	54	**489**
05:15 PM	0	199	33	232	0	0	0	0	**8**	134	0	142	44	0	**12**	**56**	430
05:30 PM	0	223	24	247	0	0	0	0	6	134	0	140	34	0	5	39	426
Total Volume	0	875	134	1009	2	1	2	5	22	554	0	576	172	2	27	201	1791
% App. Total	0	86.7	13.3		40	20	40		3.8	96.2	0		85.6	1	13.4		
PHF	.000	.943	.817	.924	.250	.250	.500	.313	.688	.810	.000	.828	.860	.500	.563	.897	.916

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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	**232**	**41**	**273**	0	0	**1**	1	5	115	0	120	44	**1**	7	52
+15 mins.	0	221	36	257	**2**	**1**	1	**4**	3	**171**	0	**174**	**50**	1	3	54
+30 mins.	0	199	33	232	0	0	0	0	**8**	134	0	142	44	0	**12**	**56**
+45 mins.	0	223	24	247	0	0	0	0	6	134	0	140	34	0	5	39
Total Volume	0	875	134	1009	2	1	2	5	22	554	0	576	172	2	27	201
% App. Total	0	86.7	13.3		40	20	40		3.8	96.2	0		85.6	1	13.4	
PHF	.000	.943	.817	.924	.250	.250	.500	.313	.688	.810	.000	.828	.860	.500	.563	.897

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Los Angeles
N/S: Harbor Boulevard
E/W: West 5th Street
Weather: Clear

File Name : 03_LAC_Harbor_5th PM
Site Code : 04119599
Start Date : 9/11/2019
Page No : 1

Groups Printed- Dual Wheeled

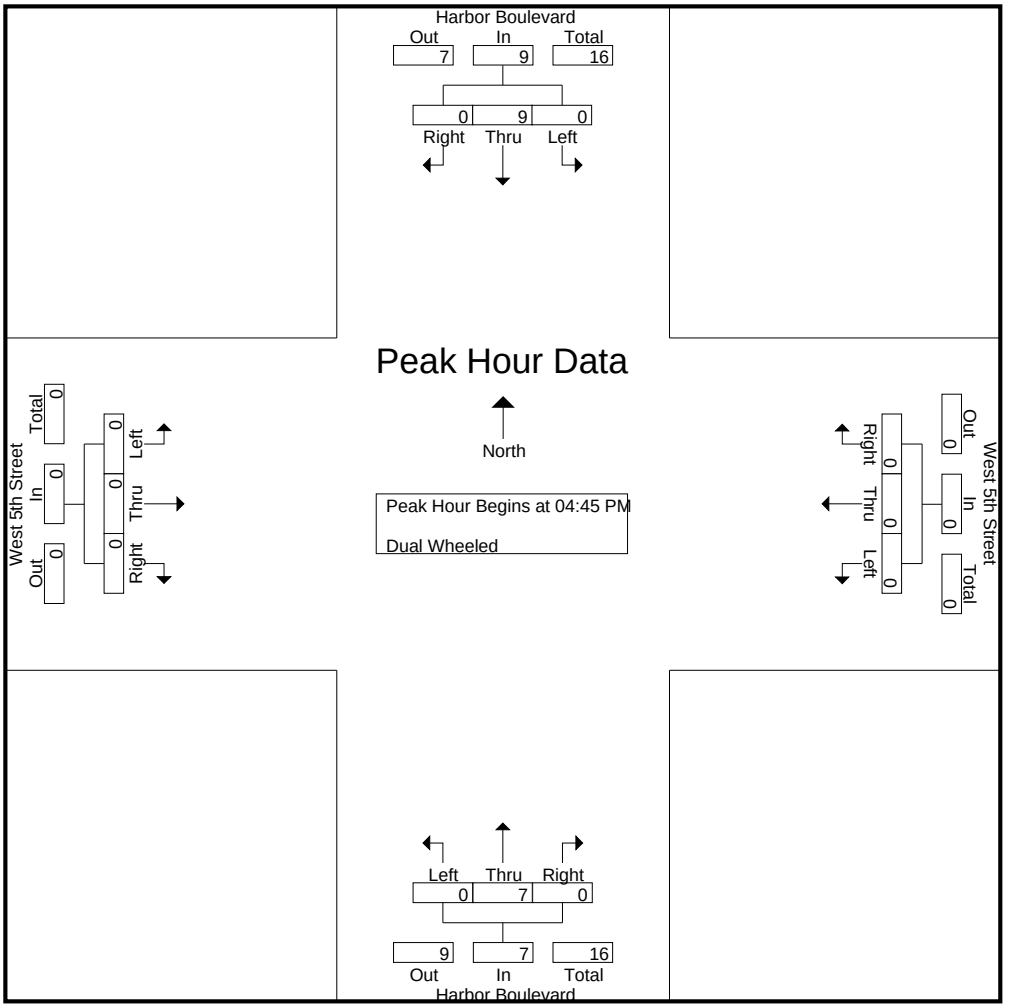
	Harbor Boulevard Southbound				West 5th Street Westbound				Harbor Boulevard Northbound				West 5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	3	0	3	0	0	0	0	0	2	0	2	2	0	0	2	7
03:15 PM	0	3	1	4	0	0	0	0	0	4	0	4	1	0	0	1	9
03:30 PM	0	2	0	2	1	0	0	1	0	2	0	2	2	0	0	2	7
03:45 PM	0	1	0	1	0	0	0	0	0	5	0	5	0	0	0	0	6
Total	0	9	1	10	1	0	0	1	0	13	0	13	5	0	0	5	29
04:00 PM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
04:15 PM	0	1	0	1	0	0	0	0	0	3	0	3	1	1	0	2	6
04:30 PM	0	1	1	2	0	0	0	0	0	1	0	1	0	0	0	0	3
04:45 PM	0	3	0	3	0	0	0	0	0	2	0	2	0	0	0	0	5
Total	0	5	1	6	0	0	0	0	0	8	0	8	1	1	0	2	16
05:00 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
05:15 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
05:30 PM	0	4	0	4	0	0	0	0	0	2	0	2	0	0	0	0	6
05:45 PM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
Total	0	8	0	8	0	0	0	0	0	7	0	7	0	0	0	0	15
Grand Total	0	22	2	24	1	0	0	1	0	28	0	28	6	1	0	7	60
Apprch %	0	91.7	8.3		100	0	0		0	100	0		85.7	14.3	0		
Total %	0	36.7	3.3	40	1.7	0	0	1.7	0	46.7	0	46.7	10	1.7	0	11.7	

	Harbor Boulevard Southbound				West 5th Street Westbound				Harbor Boulevard Northbound				West 5th 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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	3	0	3	0	0	0	0	0	**2**	0	**2**	0	0	0	0	5
05:00 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
05:15 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
05:30 PM	0	**4**	0	**4**	0	0	0	0	0	2	0	2	0	0	0	0	**6**
Total Volume	0	9	0	9	0	0	0	0	0	7	0	7	0	0	0	0	16
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.563	.000	.563	.000	.000	.000	.000	.000	.875	.000	.875	.000	.000	.000	.000	.667

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City of Los Angeles
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Weather: Clear

File Name : 03_LAC_Harbor_5th PM
Site Code : 04119599
Start Date : 9/11/2019
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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	3	0	3	0	0	0	0	0	**2**	0	**2**	0	0	0	0
+15 mins.	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0
+30 mins.	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0
+45 mins.	0	**4**	0	**4**	0	0	0	0	0	2	0	2	0	0	0	0
Total Volume	0	9	0	9	0	0	0	0	0	7	0	7	0	0	0	0
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0	
PHF	.000	.563	.000	.563	.000	.000	.000	.000	.000	.875	.000	.875	.000	.000	.000	.000

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File Name : 03_LAC_Harbor_5th PM
Site Code : 04119599
Start Date : 9/11/2019
Page No : 1

Groups Printed- Buses

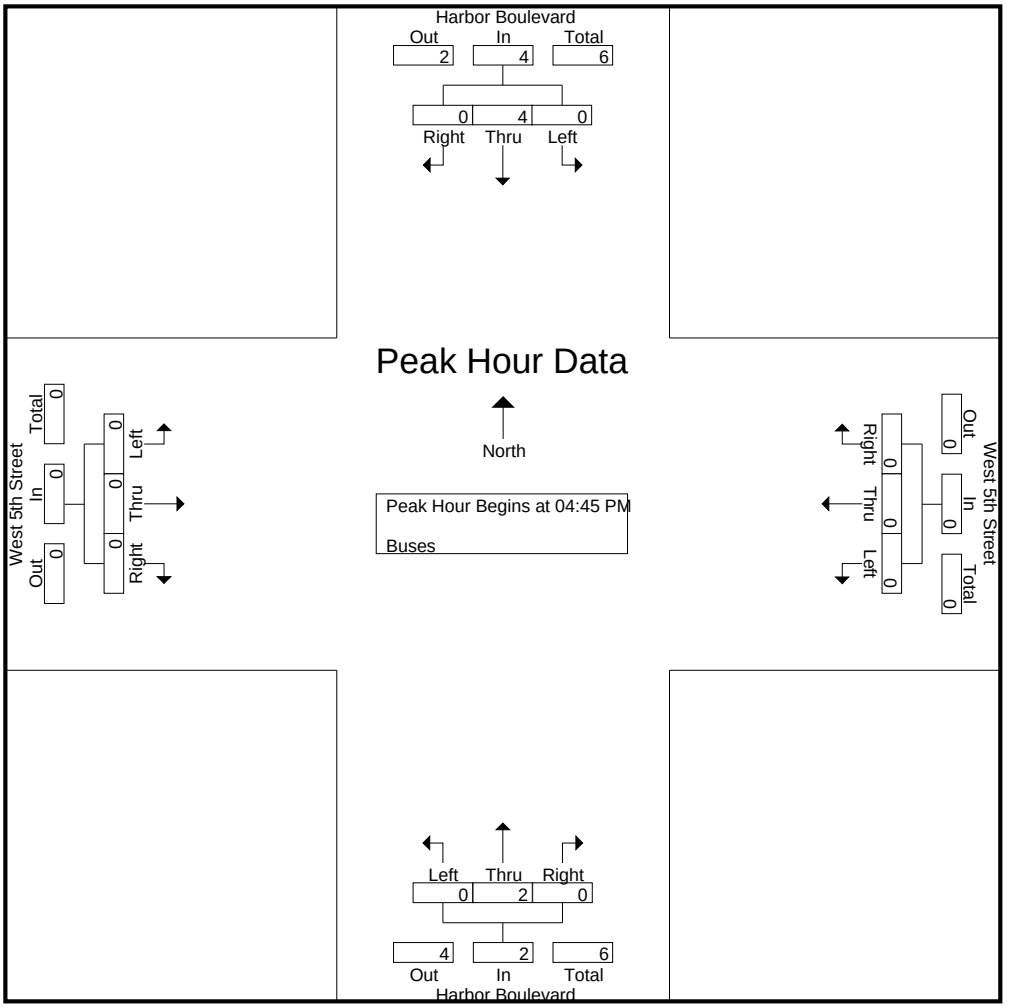
	Harbor Boulevard Southbound				West 5th Street Westbound				Harbor Boulevard Northbound				West 5th Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
03:15 PM	0	2	1	3	0	0	0	0	0	3	0	3	0	0	0	0	6
03:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
03:45 PM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
Total	0	5	1	6	0	0	0	0	0	5	0	5	0	0	0	0	11
04:00 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	2	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
05:30 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
05:45 PM	0	1	1	2	0	0	0	0	0	1	0	1	0	0	0	0	3
Total	0	4	1	5	0	0	0	0	0	2	0	2	0	0	0	0	7
Grand Total	0	11	2	13	0	0	0	0	0	9	0	9	0	0	0	0	22
Apprch %	0	84.6	15.4		0	0	0		0	100	0		0	0	0		
Total %	0	50	9.1	59.1	0	0	0	0	0	40.9	0	40.9	0	0	0	0	

	Harbor Boulevard Southbound				West 5th Street Westbound				Harbor Boulevard Northbound				West 5th 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 04:45 PM to 05:30 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	0	1	0	1	0	0	0	0	0	**1**	0	**1**	0	0	0	0	**2**
05:00 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
05:15 PM	0	**2**	0	**2**	0	0	0	0	0	0	0	0	0	0	0	0	2
05:30 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
Total Volume	0	4	0	4	0	0	0	0	0	2	0	2	0	0	0	0	6
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000	.750

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Site Code : 04119599
Start Date : 9/11/2019
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Peak Hour Analysis From 04:45 PM to 05:30 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				04:45 PM				04:45 PM				04:45 PM			
+0 mins.	0	1	0	1	0	0	0	0	0	**1**	0	**1**	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+30 mins.	0	**2**	0	**2**	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0
Total Volume	0	4	0	4	0	0	0	0	0	2	0	2	0	0	0	0
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0	
PHF	.000	.500	.000	.500	.000	.000	.000	.000	.000	.500	.000	.500	.000	.000	.000	.000

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City of Los Angeles
N/S: Harbor Boulevard
E/W: West 1st Street
Weather: Clear

File Name : 04_LAC_Harbor_1st AM
Site Code : 04119599
Start Date : 9/11/2019
Page No : 1

Groups Printed- Passenger Vehicles - Dual Wheeled - Buses

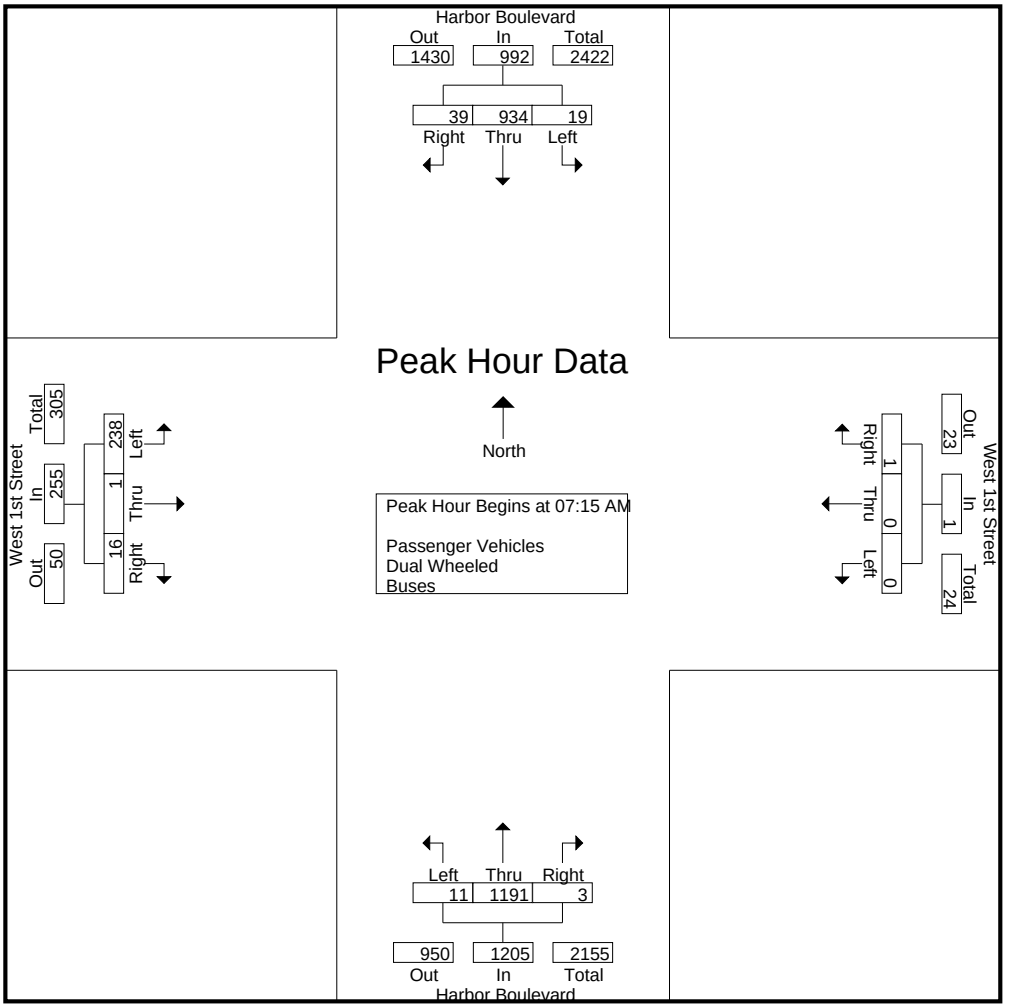
	Harbor Boulevard Southbound				West 1st Street Westbound				Harbor Boulevard Northbound				West 1st Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	5	156	6	167	0	0	0	0	1	178	0	179	22	1	1	24	370
07:15 AM	6	190	9	205	0	0	0	0	5	276	0	281	30	0	2	32	518
07:30 AM	3	250	10	263	0	0	0	0	0	342	1	343	71	0	4	75	681
07:45 AM	7	277	15	299	0	0	1	1	4	307	0	311	105	0	5	110	721
Total	21	873	40	934	0	0	1	1	10	1103	1	1114	228	1	12	241	2290
08:00 AM	3	217	5	225	0	0	0	0	2	266	2	270	32	1	5	38	533
08:15 AM	5	173	11	189	0	0	0	0	4	187	1	192	22	1	2	25	406
08:30 AM	7	154	10	171	1	1	2	4	2	131	2	135	15	2	0	17	327
08:45 AM	4	88	3	95	1	0	0	1	1	127	2	130	22	7	5	34	260
Total	19	632	29	680	2	1	2	5	9	711	7	727	91	11	12	114	1526
09:00 AM	6	134	11	151	1	0	0	1	2	111	1	114	15	1	2	18	284
09:15 AM	20	121	3	144	0	0	1	1	1	97	3	101	9	1	0	10	256
09:30 AM	8	128	5	141	2	0	0	2	2	103	2	107	13	0	3	16	266
09:45 AM	10	142	8	160	1	0	1	2	1	96	0	97	17	0	1	18	277
Total	44	525	27	596	4	0	2	6	6	407	6	419	54	2	6	62	1083
Grand Total	84	2030	96	2210	6	1	5	12	25	2221	14	2260	373	14	30	417	4899
Apprch %	3.8	91.9	4.3		50	8.3	41.7		1.1	98.3	0.6		89.4	3.4	7.2		
Total %	1.7	41.4	2	45.1	0.1	0	0.1	0.2	0.5	45.3	0.3	46.1	7.6	0.3	0.6	8.5	
Passenger Vehicles	78	1971	91	2140	6	1	5	12	20	2178	14	2212	367	14	22	403	4767
% Passenger Vehicles	92.9	97.1	94.8	96.8	100	100	100	100	80	98.1	100	97.9	98.4	100	73.3	96.6	97.3
Dual Wheeled	6	57	5	68	0	0	0	0	0	39	0	39	6	0	1	7	114
% Dual Wheeled	7.1	2.8	5.2	3.1	0	0	0	0	0	1.8	0	1.7	1.6	0	3.3	1.7	2.3
Buses	0	2	0	2	0	0	0	0	5	4	0	9	0	0	7	7	18
% Buses	0	0.1	0	0.1	0	0	0	0	20	0.2	0	0.4	0	0	23.3	1.7	0.4

	Harbor Boulevard Southbound				West 1st Street Westbound				Harbor Boulevard Northbound				West 1st 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 09:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	6	190	9	205	0	0	0	0	**5**	276	0	281	30	0	2	32	518
07:30 AM	3	250	10	263	0	0	0	0	0	**342**	1	**343**	71	0	4	75	681
07:45 AM	**7**	**277**	**15**	**299**	0	0	**1**	**1**	4	307	0	311	**105**	0	**5**	**110**	**721**
08:00 AM	3	217	5	225	0	0	0	0	2	266	**2**	270	32	**1**	5	38	533
Total Volume	19	934	39	992	0	0	1	1	11	1191	3	1205	238	1	16	255	2453
% App. Total	1.9	94.2	3.9		0	0	100		0.9	98.8	0.2		93.3	0.4	6.3		
PHF	.679	.843	.650	.829	.000	.000	.250	.250	.550	.871	.375	.878	.567	.250	.800	.580	.851

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City of Los Angeles
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File Name : 04_LAC_Harbor_1st AM
Site Code : 04119599
Start Date : 9/11/2019
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Peak Hour Analysis From 07:00 AM to 09:45 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				08:30 AM				07:15 AM				07:15 AM			
+0 mins.	6	190	9	205	**1**	**1**	**2**	**4**	**5**	276	0	281	30	0	2	32
+15 mins.	3	250	10	263	1	0	0	1	0	**342**	1	**343**	71	0	4	75
+30 mins.	**7**	**277**	**15**	**299**	1	0	0	1	4	307	0	311	**105**	0	**5**	**110**
+45 mins.	3	217	5	225	0	0	1	1	2	266	**2**	270	32	**1**	5	38
Total Volume	19	934	39	992	3	1	3	7	11	1191	3	1205	238	1	16	255
% App. Total	1.9	94.2	3.9		42.9	14.3	42.9		0.9	98.8	0.2		93.3	0.4	6.3	
PHF	.679	.843	.650	.829	.750	.250	.375	.438	.550	.871	.375	.878	.567	.250	.800	.580

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City of Los Angeles
N/S: Harbor Boulevard
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File Name : 04_LAC_Harbor_1st AM
Site Code : 04119599
Start Date : 9/11/2019
Page No : 1

Groups Printed- Passenger Vehicles

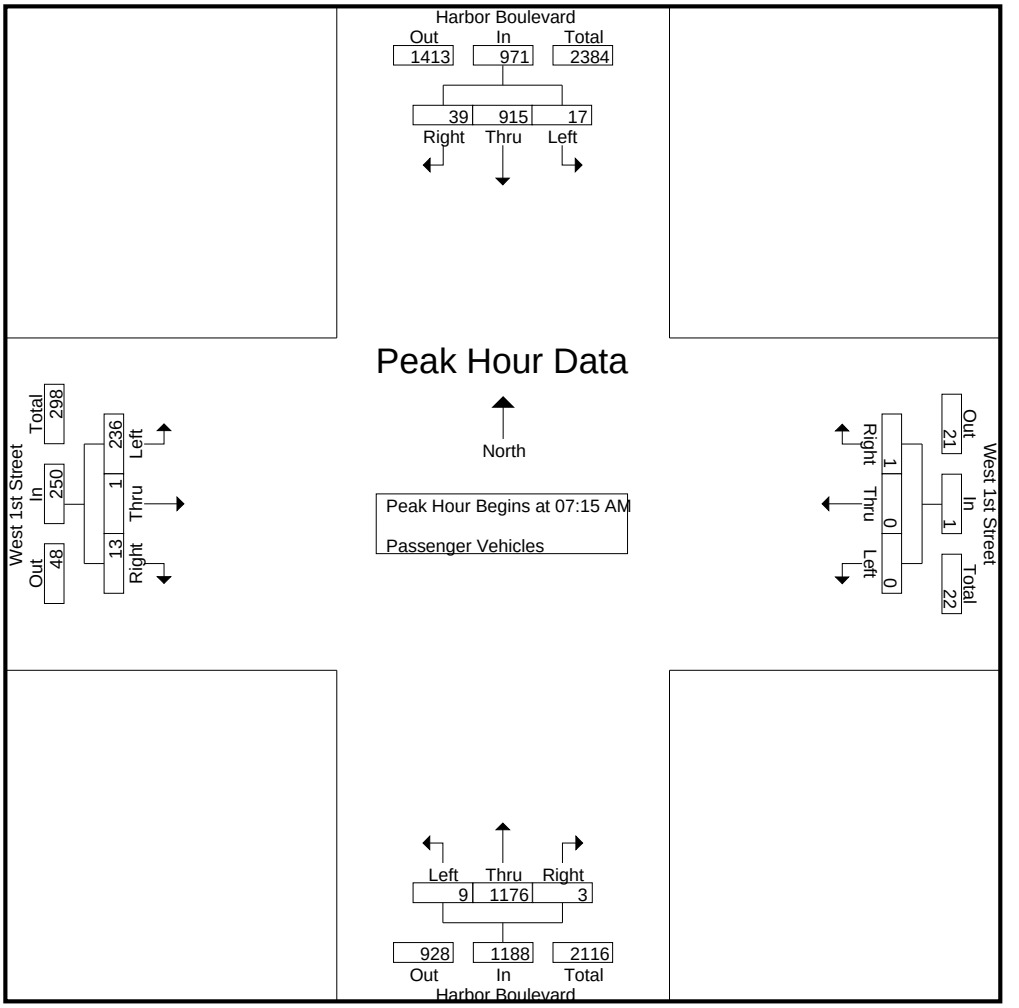
	Harbor Boulevard Southbound				West 1st Street Westbound				Harbor Boulevard Northbound				West 1st Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	5	154	6	165	0	0	0	0	1	177	0	178	22	1	0	23	366
07:15 AM	6	190	9	205	0	0	0	0	4	274	0	278	30	0	2	32	515
07:30 AM	3	243	10	256	0	0	0	0	0	337	1	338	71	0	4	75	669
07:45 AM	6	266	15	287	0	0	1	1	3	304	0	307	105	0	4	109	704
Total	20	853	40	913	0	0	1	1	8	1092	1	1101	228	1	10	239	2254
08:00 AM	2	216	5	223	0	0	0	0	2	261	2	265	30	1	3	34	522
08:15 AM	5	165	11	181	0	0	0	0	4	184	1	189	22	1	1	24	394
08:30 AM	5	150	9	164	1	1	2	4	1	128	2	131	14	2	0	16	315
08:45 AM	3	80	3	86	1	0	0	1	1	125	2	128	20	7	4	31	246
Total	15	611	28	654	2	1	2	5	8	698	7	713	86	11	8	105	1477
09:00 AM	6	130	10	146	1	0	0	1	1	106	1	108	15	1	2	18	273
09:15 AM	20	118	1	139	0	0	1	1	1	94	3	98	8	1	0	9	247
09:30 AM	8	123	5	136	2	0	0	2	1	97	2	100	13	0	1	14	252
09:45 AM	9	136	7	152	1	0	1	2	1	91	0	92	17	0	1	18	264
Total	43	507	23	573	4	0	2	6	4	388	6	398	53	2	4	59	1036
Grand Total	78	1971	91	2140	6	1	5	12	20	2178	14	2212	367	14	22	403	4767
Apprch %	3.6	92.1	4.3		50	8.3	41.7		0.9	98.5	0.6		91.1	3.5	5.5		
Total %	1.6	41.3	1.9	44.9	0.1	0	0.1	0.3	0.4	45.7	0.3	46.4	7.7	0.3	0.5	8.5	

	Harbor Boulevard Southbound				West 1st Street Westbound				Harbor Boulevard Northbound				West 1st 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 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**6**	190	9	205	0	0	0	0	**4**	274	0	278	30	0	2	32	515
07:30 AM	3	243	10	256	0	0	0	0	0	**337**	1	**338**	71	0	**4**	75	669
07:45 AM	6	**266**	**15**	**287**	0	0	**1**	**1**	3	304	0	307	**105**	0	4	**109**	**704**
08:00 AM	2	216	5	223	0	0	0	0	2	261	**2**	265	30	**1**	3	34	522
Total Volume	17	915	39	971	0	0	1	1	9	1176	3	1188	236	1	13	250	2410
% App. Total	1.8	94.2	4		0	0	100		0.8	99	0.3		94.4	0.4	5.2		
PHF	.708	.860	.650	.846	.000	.000	.250	.250	.563	.872	.375	.879	.562	.250	.813	.573	.856

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N/S: Harbor Boulevard
E/W: West 1st Street
Weather: Clear

File Name : 04_LAC_Harbor_1st AM
Site Code : 04119599
Start Date : 9/11/2019
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	**6**	190	9	205	0	0	0	0	**4**	274	0	278	30	0	2	32
+15 mins.	3	243	10	256	0	0	0	0	0	**337**	1	**338**	71	0	**4**	75
+30 mins.	6	**266**	**15**	**287**	0	0	**1**	**1**	3	304	0	307	**105**	0	4	**109**
+45 mins.	2	216	5	223	0	0	0	0	2	261	**2**	265	30	**1**	3	34
Total Volume	17	915	39	971	0	0	1	1	9	1176	3	1188	236	1	13	250
% App. Total	1.8	94.2	4		0	0	100		0.8	99	0.3		94.4	0.4	5.2	
PHF	.708	.860	.650	.846	.000	.000	.250	.250	.563	.872	.375	.879	.562	.250	.813	.573

Counts Unlimited
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City of Los Angeles
N/S: Harbor Boulevard
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Start Date : 9/11/2019
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Groups Printed- Dual Wheeled

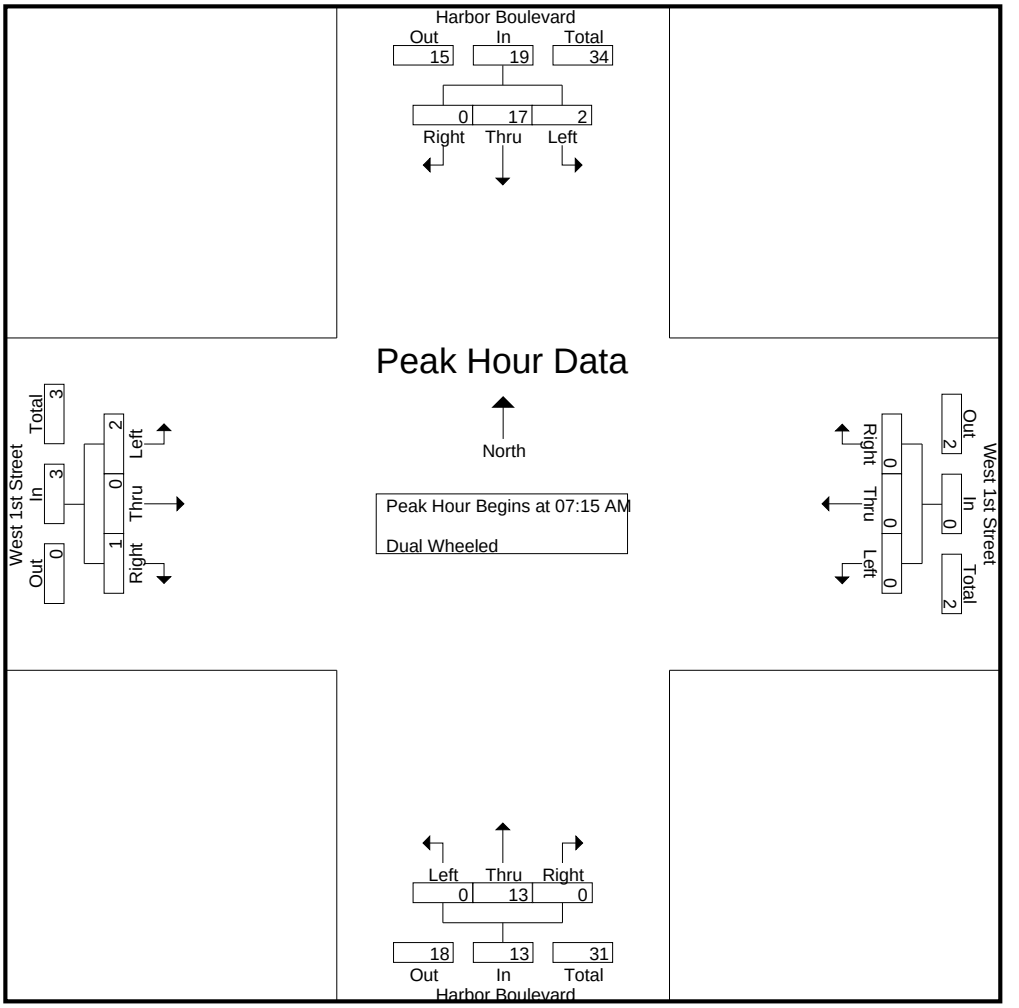
	Harbor Boulevard Southbound				West 1st Street Westbound				Harbor Boulevard Northbound				West 1st Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	2	0	2	0	0	0	0	0	1	0	1	0	0	0	0	3
07:15 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
07:30 AM	0	5	0	5	0	0	0	0	0	3	0	3	0	0	0	0	8
07:45 AM	1	11	0	12	0	0	0	0	0	3	0	3	0	0	0	0	15
Total	1	18	0	19	0	0	0	0	0	9	0	9	0	0	0	0	28
08:00 AM	1	1	0	2	0	0	0	0	0	5	0	5	2	0	1	3	10
08:15 AM	0	8	0	8	0	0	0	0	0	3	0	3	0	0	0	0	11
08:30 AM	2	4	1	7	0	0	0	0	0	3	0	3	1	0	0	1	11
08:45 AM	1	8	0	9	0	0	0	0	0	2	0	2	2	0	0	2	13
Total	4	21	1	26	0	0	0	0	0	13	0	13	5	0	1	6	45
09:00 AM	0	4	1	5	0	0	0	0	0	4	0	4	0	0	0	0	9
09:15 AM	0	3	2	5	0	0	0	0	0	3	0	3	1	0	0	1	9
09:30 AM	0	5	0	5	0	0	0	0	0	5	0	5	0	0	0	0	10
09:45 AM	1	6	1	8	0	0	0	0	0	5	0	5	0	0	0	0	13
Total	1	18	4	23	0	0	0	0	0	17	0	17	1	0	0	1	41
Grand Total	6	57	5	68	0	0	0	0	0	39	0	39	6	0	1	7	114
Apprch %	8.8	83.8	7.4		0	0	0		0	100	0		85.7	0	14.3		
Total %	5.3	50	4.4	59.6	0	0	0	0	0	34.2	0	34.2	5.3	0	0.9	6.1	

	Harbor Boulevard Southbound				West 1st Street Westbound				Harbor Boulevard Northbound				West 1st 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 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0	2
07:30 AM	0	5	0	5	0	0	0	0	0	3	0	3	0	0	0	0	8
07:45 AM	**1**	**11**	0	**12**	0	0	0	0	0	3	0	3	0	0	0	0	**15**
08:00 AM	1	1	0	2	0	0	0	0	0	**5**	0	**5**	**2**	0	**1**	**3**	10
Total Volume	2	17	0	19	0	0	0	0	0	13	0	13	2	0	1	3	35
% App. Total	10.5	89.5	0		0	0	0		0	100	0		66.7	0	33.3		
PHF	.500	.386	.000	.396	.000	.000	.000	.000	.000	.650	.000	.650	.250	.000	.250	.250	.583

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Site Code : 04119599
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	0	0	0	2	0	2	0	0	0	0
+15 mins.	0	5	0	5	0	0	0	0	0	3	0	3	0	0	0	0
+30 mins.	**1**	**11**	0	**12**	0	0	0	0	0	3	0	3	0	0	0	0
+45 mins.	1	1	0	2	0	0	0	0	0	**5**	0	**5**	**2**	0	**1**	**3**
Total Volume	2	17	0	19	0	0	0	0	0	13	0	13	2	0	1	3
% App. Total	10.5	89.5	0		0	0	0		0	100	0		66.7	0	33.3	
PHF	.500	.386	.000	.396	.000	.000	.000	.000	.000	.650	.000	.650	.250	.000	.250	.250

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File Name : 04_LAC_Harbor_1st AM
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Groups Printed- Buses

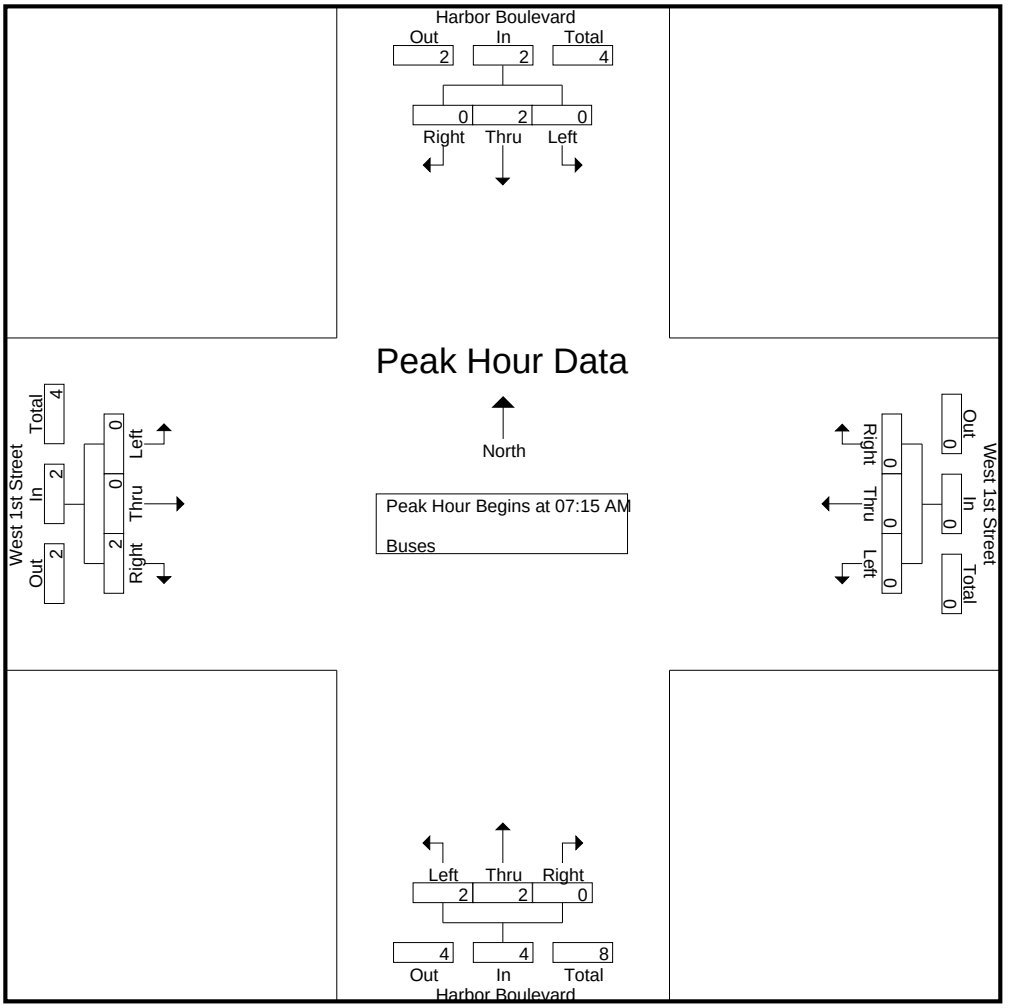
	Harbor Boulevard Southbound				West 1st Street Westbound				Harbor Boulevard Northbound				West 1st Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
07:15 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
07:30 AM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
07:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1	2
Total	0	2	0	2	0	0	0	0	2	2	0	4	0	0	2	2	8
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
08:30 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	1
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total	0	0	0	0	0	0	0	0	1	0	0	1	0	0	3	3	4
09:00 AM	0	0	0	0	0	0	0	0	1	1	0	2	0	0	0	0	2
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
09:30 AM	0	0	0	0	0	0	0	0	1	1	0	2	0	0	2	2	4
09:45 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	0	0	0	0	2	2	0	4	0	0	2	2	6
Grand Total	0	2	0	2	0	0	0	0	5	4	0	9	0	0	7	7	18
Apprch %	0	100	0		0	0	0		55.6	44.4	0		0	0	100		
Total %	0	11.1	0	11.1	0	0	0	0	27.8	22.2	0	50	0	0	38.9	38.9	

	Harbor Boulevard Southbound				West 1st Street Westbound				Harbor Boulevard Northbound				West 1st 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 07:15 AM to 08:00 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	0	0	0	0	0	0	0	**1**	0	0	1	0	0	0	0	1
07:30 AM	0	**2**	0	**2**	0	0	0	0	0	**2**	0	**2**	0	0	0	0	**4**
07:45 AM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	**1**	**1**	2
08:00 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total Volume	0	2	0	2	0	0	0	0	2	2	0	4	0	0	2	2	8
% App. Total	0	100	0		0	0	0		50	50	0		0	0	100		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.500	.250	.000	.500	.000	.000	.500	.500	.500

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Site Code : 04119599
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Peak Hour Analysis From 07:15 AM to 08:00 AM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	07:15 AM				07:15 AM				07:15 AM				07:15 AM			
+0 mins.	0	0	0	0	0	0	0	0	**1**	0	0	1	0	0	0	0
+15 mins.	0	**2**	0	**2**	0	0	0	0	0	**2**	0	**2**	0	0	0	0
+30 mins.	0	0	0	0	0	0	0	0	1	0	0	1	0	0	**1**	**1**
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Total Volume	0	2	0	2	0	0	0	0	2	2	0	4	0	0	2	2
% App. Total	0	100	0		0	0	0		50	50	0		0	0	100	
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.500	.250	.000	.500	.000	.000	.500	.500

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Site Code : 04119599
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Groups Printed- Passenger Vehicles - Dual Wheeled - Buses

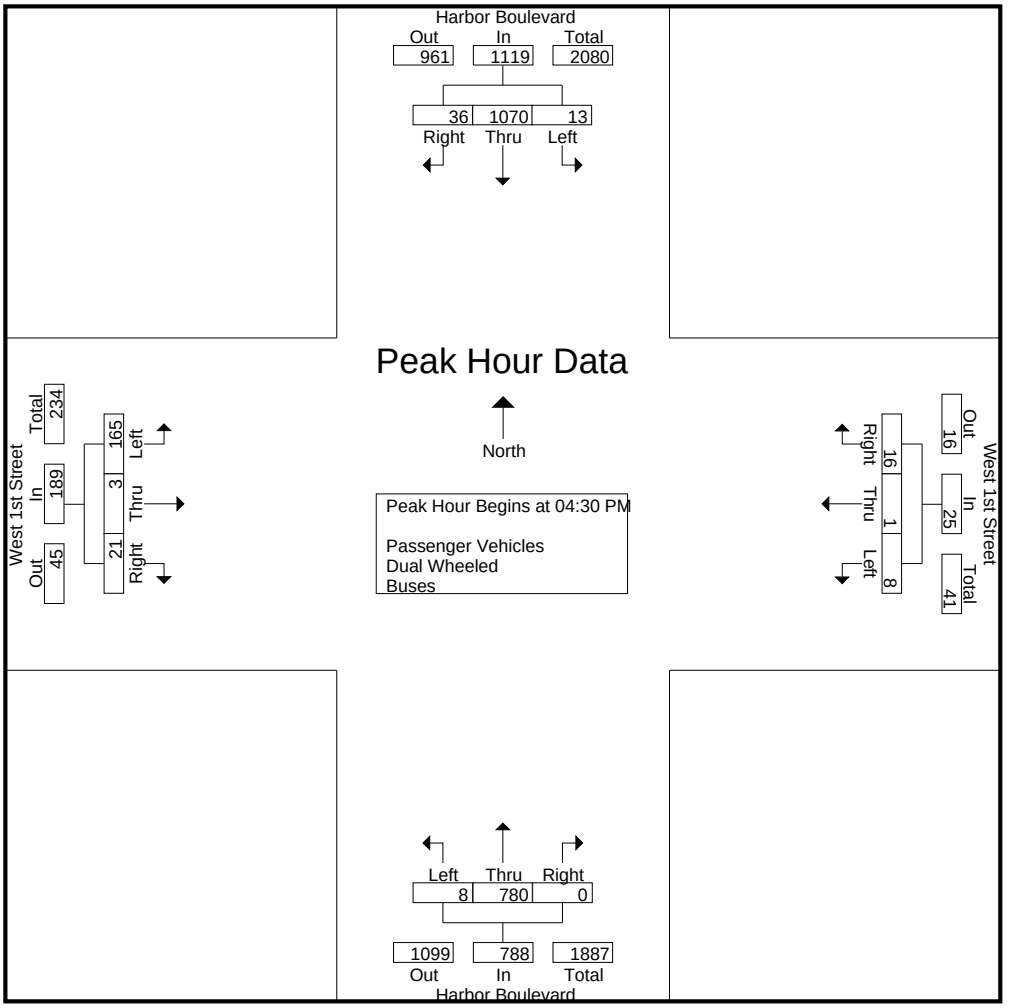
	Harbor Boulevard Southbound				West 1st Street Westbound				Harbor Boulevard Northbound				West 1st Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	3	271	16	290	0	0	5	5	3	233	1	237	59	0	2	61	593
03:15 PM	1	244	13	258	1	0	0	1	5	243	1	249	42	1	3	46	554
03:30 PM	1	228	18	247	0	1	5	6	2	208	0	210	37	0	1	38	501
03:45 PM	2	165	10	177	2	0	5	7	3	167	1	171	35	0	3	38	393
Total	7	908	57	972	3	1	15	19	13	851	3	867	173	1	9	183	2041
04:00 PM	2	120	5	127	1	0	5	6	2	192	0	194	27	0	4	31	358
04:15 PM	2	192	4	198	0	3	4	7	1	190	1	192	37	1	5	43	440
04:30 PM	2	251	7	260	4	1	4	9	2	206	0	208	59	1	9	69	546
04:45 PM	3	293	6	302	1	0	4	5	2	157	0	159	26	1	4	31	497
Total	9	856	22	887	6	4	17	27	7	745	1	753	149	3	22	174	1841
05:00 PM	6	276	10	292	2	0	5	7	3	237	0	240	44	1	4	49	588
05:15 PM	2	250	13	265	1	0	3	4	1	180	0	181	36	0	4	40	490
05:30 PM	2	247	16	265	1	1	1	3	0	170	0	170	32	1	2	35	473
05:45 PM	2	209	10	221	0	1	3	4	6	121	0	127	19	0	5	24	376
Total	12	982	49	1043	4	2	12	18	10	708	0	718	131	2	15	148	1927
Grand Total	28	2746	128	2902	13	7	44	64	30	2304	4	2338	453	6	46	505	5809
Apprch %	1	94.6	4.4		20.3	10.9	68.8		1.3	98.5	0.2		89.7	1.2	9.1		
Total %	0.5	47.3	2.2	50	0.2	0.1	0.8	1.1	0.5	39.7	0.1	40.2	7.8	0.1	0.8	8.7	
Passenger Vehicles	27	2713	126	2866	13	7	43	63	25	2265	4	2294	450	6	40	496	5719
% Passenger Vehicles	96.4	98.8	98.4	98.8	100	100	97.7	98.4	83.3	98.3	100	98.1	99.3	100	87	98.2	98.5
Dual Wheeled	1	27	1	29	0	0	1	1	0	35	0	35	3	0	0	3	68
% Dual Wheeled	3.6	1	0.8	1	0	0	2.3	1.6	0	1.5	0	1.5	0.7	0	0	0.6	1.2
Buses	0	6	1	7	0	0	0	0	5	4	0	9	0	0	6	6	22
% Buses	0	0.2	0.8	0.2	0	0	0	0	16.7	0.2	0	0.4	0	0	13	1.2	0.4

	Harbor Boulevard Southbound				West 1st Street Westbound				Harbor Boulevard Northbound				West 1st 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 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	2	251	7	260	**4**	**1**	4	**9**	2	206	0	208	**59**	**1**	**9**	**69**	546
04:45 PM	3	**293**	6	**302**	1	0	4	5	2	157	0	159	26	1	4	31	497
05:00 PM	**6**	276	10	292	2	0	**5**	7	**3**	**237**	0	**240**	44	1	4	49	**588**
05:15 PM	2	250	**13**	265	1	0	3	4	1	180	0	181	36	0	4	40	490
Total Volume	13	1070	36	1119	8	1	16	25	8	780	0	788	165	3	21	189	2121
% App. Total	1.2	95.6	3.2		32	4	64		1	99	0		87.3	1.6	11.1		
PHF	.542	.913	.692	.926	.500	.250	.800	.694	.667	.823	.000	.821	.699	.750	.583	.685	.902

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Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:45 PM				03:45 PM				03:00 PM				04:15 PM			
+0 mins.	3	**293**	6	**302**	2	0	**5**	7	3	233	**1**	237	37	**1**	5	43
+15 mins.	**6**	276	10	292	1	0	5	6	**5**	**243**	1	**249**	**59**	1	**9**	**69**
+30 mins.	2	250	13	265	0	**3**	4	7	2	208	0	210	26	1	4	31
+45 mins.	2	247	**16**	265	**4**	1	4	**9**	3	167	1	171	44	1	4	49
Total Volume	13	1066	45	1124	7	4	18	29	13	851	3	867	166	4	22	192
% App. Total	1.2	94.8	4		24.1	13.8	62.1		1.5	98.2	0.3		86.5	2.1	11.5	
PHF	.542	.910	.703	.930	.438	.333	.900	.806	.650	.876	.750	.870	.703	1.000	.611	.696

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Groups Printed- Passenger Vehicles

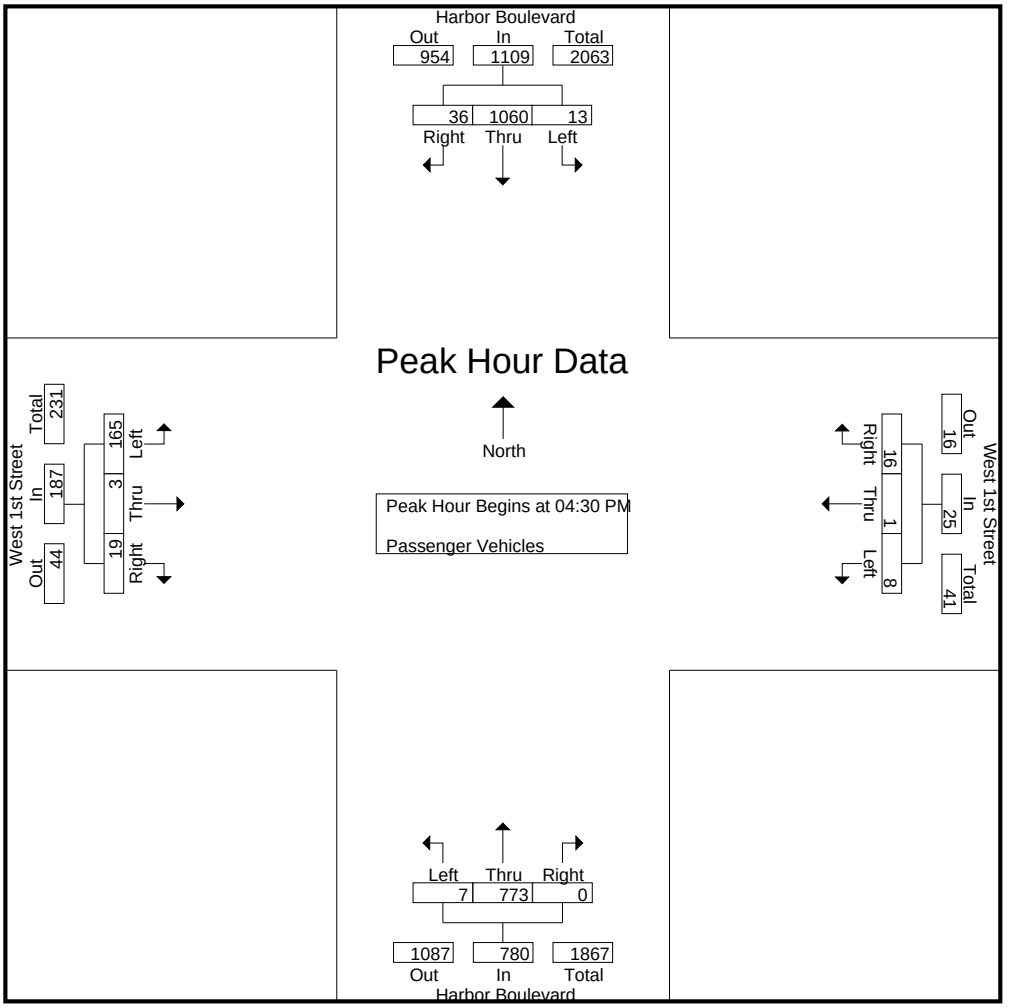
	Harbor Boulevard Southbound				West 1st Street Westbound				Harbor Boulevard Northbound				West 1st Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	3	267	14	284	0	0	5	5	2	228	1	231	59	0	2	61	581
03:15 PM	1	239	13	253	1	0	0	1	5	236	1	242	41	1	2	44	540
03:30 PM	1	223	18	242	0	1	5	6	2	204	0	206	37	0	1	38	492
03:45 PM	1	163	10	174	2	0	4	6	2	162	1	165	35	0	2	37	382
Total	6	892	55	953	3	1	14	18	11	830	3	844	172	1	7	180	1995
04:00 PM	2	120	5	127	1	0	5	6	1	189	0	190	26	0	3	29	352
04:15 PM	2	191	4	197	0	3	4	7	1	187	1	189	36	1	5	42	435
04:30 PM	2	248	7	257	4	1	4	9	2	205	0	207	59	1	9	69	542
04:45 PM	3	290	6	299	1	0	4	5	1	155	0	156	26	1	3	30	490
Total	9	849	22	880	6	4	17	27	5	736	1	742	147	3	20	170	1819
05:00 PM	6	274	10	290	2	0	5	7	3	235	0	238	44	1	4	49	584
05:15 PM	2	248	13	263	1	0	3	4	1	178	0	179	36	0	3	39	485
05:30 PM	2	244	16	262	1	1	1	3	0	167	0	167	32	1	2	35	467
05:45 PM	2	206	10	218	0	1	3	4	5	119	0	124	19	0	4	23	369
Total	12	972	49	1033	4	2	12	18	9	699	0	708	131	2	13	146	1905
Grand Total	27	2713	126	2866	13	7	43	63	25	2265	4	2294	450	6	40	496	5719
Apprch %	0.9	94.7	4.4		20.6	11.1	68.3		1.1	98.7	0.2		90.7	1.2	8.1		
Total %	0.5	47.4	2.2	50.1	0.2	0.1	0.8	1.1	0.4	39.6	0.1	40.1	7.9	0.1	0.7	8.7	

	Harbor Boulevard Southbound				West 1st Street Westbound				Harbor Boulevard Northbound				West 1st 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 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	2	248	7	257	**4**	**1**	4	**9**	2	205	0	207	**59**	**1**	**9**	**69**	542
04:45 PM	3	**290**	6	**299**	1	0	4	5	1	155	0	156	26	1	3	30	490
05:00 PM	**6**	274	10	290	2	0	**5**	7	**3**	**235**	0	**238**	44	1	4	49	**584**
05:15 PM	2	248	**13**	263	1	0	3	4	1	178	0	179	36	0	3	39	485
Total Volume	13	1060	36	1109	8	1	16	25	7	773	0	780	165	3	19	187	2101
% App. Total	1.2	95.6	3.2		32	4	64		0.9	99.1	0		88.2	1.6	10.2		
PHF	.542	.914	.692	.927	.500	.250	.800	.694	.583	.822	.000	.819	.699	.750	.528	.678	.899

Counts Unlimited
PO Box 1178
Corona, CA 92878
(951) 268-6268

City of Los Angeles
N/S: Harbor Boulevard
E/W: West 1st Street
Weather: Clear

File Name : 04_LAC_Harbor_1st PM
Site Code : 04119599
Start Date : 9/11/2019



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	2	248	7	257	**4**	**1**	4	**9**	2	205	0	207	**59**	**1**	**9**	**69**
+15 mins.	3	**290**	6	**299**	1	0	4	5	1	155	0	156	26	1	3	30
+30 mins.	**6**	274	10	290	2	0	**5**	7	**3**	**235**	0	**238**	44	1	4	49
+45 mins.	2	248	**13**	263	1	0	3	4	1	178	0	179	36	0	3	39
Total Volume	13	1060	36	1109	8	1	16	25	7	773	0	780	165	3	19	187
% App. Total	1.2	95.6	3.2		32	4	64		0.9	99.1	0		88.2	1.6	10.2	
PHF	.542	.914	.692	.927	.500	.250	.800	.694	.583	.822	.000	.819	.699	.750	.528	.678

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City of Los Angeles
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Weather: Clear

File Name : 04_LAC_Harbor_1st PM
Site Code : 04119599
Start Date : 9/11/2019
Page No : 1

Groups Printed- Dual Wheeled

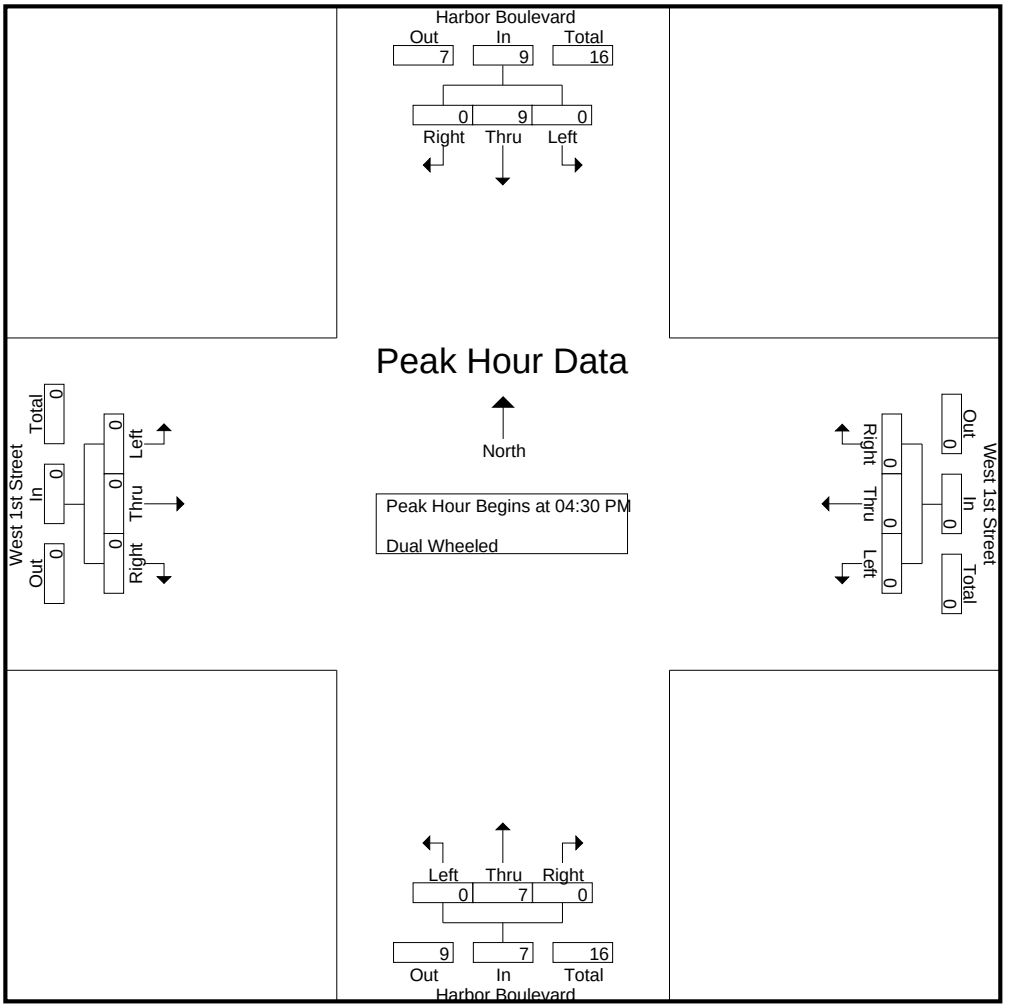
	Harbor Boulevard Southbound				West 1st Street Westbound				Harbor Boulevard Northbound				West 1st Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	3	1	4	0	0	0	0	0	5	0	5	0	0	0	0	9
03:15 PM	0	4	0	4	0	0	0	0	0	4	0	4	1	0	0	1	9
03:30 PM	0	4	0	4	0	0	0	0	0	4	0	4	0	0	0	0	8
03:45 PM	1	1	0	2	0	0	1	1	0	5	0	5	0	0	0	0	8
Total	1	12	1	14	0	0	1	1	0	18	0	18	1	0	0	1	34
04:00 PM	0	0	0	0	0	0	0	0	0	3	0	3	1	0	0	1	4
04:15 PM	0	1	0	1	0	0	0	0	0	3	0	3	1	0	0	1	5
04:30 PM	0	3	0	3	0	0	0	0	0	1	0	1	0	0	0	0	4
04:45 PM	0	3	0	3	0	0	0	0	0	2	0	2	0	0	0	0	5
Total	0	7	0	7	0	0	0	0	0	9	0	9	2	0	0	2	18
05:00 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
05:15 PM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
05:30 PM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
05:45 PM	0	3	0	3	0	0	0	0	0	2	0	2	0	0	0	0	5
Total	0	8	0	8	0	0	0	0	0	8	0	8	0	0	0	0	16
Grand Total	1	27	1	29	0	0	1	1	0	35	0	35	3	0	0	3	68
Apprch %	3.4	93.1	3.4		0	0	100		0	100	0		100	0	0		
Total %	1.5	39.7	1.5	42.6	0	0	1.5	1.5	0	51.5	0	51.5	4.4	0	0	4.4	

	Harbor Boulevard Southbound				West 1st Street Westbound				Harbor Boulevard Northbound				West 1st 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 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	**3**	0	**3**	0	0	0	0	0	1	0	1	0	0	0	0	4
04:45 PM	0	3	0	3	0	0	0	0	0	**2**	0	**2**	0	0	0	0	**5**
05:00 PM	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0	3
05:15 PM	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0	4
Total Volume	0	9	0	9	0	0	0	0	0	7	0	7	0	0	0	0	16
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0		
PHF	.000	.750	.000	.750	.000	.000	.000	.000	.000	.875	.000	.875	.000	.000	.000	.000	.800

Counts Unlimited
PO Box 1178
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City of Los Angeles
N/S: Harbor Boulevard
E/W: West 1st Street
Weather: Clear

File Name : 04_LAC_Harbor_1st PM
Site Code : 04119599
Start Date : 9/11/2019
Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	**3**	0	**3**	0	0	0	0	0	1	0	1	0	0	0	0
+15 mins.	0	3	0	3	0	0	0	0	0	**2**	0	**2**	0	0	0	0
+30 mins.	0	1	0	1	0	0	0	0	0	2	0	2	0	0	0	0
+45 mins.	0	2	0	2	0	0	0	0	0	2	0	2	0	0	0	0
Total Volume	0	9	0	9	0	0	0	0	0	7	0	7	0	0	0	0
% App. Total	0	100	0		0	0	0		0	100	0		0	0	0	
PHF	.000	.750	.000	.750	.000	.000	.000	.000	.000	.875	.000	.875	.000	.000	.000	.000

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City of Los Angeles
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File Name : 04_LAC_Harbor_1st PM
Site Code : 04119599
Start Date : 9/11/2019
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Groups Printed- Buses

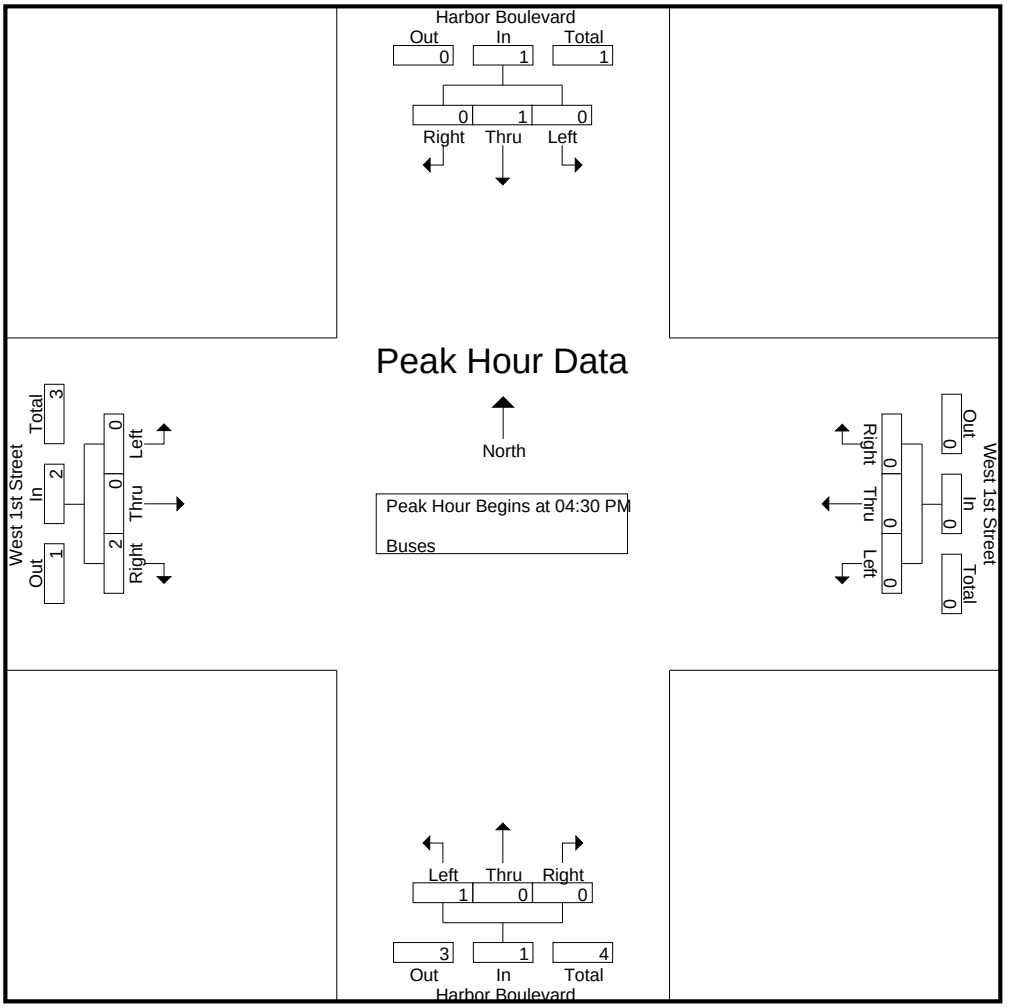
	Harbor Boulevard Southbound				West 1st Street Westbound				Harbor Boulevard Northbound				West 1st Street Eastbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
03:00 PM	0	1	1	2	0	0	0	0	1	0	0	1	0	0	0	0	3
03:15 PM	0	1	0	1	0	0	0	0	0	3	0	3	0	0	1	1	5
03:30 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
03:45 PM	0	1	0	1	0	0	0	0	1	0	0	1	0	0	1	1	3
Total	0	4	1	5	0	0	0	0	2	3	0	5	0	0	2	2	12
04:00 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1	2
04:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1	2
Total	0	0	0	0	0	0	0	0	2	0	0	2	0	0	2	2	4
05:00 PM	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
05:30 PM	0	1	0	1	0	0	0	0	0	1	0	1	0	0	0	0	2
05:45 PM	0	0	0	0	0	0	0	0	1	0	0	1	0	0	1	1	2
Total	0	2	0	2	0	0	0	0	1	1	0	2	0	0	2	2	6
Grand Total	0	6	1	7	0	0	0	0	5	4	0	9	0	0	6	6	22
Apprch %	0	85.7	14.3		0	0	0		55.6	44.4	0		0	0	100		
Total %	0	27.3	4.5	31.8	0	0	0	0	22.7	18.2	0	40.9	0	0	27.3	27.3	

	Harbor Boulevard Southbound				West 1st Street Westbound				Harbor Boulevard Northbound				West 1st 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 04:30 PM to 05:15 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
04:45 PM	0	0	0	0	0	0	0	0	**1**	0	0	**1**	0	0	**1**	**1**	**2**
05:00 PM	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0	1
05:15 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1
Total Volume	0	1	0	1	0	0	0	0	1	0	0	1	0	0	2	2	4
% App. Total	0	100	0		0	0	0		100	0	0		0	0	100		
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.250	.000	.000	.250	.000	.000	.500	.500	.500

Counts Unlimited
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City of Los Angeles
N/S: Harbor Boulevard
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File Name : 04_LAC_Harbor_1st PM
Site Code : 04119599
Start Date : 9/11/2019
Page No : 2



Peak Hour Analysis From 04:30 PM to 05:15 PM - Peak 1 of 1
Peak Hour for Each Approach Begins at:

	04:30 PM				04:30 PM				04:30 PM				04:30 PM			
+0 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
+15 mins.	0	0	0	0	0	0	0	0	**1**	0	0	**1**	0	0	**1**	**1**
+30 mins.	0	**1**	0	**1**	0	0	0	0	0	0	0	0	0	0	0	0
+45 mins.	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Total Volume	0	1	0	1	0	0	0	0	1	0	0	1	0	0	2	2
% App. Total	0	100	0		0	0	0		100	0	0		0	0	100	
PHF	.000	.250	.000	.250	.000	.000	.000	.000	.250	.000	.000	.250	.000	.000	.500	.500

APPENDIX C
LADOT CMA Worksheets

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Gaffey St	Year of Count:	2019	Ambient Growth: (%):	2	Conducted by:	KOA Corp	Date:	9/25/19
1	East-West Street:	5th St	Projection Year:	2021	Peak Hour:	AM	Reviewed by:	0	Project:	511 Harbor Mix-Use TIS

No. of Phases				3				3				3				3				3			
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0			
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2			
Override Capacity				0				0				0				0				0			

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	16	1	16	0	16	16	8	25	1	25	0	25	1	25	0	25	1	25
Left-Through		0							0				0				0	
Through	1510	1	**783**	0	1510	**783**	42	1613	1	**842**	0	1613	1	**842**	0	1613	1	**842**
Through-Right		1							1				1				1	
Right	55	0	55	0	55	55	14	71	0	71	0	71	0	71	0	71	0	71
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	81	1	**81**	1	82	**82**	47	131	1	**131**	1	132	1	**132**	0	132	1	**132**
Left-Through		0							0				0				0	
Through	1284	2	642	0	1284	642	51	1387	2	694	0	1387	2	694	0	1387	2	694
Through-Right		0							0				0				0	
Right	105	1	57	0	105	57	17	126	1	71	0	126	1	71	0	126	1	71
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	97	1	**97**	0	97	**97**	10	111	1	**111**	0	111	1	**111**	0	111	1	**111**
Left-Through		0							0				0				0	
Through	169	0	190	0	169	190	37	213	0	243	0	213	0	243	0	213	0	243
Through-Right		1							1				1				1	
Right	21	0	0	0	21	0	8	30	0	0	0	30	0	0	0	30	0	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	55	1	55	1	56	56	49	106	1	106	1	107	1	107	0	107	1	107
Left-Through		0							0				0				0	
Through	105	0	**159**	3	108	**172**	45	154	0	**293**	3	157	0	**306**	0	157	0	**306**
Through-Right		1							1				1				1	
Right	54	0	0	10	64	0	83	139	0	0	10	149	0	0	0	149	0	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*	864		*North-South:*	865		*North-South:*		973		*North-South:*		974		*North-South:*		974
		East-West:	256		*East-West:*	269		*East-West:*		404		*East-West:*		417		*East-West:*		417
		SUM:	1120		*SUM:*	1134		*SUM:*		1377		*SUM:*		1391		*SUM:*		1391
VOLUME/CAPACITY *(V/C)* RATIO:			0.786			0.796				0.966				0.976				0.976
V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.686**			**0.696**				**0.866**				**0.876**				**0.876**
LEVEL OF SERVICE (LOS):			**B**			**B**				**D**				**D**				**D**

REMARKS:

Version: 1i Beta; 8/4/2011

EXISTING + PROJECT IMPACT

Change in v/c due to project: **0.010**

Significant impacted? **NO**

PROJECT IMPACT

Change in *v/c* due to project: **0.010**

Significant impacted? **NO**

$\Delta v/c$ after mitigation: **0.010**

Fully mitigated? **N/A**

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Gaffey St	Year of Count:	2019	Ambient Growth: (%):	2	Conducted by:	KOA Corp	Date:	9/25/19
1	East-West Street:	5th St	Projection Year:	2021	Peak Hour:	PM	Reviewed by:	0	Project:	511 Harbor Mix-Use TIS

No. of Phases				3				3				3				3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				0				0				0				0				0
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2
Override Capacity				0				0				0				0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	24	1	**24**	0	24	**24**	8	33	1	33	0	33	1	33	0	33	1	33
	Left-Through		0							0				0				0	
	Through	1245	1	640	0	1245	641	53	1348	1	**717**	0	1348	1	**718**	0	1348	1	**718**
	Through-Right		1							1				1				1	
	Right	35	0	35	1	36	36	50	86	0	86	1	87	0	87	0	87	0	87
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	62	1	62	9	71	71	82	147	1	**147**	9	156	1	**156**	0	156	1	**156**
	Left-Through		0							0				0				0	
	Through	1465	2	**733**	0	1465	**733**	47	1571	2	786	0	1571	2	786	0	1571	2	786
	Through-Right		0							0				0				0	
	Right	134	1	79	0	134	79	15	154	1	88	0	154	1	88	0	154	1	88
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	110	1	**110**	0	110	**110**	19	133	1	**133**	0	133	1	**133**	0	133	1	**133**
	Left-Through		0							0				0				0	
	Through	72	0	96	3	75	99	43	118	0	151	3	121	0	154	0	121	0	154
	Through-Right		1							1				1				1	
	Right	24	0	0	0	24	0	8	33	0	0	0	33	0	0	0	33	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	45	1	45	1	46	46	29	76	1	76	1	77	1	77	0	77	1	77
	Left-Through		0							0				0				0	
	Through	99	0	**156**	2	101	**163**	31	134	0	**244**	2	136	0	**251**	0	136	0	**251**
	Through-Right		1							1				1				1	
	Right	57	0	0	5	62	0	51	110	0	0	5	115	0	0	0	115	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		757	*North-South:*		757	*North-South:*			864	*North-South:*			874	*North-South:*			874
		East-West:		266	*East-West:*		273	*East-West:*			377	*East-West:*			384	*East-West:*			384
		SUM:		1023	*SUM:*		1030	*SUM:*			1241	*SUM:*			1258	*SUM:*			1258
VOLUME/CAPACITY *(V/C)* RATIO:				0.718			0.723				0.871				0.883				0.883
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.618**			**0.623**				**0.771**				**0.783**				**0.783**
LEVEL OF SERVICE (LOS):				**B**			**B**				**C**				**C**				**C**

REMARKS:

Version: 1i Beta; 8/4/2011

EXISTING + PROJECT IMPACT

Change in v/c due to project: **0.005**

Significant impacted? **NO**

PROJECT IMPACT

Change in *v/c* due to project: **0.012**

Significant impacted? **NO**

$\Delta v/c$ after mitigation: **0.012**

Fully mitigated? **N/A**

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Pacific Avenue	Year of Count:	2019	Ambient Growth: (%):	2	Conducted by:	KOA Corp	Date:	9/25/19
2	East-West Street:	5th St	Projection Year:	2021	Peak Hour:	AM	Reviewed by:	0	Project:	511 Harbor Mix-Use TIS

No. of Phases			2			2			2			2			2			2	
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0			0	
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2			2	
Override Capacity			0			0			0			0			0			0	

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	27	1	27	0	27	27	3	31	1	31	0	31	1	31	0	31	1	31
Left-Through		0							0				0				0	
Through	729	1	**729**	0	729	**729**	18	776	1	**776**	0	776	1	**776**	0	776	1	**776**
Through-Right		0							0				0				0	
Right	39	1	5	0	39	5	4	45	1	0	0	45	1	0	0	45	1	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	55	1	**55**	0	55	**55**	74	131	1	**131**	0	131	1	**131**	0	131	1	**131**
Left-Through		0							0				0				0	
Through	487	1	487	0	487	487	20	527	1	527	0	527	1	527	0	527	1	527
Through-Right		0							0				0				0	
Right	21	1	0	0	21	0	11	33	1	8	0	33	1	8	0	33	1	8
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	43	1	43	0	43	**43**	6	51	1	**51**	0	51	1	**51**	0	51	1	**51**
Left-Through		0							0				0				0	
Through	143	0	**170**	1	144	171	88	237	0	269	1	238	0	270	0	238	0	270
Through-Right		1							1				1				1	
Right	27	0	0	0	27	0	4	32	0	0	0	32	0	0	0	32	0	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	68	1	**68**	1	69	69	19	90	1	90	1	91	1	91	0	91	1	91
Left-Through		0							0				0				0	
Through	118	0	187	14	132	**205**	163	286	0	**483**	14	300	0	**501**	0	300	0	**501**
Through-Right		1							1				1				1	
Right	69	0	0	4	73	0	125	197	0	0	4	201	0	0	0	201	0	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES	*North-South:*		784	*North-South:*		784	*North-South:*			907	*North-South:*			907	*North-South:*			907
	East-West:		238	*East-West:*		248	*East-West:*			534	*East-West:*			552	*East-West:*			552
	SUM:		1022	*SUM:*		1032	*SUM:*			1441	*SUM:*			1459	*SUM:*			1459
VOLUME/CAPACITY *(V/C)* RATIO:			0.681			0.688				0.961				0.973				0.973
V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.581**			**0.588**				**0.861**				**0.873**				**0.873**
LEVEL OF SERVICE (LOS):			**A**			**A**				**D**				**D**				**D**

REMARKS:

Version: 1i Beta; 8/4/2011

EXISTING + PROJECT IMPACT

Change in v/c due to project: **0.007**

Significant impacted? **NO**

PROJECT IMPACT

Change in *v/c* due to project: **0.012**

Significant impacted? **NO**

$\Delta v/c$ after mitigation: **0.012**

Fully mitigated? **N/A**

Level of Service Workheet
(Circular 212 Method)

I/S #:	North-South Street:	Pacific Avenue	Year of Count:	2019	Ambient Growth: (%):	2	Conducted by:	KOA Corp	Date:	9/25/19
2	East-West Street:	5th St	Projection Year:	2021	Peak Hour:	PM	Reviewed by:	0	Project:	511 Harbor Mix-Use TIS

No. of Phases			2			2			2			2			2			2	
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			0			0			0			0			0			0	
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2			2	
Override Capacity			0			0			0			0			0			0	

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	20	1	20	0	20	20	5	26	1	26	0	26	1	26	0	26	1	26
Left-Through		0							0				0				0	
Through	627	1	**627**	0	627	**627**	20	672	1	**672**	0	672	1	**672**	0	672	1	**672**
Through-Right		0							0				0				0	
Right	68	1	28	1	69	29	19	90	1	44	1	91	1	45	0	91	1	45
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	70	1	**70**	4	74	**74**	121	194	1	**194**	4	198	1	**198**	0	198	1	**198**
Left-Through		0							0				0				0	
Through	580	1	580	0	580	580	19	622	1	622	0	622	1	622	0	622	1	622
Through-Right		0							0				0				0	
Right	29	1	0	0	29	0	9	39	1	0	0	39	1	0	0	39	1	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	71	1	**71**	0	71	**71**	12	86	1	**86**	0	86	1	**86**	0	86	1	**86**
Left-Through		0							0				0				0	
Through	131	0	168	13	144	181	159	295	0	337	13	308	0	350	0	308	0	350
Through-Right		1							1				1				1	
Right	37	0	0	0	37	0	4	42	0	0	0	42	0	0	0	42	0	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	80	1	80	1	81	81	9	92	1	92	1	93	1	93	0	93	1	93
Left-Through		0							0				0				0	
Through	133	0	**227**	8	141	**237**	96	234	0	**405**	8	242	0	**415**	0	242	0	**415**
Through-Right		1							1				1				1	
Right	94	0	0	2	96	0	73	171	0	0	2	173	0	0	0	173	0	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*	697		*North-South:*	701		*North-South:*		866		*North-South:*		870		*North-South:*		870
		East-West:	298		*East-West:*	308		*East-West:*		491		*East-West:*		501		*East-West:*		501
		SUM:	995		*SUM:*	1009		*SUM:*		1357		*SUM:*		1371		*SUM:*		1371
VOLUME/CAPACITY *(V/C)* RATIO:			0.663			0.673				0.905				0.914				0.914
V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.563**			**0.573**				**0.805**				**0.814**				**0.814**
LEVEL OF SERVICE (LOS):			**A**			**A**				**D**				**D**				**D**

REMARKS:

Version: 1i Beta; 8/4/2011

EXISTING + PROJECT IMPACT

Change in v/c due to project: **0.010**

Significant impacted? **NO**

PROJECT IMPACT

Change in *v/c* due to project: **0.009**

Significant impacted? **NO**

$\Delta v/c$ after mitigation: **0.009**

Fully mitigated? **N/A**

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Harbor Blvd	Year of Count:	2019	Ambient Growth: (%):	2	Conducted by:	KOA Corp	Date:	9/25/19
3	East-West Street:	5th St	Projection Year:	2021	Peak Hour:	AM	Reviewed by:	0	Project:	511 Harbor Mix-Use TIS

No. of Phases			3			3			3			3			3			3	
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			2			2			2			2			2			2	
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2			2	
Override Capacity			0			0			0			0			0			0	

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	29	1	29	0	29	29	10	40	1	40	0	40	1	40	0	40	1	40
	Left-Through		0							0				0				0	
	Through	1007	2	**504**	0	1007	**504**	106	1154	2	**577**	0	1154	2	**577**	0	1154	2	**577**
	Through-Right		0							0				0				0	
	Right	2	1	1	0	2	1	0	2	1	1	0	2	1	1	0	2	1	1
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	**0**	0	0	**0**	0	0	0	**0**	0	0	0	**0**	0	0	0	**0**
	Left-Through		0							0				0				0	
	Through	585	1	414	0	585	414	109	718	1	523	0	718	1	523	0	718	1	523
	Through-Right		1							1				1				1	
	Right	242	0	242	1	243	243	75	327	0	327	1	328	0	328	0	328	0	328
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	150	1	**150**	7	157	**157**	86	242	1	**242**	7	249	1	**249**	0	249	1	**249**
	Left-Through		0							0				0				0	
	Through	2	0	11	0	2	12	0	2	0	30	0	2	0	31	0	2	0	31
	Through-Right		1							1				1				1	
	Right	9	0	0	1	10	0	19	28	0	0	1	29	0	0	0	29	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	2	1	2	0	2	2	0	2	1	2	0	2	1	2	0	2	1	2
	Left-Through		0							0				0				0	
	Through	1	0	**4**	0	1	**4**	0	1	0	**4**	0	1	0	**4**	0	1	0	**4**
	Through-Right		1							1				1				1	
	Right	3	0	0	0	3	0	0	3	0	0	0	3	0	0	0	3	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		504	*North-South:*		504	*North-South:*			577	*North-South:*			577	*North-South:*			577
		East-West:		154	*East-West:*		161	*East-West:*			246	*East-West:*			253	*East-West:*			253
		SUM:		658	*SUM:*		665	*SUM:*			823	*SUM:*			830	*SUM:*			830
VOLUME/CAPACITY *(V/C)* RATIO:				0.462			0.467				0.578				0.582				0.582
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.362**			**0.367**				**0.478**				**0.482**				**0.482**
LEVEL OF SERVICE (LOS):				**A**			**A**				**A**				**A**				**A**

REMARKS:

Version: 1i Beta; 8/4/2011

EXISTING + PROJECT IMPACT

Change in v/c due to project: **0.005**

Significant impacted? **NO**

PROJECT IMPACT

Change in *v/c* due to project: **0.004**

Significant impacted? **NO**

$\Delta v/c$ after mitigation: **0.004**

Fully mitigated? **N/A**

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Harbor Blvd	Year of Count:	2019	Ambient Growth: (%):	2	Conducted by:	KOA Corp	Date:	9/25/19
3	East-West Street:	5th St	Projection Year:	2021	Peak Hour:	PM	Reviewed by:	0	Project:	511 Harbor Mix-Use TIS

No. of Phases				3				3				3				3				3				3
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?				2				2				2				2				2				2
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0	NB--	0	SB--	0
	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0	EB--	0	WB--	0
ATSAC-1 or ATSAC+ATCS-2?				2				2				2				2				2				2
Override Capacity				0				0				0				0				0				0

	MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
		Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND	Left	22	1	**22**	1	23	**23**	19	42	1	**42**	1	43	1	**43**	0	43	1	**43**
	Left-Through		0							0				0				0	
	Through	563	2	282	0	563	282	109	695	2	348	0	695	2	348	0	695	2	348
	Through-Right		0							0				0				0	
	Right	0	1	0	0	0	0	0	0	1	0	0	0	1	0	0	0	1	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
SOUTHBOUND	Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Left-Through		0							0				0				0	
	Through	888	1	**511**	0	888	**514**	107	1031	1	**636**	0	1031	1	**639**	0	1031	1	**639**
	Through-Right		1							1				1				1	
	Right	134	0	134	6	140	140	102	241	0	241	6	247	0	247	0	247	0	247
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
EASTBOUND	Left	172	1	**172**	4	176	**176**	56	235	1	**235**	4	239	1	**239**	0	239	1	**239**
	Left-Through		0							0				0				0	
	Through	2	0	29	0	2	30	0	2	0	43	0	2	0	44	0	2	0	44
	Through-Right		1							1				1				1	
	Right	27	0	0	1	28	0	13	41	0	0	1	42	0	0	0	42	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
WESTBOUND	Left	2	1	2	0	2	2	0	2	1	2	0	2	1	2	0	2	1	2
	Left-Through		0							0				0				0	
	Through	1	0	**3**	0	1	**3**	0	1	0	**3**	0	1	0	**3**	0	1	0	**3**
	Through-Right		1							1				1				1	
	Right	2	0	0	0	2	0	0	2	0	0	0	2	0	0	0	2	0	0
	Left-Through-Right		0							0				0				0	
	Left-Right		0							0				0				0	
CRITICAL VOLUMES		*North-South:*		533	*North-South:*		537	*North-South:*			678	*North-South:*			682	*North-South:*			682
		East-West:		175	*East-West:*		179	*East-West:*			238	*East-West:*			242	*East-West:*			242
		SUM:		708	*SUM:*		716	*SUM:*			916	*SUM:*			924	*SUM:*			924
VOLUME/CAPACITY *(V/C)* RATIO:				0.497			0.502				0.643				0.648				0.648
V/C LESS ATSAC/ATCS ADJUSTMENT:				**0.397**			**0.402**				**0.543**				**0.548**				**0.548**
LEVEL OF SERVICE (LOS):				**A**			**A**				**A**				**A**				**A**

REMARKS:

Version: 1i Beta; 8/4/2011

EXISTING + PROJECT IMPACT

Change in v/c due to project: **0.005**

Significant impacted? **NO**

PROJECT IMPACT

Change in *v/c* due to project: **0.005**

Significant impacted? **NO**

$\Delta v/c$ after mitigation: **0.005**

Fully mitigated? **N/A**

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Harbor Blvd	Year of Count:	2019	Ambient Growth: (%):	2	Conducted by:	KOA Corp	Date:	9/25/19
4	East-West Street:	1st St	Projection Year:	2021	Peak Hour:	AM	Reviewed by:	0	Project:	511 Harbor Mix-Use TIS

No. of Phases			3			3			3			3			3			3	
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			2			2			2			2			2			2	
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2			2	
Override Capacity			0			0			0			0			0			0	

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	11	1	11	0	11	11	1	12	1	12	0	12	1	12	0	12	1	12
Left-Through		0							0				0				0	
Through	1191	1	**597**	7	1198	**601**	278	1517	1	**760**	7	1524	1	**764**	0	1524	1	**764**
Through-Right		1							1				1				1	
Right	3	0	3	0	3	3	0	3	0	3	0	3	0	3	0	3	0	3
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	19	1	**19**	0	19	**19**	0	20	1	**20**	0	20	1	**20**	0	20	1	**20**
Left-Through		0							0				0				0	
Through	934	2	467	1	935	468	223	1195	2	598	1	1196	2	598	0	1196	2	598
Through-Right		0							0				0				0	
Right	39	1	0	0	39	0	4	45	1	0	0	45	1	0	0	45	1	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	238	1	**238**	0	238	**238**	20	268	1	**268**	0	268	1	**268**	0	268	1	**268**
Left-Through		0							0				0				0	
Through	1	0	17	0	1	17	0	1	0	20	0	1	0	20	0	1	0	20
Through-Right		1							1				1				1	
Right	16	0	0	0	16	0	2	19	0	0	0	19	0	0	0	19	0	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Left-Through		0							0				0				0	
Through	0	0	**1**	0	0	**1**	0	0	0	**1**	0	0	0	**1**	0	0	0	**1**
Through-Right		0							0				0				0	
Right	1	0	0	0	1	0	0	1	0	0	0	1	0	0	0	1	0	0
Left-Through-Right		1							1				1				1	
Left-Right		0							0				0				0	
CRITICAL VOLUMES *North-South:*			616			620				780				784				784
CRITICAL VOLUMES *East-West:*			239			239				269				269				269
CRITICAL VOLUMES *SUM:*			855			859				1049				1053				1053
VOLUME/CAPACITY *(V/C)* RATIO:			0.600			0.603				0.736				0.739				0.739
V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.500**			**0.503**				**0.636**				**0.639**				**0.639**
LEVEL OF SERVICE (LOS):			**A**			**A**				**B**				**B**				**B**

REMARKS:

Version: 1i Beta; 8/4/2011

EXISTING + PROJECT IMPACT

Change in v/c due to project: **0.003**

Significant impacted? **NO**

PROJECT IMPACT

Change in *v/c* due to project: **0.003**

Significant impacted? **NO**

$\Delta v/c$ after mitigation: **0.003**

Fully mitigated? **N/A**

Level of Service Worksheet
(Circular 212 Method)

I/S #:	North-South Street:	Harbor Blvd	Year of Count:	2019	Ambient Growth: (%):	2	Conducted by:	KOA Corp	Date:	9/25/19
4	East-West Street:	1st St	Projection Year:	2021	Peak Hour:	PM	Reviewed by:	0	Project:	511 Harbor Mix-Use TIS

No. of Phases			3			3			3			3			3			3	
Opposed Ø'ing: N/S-1, E/W-2 or Both-3?			2			2			2			2			2			2	
Right Turns: FREE-1, NRTOR-2 or OLA-3?	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	NB--	0	SB-- 0	
	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	EB--	0	WB-- 0	
ATSAC-1 or ATSAC+ATCS-2?			2			2			2			2			2			2	
Override Capacity			0			0			0			0			0			0	

MOVEMENT	EXISTING CONDITION			EXISTING PLUS PROJECT			FUTURE CONDITION W/O PROJECT				FUTURE CONDITION W/ PROJECT				FUTURE W/ PROJECT W/ MITIGATION			
	Volume	No. of Lanes	Lane Volume	Project Traffic	Total Volume	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume	Added Volume	Total Volume	No. of Lanes	Lane Volume
NORTHBOUND																		
Left	8	1	**8**	0	8	**8**	12	20	1	**20**	0	20	1	**20**	0	20	1	**20**
Left-Through		0							0				0				0	
Through	780	1	390	4	784	392	202	1014	1	507	4	1018	1	509	0	1018	1	509
Through-Right		1							1				1				1	
Right	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
SOUTHBOUND																		
Left	13	1	13	0	13	13	0	14	1	14	0	14	1	14	0	14	1	14
Left-Through		0							0				0				0	
Through	1070	2	**535**	6	1076	**538**	261	1374	2	**687**	6	1380	2	**690**	0	1380	2	**690**
Through-Right		0							0				0				0	
Right	36	1	0	0	36	0	19	56	1	0	0	56	1	0	0	56	1	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
EASTBOUND																		
Left	165	1	**165**	0	165	**165**	10	182	1	**182**	0	182	1	**182**	0	182	1	**182**
Left-Through		0							0				0				0	
Through	3	0	24	0	3	24	0	3	0	38	0	3	0	38	0	3	0	38
Through-Right		1							1				1				1	
Right	21	0	0	0	21	0	13	35	0	0	0	35	0	0	0	35	0	0
Left-Through-Right		0							0				0				0	
Left-Right		0							0				0				0	
WESTBOUND																		
Left	8	0	8	0	8	8	0	8	0	8	0	8	0	8	0	8	0	8
Left-Through		0							0				0				0	
Through	1	0	**15**	0	1	**15**	0	1	0	**15**	0	1	0	**15**	0	1	0	**15**
Through-Right		0							0				0				0	
Right	6	0	0	0	6	0	0	6	0	0	0	6	0	0	0	6	0	0
Left-Through-Right		1							1				1				1	
Left-Right		0							0				0				0	
CRITICAL VOLUMES *North-South:*			543			546				707				710				710
CRITICAL VOLUMES *East-West:*			180			180				197				197				197
CRITICAL VOLUMES *SUM:*			723			726				904				907				907
VOLUME/CAPACITY *(V/C)* RATIO:			0.507			0.509				0.634				0.636				0.636
V/C LESS ATSAC/ATCS ADJUSTMENT:			**0.407**			**0.409**				**0.534**				**0.536**				**0.536**
LEVEL OF SERVICE (LOS):			**A**			**A**				**A**				**A**				**A**

REMARKS:

Version: 1i Beta; 8/4/2011

EXISTING + PROJECT IMPACT

Change in v/c due to project: **0.002**

Significant impacted? **NO**

PROJECT IMPACT

Change in *v/c* due to project: **0.002**

Significant impacted? **NO**

$\Delta v/c$ after mitigation: **0.002**

Fully mitigated? **N/A**

URBAN CROSSROADS

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November 26, 2019

Mr. Raffi Cohen
LAMF 511Harbor LLC
8906 W. Olympic Blvd., Suite 200
Beverly Hills, CA 90211

SUBJECT: 511 SOUTH HARBOR BOULEVARD FOCUSED AIR QUALITY AND GREENHOUSE GAS EMISSIONS MEMO

Dear Mr. Raffi Cohen:

Urban Crossroads, Inc. is pleased to submit this Air Quality and Greenhouse Gas Emissions Memo to LAMF 511Harbor LLC (Client) for the proposed 511 South Harbor Boulevard development (Project), which is located at 511 South Harbor Boulevard, in the City of Los Angeles as shown on Exhibit A.

SUMMARY OF FINDINGS

Results of the Memo indicate the construction and operations of the Project would result in less than significant impacts associated with air quality and greenhouse gas (GHG) emissions.

PROJECT DESCRIPTION

The proposed Project would construct an eight-story, mixed-use building with 137 residential units, 349 square feet of retail space and 2,129 square feet of restaurant space as shown on Exhibit B. Currently, the Project site is occupied by a sit-down restaurant that would be demolished for the construction of the Project.

STANDARD REGULATORY REQUIREMENTS/BEST AVAILABLE CONTROL MEASURES (BACMS)

South Coast Air Quality Management District (SCAQMD) Rules that are currently applicable during construction activity for this Project include but are not limited to Rule 403 (Fugitive Dust) (1), Rule 1113 (Architectural Coatings) (2), Rule 445 (Wood Burning Devices). Implementation of these rules are required pursuant to existing law and therefore is considered part of the Project.

BACM AQ-1

All applicable measures included in Rule 403, shall be incorporated into Project plans and specifications as implementation of Rule 403, which include but are not limited to (1):

- All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 mph per SCAQMD guidelines in order to limit fugitive dust emissions.

EXHIBIT A: LOCATION MAP

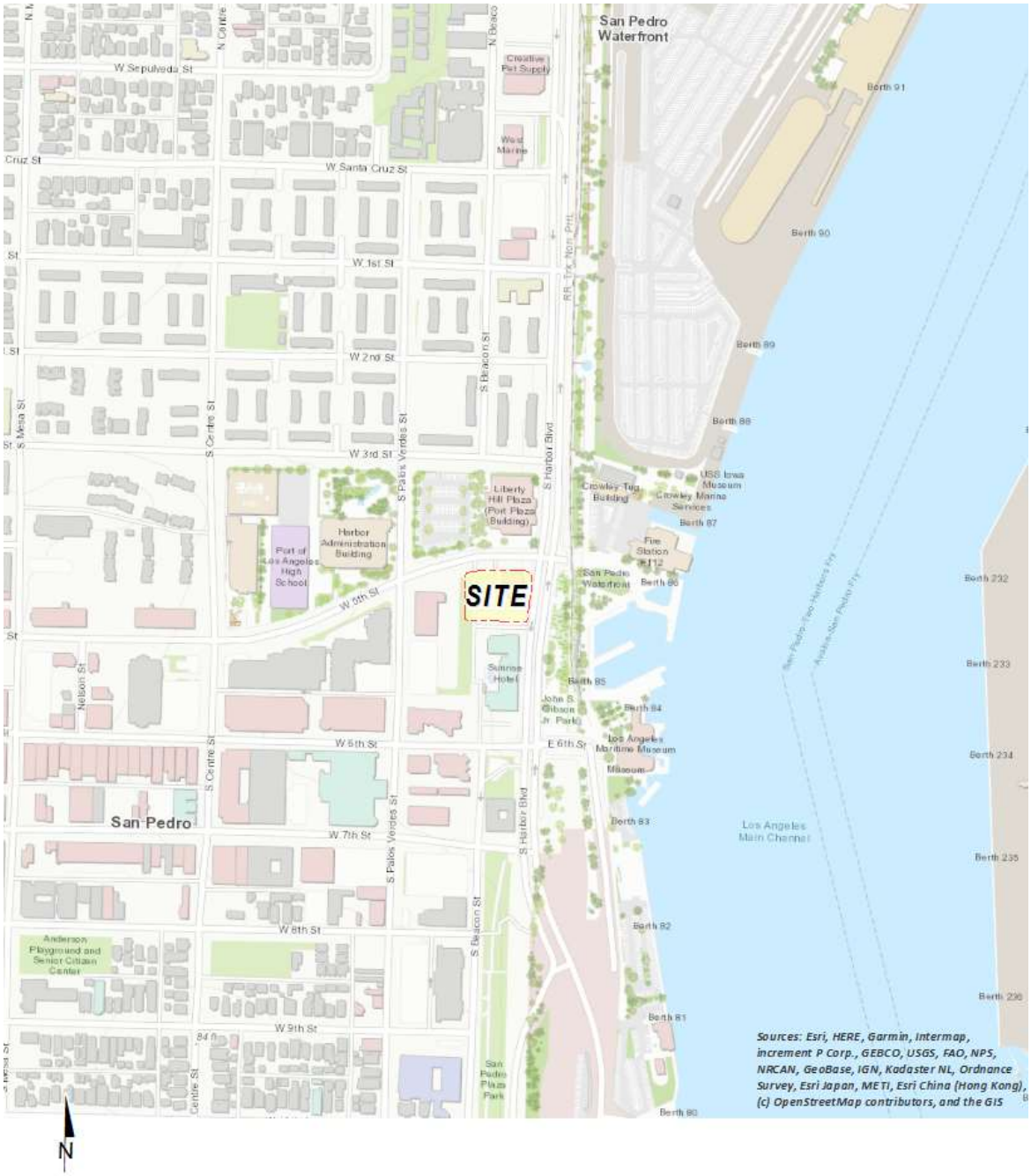


EXHIBIT B: SITE PLAN



- The contractor shall ensure that traffic speeds on unpaved roads and Project site areas are limited to 15 miles per hour or less.
- The contractor shall ensure that all disturbed unpaved roads and disturbed areas within the Project are watered at least three (3) times daily during dry weather. Watering, with complete coverage of disturbed areas, shall occur at least three times a day, preferably in the mid-morning, afternoon, and after work is done for the day.

BACM AQ-2

The following measures shall be incorporated into Project plans and specifications as implementation of SCAQMD Rule 1113 (2):

- Only "Low-Volatile Organic Compounds (VOC)" paints (no more than 50 gram/liter of VOC) consistent with SCAQMD Rule 1113 shall be used.

BACM AQ-3

The following measures shall be incorporated into Project plans and specifications as implementation of SCAQMD Rule 445 (3):

- Rule 445 prohibits the use of wood burning stoves and fireplaces in new developments.

CONSTRUCTION AND OPERATIONAL-SOURCE MITIGATION MEASURES

As shown in the analysis below, the Project would not result in an exceedance of any localized or regional construction-source or operational-source emissions thresholds. As such, the Project would not result in any significant impacts and no mitigation measures are required.

CALIFORNIA EMISSIONS ESTIMATOR MODEL™ EMPLOYED TO ESTIMATE AQ EMISSIONS

Land uses such as the Project affect air quality through construction-source emissions.

On October 17, 2017, the SCAQMD in conjunction with the California Air Pollution Control Officers Association (CAPCOA) and other California air districts, released the latest version of the California Emissions Estimator Model™ (CalEEMod) v2016.3.2. The purpose of this model is to more accurately calculate construction-source and operational-source criteria pollutant (Nitrogen Oxides (NO_X), VOC, Particulate Matter less than 10 microns (PM_{10}), Particulate Matter less than 2.5 microns ($PM_{2.5}$), Sulfur Oxides (SO_X), and Carbon Monoxide (CO)) and GHG emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation measures. Accordingly, the latest version of CalEEMod has been used for this Project to determine construction and operational impacts related to the Project. Air quality outputs from the model runs are provided in Attachments A.

AIR QUALITY

REGIONAL EMISSIONS

CONSTRUCTION

The duration of construction activity was based on CalEEMod defaults which estimate total construction would occur over an approximate 18-month period beginning in April 2020. The number of days of construction are shown on Table 1. Equipment employed for Project construction activities are based on CalEEMod defaults, as shown on Table 2. The Project construction fleet may vary due to specific Project needs at any given time. It is antitipated that the Project will require the demolition of the existing 4,169 square foot restaurant that occupies the Project site.

Grading Activities

The Project is anticipated to include soil export as a part of Project grading activities. Based on information provided by the Project applicant, the Project is expected require 1,400 cubic yards soil export. For purposes of analysis, the 1,400 cubic yards of export along with a model default hauling trip length of 20 miles has been utilized.

TABLE 1: CONSTRUCTION DURATION

Phase Name	Days
Demolition	10
Site Preparation	10
Grading	20
Building Construction	230
Paving	20
Architectural Coating	40

REGIONAL CONSTRUCTION EMISSIONS SUMMARY

Impacts without Mitigation

The estimated maximum daily construction emissions without mitigation are summarized on Table 3. Detailed construction model outputs are presented in Attachment A. Under the assumed construction modeling scenario discussed above, emissions resulting from the Project construction would not exceed criteria pollutant thresholds established by the SCAQMD for emissions of any criteria pollutant, and accordingly will not 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. Thus, a less than significant impact would occur for regional Project-related construction-source emissions and no mitigation is required.

TABLE 2: CONSTRUCTION EQUIPMENT

Activity	Equipment	Amount	Hours Per Day
Demolition	Concrete/Industrial Saws	1	8
	Rubber Tired Dozers	1	1
	Tractors/Loaders/Backhoes	2	6
Site Preparation	Crawler Tractors	1	8
	Grader	1	8
Grading	Concrete/Industrial Saws	1	8
	Crawler Tractors	2	8
	Rubber Tired Dozers	1	1
Building Construction	Cranes	1	4
	Forklifts	1	6
	Tractor/Loader/Backhoes	2	8
Paving	Cement and Mortar Mixers	4	6
	Pavers	1	7
	Rollers	1	7
	Tractor/Loader/Backhoes	7	7
Architectural Coating	Air Compressors	1	6

TABLE 3: PROJECT CONSTRUCTION EMISSIONS AND REGIONAL THRESHOLDS (WITHOUT MITIGATION)

Phase	Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
2020	3.40	33.93	23.52	0.06	4.97	2.29
2021	43.75	10.60	12.72	0.03	1.96	0.83
Maximum Daily Emissions	**43.75**	**33.93**	**23.52**	**0.06**	**4.97**	**2.29**
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

lbs/day = Pounds Per Day

OPERATIONS

Operational activities associated with the Project would result in emissions of CO, VOCs, NO_X, SO_X, PM_{10}, and $PM_{2.5}$. Operational related emissions are expected from the following primary sources: area source emissions, energy source emissions, mobile source emissions, and on-site equipment emissions.

Area Source Emissions

Architectural Coatings – Over a period of time, the buildings that are part of this Project will be subject to emissions resulting from the evaporation of solvents contained in paints, varnishes, primers, and other surface coatings as part of Project maintenance. The emissions associated with architectural coatings were calculated using the CalEEMod.

Consumer Products – Consumer products include, but are not limited to detergents, cleaning compounds, polishes, personal care products, and lawn and garden products. Many of these products contain organic compounds which when released in the atmosphere can react to form ozone and other photochemically reactive pollutants. The emissions associated with use of consumer products were calculated based on defaults provided within the CalEEMod model.

Landscape Maintenance Equipment – Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shedders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Project. The emissions associated with landscape maintenance equipment were calculated based on assumptions provided in the CalEEMod model.

Energy Source Emissions

Combustion Emissions Associated with Natural Gas and Electricity – Electricity and natural gas are used by almost every project. Criteria pollutant emissions are emitted through the generation of electricity and consumption of natural gas. However, because electrical generating facilities for the Project area are located either outside the region (state) or offset through the use of pollution credits (RECLAIM) for generation within the SCAB, criteria pollutant emissions from offsite generation of electricity is generally excluded from the evaluation of significance and only natural gas use is considered. The emissions associated with natural gas use were calculated using CalEEMod.

Mobile Source Emissions

Project mobile source air quality emissions are primarily dependent on overall daily vehicle trip generation. The Project related operational air quality impacts derive primarily from vehicle trips generated by the Project. According to the *Traffic Impact Study*, the Project would generate 997 weekday trip-ends per (4).

REGIONAL OPERATIONAL EMISSIONS SUMMARY

Impacts without Mitigation

Table 4 summarizes the Project's daily regional emissions from on-going operations. Detailed construction model outputs are presented in Attachment A. During operational activity, the Project will not exceed any of the thresholds of significance, and accordingly will not 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. Thus, a less than significant impact would occur for regional Project-related operation-sources emissions, and no mitigation is required.

TABLE 4: PROJECT OPERATIONAL EMISSIONS AND REGIONAL THRESHOLDS (WITHOUT MITIGATION)

Operational Activities – Summer Scenario	Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area Source	3.55	2.40	12.31	0.01	0.25	0.25
Energy Source	0.05	0.45	0.25	2.8e-03	0.04	0.04
Mobile	1.89	8.68	24.02	0.08	6.36	1.77
Total Maximum Daily Emissions	**5.50**	**11.54**	**36.58**	**0.10**	**6.71**	**2.05**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**
Operational Activities – Winter Scenario	**Emissions (lbs/day)**					
	VOC	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Area Source	3.55	2.40	12.31	0.01	0.25	0.25
Energy Source	0.05	0.45	0.25	2.8e-03	0.04	0.04
Mobile	1.84	8.88	22.98	0.08	6.43	1.77
Total Maximum Daily Emissions	**5.44**	**11.73**	**35.53**	**0.10**	**6.71**	**2.05**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

LOCALIZED EMISSIONS

The analysis makes use of methodology included in the SCAQMD *Final Localized Significance Threshold Methodology* (LST Methodology) (5). The SCAQMD has established that impacts to air quality are significant if there is a potential to contribute or cause localized exceedances of the federal and/or state ambient air quality standards (NAAQS/CAAQS). Collectively, these are referred to as Localized Significance Thresholds (LSTs). The SCAQMD established LSTs in response to the SCAQMD Governing

Board's Environmental Justice Initiative I-4[1]. LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest residence or sensitive receptor. The SCAQMD states that lead agencies can use the LSTs as another indicator of significance in its air quality impact analyses (5).

Sensitive Receptors

Receptor locations are off-site locations where individuals may be exposed to emissions from Project activities. This Memorandum analyzes localized construction and operational emissions impacts at the nearest sensitive receptors.

Some people are especially sensitive to air pollution and are given special consideration when evaluating air quality impacts from projects. These groups of people include children, the elderly, individuals with pre-existing respiratory or cardiovascular illness, and athletes and others who engage in frequent exercise. Structures that house these persons or places where they gather to exercise are defined as "sensitive receptors"; they are also known to be locations where an individual can remain for 24 hours.

Project-related Sensitive Receptors

Sensitive receptors in the Project study area include existing residential uses. The SCAQMD recommends that the nearest sensitive receptor be considered when determining the Project's potential to cause an individual and cumulatively significant impact. As such, the nearest sensitive receptor for evaluation of localized NO_2, CO, PM_{10} and $PM_{2.5}$ emissions is an existing residential home located at the 550 Palo Verdes Apartments located approximately 24 feet/7.3 meters west of the Project site. The *LST Methodology* explicitly states that "*It is possible that a project may have receptors closer than 25 meters. Projects with boundaries located closer than 25 meters to the nearest receptor should use the LSTs for receptors located at 25 meters* (5)." As the residential home is located less than 25-meters from the Project site, the 25-meter receptor distance will be used for evaluation.

LOCALIZED CONSTRUCTION EMISSIONS SUMMARY

Impacts without Mitigation

Table 5 identifies the localized impacts at the nearest receptor location in the vicinity of the Project. Outputs from the model runs for construction LSTs are provided in Attachment A. Under the assumed construction modeling scenario (as previously discussed), emissions resulting from the Project construction will not exceed the numerical thresholds of significance established by the SCAQMD for any criteria pollutant, accordingly the Project's construction will not expose sensitive receptors to substantial

[1] The purpose of SCAQMD's Environmental Justice program is to ensure that everyone has the right to equal protection from air pollution and fair access to the decision-making process that works to improve the quality of air within their communities. Further, the SCAQMD defines Environmental Justice as "…equitable environmental policymaking and enforcement to protect the health of all residents, regardless of age, culture, ethnicity, gender, race, socioeconomic status, or geographic location, from the health effects of air pollution."

pollutant concentrations. Thus, a less than significant impact related to sensitive receptors exposure to pollutants concentrations from Project construction would occur and no mitigation is required.

TABLE 5: LOCALIZED SIGNIFICANCE SUMMARY OF CONSTRUCTION (WITHOUT MITIGATION)

On-Site Site Preparation Emissions	Emissions (lbs/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Maximum Daily Emissions	**13.77**	**4.31**	**0.89**	**0.49**
SCAQMD Localized Threshold	57	123	4	3
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**
On-Site Grading Emissions	**Emissions (lbs/day)**			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Maximum Daily Emissions	**19.61**	**9.20**	**1.54**	**0.99**
SCAQMD Localized Threshold	57	123	4	3
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**

CO "HOT SPOT" ANALYSIS

As discussed below, the Project would not result in potentially adverse CO concentrations or "hot spots."

At the time of the 1993 Handbook, the South Coast Air Basin (SCAB) was designated nonattainment under the CAAQS and NAAQS for CO (6).

It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. In response, vehicle emissions standards have become increasingly stringent in the last twenty years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain vehicles that are more stringent). With the turnover of older vehicles, introduction of cleaner fuels, and implementation of increasingly sophisticated and efficient emissions control technologies, CO concentration in the SCAB is now designated as attainment.

To establish a more accurate record of baseline CO concentrations affecting the SCAB, a CO "hot spot" analysis was conducted in 2003 for four busy intersections in Los Angeles at the peak morning and afternoon time periods. This "hot spot" analysis did not predict any violation of CO standards, as shown on Table 6.

TABLE 6: CO MODEL RESULTS

Intersection Location	CO Concentrations (ppm)		
	Morning 1-hour	Afternoon 1-hour	8-hour
Wilshire Blvd./Veteran Ave.	4.6	3.5	3.7
Sunset Blvd./Highland Ave.	4	4.5	3.5
La Cienega Blvd./Century Blvd.	3.7	3.1	5.2
Long Beach Blvd./Imperial Hwy.	3	3.1	8.4

Based on the SCAQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan), peak carbon monoxide concentrations in the SCAB were a result of unusual meteorological and topographical conditions and not a result of traffic volumes and congestion at a particular intersection. As evidence of this, for example, 9.3 ppm 8-hr CO concentration measured at the Long Beach Blvd. and Imperial Hwy. intersection (highest CO generating intersection within the "hot spot" analysis), only 0.7 ppm was attributable to the traffic volumes and congestion at this intersection; the remaining 8.6 ppm were due to the ambient air measurements at the time the 2003 AQMP was prepared (7). In contrast, an adverse CO concentration, known as a "hot spot", would occur if an exceedance of the state one-hour standard of 20 parts per million (ppm) or the eight-hour standard of 9 ppm were to occur. The ambient 1-hr and 8-hr CO concentration within the Project study area is estimated to be 4.7 ppm and 3.5 ppm, respectively (data from South Central Los Angeles County Monitoring Station for 2018). Therefore, even if the traffic volumes for the proposed Project were double or even triple of the traffic volumes generated at the Long Beach Blvd. and Imperial Hwy. intersection, coupled with the on-going improvements in ambient air quality, the Project would not be capable of resulting in a CO "hot spot" at any study area intersections. Similar considerations are also employed by other Air Districts when evaluating potential CO concentration impacts. More specifically, the Bay Area Air Quality Management District (BAAQMD) concludes that under existing and future vehicle emission rates, a given project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour (vph) — or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (8).

Traffic volumes generating the CO concentrations for the "hot spot" analysis, shown on Table 7. The busiest intersection evaluated was that at Wilshire Blvd. and Veteran Ave., which has a daily traffic volume of approximately 100,000 vehicles per day. The 2003 AQMP estimated that the 1-hour concentration for this intersection was 4.6 ppm; this indicates that, should the daily traffic volume increase four times to 400,000 vehicles per day, CO concentrations (4.6 ppm x 4= 18.4 ppm) would still not likely exceed the most stringent 1-hour CO standard (20.0 ppm).[2] At buildout of the Project, the highest daily traffic volumes generated at the roadways within the vicinity of the Project are expected

2 Based on the ratio of the CO standard (20.0 ppm) and the modeled value (4.6 ppm).

to generate less than the highest daily traffic volumes generated at the busiest intersection in the CO "hot spot" analysis. As such, the Project would not likely exceed the most stringent 1-hour CO standard.

TABLE 7: TRAFFIC VOLUMES

Intersection Location	Peak Traffic Volumes (vph)				
	Eastbound (AM/PM)	Westbound (AM/PM)	Southbound (AM/PM)	Northbound (AM/PM)	Total (AM/PM)
Wilshire Blvd./Veteran Ave.	4,954/2,069	1,830/3,317	721/1,400	560/933	8,062/7,719
Sunset Blvd./Highland Ave.	1,417/1,764	1,342/1,540	2,304/1,832	1,551/2,238	6,614/5,374
La Cienega Blvd./Century Blvd.	2,540/2,243	1,890/2,728	1,384/2,029	821/1,674	6,634/8,674
Long Beach Blvd./Imperial Hwy.	1,217/2,020	1,760/1,400	479/944	756/1,150	4,212/5,514

CUMULATIVE IMPACTS

The CAAQS designate the Project site as nonattainment for O_3 PM_{10}, and $PM_{2.5}$ while the NAAQS designates the Project site as nonattainment for O_3 and $PM_{2.5}$.

The AQMD has published a report on how to address cumulative impacts from air pollution: *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution* (9). In this report the AQMD clearly states (Page D-3):

> *…the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in an Environmental Assessment or Environmental Impact Report (EIR). The only case where the significance thresholds for project specific and cumulative impacts differ is the Hazard Index (HI) significance threshold for toxic air contaminant (TAC) emissions. The project specific (project increment) significance threshold is HI > 1.0 while the cumulative (facility-wide) is HI > 3.0. It should be noted that the HI is only one of three TAC emission significance thresholds considered (when applicable) in a CEQA analysis. The other two are the maximum individual cancer risk (MICR) and the cancer burden, both of which use the same significance thresholds (MICR of 10 in 1 million and cancer burden of 0.5) for project specific and cumulative impacts.*
>
> *Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant.*

Therefore, this analysis assumes that individual projects that do not generate operational or construction emissions that exceed the SCAQMD's recommended daily thresholds for project-specific impacts would also not cause a cumulatively considerable increase in emissions for those pollutants for which the Basin

is in nonattainment, and, therefore, would not be considered to have a significant, adverse air quality impact. Alternatively, individual project-related construction and operational emissions that exceed SCAQMD thresholds for project-specific impacts would be considered cumulatively considerable.

Construction Impacts

The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that Project construction-source air pollutant emissions would not result in exceedances of regional thresholds. Therefore, Project construction-source emissions would be considered less than significant on a project-specific and cumulative basis.

Operational Impacts

The Project-specific evaluation of emissions presented in the preceding analysis demonstrates that Project operational-source air pollutant emissions would not result in exceedances of regional thresholds. Therefore, Project operational-source emissions would be considered less than significant on a project-specific and cumulative basis.

GREENHOUSE GAS

The City of Los Angeles has not adopted its own numeric threshold of significance for determining impacts with respect to GHG emissions. A screening threshold of 3,000 metric tons of carbon dioxide equivalent ($MTCO_2e$) per year to determine if additional analysis is required is an acceptable approach for the proposed Project. This approach is a widely accepted screening threshold used by the City of Los Angeles and numerous cities in the South Coast Air Basin (SCAB).

EMISSIONS SUMMARY

The annual GHG emissions associated with the construction and operation of the proposed Project are estimated to be 2,058.08 $MTCO_2e$ per year as summarized in Table 8. Direct and indirect operational emissions associated with the Project are compared with the SCAQMD's proposed Tier 3 threshold of significance for non-industrial projects, which is 3,000 $MTCO_2e$ per year. As shown, the proposed Project would result in a less than significant impact with respect to GHG emissions.

Further, the Project will comply with all applicable regulations intended to reduce GHG-emissions. Thus, a less than significant impact related to GHG emissions from Project construction and operation would occur and no mitigation is required.

TABLE 8: TOTAL PROJECT GHG EMISSIONS (ANNUAL)

Emission Source	Emissions (MT/yr)
	Total CO_2e
Annual construction-related emissions amortized over 30 years	12.66
Area	35.46
Energy	619.50
Mobile Sources	1,227.76
Waste	44.63
Water Usage	118.07
Total CO_2e (All Sources)	**2,058.08**
Screening Threshold (CO_2e)	**3,000**
Threshold Exceeded?	**NO**

MT/yr = Metric Tons per Year

If you have any questions, please contact me directly at (949) 336-5987.

Respectfully submitted,

URBAN CROSSROADS, INC.



Haseeb Qureshi,
Associate Principal

REFERENCES

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2. **South Coast Air Quality Management District.** RULE 1113. Architectural Coatings. [Online] http://www.aqmd.gov/docs/default-source/rule-book/reg-xi/r1113.pdf.
3. **South Coast Air Quality Management.** Rule 445. Wood Burning Devices. [Online] http://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-445.pdf.
4. **KOA Corporation.** *511 South Harbor Boulevard Traffic Impact Study.* 2019.
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9. **Goss, Tracy A and Kroeger, Amy.** White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution. [Online] South Coast Air Quality Management District, 2003. http://www.aqmd.gov/rules/ciwg/final_white_paper.pdf.

ATTACHMENT A:

CALEEMOD MODEL OUTPUTS

511 South Harbor Boulevard

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	128.00	Space	0.00	51,200.00	0
High Turnover (Sit Down Restaurant)	2.13	1000sqft	0.00	2,129.00	0
Apartments Mid Rise	137.00	Dwelling Unit	0.77	132,832.00	392
Strip Mall	0.35	1000sqft	0.00	349.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2021
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

511 South Harbor Boulevard - Los Angeles-South Coast County, Summer

Project Characteristics -

Land Use - Total Area - 0.765 ac. Per the CalEEmod 2016.3.2 User's Guide, Non-residential lot acreages will be zeroed out so as not to over calculate construction emissions due to the size of the development footprint.

Construction Phase - Number of days has been estimated based on the Project construction start and end date provided by the applicant.

Off-road Equipment - Crawler Tractors used in lieu of Tractor/Loader/Backhoe

Off-road Equipment - Crawler Tractors used in lieu of Tractor/Loader/Backhoe

Trips and VMT - Operations Run Only.

Demolition -

Grading -

Vehicle Trips - Trip Rates based on information provided in the Traffic Impact Study and ITE 10th Edition.

Woodstoves - Rule 445

Energy Use -

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	20.00
tblConstructionPhase	NumDays	100.00	230.00
tblConstructionPhase	NumDays	2.00	20.00
tblConstructionPhase	NumDays	5.00	20.00
tblConstructionPhase	NumDays	1.00	10.00
tblFireplaces	NumberGas	116.45	137.00
tblFireplaces	NumberNoFireplace	13.70	0.00
tblFireplaces	NumberWood	6.85	0.00
tblGrading	MaterialExported	0.00	1,400.00
tblLandUse	LandUseSquareFeet	2,130.00	2,129.00
tblLandUse	LandUseSquareFeet	137,000.00	132,832.00
tblLandUse	LandUseSquareFeet	350.00	349.00
tblLandUse	LotAcreage	1.15	0.00

tblLandUse	LotAcreage	0.05	0.00
tblLandUse	LotAcreage	3.61	0.77
tblLandUse	LotAcreage	0.01	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblVehicleTrips	ST_TR	6.39	4.91
tblVehicleTrips	ST_TR	158.37	122.40
tblVehicleTrips	ST_TR	42.04	46.12
tblVehicleTrips	SU_TR	5.86	4.09
tblVehicleTrips	SU_TR	131.84	142.64
tblVehicleTrips	SU_TR	20.43	21.10
tblVehicleTrips	WD_TR	6.65	5.44
tblVehicleTrips	WD_TR	127.15	112.18
tblVehicleTrips	WD_TR	44.32	37.75
tblWoodstoves	NumberCatalytic	6.85	0.00
tblWoodstoves	NumberNoncatalytic	6.85	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					
2020	3.3337	33.8542	23.5247	0.0628	3.5857	1.3830	4.9687	1.0022	1.2889	2.2911	0.0000	6,246.5549	6,246.5549	1.0580	0.0000	6,273.0047
2021	43.7405	10.5745	12.7210	0.0311	1.4997	0.4630	1.9628	0.4011	0.4262	0.8273	0.0000	3,113.3528	3,113.3528	0.4347	0.0000	3,124.2190
Maximum	**43.7405**	**33.8542**	**23.5247**	**0.0628**	**3.5857**	**1.3830**	**4.9687**	**1.0022**	**1.2889**	**2.2911**	**0.0000**	**6,246.5549**	**6,246.5549**	**1.0580**	**0.0000**	**6,273.0047**

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					
2020	3.3337	33.8542	23.5247	0.0628	2.4748	1.3830	3.8577	0.6792	1.2889	1.9681	0.0000	6,246.5549	6,246.5549	1.0580	0.0000	6,273.0047
2021	43.7405	10.5745	12.7210	0.0311	1.4997	0.4630	1.9628	0.4011	0.4262	0.8273	0.0000	3,113.3527	3,113.3527	0.4347	0.0000	3,124.2190
Maximum	**43.7405**	**33.8542**	**23.5247**	**0.0628**	**2.4748**	**1.3830**	**3.8577**	**0.6792**	**1.2889**	**1.9681**	**0.0000**	**6,246.5549**	**6,246.5549**	**1.0580**	**0.0000**	**6,273.0047**

	ROG	NOx	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**	**21.85**	**0.00**	**16.03**	**23.02**	**0.00**	**10.36**	**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	3.5456	2.4035	12.3077	0.0151		0.2462	0.2462		0.2462	0.2462	0.0000	2,921.5567	2,921.5567	0.0754	0.0532	2,939.2919
Energy	0.0518	0.4509	0.2466	2.8300e-003		0.0358	0.0358		0.0358	0.0358		565.5379	565.5379	0.0108	0.0104	568.8986
Mobile	1.8986	8.6828	24.0241	0.0813	6.3612	0.0674	6.4286	1.7024	0.0629	1.7653		8,268.9957	8,268.9957	0.4375		8,279.9327
Total	**5.4960**	**11.5372**	**36.5784**	**0.0993**	**6.3612**	**0.3494**	**6.7106**	**1.7024**	**0.3450**	**2.0474**	**0.0000**	**11,756.0902**	**11,756.0902**	**0.5237**	**0.0636**	**11,788.1232**

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	3.5456	2.4035	12.3077	0.0151		0.2462	0.2462		0.2462	0.2462	0.0000	2,921.5567	2,921.5567	0.0754	0.0532	2,939.2919
Energy	0.0518	0.4509	0.2466	2.8300e-003		0.0358	0.0358		0.0358	0.0358		565.5379	565.5379	0.0108	0.0104	568.8986
Mobile	1.8986	8.6828	24.0241	0.0813	6.3612	0.0674	6.4286	1.7024	0.0629	1.7653		8,268.9957	8,268.9957	0.4375		8,279.9327
Total	**5.4960**	**11.5372**	**36.5784**	**0.0993**	**6.3612**	**0.3494**	**6.7106**	**1.7024**	**0.3450**	**2.0474**	**0.0000**	**11,756.0902**	**11,756.0902**	**0.5237**	**0.0636**	**11,788.1232**

	ROG	NOx	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**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/1/2020	4/14/2020	5	10	
2	Site Preparation	Site Preparation	4/15/2020	4/28/2020	5	10	
3	Grading	Grading	4/29/2020	5/26/2020	5	20	
4	Building Construction	Building Construction	5/26/2020	4/12/2021	5	230	
5	Paving	Paving	4/13/2021	5/10/2021	5	20	
6	Architectural Coating	Architectural Coating	5/11/2021	6/7/2021	5	20	

Acres of Grading (Site Preparation Phase): 10

Acres of Grading (Grading Phase): 20

Acres of Paving: 0

Residential Indoor: 268,985; Residential Outdoor: 89,662; Non-Residential Indoor: 3,717; Non-Residential Outdoor: 1,239; Striped Parking Area: 3,072 (Architectural Coating – sqft)

OffRoad Equipment

511 South Harbor Boulevard - Los Angeles-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Crawler Tractors	1	8.00	212	0.43
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Crawler Tractors	2	8.00	212	0.43
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment 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	4	10.00	0.00	19.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	175.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	121.00	23.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	24.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.4104	0.0000	0.4104	0.0621	0.0000	0.0621			0.0000			0.0000
Off-Road	0.8674	7.8729	7.6226	0.0120		0.4672	0.4672		0.4457	0.4457		1,147.2352	1,147.2352	0.2169		1,152.6578
Total	**0.8674**	**7.8729**	**7.6226**	**0.0120**	**0.4104**	**0.4672**	**0.8776**	**0.0621**	**0.4457**	**0.5078**		**1,147.2352**	**1,147.2352**	**0.2169**		**1,152.6578**

3.2 Demolition - 2020

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	0.0166	0.5463	0.1211	1.5000e-003	0.0332	1.7400e-003	0.0350	9.1100e-003	1.6700e-003	0.0108		162.6081	162.6081	0.0111		162.8848
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	0.0460	0.0327	0.4378	1.1800e-003	0.1118	9.3000e-004	0.1127	0.0296	8.6000e-004	0.0305		117.6113	117.6113	3.7100e-003		117.7040
Total	**0.0626**	**0.5791**	**0.5589**	**2.6800e-003**	**0.1450**	**2.6700e-003**	**0.1477**	**0.0388**	**2.5300e-003**	**0.0413**		**280.2193**	**280.2193**	**0.0148**		**280.5887**

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					0.1601	0.0000	0.1601	0.0242	0.0000	0.0242			0.0000			0.0000
Off-Road	0.8674	7.8729	7.6226	0.0120		0.4672	0.4672		0.4457	0.4457	0.0000	1,147.2352	1,147.2352	0.2169		1,152.6578
Total	**0.8674**	**7.8729**	**7.6226**	**0.0120**	**0.1601**	**0.4672**	**0.6273**	**0.0242**	**0.4457**	**0.4699**	**0.0000**	**1,147.2352**	**1,147.2352**	**0.2169**		**1,152.6578**

3.2 Demolition - 2020

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	0.0166	0.5463	0.1211	1.5000e-003	0.0332	1.7400e-003	0.0350	9.1100e-003	1.6700e-003	0.0108		162.6081	162.6081	0.0111		162.8848
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	0.0460	0.0327	0.4378	1.1800e-003	0.1118	9.3000e-004	0.1127	0.0296	8.6000e-004	0.0305		117.6113	117.6113	3.7100e-003		117.7040
Total	**0.0626**	**0.5791**	**0.5589**	**2.6800e-003**	**0.1450**	**2.6700e-003**	**0.1477**	**0.0388**	**2.5300e-003**	**0.0413**		**280.2193**	**280.2193**	**0.0148**		**280.5887**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.0605	0.0000	1.0605	0.1145	0.0000	0.1145			0.0000			0.0000
Off-Road	1.0547	13.7732	4.3144	0.0145		0.4829	0.4829		0.4442	0.4442		1,403.1071	1,403.1071	0.4538		1,414.4519
Total	**1.0547**	**13.7732**	**4.3144**	**0.0145**	**1.0605**	**0.4829**	**1.5434**	**0.1145**	**0.4442**	**0.5588**		**1,403.1071**	**1,403.1071**	**0.4538**		**1,414.4519**

3.3 Site Preparation - 2020

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	0.0230	0.0164	0.2189	5.9000e-004	0.0559	4.7000e-004	0.0564	0.0148	4.3000e-004	0.0153		58.8056	58.8056	1.8500e-003		58.8520
Total	**0.0230**	**0.0164**	**0.2189**	**5.9000e-004**	**0.0559**	**4.7000e-004**	**0.0564**	**0.0148**	**4.3000e-004**	**0.0153**		**58.8056**	**58.8056**	**1.8500e-003**		**58.8520**

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					0.4136	0.0000	0.4136	0.0447	0.0000	0.0447			0.0000			0.0000
Off-Road	1.0547	13.7732	4.3144	0.0145		0.4829	0.4829		0.4442	0.4442	0.0000	1,403.1071	1,403.1071	0.4538		1,414.4519
Total	**1.0547**	**13.7732**	**4.3144**	**0.0145**	**0.4136**	**0.4829**	**0.8965**	**0.0447**	**0.4442**	**0.4889**	**0.0000**	**1,403.1071**	**1,403.1071**	**0.4538**		**1,414.4519**

3.3 Site Preparation - 2020

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	0.0230	0.0164	0.2189	5.9000e-004	0.0559	4.7000e-004	0.0564	0.0148	4.3000e-004	0.0153		58.8056	58.8056	1.8500e-003		58.8520
Total	**0.0230**	**0.0164**	**0.2189**	**5.9000e-004**	**0.0559**	**4.7000e-004**	**0.0564**	**0.0148**	**4.3000e-004**	**0.0153**		**58.8056**	**58.8056**	**1.8500e-003**		**58.8520**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.8212	0.0000	1.8212	0.5295	0.0000	0.5295			0.0000			0.0000
Off-Road	1.7109	19.6105	9.2030	0.0230		0.8288	0.8288		0.7784	0.7784		2,216.8593	2,216.8593	0.5628		2,230.9303
Total	**1.7109**	**19.6105**	**9.2030**	**0.0230**	**1.8212**	**0.8288**	**2.6500**	**0.5295**	**0.7784**	**1.3079**		**2,216.8593**	**2,216.8593**	**0.5628**		**2,230.9303**

3.4 Grading - 2020

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	0.0764	2.5160	0.5575	6.9100e-003	0.1530	8.0300e-003	0.1610	0.0419	7.6800e-003	0.0496		748.8528	748.8528	0.0510		750.1271
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	0.0460	0.0327	0.4378	1.1800e-003	0.1118	9.3000e-004	0.1127	0.0296	8.6000e-004	0.0305		117.6113	117.6113	3.7100e-003		117.7040
Total	**0.1225**	**2.5487**	**0.9954**	**8.0900e-003**	**0.2648**	**8.9600e-003**	**0.2737**	**0.0716**	**8.5400e-003**	**0.0801**		**866.4641**	**866.4641**	**0.0547**		**867.8311**

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					0.7103	0.0000	0.7103	0.2065	0.0000	0.2065			0.0000			0.0000
Off-Road	1.7109	19.6105	9.2030	0.0230		0.8288	0.8288		0.7784	0.7784	0.0000	2,216.8593	2,216.8593	0.5628		2,230.9303
Total	**1.7109**	**19.6105**	**9.2030**	**0.0230**	**0.7103**	**0.8288**	**1.5391**	**0.2065**	**0.7784**	**0.9849**	**0.0000**	**2,216.8593**	**2,216.8593**	**0.5628**		**2,230.9303**

3.4 Grading - 2020

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	0.0764	2.5160	0.5575	6.9100e-003	0.1530	8.0300e-003	0.1610	0.0419	7.6800e-003	0.0496		748.8528	748.8528	0.0510		750.1271
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	0.0460	0.0327	0.4378	1.1800e-003	0.1118	9.3000e-004	0.1127	0.0296	8.6000e-004	0.0305		117.6113	117.6113	3.7100e-003		117.7040
Total	**0.1225**	**2.5487**	**0.9954**	**8.0900e-003**	**0.2648**	**8.9600e-003**	**0.2737**	**0.0716**	**8.5400e-003**	**0.0801**		**866.4641**	**866.4641**	**0.0547**		**867.8311**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8617	8.8523	7.3875	0.0114		0.5224	0.5224		0.4806	0.4806		1,102.9781	1,102.9781	0.3567		1,111.8962
Total	**0.8617**	**8.8523**	**7.3875**	**0.0114**		**0.5224**	**0.5224**		**0.4806**	**0.4806**		**1,102.9781**	**1,102.9781**	**0.3567**		**1,111.8962**

3.5 Building Construction - 2020

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	0.0818	2.4466	0.6410	5.9700e-003	0.1473	0.0115	0.1588	0.0424	0.0110	0.0534		637.1568	637.1568	0.0389		638.1288
Worker	0.5569	0.3961	5.2979	0.0143	1.3525	0.0113	1.3638	0.3587	0.0104	0.3691		1,423.0966	1,423.0966	0.0449		1,424.2183
Total	**0.6387**	**2.8427**	**5.9389**	**0.0203**	**1.4997**	**0.0228**	**1.5226**	**0.4011**	**0.0214**	**0.4225**		**2,060.2534**	**2,060.2534**	**0.0838**		**2,062.3471**

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	0.8617	8.8523	7.3875	0.0114		0.5224	0.5224		0.4806	0.4806	0.0000	1,102.9781	1,102.9781	0.3567		1,111.8962
Total	**0.8617**	**8.8523**	**7.3875**	**0.0114**		**0.5224**	**0.5224**		**0.4806**	**0.4806**	**0.0000**	**1,102.9781**	**1,102.9781**	**0.3567**		**1,111.8962**

3.5 Building Construction - 2020

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	0.0818	2.4466	0.6410	5.9700e-003	0.1473	0.0115	0.1588	0.0424	0.0110	0.0534		637.1568	637.1568	0.0389		638.1288
Worker	0.5569	0.3961	5.2979	0.0143	1.3525	0.0113	1.3638	0.3587	0.0104	0.3691		1,423.0966	1,423.0966	0.0449		1,424.2183
Total	**0.6387**	**2.8427**	**5.9389**	**0.0203**	**1.4997**	**0.0228**	**1.5226**	**0.4011**	**0.0214**	**0.4225**		**2,060.2534**	**2,060.2534**	**0.0838**		**2,062.3471**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7750	7.9850	7.2637	0.0114		0.4475	0.4475		0.4117	0.4117		1,103.2158	1,103.2158	0.3568		1,112.1358
Total	**0.7750**	**7.9850**	**7.2637**	**0.0114**		**0.4475**	**0.4475**		**0.4117**	**0.4117**		**1,103.2158**	**1,103.2158**	**0.3568**		**1,112.1358**

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0699	2.2331	0.5838	5.9100e-003	0.1473	4.5700e-003	0.1518	0.0424	4.3700e-003	0.0468		632.2255	632.2255	0.0373		633.1566
Worker	0.5187	0.3565	4.8736	0.0138	1.3525	0.0109	1.3634	0.3587	0.0101	0.3688		1,377.9115	1,377.9115	0.0406		1,378.9265
Total	**0.5886**	**2.5896**	**5.4573**	**0.0197**	**1.4997**	**0.0155**	**1.5152**	**0.4011**	**0.0144**	**0.4155**		**2,010.1370**	**2,010.1370**	**0.0779**		**2,012.0831**

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	0.7750	7.9850	7.2637	0.0114		0.4475	0.4475		0.4117	0.4117	0.0000	1,103.2158	1,103.2158	0.3568		1,112.1358
Total	**0.7750**	**7.9850**	**7.2637**	**0.0114**		**0.4475**	**0.4475**		**0.4117**	**0.4117**	**0.0000**	**1,103.2158**	**1,103.2158**	**0.3568**		**1,112.1358**

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0699	2.2331	0.5838	5.9100e-003	0.1473	4.5700e-003	0.1518	0.0424	4.3700e-003	0.0468		632.2255	632.2255	0.0373		633.1566
Worker	0.5187	0.3565	4.8736	0.0138	1.3525	0.0109	1.3634	0.3587	0.0101	0.3688		1,377.9115	1,377.9115	0.0406		1,378.9265
Total	**0.5886**	**2.5896**	**5.4573**	**0.0197**	**1.4997**	**0.0155**	**1.5152**	**0.4011**	**0.0144**	**0.4155**		**2,010.1370**	**2,010.1370**	**0.0779**		**2,012.0831**

3.6 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	0.7214	6.7178	7.0899	0.0113		0.3534	0.3534		0.3286	0.3286		1,035.3425	1,035.3425	0.3016		1,042.8818
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7214**	**6.7178**	**7.0899**	**0.0113**		**0.3534**	**0.3534**		**0.3286**	**0.3286**		**1,035.3425**	**1,035.3425**	**0.3016**		**1,042.8818**

3.6 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0772	0.0530	0.7250	2.0600e-003	0.2012	1.6300e-003	0.2028	0.0534	1.5000e-003	0.0549		204.9786	204.9786	6.0400e-003		205.1296
Total	**0.0772**	**0.0530**	**0.7250**	**2.0600e-003**	**0.2012**	**1.6300e-003**	**0.2028**	**0.0534**	**1.5000e-003**	**0.0549**		**204.9786**	**204.9786**	**6.0400e-003**		**205.1296**

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	0.7214	6.7178	7.0899	0.0113		0.3534	0.3534		0.3286	0.3286	0.0000	1,035.3425	1,035.3425	0.3016		1,042.8818
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7214**	**6.7178**	**7.0899**	**0.0113**		**0.3534**	**0.3534**		**0.3286**	**0.3286**	**0.0000**	**1,035.3425**	**1,035.3425**	**0.3016**		**1,042.8818**

3.6 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0772	0.0530	0.7250	2.0600e-003	0.2012	1.6300e-003	0.2028	0.0534	1.5000e-003	0.0549		204.9786	204.9786	6.0400e-003		205.1296
Total	**0.0772**	**0.0530**	**0.7250**	**2.0600e-003**	**0.2012**	**1.6300e-003**	**0.2028**	**0.0534**	**1.5000e-003**	**0.0549**		**204.9786**	**204.9786**	**6.0400e-003**		**205.1296**

3.7 Architectural Coating - 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					
Archit. Coating	43.4187					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**43.6376**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.1029	0.0707	0.9667	2.7400e-003	0.2683	2.1700e-003	0.2704	0.0711	2.0000e-003	0.0731		273.3048	273.3048	8.0500e-003		273.5061
Total	**0.1029**	**0.0707**	**0.9667**	**2.7400e-003**	**0.2683**	**2.1700e-003**	**0.2704**	**0.0711**	**2.0000e-003**	**0.0731**		**273.3048**	**273.3048**	**8.0500e-003**		**273.5061**

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	43.4187					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**43.6376**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.1029	0.0707	0.9667	2.7400e-003	0.2683	2.1700e-003	0.2704	0.0711	2.0000e-003	0.0731		273.3048	273.3048	8.0500e-003		273.5061
Total	**0.1029**	**0.0707**	**0.9667**	**2.7400e-003**	**0.2683**	**2.1700e-003**	**0.2704**	**0.0711**	**2.0000e-003**	**0.0731**		**273.3048**	**273.3048**	**8.0500e-003**		**273.5061**

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	1.8986	8.6828	24.0241	0.0813	6.3612	0.0674	6.4286	1.7024	0.0629	1.7653		8,268.9957	8,268.9957	0.4375		8,279.9327
Unmitigated	1.8986	8.6828	24.0241	0.0813	6.3612	0.0674	6.4286	1.7024	0.0629	1.7653		8,268.9957	8,268.9957	0.4375		8,279.9327

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	745.28	672.67	560.33	2,421,003	2,421,003
Enclosed Parking with Elevator	0.00	0.00	0.00		
High Turnover (Sit Down Restaurant)	238.94	260.71	303.82	342,509	342,509
Strip Mall	13.21	16.14	7.39	24,350	24,350
Total	997.44	949.52	871.54	2,787,863	2,787,863

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891
Enclosed Parking with Elevator	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891
High Turnover (Sit Down Restaurant)	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891
Strip Mall	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive 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	0.0518	0.4509	0.2466	2.8300e-003		0.0358	0.0358		0.0358	0.0358		565.5379	565.5379	0.0108	0.0104	568.8986
NaturalGas Unmitigated	0.0518	0.4509	0.2466	2.8300e-003		0.0358	0.0358		0.0358	0.0358		565.5379	565.5379	0.0108	0.0104	568.8986

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	3459.51	0.0373	0.3188	0.1357	2.0400e-003		0.0258	0.0258		0.0258	0.0258		407.0011	407.0011	7.8000e-003	7.4600e-003	409.4197
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	1345.99	0.0145	0.1320	0.1109	7.9000e-004		0.0100	0.0100		0.0100	0.0100		158.3523	158.3523	3.0400e-003	2.9000e-003	159.2933
Strip Mall	1.56811	2.0000e-005	1.5000e-004	1.3000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		0.1845	0.1845	0.0000	0.0000	0.1856
Total		**0.0519**	**0.4509**	**0.2467**	**2.8300e-003**		**0.0358**	**0.0358**		**0.0358**	**0.0358**		**565.5379**	**565.5379**	**0.0108**	**0.0104**	**568.8986**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	3.45951	0.0373	0.3188	0.1357	2.0400e-003		0.0258	0.0258		0.0258	0.0258		407.0011	407.0011	7.8000e-003	7.4600e-003	409.4197
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	1.34599	0.0145	0.1320	0.1109	7.9000e-004		0.0100	0.0100		0.0100	0.0100		158.3523	158.3523	3.0400e-003	2.9000e-003	159.2933
Strip Mall	0.00156811	2.0000e-005	1.5000e-004	1.3000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		0.1845	0.1845	0.0000	0.0000	0.1856
Total		**0.0519**	**0.4509**	**0.2467**	**2.8300e-003**		**0.0358**	**0.0358**		**0.0358**	**0.0358**		**565.5379**	**565.5379**	**0.0108**	**0.0104**	**568.8986**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.5456	2.4035	12.3077	0.0151		0.2462	0.2462		0.2462	0.2462	0.0000	2,921.5567	2,921.5567	0.0754	0.0532	2,939.2919
Unmitigated	3.5456	2.4035	12.3077	0.0151		0.2462	0.2462		0.2462	0.2462	0.0000	2,921.5567	2,921.5567	0.0754	0.0532	2,939.2919

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	0.2379					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.6973					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.2659	2.2726	0.9671	0.0145		0.1837	0.1837		0.1837	0.1837	0.0000	2,901.1765	2,901.1765	0.0556	0.0532	2,918.4167
Landscaping	0.3445	0.1309	11.3406	6.0000e-004		0.0625	0.0625		0.0625	0.0625		20.3802	20.3802	0.0198		20.8752
Total	**3.5456**	**2.4035**	**12.3077**	**0.0151**		**0.2462**	**0.2462**		**0.2462**	**0.2462**	**0.0000**	**2,921.5567**	**2,921.5567**	**0.0754**	**0.0532**	**2,939.2919**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2379					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.6973					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.2659	2.2726	0.9671	0.0145		0.1837	0.1837		0.1837	0.1837	0.0000	2,901.1765	2,901.1765	0.0556	0.0532	2,918.4167
Landscaping	0.3445	0.1309	11.3406	6.0000e-004		0.0625	0.0625		0.0625	0.0625		20.3802	20.3802	0.0198		20.8752
Total	**3.5456**	**2.4035**	**12.3077**	**0.0151**		**0.2462**	**0.2462**		**0.2462**	**0.2462**	**0.0000**	**2,921.5567**	**2,921.5567**	**0.0754**	**0.0532**	**2,939.2919**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

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

511 South Harbor Boulevard

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	128.00	Space	0.00	51,200.00	0
High Turnover (Sit Down Restaurant)	2.13	1000sqft	0.00	2,129.00	0
Apartments Mid Rise	137.00	Dwelling Unit	0.77	132,832.00	392
Strip Mall	0.35	1000sqft	0.00	349.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2021
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

511 South Harbor Boulevard - Los Angeles-South Coast County, Winter

Project Characteristics -

Land Use - Total Area - 0.765 ac. Per the CalEEmod 2016.3.2 User's Guide, Non-residential lot acreages will be zeroed out so as not to over calculate construction emissions due to the size of the development footprint.

Construction Phase - Number of days has been estimated based on the Project construction start and end date provided by the applicant.

Off-road Equipment - Crawler Tractors used in lieu of Tractor/Loader/Backhoe

Off-road Equipment - Crawler Tractors used in lieu of Tractor/Loader/Backhoe

Trips and VMT - Operations Run Only.

Demolition -

Grading -

Vehicle Trips - Trip Rates based on information provided in the Traffic Impact Study and ITE 10th Edition.

Woodstoves - Rule 445

Energy Use -

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	20.00
tblConstructionPhase	NumDays	100.00	230.00
tblConstructionPhase	NumDays	2.00	20.00
tblConstructionPhase	NumDays	5.00	20.00
tblConstructionPhase	NumDays	1.00	10.00
tblFireplaces	NumberGas	116.45	137.00
tblFireplaces	NumberNoFireplace	13.70	0.00
tblFireplaces	NumberWood	6.85	0.00
tblGrading	MaterialExported	0.00	1,400.00
tblLandUse	LandUseSquareFeet	2,130.00	2,129.00
tblLandUse	LandUseSquareFeet	137,000.00	132,832.00
tblLandUse	LandUseSquareFeet	350.00	349.00
tblLandUse	LotAcreage	1.15	0.00

tblLandUse	LotAcreage	0.05	0.00
tblLandUse	LotAcreage	3.61	0.77
tblLandUse	LotAcreage	0.01	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblVehicleTrips	ST_TR	6.39	4.91
tblVehicleTrips	ST_TR	158.37	122.40
tblVehicleTrips	ST_TR	42.04	46.12
tblVehicleTrips	SU_TR	5.86	4.09
tblVehicleTrips	SU_TR	131.84	142.64
tblVehicleTrips	SU_TR	20.43	21.10
tblVehicleTrips	WD_TR	6.65	5.44
tblVehicleTrips	WD_TR	127.15	112.18
tblVehicleTrips	WD_TR	44.32	37.75
tblWoodstoves	NumberCatalytic	6.85	0.00
tblWoodstoves	NumberNoncatalytic	6.85	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					
2020	3.4058	33.9322	23.1432	0.0616	3.5857	1.3833	4.9690	1.0022	1.2892	2.2914	0.0000	6,126.2482	6,126.2482	1.0596	0.0000	6,152.7372
2021	43.7521	10.6081	12.3653	0.0302	1.4997	0.4632	1.9629	0.4011	0.4263	0.8274	0.0000	3,015.5343	3,015.5343	0.4347	0.0000	3,026.4012
Maximum	**43.7521**	**33.9322**	**23.1432**	**0.0616**	**3.5857**	**1.3833**	**4.9690**	**1.0022**	**1.2892**	**2.2914**	**0.0000**	**6,126.2482**	**6,126.2482**	**1.0596**	**0.0000**	**6,152.7372**

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					
2020	3.4058	33.9322	23.1432	0.0616	2.4748	1.3833	3.8580	0.6792	1.2892	1.9684	0.0000	6,126.2482	6,126.2482	1.0596	0.0000	6,152.7372
2021	43.7521	10.6081	12.3653	0.0302	1.4997	0.4632	1.9629	0.4011	0.4263	0.8274	0.0000	3,015.5343	3,015.5343	0.4347	0.0000	3,026.4012
Maximum	**43.7521**	**33.9322**	**23.1432**	**0.0616**	**2.4748**	**1.3833**	**3.8580**	**0.6792**	**1.2892**	**1.9684**	**0.0000**	**6,126.2482**	**6,126.2482**	**1.0596**	**0.0000**	**6,152.7372**

	ROG	NOx	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**	**21.85**	**0.00**	**16.03**	**23.02**	**0.00**	**10.36**	**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	3.5456	2.4035	12.3077	0.0151		0.2462	0.2462		0.2462	0.2462	0.0000	2,921.5567	2,921.5567	0.0754	0.0532	2,939.2919
Energy	0.0518	0.4509	0.2466	2.8300e-003		0.0358	0.0358		0.0358	0.0358		565.5379	565.5379	0.0108	0.0104	568.8986
Mobile	1.8442	8.8778	22.9779	0.0773	6.3612	0.0678	6.4290	1.7024	0.0633	1.7657		7,864.7963	7,864.7963	0.4373		7,875.7282
Total	**5.4416**	**11.7322**	**35.5322**	**0.0952**	**6.3612**	**0.3498**	**6.7110**	**1.7024**	**0.3453**	**2.0478**	**0.0000**	**11,351.8908**	**11,351.8908**	**0.5235**	**0.0636**	**11,383.9187**

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	3.5456	2.4035	12.3077	0.0151		0.2462	0.2462		0.2462	0.2462	0.0000	2,921.5567	2,921.5567	0.0754	0.0532	2,939.2919
Energy	0.0518	0.4509	0.2466	2.8300e-003		0.0358	0.0358		0.0358	0.0358		565.5379	565.5379	0.0108	0.0104	568.8986
Mobile	1.8442	8.8778	22.9779	0.0773	6.3612	0.0678	6.4290	1.7024	0.0633	1.7657		7,864.7963	7,864.7963	0.4373		7,875.7282
Total	**5.4416**	**11.7322**	**35.5322**	**0.0952**	**6.3612**	**0.3498**	**6.7110**	**1.7024**	**0.3453**	**2.0478**	**0.0000**	**11,351.8908**	**11,351.8908**	**0.5235**	**0.0636**	**11,383.9187**

	ROG	NOx	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**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/1/2020	4/14/2020	5	10	
2	Site Preparation	Site Preparation	4/15/2020	4/28/2020	5	10	
3	Grading	Grading	4/29/2020	5/26/2020	5	20	
4	Building Construction	Building Construction	5/26/2020	4/12/2021	5	230	
5	Paving	Paving	4/13/2021	5/10/2021	5	20	
6	Architectural Coating	Architectural Coating	5/11/2021	6/7/2021	5	20	

Acres of Grading (Site Preparation Phase): 10

Acres of Grading (Grading Phase): 20

Acres of Paving: 0

Residential Indoor: 268,985; Residential Outdoor: 89,662; Non-Residential Indoor: 3,717; Non-Residential Outdoor: 1,239; Striped Parking Area: 3,072 (Architectural Coating – sqft)

OffRoad Equipment

511 South Harbor Boulevard - Los Angeles-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Crawler Tractors	1	8.00	212	0.43
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Crawler Tractors	2	8.00	212	0.43
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment 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	4	10.00	0.00	19.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	175.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	121.00	23.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	24.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.4104	0.0000	0.4104	0.0621	0.0000	0.0621			0.0000			0.0000
Off-Road	0.8674	7.8729	7.6226	0.0120		0.4672	0.4672		0.4457	0.4457		1,147.2352	1,147.2352	0.2169		1,152.6578
Total	**0.8674**	**7.8729**	**7.6226**	**0.0120**	**0.4104**	**0.4672**	**0.8776**	**0.0621**	**0.4457**	**0.5078**		**1,147.2352**	**1,147.2352**	**0.2169**		**1,152.6578**

3.2 Demolition - 2020

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	0.0170	0.5534	0.1287	1.4700e-003	0.0332	1.7700e-003	0.0350	9.1100e-003	1.6900e-003	0.0108		159.8079	159.8079	0.0115		160.0946
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	0.0511	0.0363	0.4010	1.1100e-003	0.1118	9.3000e-004	0.1127	0.0296	8.6000e-004	0.0305		110.7420	110.7420	3.4900e-003		110.8293
Total	**0.0681**	**0.5897**	**0.5297**	**2.5800e-003**	**0.1450**	**2.7000e-003**	**0.1477**	**0.0388**	**2.5500e-003**	**0.0413**		**270.5499**	**270.5499**	**0.0150**		**270.9239**

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					0.1601	0.0000	0.1601	0.0242	0.0000	0.0242			0.0000			0.0000
Off-Road	0.8674	7.8729	7.6226	0.0120		0.4672	0.4672		0.4457	0.4457	0.0000	1,147.2352	1,147.2352	0.2169		1,152.6578
Total	**0.8674**	**7.8729**	**7.6226**	**0.0120**	**0.1601**	**0.4672**	**0.6273**	**0.0242**	**0.4457**	**0.4699**	**0.0000**	**1,147.2352**	**1,147.2352**	**0.2169**		**1,152.6578**

3.2 Demolition - 2020

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	0.0170	0.5534	0.1287	1.4700e-003	0.0332	1.7700e-003	0.0350	9.1100e-003	1.6900e-003	0.0108		159.8079	159.8079	0.0115		160.0946
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	0.0511	0.0363	0.4010	1.1100e-003	0.1118	9.3000e-004	0.1127	0.0296	8.6000e-004	0.0305		110.7420	110.7420	3.4900e-003		110.8293
Total	**0.0681**	**0.5897**	**0.5297**	**2.5800e-003**	**0.1450**	**2.7000e-003**	**0.1477**	**0.0388**	**2.5500e-003**	**0.0413**		**270.5499**	**270.5499**	**0.0150**		**270.9239**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.0605	0.0000	1.0605	0.1145	0.0000	0.1145			0.0000			0.0000
Off-Road	1.0547	13.7732	4.3144	0.0145		0.4829	0.4829		0.4442	0.4442		1,403.1071	1,403.1071	0.4538		1,414.4519
Total	**1.0547**	**13.7732**	**4.3144**	**0.0145**	**1.0605**	**0.4829**	**1.5434**	**0.1145**	**0.4442**	**0.5588**		**1,403.1071**	**1,403.1071**	**0.4538**		**1,414.4519**

3.3 Site Preparation - 2020

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	0.0256	0.0181	0.2005	5.6000e-004	0.0559	4.7000e-004	0.0564	0.0148	4.3000e-004	0.0153		55.3710	55.3710	1.7500e-003		55.4147
Total	**0.0256**	**0.0181**	**0.2005**	**5.6000e-004**	**0.0559**	**4.7000e-004**	**0.0564**	**0.0148**	**4.3000e-004**	**0.0153**		**55.3710**	**55.3710**	**1.7500e-003**		**55.4147**

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					0.4136	0.0000	0.4136	0.0447	0.0000	0.0447			0.0000			0.0000
Off-Road	1.0547	13.7732	4.3144	0.0145		0.4829	0.4829		0.4442	0.4442	0.0000	1,403.1071	1,403.1071	0.4538		1,414.4519
Total	**1.0547**	**13.7732**	**4.3144**	**0.0145**	**0.4136**	**0.4829**	**0.8965**	**0.0447**	**0.4442**	**0.4889**	**0.0000**	**1,403.1071**	**1,403.1071**	**0.4538**		**1,414.4519**

3.3 Site Preparation - 2020

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	0.0256	0.0181	0.2005	5.6000e-004	0.0559	4.7000e-004	0.0564	0.0148	4.3000e-004	0.0153		55.3710	55.3710	1.7500e-003		55.4147
Total	**0.0256**	**0.0181**	**0.2005**	**5.6000e-004**	**0.0559**	**4.7000e-004**	**0.0564**	**0.0148**	**4.3000e-004**	**0.0153**		**55.3710**	**55.3710**	**1.7500e-003**		**55.4147**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.8212	0.0000	1.8212	0.5295	0.0000	0.5295			0.0000			0.0000
Off-Road	1.7109	19.6105	9.2030	0.0230		0.8288	0.8288		0.7784	0.7784		2,216.8593	2,216.8593	0.5628		2,230.9303
Total	**1.7109**	**19.6105**	**9.2030**	**0.0230**	**1.8212**	**0.8288**	**2.6500**	**0.5295**	**0.7784**	**1.3079**		**2,216.8593**	**2,216.8593**	**0.5628**		**2,230.9303**

3.4 Grading - 2020

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	0.0783	2.5486	0.5925	6.7900e-003	0.1530	8.1500e-003	0.1611	0.0419	7.8000e-003	0.0497		735.9573	735.9573	0.0528		737.2779
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	0.0511	0.0363	0.4010	1.1100e-003	0.1118	9.3000e-004	0.1127	0.0296	8.6000e-004	0.0305		110.7420	110.7420	3.4900e-003		110.8293
Total	**0.1294**	**2.5848**	**0.9935**	**7.9000e-003**	**0.2648**	**9.0800e-003**	**0.2739**	**0.0716**	**8.6600e-003**	**0.0802**		**846.6994**	**846.6994**	**0.0563**		**848.1072**

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					0.7103	0.0000	0.7103	0.2065	0.0000	0.2065			0.0000			0.0000
Off-Road	1.7109	19.6105	9.2030	0.0230		0.8288	0.8288		0.7784	0.7784	0.0000	2,216.8593	2,216.8593	0.5628		2,230.9303
Total	**1.7109**	**19.6105**	**9.2030**	**0.0230**	**0.7103**	**0.8288**	**1.5391**	**0.2065**	**0.7784**	**0.9849**	**0.0000**	**2,216.8593**	**2,216.8593**	**0.5628**		**2,230.9303**

3.4 Grading - 2020

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	0.0783	2.5486	0.5925	6.7900e-003	0.1530	8.1500e-003	0.1611	0.0419	7.8000e-003	0.0497		735.9573	735.9573	0.0528		737.2779
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	0.0511	0.0363	0.4010	1.1100e-003	0.1118	9.3000e-004	0.1127	0.0296	8.6000e-004	0.0305		110.7420	110.7420	3.4900e-003		110.8293
Total	**0.1294**	**2.5848**	**0.9935**	**7.9000e-003**	**0.2648**	**9.0800e-003**	**0.2739**	**0.0716**	**8.6600e-003**	**0.0802**		**846.6994**	**846.6994**	**0.0563**		**848.1072**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.8617	8.8523	7.3875	0.0114		0.5224	0.5224		0.4806	0.4806		1,102.9781	1,102.9781	0.3567		1,111.8962
Total	**0.8617**	**8.8523**	**7.3875**	**0.0114**		**0.5224**	**0.5224**		**0.4806**	**0.4806**		**1,102.9781**	**1,102.9781**	**0.3567**		**1,111.8962**

3.5 Building Construction - 2020

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	0.0855	2.4461	0.7070	5.8100e-003	0.1473	0.0117	0.1589	0.0424	0.0112	0.0536		619.7329	619.7329	0.0414		620.7689
Worker	0.6183	0.4386	4.8522	0.0135	1.3525	0.0113	1.3638	0.3587	0.0104	0.3691		1,339.9787	1,339.9787	0.0422		1,341.0345
Total	**0.7039**	**2.8847**	**5.5592**	**0.0193**	**1.4997**	**0.0230**	**1.5227**	**0.4011**	**0.0216**	**0.4227**		**1,959.7115**	**1,959.7115**	**0.0837**		**1,961.8034**

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	0.8617	8.8523	7.3875	0.0114		0.5224	0.5224		0.4806	0.4806	0.0000	1,102.9781	1,102.9781	0.3567		1,111.8962
Total	**0.8617**	**8.8523**	**7.3875**	**0.0114**		**0.5224**	**0.5224**		**0.4806**	**0.4806**	**0.0000**	**1,102.9781**	**1,102.9781**	**0.3567**		**1,111.8962**

3.5 Building Construction - 2020

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	0.0855	2.4461	0.7070	5.8100e-003	0.1473	0.0117	0.1589	0.0424	0.0112	0.0536		619.7329	619.7329	0.0414		620.7689
Worker	0.6183	0.4386	4.8522	0.0135	1.3525	0.0113	1.3638	0.3587	0.0104	0.3691		1,339.9787	1,339.9787	0.0422		1,341.0345
Total	**0.7039**	**2.8847**	**5.5592**	**0.0193**	**1.4997**	**0.0230**	**1.5227**	**0.4011**	**0.0216**	**0.4227**		**1,959.7115**	**1,959.7115**	**0.0837**		**1,961.8034**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.7750	7.9850	7.2637	0.0114		0.4475	0.4475		0.4117	0.4117		1,103.2158	1,103.2158	0.3568		1,112.1358
Total	**0.7750**	**7.9850**	**7.2637**	**0.0114**		**0.4475**	**0.4475**		**0.4117**	**0.4117**		**1,103.2158**	**1,103.2158**	**0.3568**		**1,112.1358**

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0734	2.2284	0.6458	5.7500e-003	0.1473	4.7100e-003	0.1520	0.0424	4.5100e-003	0.0469		614.8947	614.8947	0.0397		615.8871
Worker	0.5770	0.3946	4.4559	0.0130	1.3525	0.0109	1.3634	0.3587	0.0101	0.3688		1,297.4238	1,297.4238	0.0382		1,298.3783
Total	**0.6503**	**2.6231**	**5.1017**	**0.0188**	**1.4997**	**0.0156**	**1.5154**	**0.4011**	**0.0146**	**0.4157**		**1,912.3185**	**1,912.3185**	**0.0779**		**1,914.2654**

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	0.7750	7.9850	7.2637	0.0114		0.4475	0.4475		0.4117	0.4117	0.0000	1,103.2158	1,103.2158	0.3568		1,112.1358
Total	**0.7750**	**7.9850**	**7.2637**	**0.0114**		**0.4475**	**0.4475**		**0.4117**	**0.4117**	**0.0000**	**1,103.2158**	**1,103.2158**	**0.3568**		**1,112.1358**

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0734	2.2284	0.6458	5.7500e-003	0.1473	4.7100e-003	0.1520	0.0424	4.5100e-003	0.0469		614.8947	614.8947	0.0397		615.8871
Worker	0.5770	0.3946	4.4559	0.0130	1.3525	0.0109	1.3634	0.3587	0.0101	0.3688		1,297.4238	1,297.4238	0.0382		1,298.3783
Total	**0.6503**	**2.6231**	**5.1017**	**0.0188**	**1.4997**	**0.0156**	**1.5154**	**0.4011**	**0.0146**	**0.4157**		**1,912.3185**	**1,912.3185**	**0.0779**		**1,914.2654**

3.6 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	0.7214	6.7178	7.0899	0.0113		0.3534	0.3534		0.3286	0.3286		1,035.3425	1,035.3425	0.3016		1,042.8818
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7214**	**6.7178**	**7.0899**	**0.0113**		**0.3534**	**0.3534**		**0.3286**	**0.3286**		**1,035.3425**	**1,035.3425**	**0.3016**		**1,042.8818**

3.6 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0858	0.0587	0.6629	1.9400e-003	0.2012	1.6300e-003	0.2028	0.0534	1.5000e-003	0.0549		193.0052	193.0052	5.6800e-003		193.1472
Total	**0.0858**	**0.0587**	**0.6629**	**1.9400e-003**	**0.2012**	**1.6300e-003**	**0.2028**	**0.0534**	**1.5000e-003**	**0.0549**		**193.0052**	**193.0052**	**5.6800e-003**		**193.1472**

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	0.7214	6.7178	7.0899	0.0113		0.3534	0.3534		0.3286	0.3286	0.0000	1,035.3425	1,035.3425	0.3016		1,042.8818
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.7214**	**6.7178**	**7.0899**	**0.0113**		**0.3534**	**0.3534**		**0.3286**	**0.3286**	**0.0000**	**1,035.3425**	**1,035.3425**	**0.3016**		**1,042.8818**

3.6 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.0858	0.0587	0.6629	1.9400e-003	0.2012	1.6300e-003	0.2028	0.0534	1.5000e-003	0.0549		193.0052	193.0052	5.6800e-003		193.1472
Total	**0.0858**	**0.0587**	**0.6629**	**1.9400e-003**	**0.2012**	**1.6300e-003**	**0.2028**	**0.0534**	**1.5000e-003**	**0.0549**		**193.0052**	**193.0052**	**5.6800e-003**		**193.1472**

3.7 Architectural Coating - 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					
Archit. Coating	43.4187					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941		281.4481	281.4481	0.0193		281.9309
Total	**43.6376**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**		**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.1144	0.0783	0.8838	2.5800e-003	0.2683	2.1700e-003	0.2704	0.0711	2.0000e-003	0.0731		257.3403	257.3403	7.5700e-003		257.5296
Total	**0.1144**	**0.0783**	**0.8838**	**2.5800e-003**	**0.2683**	**2.1700e-003**	**0.2704**	**0.0711**	**2.0000e-003**	**0.0731**		**257.3403**	**257.3403**	**7.5700e-003**		**257.5296**

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	43.4187					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2189	1.5268	1.8176	2.9700e-003		0.0941	0.0941		0.0941	0.0941	0.0000	281.4481	281.4481	0.0193		281.9309
Total	**43.6376**	**1.5268**	**1.8176**	**2.9700e-003**		**0.0941**	**0.0941**		**0.0941**	**0.0941**	**0.0000**	**281.4481**	**281.4481**	**0.0193**		**281.9309**

3.7 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	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	0.1144	0.0783	0.8838	2.5800e-003	0.2683	2.1700e-003	0.2704	0.0711	2.0000e-003	0.0731		257.3403	257.3403	7.5700e-003		257.5296
Total	**0.1144**	**0.0783**	**0.8838**	**2.5800e-003**	**0.2683**	**2.1700e-003**	**0.2704**	**0.0711**	**2.0000e-003**	**0.0731**		**257.3403**	**257.3403**	**7.5700e-003**		**257.5296**

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	1.8442	8.8778	22.9779	0.0773	6.3612	0.0678	6.4290	1.7024	0.0633	1.7657		7,864.7963	7,864.7963	0.4373		7,875.7282
Unmitigated	1.8442	8.8778	22.9779	0.0773	6.3612	0.0678	6.4290	1.7024	0.0633	1.7657		7,864.7963	7,864.7963	0.4373		7,875.7282

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	745.28	672.67	560.33	2,421,003	2,421,003
Enclosed Parking with Elevator	0.00	0.00	0.00		
High Turnover (Sit Down Restaurant)	238.94	260.71	303.82	342,509	342,509
Strip Mall	13.21	16.14	7.39	24,350	24,350
Total	997.44	949.52	871.54	2,787,863	2,787,863

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891
Enclosed Parking with Elevator	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891
High Turnover (Sit Down Restaurant)	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891
Strip Mall	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive 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	0.0518	0.4509	0.2466	2.8300e-003		0.0358	0.0358		0.0358	0.0358		565.5379	565.5379	0.0108	0.0104	568.8986
NaturalGas Unmitigated	0.0518	0.4509	0.2466	2.8300e-003		0.0358	0.0358		0.0358	0.0358		565.5379	565.5379	0.0108	0.0104	568.8986

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	3459.51	0.0373	0.3188	0.1357	2.0400e-003		0.0258	0.0258		0.0258	0.0258		407.0011	407.0011	7.8000e-003	7.4600e-003	409.4197
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	1345.99	0.0145	0.1320	0.1109	7.9000e-004		0.0100	0.0100		0.0100	0.0100		158.3523	158.3523	3.0400e-003	2.9000e-003	159.2933
Strip Mall	1.56811	2.0000e-005	1.5000e-004	1.3000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		0.1845	0.1845	0.0000	0.0000	0.1856
Total		**0.0519**	**0.4509**	**0.2467**	**2.8300e-003**		**0.0358**	**0.0358**		**0.0358**	**0.0358**		**565.5379**	**565.5379**	**0.0108**	**0.0104**	**568.8986**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	3.45951	0.0373	0.3188	0.1357	2.0400e-003		0.0258	0.0258		0.0258	0.0258		407.0011	407.0011	7.8000e-003	7.4600e-003	409.4197
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	1.34599	0.0145	0.1320	0.1109	7.9000e-004		0.0100	0.0100		0.0100	0.0100		158.3523	158.3523	3.0400e-003	2.9000e-003	159.2933
Strip Mall	0.00156811	2.0000e-005	1.5000e-004	1.3000e-004	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		0.1845	0.1845	0.0000	0.0000	0.1856
Total		**0.0519**	**0.4509**	**0.2467**	**2.8300e-003**		**0.0358**	**0.0358**		**0.0358**	**0.0358**		**565.5379**	**565.5379**	**0.0108**	**0.0104**	**568.8986**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	3.5456	2.4035	12.3077	0.0151		0.2462	0.2462		0.2462	0.2462	0.0000	2,921.5567	2,921.5567	0.0754	0.0532	2,939.2919
Unmitigated	3.5456	2.4035	12.3077	0.0151		0.2462	0.2462		0.2462	0.2462	0.0000	2,921.5567	2,921.5567	0.0754	0.0532	2,939.2919

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	0.2379					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.6973					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.2659	2.2726	0.9671	0.0145		0.1837	0.1837		0.1837	0.1837	0.0000	2,901.1765	2,901.1765	0.0556	0.0532	2,918.4167
Landscaping	0.3445	0.1309	11.3406	6.0000e-004		0.0625	0.0625		0.0625	0.0625		20.3802	20.3802	0.0198		20.8752
Total	**3.5456**	**2.4035**	**12.3077**	**0.0151**		**0.2462**	**0.2462**		**0.2462**	**0.2462**	**0.0000**	**2,921.5567**	**2,921.5567**	**0.0754**	**0.0532**	**2,939.2919**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.2379					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.6973					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.2659	2.2726	0.9671	0.0145		0.1837	0.1837		0.1837	0.1837	0.0000	2,901.1765	2,901.1765	0.0556	0.0532	2,918.4167
Landscaping	0.3445	0.1309	11.3406	6.0000e-004		0.0625	0.0625		0.0625	0.0625		20.3802	20.3802	0.0198		20.8752
Total	**3.5456**	**2.4035**	**12.3077**	**0.0151**		**0.2462**	**0.2462**		**0.2462**	**0.2462**	**0.0000**	**2,921.5567**	**2,921.5567**	**0.0754**	**0.0532**	**2,939.2919**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

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

511 South Harbor Boulevard

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	128.00	Space	0.00	51,200.00	0
High Turnover (Sit Down Restaurant)	2.13	1000sqft	0.00	2,129.00	0
Apartments Mid Rise	137.00	Dwelling Unit	0.77	132,832.00	392
Strip Mall	0.35	1000sqft	0.00	349.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	11			**Operational Year**	2021
Utility Company	Los Angeles Department of Water & Power				
CO2 Intensity (lb/MWhr)	1227.89	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

511 South Harbor Boulevard - Los Angeles-South Coast County, Annual

Project Characteristics -

Land Use - Total Area - 0.765 ac. Per the CalEEmod 2016.3.2 User's Guide, Non-residential lot acreages will be zeroed out so as not to over calculate construction emissions due to the size of the development footprint.

Construction Phase - Number of days has been estimated based on the Project construction start and end date provided by the applicant.

Off-road Equipment - Crawler Tractors used in lieu of Tractor/Loader/Backhoe

Off-road Equipment - Crawler Tractors used in lieu of Tractor/Loader/Backhoe

Trips and VMT - Operations Run Only.

Demolition -

Grading -

Vehicle Trips - Trip Rates based on information provided in the Traffic Impact Study and ITE 10th Edition.

Woodstoves - Rule 445

Energy Use -

Construction Off-road Equipment Mitigation -

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	5.00	20.00
tblConstructionPhase	NumDays	100.00	230.00
tblConstructionPhase	NumDays	2.00	20.00
tblConstructionPhase	NumDays	5.00	20.00
tblConstructionPhase	NumDays	1.00	10.00
tblFireplaces	NumberGas	116.45	137.00
tblFireplaces	NumberNoFireplace	13.70	0.00
tblFireplaces	NumberWood	6.85	0.00
tblGrading	MaterialExported	0.00	1,400.00
tblLandUse	LandUseSquareFeet	2,130.00	2,129.00
tblLandUse	LandUseSquareFeet	137,000.00	132,832.00
tblLandUse	LandUseSquareFeet	350.00	349.00
tblLandUse	LotAcreage	1.15	0.00

tblLandUse	LotAcreage	0.05	0.00
tblLandUse	LotAcreage	3.61	0.77
tblLandUse	LotAcreage	0.01	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblVehicleTrips	ST_TR	6.39	4.91
tblVehicleTrips	ST_TR	158.37	122.40
tblVehicleTrips	ST_TR	42.04	46.12
tblVehicleTrips	SU_TR	5.86	4.09
tblVehicleTrips	SU_TR	131.84	142.64
tblVehicleTrips	SU_TR	20.43	21.10
tblVehicleTrips	WD_TR	6.65	5.44
tblVehicleTrips	WD_TR	127.15	112.18
tblVehicleTrips	WD_TR	44.32	37.75
tblWoodstoves	NumberCatalytic	6.85	0.00
tblWoodstoves	NumberNoncatalytic	6.85	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					
2020	0.1472	1.2656	1.1957	2.9000e-003	0.1453	0.0562	0.2016	0.0383	0.0520	0.0903	0.0000	262.7608	262.7608	0.0402	0.0000	263.7667
2021	0.4946	0.4676	0.5533	1.2900e-003	0.0576	0.0212	0.0787	0.0154	0.0196	0.0350	0.0000	115.6159	115.6159	0.0172	0.0000	116.0460
Maximum	**0.4946**	**1.2656**	**1.1957**	**2.9000e-003**	**0.1453**	**0.0562**	**0.2016**	**0.0383**	**0.0520**	**0.0903**	**0.0000**	**262.7608**	**262.7608**	**0.0402**	**0.0000**	**263.7667**

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					
2020	0.1472	1.2656	1.1957	2.9000e-003	0.1298	0.0562	0.1860	0.0345	0.0520	0.0865	0.0000	262.7607	262.7607	0.0402	0.0000	263.7666
2021	0.4946	0.4676	0.5533	1.2900e-003	0.0576	0.0212	0.0787	0.0154	0.0196	0.0350	0.0000	115.6158	115.6158	0.0172	0.0000	116.0459
Maximum	**0.4946**	**1.2656**	**1.1957**	**2.9000e-003**	**0.1298**	**0.0562**	**0.1860**	**0.0345**	**0.0520**	**0.0865**	**0.0000**	**262.7607**	**262.7607**	**0.0402**	**0.0000**	**263.7666**

	ROG	NOx	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**	**7.68**	**0.00**	**5.56**	**7.02**	**0.00**	**3.01**	**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	4-1-2020	6-30-2020	0.5308	0.5308
2	7-1-2020	9-30-2020	0.4336	0.4336
3	10-1-2020	12-31-2020	0.4371	0.4371
4	1-1-2021	3-31-2021	0.3868	0.3868
5	4-1-2021	6-30-2021	0.5802	0.5802
		Highest	0.5802	0.5802

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	0.5821	0.0448	1.4297	2.6000e-004		0.0101	0.0101		0.0101	0.0101	0.0000	35.2099	35.2099	2.8800e-003	6.0000e-004	35.4615
Energy	9.4600e-003	0.0823	0.0450	5.2000e-004		6.5400e-003	6.5400e-003		6.5400e-003	6.5400e-003	0.0000	617.8704	617.8704	0.0142	4.2800e-003	619.4997
Mobile	0.3013	1.5206	3.9301	0.0133	1.0581	0.0114	1.0695	0.2836	0.0107	0.2943	0.0000	1,226.0953	1,226.0953	0.0667	0.0000	1,227.7628
Waste						0.0000	0.0000		0.0000	0.0000	18.0134	0.0000	18.0134	1.0646	0.0000	44.6275
Water						0.0000	0.0000		0.0000	0.0000	3.0452	104.7853	107.8305	0.3152	7.9000e-003	118.0649
Total	**0.8929**	**1.6477**	**5.4047**	**0.0141**	**1.0581**	**0.0281**	**1.0862**	**0.2836**	**0.0273**	**0.3110**	**21.0586**	**1,983.9608**	**2,005.0194**	**1.4636**	**0.0128**	**2,045.4164**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5821	0.0448	1.4297	2.6000e-004		0.0101	0.0101		0.0101	0.0101	0.0000	35.2099	35.2099	2.8800e-003	6.0000e-004	35.4615
Energy	9.4600e-003	0.0823	0.0450	5.2000e-004		6.5400e-003	6.5400e-003		6.5400e-003	6.5400e-003	0.0000	617.8704	617.8704	0.0142	4.2800e-003	619.4997
Mobile	0.3013	1.5206	3.9301	0.0133	1.0581	0.0114	1.0695	0.2836	0.0107	0.2943	0.0000	1,226.0953	1,226.0953	0.0667	0.0000	1,227.7628
Waste						0.0000	0.0000		0.0000	0.0000	18.0134	0.0000	18.0134	1.0646	0.0000	44.6275
Water						0.0000	0.0000		0.0000	0.0000	3.0452	104.7853	107.8305	0.3152	7.9000e-003	118.0649
Total	**0.8929**	**1.6477**	**5.4047**	**0.0141**	**1.0581**	**0.0281**	**1.0862**	**0.2836**	**0.0273**	**0.3110**	**21.0586**	**1,983.9608**	**2,005.0194**	**1.4636**	**0.0128**	**2,045.4164**

	ROG	NOx	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**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	4/1/2020	4/14/2020	5	10	
2	Site Preparation	Site Preparation	4/15/2020	4/28/2020	5	10	
3	Grading	Grading	4/29/2020	5/26/2020	5	20	
4	Building Construction	Building Construction	5/26/2020	4/12/2021	5	230	
5	Paving	Paving	4/13/2021	5/10/2021	5	20	
6	Architectural Coating	Architectural Coating	5/11/2021	6/7/2021	5	20	

Acres of Grading (Site Preparation Phase): 10

Acres of Grading (Grading Phase): 20

Acres of Paving: 0

Residential Indoor: 268,985; Residential Outdoor: 89,662; Non-Residential Indoor: 3,717; Non-Residential Outdoor: 1,239; Striped Parking Area: 3,072 (Architectural Coating – sqft)

OffRoad Equipment

511 South Harbor Boulevard - Los Angeles-South Coast County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Rubber Tired Dozers	1	1.00	247	0.40
Demolition	Tractors/Loaders/Backhoes	2	6.00	97	0.37
Site Preparation	Crawler Tractors	1	8.00	212	0.43
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Grading	Concrete/Industrial Saws	1	8.00	81	0.73
Grading	Crawler Tractors	2	8.00	212	0.43
Grading	Rubber Tired Dozers	1	1.00	247	0.40
Grading	Tractors/Loaders/Backhoes	0	6.00	97	0.37
Building Construction	Cranes	1	4.00	231	0.29
Building Construction	Forklifts	2	6.00	89	0.20
Building Construction	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Paving	Cement and Mortar Mixers	4	6.00	9	0.56
Paving	Pavers	1	7.00	130	0.42
Paving	Rollers	1	7.00	80	0.38
Paving	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment 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	4	10.00	0.00	19.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	2	5.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	4	10.00	0.00	175.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	5	121.00	23.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	24.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Demolition - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.0500e-003	0.0000	2.0500e-003	3.1000e-004	0.0000	3.1000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.3400e-003	0.0394	0.0381	6.0000e-005		2.3400e-003	2.3400e-003		2.2300e-003	2.2300e-003	0.0000	5.2038	5.2038	9.8000e-004	0.0000	5.2284
Total	**4.3400e-003**	**0.0394**	**0.0381**	**6.0000e-005**	**2.0500e-003**	**2.3400e-003**	**4.3900e-003**	**3.1000e-004**	**2.2300e-003**	**2.5400e-003**	**0.0000**	**5.2038**	**5.2038**	**9.8000e-004**	**0.0000**	**5.2284**

3.2 Demolition - 2020

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	8.0000e-005	2.8200e-003	6.2000e-004	1.0000e-005	1.6000e-004	1.0000e-005	1.7000e-004	4.0000e-005	1.0000e-005	5.0000e-005	0.0000	0.7322	0.7322	5.0000e-005	0.0000	0.7335
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-004	1.9000e-004	2.0600e-003	1.0000e-005	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.5107	0.5107	2.0000e-005	0.0000	0.5111
Total	**3.1000e-004**	**3.0100e-003**	**2.6800e-003**	**2.0000e-005**	**7.1000e-004**	**1.0000e-005**	**7.2000e-004**	**1.9000e-004**	**1.0000e-005**	**2.0000e-004**	**0.0000**	**1.2429**	**1.2429**	**7.0000e-005**	**0.0000**	**1.2446**

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					8.0000e-004	0.0000	8.0000e-004	1.2000e-004	0.0000	1.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.3400e-003	0.0394	0.0381	6.0000e-005		2.3400e-003	2.3400e-003		2.2300e-003	2.2300e-003	0.0000	5.2038	5.2038	9.8000e-004	0.0000	5.2284
Total	**4.3400e-003**	**0.0394**	**0.0381**	**6.0000e-005**	**8.0000e-004**	**2.3400e-003**	**3.1400e-003**	**1.2000e-004**	**2.2300e-003**	**2.3500e-003**	**0.0000**	**5.2038**	**5.2038**	**9.8000e-004**	**0.0000**	**5.2284**

3.2 Demolition - 2020

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	8.0000e-005	2.8200e-003	6.2000e-004	1.0000e-005	1.6000e-004	1.0000e-005	1.7000e-004	4.0000e-005	1.0000e-005	5.0000e-005	0.0000	0.7322	0.7322	5.0000e-005	0.0000	0.7335
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	2.3000e-004	1.9000e-004	2.0600e-003	1.0000e-005	5.5000e-004	0.0000	5.5000e-004	1.5000e-004	0.0000	1.5000e-004	0.0000	0.5107	0.5107	2.0000e-005	0.0000	0.5111
Total	**3.1000e-004**	**3.0100e-003**	**2.6800e-003**	**2.0000e-005**	**7.1000e-004**	**1.0000e-005**	**7.2000e-004**	**1.9000e-004**	**1.0000e-005**	**2.0000e-004**	**0.0000**	**1.2429**	**1.2429**	**7.0000e-005**	**0.0000**	**1.2446**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.3000e-003	0.0000	5.3000e-003	5.7000e-004	0.0000	5.7000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.2700e-003	0.0689	0.0216	7.0000e-005		2.4100e-003	2.4100e-003		2.2200e-003	2.2200e-003	0.0000	6.3644	6.3644	2.0600e-003	0.0000	6.4159
Total	**5.2700e-003**	**0.0689**	**0.0216**	**7.0000e-005**	**5.3000e-003**	**2.4100e-003**	**7.7100e-003**	**5.7000e-004**	**2.2200e-003**	**2.7900e-003**	**0.0000**	**6.3644**	**6.3644**	**2.0600e-003**	**0.0000**	**6.4159**

3.3 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	9.0000e-005	1.0300e-003	0.0000	2.7000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2553	0.2553	1.0000e-005	0.0000	0.2555
Total	**1.2000e-004**	**9.0000e-005**	**1.0300e-003**	**0.0000**	**2.7000e-004**	**0.0000**	**2.8000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.2553**	**0.2553**	**1.0000e-005**	**0.0000**	**0.2555**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					2.0700e-003	0.0000	2.0700e-003	2.2000e-004	0.0000	2.2000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	5.2700e-003	0.0689	0.0216	7.0000e-005		2.4100e-003	2.4100e-003		2.2200e-003	2.2200e-003	0.0000	6.3644	6.3644	2.0600e-003	0.0000	6.4158
Total	**5.2700e-003**	**0.0689**	**0.0216**	**7.0000e-005**	**2.0700e-003**	**2.4100e-003**	**4.4800e-003**	**2.2000e-004**	**2.2200e-003**	**2.4400e-003**	**0.0000**	**6.3644**	**6.3644**	**2.0600e-003**	**0.0000**	**6.4158**

3.3 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.2000e-004	9.0000e-005	1.0300e-003	0.0000	2.7000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2553	0.2553	1.0000e-005	0.0000	0.2555
Total	**1.2000e-004**	**9.0000e-005**	**1.0300e-003**	**0.0000**	**2.7000e-004**	**0.0000**	**2.8000e-004**	**7.0000e-005**	**0.0000**	**7.0000e-005**	**0.0000**	**0.2553**	**0.2553**	**1.0000e-005**	**0.0000**	**0.2555**

3.4 Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0182	0.0000	0.0182	5.2900e-003	0.0000	5.2900e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0171	0.1961	0.0920	2.3000e-004		8.2900e-003	8.2900e-003		7.7800e-003	7.7800e-003	0.0000	20.1110	20.1110	5.1100e-003	0.0000	20.2387
Total	**0.0171**	**0.1961**	**0.0920**	**2.3000e-004**	**0.0182**	**8.2900e-003**	**0.0265**	**5.2900e-003**	**7.7800e-003**	**0.0131**	**0.0000**	**20.1110**	**20.1110**	**5.1100e-003**	**0.0000**	**20.2387**

3.4 Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	7.7000e-004	0.0260	5.7300e-003	7.0000e-005	1.5000e-003	8.0000e-005	1.5800e-003	4.1000e-004	8.0000e-005	4.9000e-004	0.0000	6.7443	6.7443	4.7000e-004	0.0000	6.7561
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6000e-004	3.7000e-004	4.1200e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	1.0214	1.0214	3.0000e-005	0.0000	1.0222
Total	**1.2300e-003**	**0.0264**	**9.8500e-003**	**8.0000e-005**	**2.6000e-003**	**9.0000e-005**	**2.6900e-003**	**7.0000e-004**	**9.0000e-005**	**7.9000e-004**	**0.0000**	**7.7657**	**7.7657**	**5.0000e-004**	**0.0000**	**7.7783**

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					7.1000e-003	0.0000	7.1000e-003	2.0600e-003	0.0000	2.0600e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0171	0.1961	0.0920	2.3000e-004		8.2900e-003	8.2900e-003		7.7800e-003	7.7800e-003	0.0000	20.1110	20.1110	5.1100e-003	0.0000	20.2386
Total	**0.0171**	**0.1961**	**0.0920**	**2.3000e-004**	**7.1000e-003**	**8.2900e-003**	**0.0154**	**2.0600e-003**	**7.7800e-003**	**9.8400e-003**	**0.0000**	**20.1110**	**20.1110**	**5.1100e-003**	**0.0000**	**20.2386**

3.4 Grading - 2020

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	7.7000e-004	0.0260	5.7300e-003	7.0000e-005	1.5000e-003	8.0000e-005	1.5800e-003	4.1000e-004	8.0000e-005	4.9000e-004	0.0000	6.7443	6.7443	4.7000e-004	0.0000	6.7561
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	4.6000e-004	3.7000e-004	4.1200e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1100e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	1.0214	1.0214	3.0000e-005	0.0000	1.0222
Total	**1.2300e-003**	**0.0264**	**9.8500e-003**	**8.0000e-005**	**2.6000e-003**	**9.0000e-005**	**2.6900e-003**	**7.0000e-004**	**9.0000e-005**	**7.9000e-004**	**0.0000**	**7.7657**	**7.7657**	**5.0000e-004**	**0.0000**	**7.7783**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0681	0.6993	0.5836	9.0000e-004		0.0413	0.0413		0.0380	0.0380	0.0000	79.0478	79.0478	0.0256	0.0000	79.6869
Total	**0.0681**	**0.6993**	**0.5836**	**9.0000e-004**		**0.0413**	**0.0413**		**0.0380**	**0.0380**	**0.0000**	**79.0478**	**79.0478**	**0.0256**	**0.0000**	**79.6869**

3.5 Building Construction - 2020

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	6.5900e-003	0.1969	0.0533	4.7000e-004	0.0115	9.2000e-004	0.0124	3.3000e-003	8.8000e-004	4.1800e-003	0.0000	45.1390	45.1390	2.8700e-003	0.0000	45.2108
Worker	0.0441	0.0356	0.3935	1.0800e-003	0.1048	8.9000e-004	0.1056	0.0278	8.2000e-004	0.0286	0.0000	97.6309	97.6309	3.0800e-003	0.0000	97.7078
Total	**0.0507**	**0.2325**	**0.4468**	**1.5500e-003**	**0.1162**	**1.8100e-003**	**0.1180**	**0.0311**	**1.7000e-003**	**0.0328**	**0.0000**	**142.7699**	**142.7699**	**5.9500e-003**	**0.0000**	**142.9186**

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	0.0681	0.6993	0.5836	9.0000e-004		0.0413	0.0413		0.0380	0.0380	0.0000	79.0477	79.0477	0.0256	0.0000	79.6868
Total	**0.0681**	**0.6993**	**0.5836**	**9.0000e-004**		**0.0413**	**0.0413**		**0.0380**	**0.0380**	**0.0000**	**79.0477**	**79.0477**	**0.0256**	**0.0000**	**79.6868**

3.5 Building Construction - 2020

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	6.5900e-003	0.1969	0.0533	4.7000e-004	0.0115	9.2000e-004	0.0124	3.3000e-003	8.8000e-004	4.1800e-003	0.0000	45.1390	45.1390	2.8700e-003	0.0000	45.2108
Worker	0.0441	0.0356	0.3935	1.0800e-003	0.1048	8.9000e-004	0.1056	0.0278	8.2000e-004	0.0286	0.0000	97.6309	97.6309	3.0800e-003	0.0000	97.7078
Total	**0.0507**	**0.2325**	**0.4468**	**1.5500e-003**	**0.1162**	**1.8100e-003**	**0.1180**	**0.0311**	**1.7000e-003**	**0.0328**	**0.0000**	**142.7699**	**142.7699**	**5.9500e-003**	**0.0000**	**142.9186**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0279	0.2875	0.2615	4.1000e-004		0.0161	0.0161		0.0148	0.0148	0.0000	36.0295	36.0295	0.0117	0.0000	36.3209
Total	**0.0279**	**0.2875**	**0.2615**	**4.1000e-004**		**0.0161**	**0.0161**		**0.0148**	**0.0148**	**0.0000**	**36.0295**	**36.0295**	**0.0117**	**0.0000**	**36.3209**

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.5700e-003	0.0817	0.0222	2.1000e-004	5.2200e-003	1.7000e-004	5.3800e-003	1.5100e-003	1.6000e-004	1.6600e-003	0.0000	20.4099	20.4099	1.2500e-003	0.0000	20.4412
Worker	0.0187	0.0146	0.1647	4.8000e-004	0.0477	3.9000e-004	0.0481	0.0127	3.6000e-004	0.0130	0.0000	43.0772	43.0772	1.2700e-003	0.0000	43.1089
Total	**0.0213**	**0.0963**	**0.1869**	**6.9000e-004**	**0.0530**	**5.6000e-004**	**0.0535**	**0.0142**	**5.2000e-004**	**0.0147**	**0.0000**	**63.4872**	**63.4872**	**2.5200e-003**	**0.0000**	**63.5501**

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	0.0279	0.2875	0.2615	4.1000e-004		0.0161	0.0161		0.0148	0.0148	0.0000	36.0295	36.0295	0.0117	0.0000	36.3208
Total	**0.0279**	**0.2875**	**0.2615**	**4.1000e-004**		**0.0161**	**0.0161**		**0.0148**	**0.0148**	**0.0000**	**36.0295**	**36.0295**	**0.0117**	**0.0000**	**36.3208**

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.5700e-003	0.0817	0.0222	2.1000e-004	5.2200e-003	1.7000e-004	5.3800e-003	1.5100e-003	1.6000e-004	1.6600e-003	0.0000	20.4099	20.4099	1.2500e-003	0.0000	20.4412
Worker	0.0187	0.0146	0.1647	4.8000e-004	0.0477	3.9000e-004	0.0481	0.0127	3.6000e-004	0.0130	0.0000	43.0772	43.0772	1.2700e-003	0.0000	43.1089
Total	**0.0213**	**0.0963**	**0.1869**	**6.9000e-004**	**0.0530**	**5.6000e-004**	**0.0535**	**0.0142**	**5.2000e-004**	**0.0147**	**0.0000**	**63.4872**	**63.4872**	**2.5200e-003**	**0.0000**	**63.5501**

3.6 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	7.2100e-003	0.0672	0.0709	1.1000e-004		3.5300e-003	3.5300e-003		3.2900e-003	3.2900e-003	0.0000	9.3925	9.3925	2.7400e-003	0.0000	9.4609
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.2100e-003**	**0.0672**	**0.0709**	**1.1000e-004**		**3.5300e-003**	**3.5300e-003**		**3.2900e-003**	**3.2900e-003**	**0.0000**	**9.3925**	**9.3925**	**2.7400e-003**	**0.0000**	**9.4609**

3.6 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.7000e-004	6.0000e-004	6.8100e-003	2.0000e-005	1.9700e-003	2.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.7801	1.7801	5.0000e-005	0.0000	1.7814
Total	**7.7000e-004**	**6.0000e-004**	**6.8100e-003**	**2.0000e-005**	**1.9700e-003**	**2.0000e-005**	**1.9900e-003**	**5.2000e-004**	**1.0000e-005**	**5.4000e-004**	**0.0000**	**1.7801**	**1.7801**	**5.0000e-005**	**0.0000**	**1.7814**

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	7.2100e-003	0.0672	0.0709	1.1000e-004		3.5300e-003	3.5300e-003		3.2900e-003	3.2900e-003	0.0000	9.3925	9.3925	2.7400e-003	0.0000	9.4609
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**7.2100e-003**	**0.0672**	**0.0709**	**1.1000e-004**		**3.5300e-003**	**3.5300e-003**		**3.2900e-003**	**3.2900e-003**	**0.0000**	**9.3925**	**9.3925**	**2.7400e-003**	**0.0000**	**9.4609**

3.6 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.7000e-004	6.0000e-004	6.8100e-003	2.0000e-005	1.9700e-003	2.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.7801	1.7801	5.0000e-005	0.0000	1.7814
Total	**7.7000e-004**	**6.0000e-004**	**6.8100e-003**	**2.0000e-005**	**1.9700e-003**	**2.0000e-005**	**1.9900e-003**	**5.2000e-004**	**1.0000e-005**	**5.4000e-004**	**0.0000**	**1.7801**	**1.7801**	**5.0000e-005**	**0.0000**	**1.7814**

3.7 Architectural Coating - 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					
Archit. Coating	0.4342					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1900e-003	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576
Total	**0.4364**	**0.0153**	**0.0182**	**3.0000e-005**		**9.4000e-004**	**9.4000e-004**		**9.4000e-004**	**9.4000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.8000e-004**	**0.0000**	**2.5576**

3.7 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0300e-003	8.0000e-004	9.0800e-003	3.0000e-005	2.6300e-003	2.0000e-005	2.6500e-003	7.0000e-004	2.0000e-005	7.2000e-004	0.0000	2.3734	2.3734	7.0000e-005	0.0000	2.3752
Total	**1.0300e-003**	**8.0000e-004**	**9.0800e-003**	**3.0000e-005**	**2.6300e-003**	**2.0000e-005**	**2.6500e-003**	**7.0000e-004**	**2.0000e-005**	**7.2000e-004**	**0.0000**	**2.3734**	**2.3734**	**7.0000e-005**	**0.0000**	**2.3752**

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	0.4342					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.1900e-003	0.0153	0.0182	3.0000e-005		9.4000e-004	9.4000e-004		9.4000e-004	9.4000e-004	0.0000	2.5533	2.5533	1.8000e-004	0.0000	2.5576
Total	**0.4364**	**0.0153**	**0.0182**	**3.0000e-005**		**9.4000e-004**	**9.4000e-004**		**9.4000e-004**	**9.4000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.8000e-004**	**0.0000**	**2.5576**

3.7 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.0300e-003	8.0000e-004	9.0800e-003	3.0000e-005	2.6300e-003	2.0000e-005	2.6500e-003	7.0000e-004	2.0000e-005	7.2000e-004	0.0000	2.3734	2.3734	7.0000e-005	0.0000	2.3752
Total	**1.0300e-003**	**8.0000e-004**	**9.0800e-003**	**3.0000e-005**	**2.6300e-003**	**2.0000e-005**	**2.6500e-003**	**7.0000e-004**	**2.0000e-005**	**7.2000e-004**	**0.0000**	**2.3734**	**2.3734**	**7.0000e-005**	**0.0000**	**2.3752**

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	0.3013	1.5206	3.9301	0.0133	1.0581	0.0114	1.0695	0.2836	0.0107	0.2943	0.0000	1,226.0953	1,226.0953	0.0667	0.0000	1,227.7628
Unmitigated	0.3013	1.5206	3.9301	0.0133	1.0581	0.0114	1.0695	0.2836	0.0107	0.2943	0.0000	1,226.0953	1,226.0953	0.0667	0.0000	1,227.7628

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	745.28	672.67	560.33	2,421,003	2,421,003
Enclosed Parking with Elevator	0.00	0.00	0.00		
High Turnover (Sit Down Restaurant)	238.94	260.71	303.82	342,509	342,509
Strip Mall	13.21	16.14	7.39	24,350	24,350
Total	997.44	949.52	871.54	2,787,863	2,787,863

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Strip Mall	16.60	8.40	6.90	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891
Enclosed Parking with Elevator	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891
High Turnover (Sit Down Restaurant)	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891
Strip Mall	0.547192	0.045177	0.202743	0.121510	0.016147	0.006143	0.019743	0.029945	0.002479	0.002270	0.005078	0.000682	0.000891

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive 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	524.2392	524.2392	0.0124	2.5600e-003	525.3121
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	524.2392	524.2392	0.0124	2.5600e-003	525.3121
NaturalGas Mitigated	9.4600e-003	0.0823	0.0450	5.2000e-004		6.5400e-003	6.5400e-003		6.5400e-003	6.5400e-003	0.0000	93.6311	93.6311	1.7900e-003	1.7200e-003	94.1875
NaturalGas Unmitigated	9.4600e-003	0.0823	0.0450	5.2000e-004		6.5400e-003	6.5400e-003		6.5400e-003	6.5400e-003	0.0000	93.6311	93.6311	1.7900e-003	1.7200e-003	94.1875

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	1.26272e+006	6.8100e-003	0.0582	0.0248	3.7000e-004		4.7000e-003	4.7000e-003		4.7000e-003	4.7000e-003	0.0000	67.3836	67.3836	1.2900e-003	1.2400e-003	67.7840
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	491288	2.6500e-003	0.0241	0.0202	1.4000e-004		1.8300e-003	1.8300e-003		1.8300e-003	1.8300e-003	0.0000	26.2170	26.2170	5.0000e-004	4.8000e-004	26.3728
Strip Mall	572.36	0.0000	3.0000e-005	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0305	0.0305	0.0000	0.0000	0.0307
Total		**9.4600e-003**	**0.0823**	**0.0450**	**5.1000e-004**		**6.5300e-003**	**6.5300e-003**		**6.5300e-003**	**6.5300e-003**	**0.0000**	**93.6311**	**93.6311**	**1.7900e-003**	**1.7200e-003**	**94.1875**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	1.26272e+006	6.8100e-003	0.0582	0.0248	3.7000e-004		4.7000e-003	4.7000e-003		4.7000e-003	4.7000e-003	0.0000	67.3836	67.3836	1.2900e-003	1.2400e-003	67.7840
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	491288	2.6500e-003	0.0241	0.0202	1.4000e-004		1.8300e-003	1.8300e-003		1.8300e-003	1.8300e-003	0.0000	26.2170	26.2170	5.0000e-004	4.8000e-004	26.3728
Strip Mall	572.36	0.0000	3.0000e-005	2.0000e-005	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0305	0.0305	0.0000	0.0000	0.0307
Total		**9.4600e-003**	**0.0823**	**0.0450**	**5.1000e-004**		**6.5300e-003**	**6.5300e-003**		**6.5300e-003**	**6.5300e-003**	**0.0000**	**93.6311**	**93.6311**	**1.7900e-003**	**1.7200e-003**	**94.1875**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	542531	302.1689	7.1400e-003	1.4800e-003	302.7873
Enclosed Parking with Elevator	300032	167.1063	3.9500e-003	8.2000e-004	167.4483
High Turnover (Sit Down Restaurant)	93974.1	52.3399	1.2400e-003	2.6000e-004	52.4471
Strip Mall	4711.5	2.6241	6.0000e-005	1.0000e-005	2.6295
Total		**524.2392**	**0.0124**	**2.5700e-003**	**525.3121**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	542531	302.1689	7.1400e-003	1.4800e-003	302.7873
Enclosed Parking with Elevator	300032	167.1063	3.9500e-003	8.2000e-004	167.4483
High Turnover (Sit Down Restaurant)	93974.1	52.3399	1.2400e-003	2.6000e-004	52.4471
Strip Mall	4711.5	2.6241	6.0000e-005	1.0000e-005	2.6295
Total		**524.2392**	**0.0124**	**2.5700e-003**	**525.3121**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.5821	0.0448	1.4297	2.6000e-004		0.0101	0.0101		0.0101	0.0101	0.0000	35.2099	35.2099	2.8800e-003	6.0000e-004	35.4615
Unmitigated	0.5821	0.0448	1.4297	2.6000e-004		0.0101	0.0101		0.0101	0.0101	0.0000	35.2099	35.2099	2.8800e-003	6.0000e-004	35.4615

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	0.0434					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4923					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	3.3200e-003	0.0284	0.0121	1.8000e-004		2.3000e-003	2.3000e-003		2.3000e-003	2.3000e-003	0.0000	32.8988	32.8988	6.3000e-004	6.0000e-004	33.0943
Landscaping	0.0431	0.0164	1.4176	7.0000e-005		7.8100e-003	7.8100e-003		7.8100e-003	7.8100e-003	0.0000	2.3111	2.3111	2.2500e-003	0.0000	2.3672
Total	**0.5821**	**0.0448**	**1.4297**	**2.5000e-004**		**0.0101**	**0.0101**		**0.0101**	**0.0101**	**0.0000**	**35.2099**	**35.2099**	**2.8800e-003**	**6.0000e-004**	**35.4615**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0434					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4923					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	3.3200e-003	0.0284	0.0121	1.8000e-004		2.3000e-003	2.3000e-003		2.3000e-003	2.3000e-003	0.0000	32.8988	32.8988	6.3000e-004	6.0000e-004	33.0943
Landscaping	0.0431	0.0164	1.4176	7.0000e-005		7.8100e-003	7.8100e-003		7.8100e-003	7.8100e-003	0.0000	2.3111	2.3111	2.2500e-003	0.0000	2.3672
Total	**0.5821**	**0.0448**	**1.4297**	**2.5000e-004**		**0.0101**	**0.0101**		**0.0101**	**0.0101**	**0.0000**	**35.2099**	**35.2099**	**2.8800e-003**	**6.0000e-004**	**35.4615**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	107.8305	0.3152	7.9000e-003	118.0649
Unmitigated	107.8305	0.3152	7.9000e-003	118.0649

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	8.9261 / 5.62732	102.3867	0.2932	7.3500e-003	111.9085
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	0.646527 / 0.0412677	5.1492	0.0212	5.2000e-004	5.8342
Strip Mall	0.0259254 / 0.0158898	0.2946	8.5000e-004	2.0000e-005	0.3222
Total		**107.8305**	**0.3152**	**7.8900e-003**	**118.0649**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	8.9261 / 5.62732	102.3867	0.2932	7.3500e-003	111.9085
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	0.646527 / 0.0412677	5.1492	0.0212	5.2000e-004	5.8342
Strip Mall	0.0259254 / 0.0158898	0.2946	8.5000e-004	2.0000e-005	0.3222
Total		**107.8305**	**0.3152**	**7.8900e-003**	**118.0649**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	18.0134	1.0646	0.0000	44.6275
Unmitigated	18.0134	1.0646	0.0000	44.6275

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	63.02	12.7925	0.7560	0.0000	31.6929
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	25.35	5.1458	0.3041	0.0000	12.7486
Strip Mall	0.37	0.0751	4.4400e-003	0.0000	0.1861
Total		**18.0134**	**1.0646**	**0.0000**	**44.6275**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	63.02	12.7925	0.7560	0.0000	31.6929
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
High Turnover (Sit Down Restaurant)	25.35	5.1458	0.3041	0.0000	12.7486
Strip Mall	0.37	0.0751	4.4400e-003	0.0000	0.1861
Total		**18.0134**	**1.0646**	**0.0000**	**44.6275**

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

511 South Harbor Boulevard

NOISE IMPACT ANALYSIS

CITY OF LOS ANGELES

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NOVEMBER 25, 2019

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LIST OF ABBREVIATED TERMS

(1)	Reference
ADT	Average Daily Traffic
ANSI	American National Standards Institute
Calveno	California Vehicle Noise
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
dBA	A-weighted decibels
EPA	Environmental Protection Agency
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
INCE	Institute of Noise Control Engineering
L_{eq}	Equivalent continuous (average) sound level
L_{max}	Maximum level measured over the time interval
L_{min}	Minimum level measured over the time interval
mph	Miles per hour
NIOSH	National Institute for Occupational Safety and Health
OSHA	Occupational Safety and Health Administration
PPV	Peak Particle Velocity
Project	511 South Harbor Boulevard
REMEL	Reference Energy Mean Emission Level
RMS	Root-mean-square
VdB	Vibration Decibels

EXECUTIVE SUMMARY

Urban Crossroads, Inc. has prepared this noise study to determine the noise exposure and the necessary noise attenuation measures for the proposed 511 South Harbor Boulevard mixed-use development ("Project"). The Project site is located at 511 S. Harbor Boulevard, in the City of Los Angeles. The proposed Project would construct an eight-story, mixed-use building with 137 residential units, 349 square feet of retail space and 2,129 square feet of restaurant space. Currently, the Project site is occupied by a sit-down restaurant that would be demolished for the construction of the Project.

This study has been prepared consistent with applicable City of Los Angeles noise standards and significance criteria, consistent with guidance provided in Appendix G of the California Environmental Quality Act (CEQA). (1)

OFF-SITE TRAFFIC NOISE ANALYSIS

Traffic generated by the proposed Project will influence the traffic noise levels in surrounding off-site areas. To quantify the off-site traffic noise increases on the surrounding off-site areas, the changes in traffic noise levels on roadway segments surrounding the Project site were estimated based on the change in the average daily traffic (ADT) volumes. The traffic noise levels provided in this analysis are based on the traffic forecasts provided by KOA. (2) To assess the off-site noise level impacts associated with the proposed Project, noise contour boundaries were developed for Existing and Future conditions for both the with and without Project traffic conditions. The off-site traffic noise analysis shows that the Project noise level contributions will be *less than significant* at adjacent noise-sensitive land uses under all traffic scenarios.

OPERATIONAL NOISE ANALYSIS

The Project-related operational noise sources are expected to include roof-top air conditioning units, outdoor activity, and pad-mounted transformer. Using reference noise levels to represent the potential noise sources within 511 South Harbor Boulevard site, this analysis estimates the Project-related operational (stationary-source) noise levels at the noise-sensitive receiver locations. The proposed Project's residential land uses are considered noise-sensitive receivers. Consistent with the existing residential land use in the study area, the Project is not expected to produce any substantial off-site operational noise source activity from its residential uses.

The noise analysis shows that the Project-related operational noise levels will satisfy the City of Los Angeles exterior noise level standards at nearby off-site receiver locations, and therefore, will not generate noise levels which exceed the existing ambient conditions by 5 dBA L_{eq} during the daytime and nighttime hours, respectively. As such, the operational noise level impacts associated with the proposed Project activities, such as the roof-top air conditioning units, outdoor activity, and pad-mounted transformer, will be *less than significant*.

CONSTRUCTION NOISE ANALYSIS

Project construction is expected to create temporary and intermittent high-level noise conditions at receivers surrounding the Project site when certain activities occur at the closest point to the nearby receiver locations from primary Project construction activity. Using sample reference noise levels to represent the planned construction activities of 511 South Harbor Boulevard site, this analysis estimates the Project-related construction noise levels at nearby sensitive receiver locations. The results of the construction noise analysis show that the unmitigated construction noise levels will satisfy the City of Los Angeles Municipal Code 75 dBA L_{eq} exterior construction noise level standard at the nearby sensitive receiver locations and will, therefore, result in a *less than significant* impact.

CONSTRUCTION VIBRATION ANALYSIS

Based on the reference vibration levels provided by the Federal Transit Administration, a large bulldozer represents the peak source of vibration with a reference velocity of 0.089 in/sec peak-particle-velocity (PPV) at 25 feet. At distances ranging from roughly 24 to 522 feet from primary Project construction activities, construction vibration velocity levels are expected to range from 0.001 to 0.095 in/sec PPV at sensitive residential receiver locations. Based on the Caltrans older residential building damage threshold of 0.3 in/sec PPV, the proposed Project construction activities would result in vibration levels which are anticipated to remain below the threshold for building damage, and therefore, represents a *less than significant* impact.

SUMMARY OF SIGNIFICANCE FINDINGS

The results of this 511 South Harbor Boulevard Noise Impact Analysis are summarized below based on the significance criteria in Section 4 of this report. Table ES-1 shows the findings of significance for each potential noise impact with Project Design Features.

TABLE ES-1: SUMMARY OF SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
Off-Site Traffic Noise	7	*Less Than Significant*	-
Operational Noise	9	*Less Than Significant*	-
Construction Noise	10	*Less Than Significant*	
Construction Vibration		*Less Than Significant*	-

1 INTRODUCTION

This noise analysis has been completed to determine the noise impacts associated with the development of the proposed 511 South Harbor Boulevard ("Project"). This noise study describes the proposed Project, provides information regarding noise fundamentals, outlines the local regulatory setting, provides the study methods and procedures for traffic noise analysis, and evaluates the future exterior noise environment. In addition, this study includes an analysis of the potential Project-related long-term operational noise and short-term construction noise impacts.

1.1 SITE LOCATION

The proposed Project is located at 511 South Harbor Boulevard, in the City of Los Angeles, as shown on Exhibit 1-A.

1.2 PROJECT DESCRIPTION

The proposed Project would construct an eight-story, mixed-use building with 137 residential units, 349 square feet of retail space and 2,129 square feet of restaurant space as shown on Exhibit 1-B. Currently, the Project site is occupied by a sit-down restaurant that would be demolished for the construction of the Project.

Project-related stationary-source (operational) noise sources are expected to include: roof-top air conditioning units, outdoor activity, and pad-mounted transformer. Further, the proposed residential land uses are considered noise-sensitive receiving land uses and are not expected to include any specific type of operational noise levels beyond the typical noise sources associated with existing residential land use in the Project study area.

EXHIBIT 1-A: LOCATION MAP



EXHIBIT 1-B: SITE PLAN



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2 FUNDAMENTALS

Noise has been simply defined as "unwanted sound." Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm or when it has adverse effects on health. Noise is measured on a logarithmic scale of sound pressure level known as a decibel (dB). A-weighted decibels (dBA) approximate the subjective response of the human ear to broad frequency noise source by discriminating against very low and very high frequencies of the audible spectrum. They are adjusted to reflect only those frequencies which are audible to the human ear. Exhibit 2-A presents a summary of the typical noise levels and their subjective loudness and effects that are described in more detail below.

EXHIBIT 2-A: TYPICAL NOISE LEVELS

COMMON OUTDOOR ACTIVITIES	COMMON INDOOR ACTIVITIES	A - WEIGHTED SOUND LEVEL dBA	SUBJECTIVE LOUDNESS	EFFECTS OF NOISE
THRESHOLD OF PAIN		140	INTOLERABLE OR DEAFENING	HEARING LOSS
NEAR JET ENGINE		130		
		120		
JET FLY-OVER AT 300m (1000 ft)	ROCK BAND	110		
LOUD AUTO HORN		100	VERY NOISY	
GAS LAWN MOWER AT 1m (3 ft)		90		
DIESEL TRUCK AT 15m (50 ft), at 80 km/hr (50 mph)	FOOD BLENDER AT 1m (3 ft)	80		SPEECH INTERFERENCE
NOISY URBAN AREA, DAYTIME	VACUUM CLEANER AT 3m (10 ft)	70	LOUD	
HEAVY TRAFFIC AT 90m (300 ft)	NORMAL SPEECH AT 1m (3 ft)	60		
QUIET URBAN DAYTIME	LARGE BUSINESS OFFICE	50	MODERATE	SLEEP DISTURBANCE
QUIET URBAN NIGHTTIME	THEATER, LARGE CONFERENCE ROOM (BACKGROUND)	40		
QUIET SUBURBAN NIGHTTIME	LIBRARY	30	FAINT	NO EFFECT
QUIET RURAL NIGHTTIME	BEDROOM AT NIGHT, CONCERT HALL (BACKGROUND)	20		
	BROADCAST/RECORDING STUDIO	10	VERY FAINT	
LOWEST THRESHOLD OF HUMAN HEARING	LOWEST THRESHOLD OF HUMAN HEARING	0		

Source: Environmental Protection Agency Office of Noise Abatement and Control, Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety (EPA/ONAC 550/9-74-004) March 1974.

2.1 RANGE OF NOISE

Since the range of intensities that the human ear can detect is so large, the scale frequently used to measure intensity is a scale based on multiples of 10, the logarithmic scale. The scale for measuring intensity is the decibel scale. Each interval of 10 decibels indicates a sound energy ten times greater than before, which is perceived by the human ear as being roughly twice as loud. (3) The most common sounds vary between 40 dBA (very quiet) to 100 dBA (very loud). Normal conversation at three feet is roughly at 60 dBA, while loud jet engine noises equate to 110 dBA

at approximately 100 feet, which can cause serious discomfort. (4) Another important aspect of noise is the duration of the sound and the way it is described and distributed in time.

2.2 NOISE DESCRIPTORS

Environmental noise descriptors are generally based on averages, rather than instantaneous, noise levels. The most commonly used figure is the equivalent level (L_{eq}). Equivalent sound levels are not measured directly but are calculated from sound pressure levels typically measured in A-weighted decibels (dBA). The equivalent sound level (L_{eq}) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period and is commonly used to describe the "average" noise levels within the environment.

Peak hour or average noise levels, while useful, do not completely describe a given noise environment. Noise levels lower than peak hour may be disturbing if they occur during times when quiet is most desirable, namely evening and nighttime (sleeping) hours. To account for this, the Day-Night Average Noise Level (LDN) and the Community Noise Equivalent Level (CNEL), representing a composite 24- hour noise level is utilized. The LDN and CNEL are weighted averages of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The LDN time of day corrections include the addition of 10 decibels to dBA L_{eq} sound levels at night between 10:00 p.m. and 7:00 a.m. The CNEL time of day corrections require the addition of 5 decibels to dBA L_{eq} sound levels in the evening from 7:00 p.m. to 10:00 p.m., in addition to the corrections for the LDN. These additions are made to account for the noise sensitive time periods during the evening and night hours when sound appears louder. LDN and CNEL do not represent the actual sound level heard at any time, but rather represent the total sound exposure. The City of Los Angeles relies on the 24-hour LDN level to assess land use compatibility with transportation related noise sources, however, this analysis uses the CNEL noise level to apply the more conservative evening hour corrections to the 24-hour noise levels.

2.3 SOUND PROPAGATION

When sound propagates over a distance, it changes in level and frequency content. The way noise reduces with distance depends on the following factors.

2.3.1 GEOMETRIC SPREADING

Sound from a localized source (i.e., a stationary point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 dB for each doubling of distance from a point source. Highways consist of several localized noise sources on a defined path and hence can be treated as a line source, which approximates the effect of several point sources. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of 3 dB for each doubling of distance from a line source.

2.3.2 GROUND ABSORPTION

The propagation path of noise from a highway to a receiver is usually very close to the ground. Noise attenuation from ground absorption and reflective wave canceling adds to the attenuation associated with geometric spreading. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually sufficiently accurate for distances of less than 200 ft. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receiver, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receiver such as soft dirt, grass, or scattered bushes and trees), an excess ground attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance from a line source.

2.3.3 ATMOSPHERIC EFFECTS

Receivers located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Sound levels can be increased at large distances (e.g., more than 500 feet) due to atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also have significant effects.

2.3.4 SHIELDING

A large object or barrier in the path between a noise source and a receiver can substantially attenuate noise levels at the receiver. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Shielding by trees and other such vegetation typically only has an “out of sight, out of mind” effect. That is, the perception of noise impact tends to decrease when vegetation blocks the line-of-sight to nearby resident. However, for vegetation to provide a substantial, or even noticeable, noise reduction, the vegetation area must be at least 15 feet in height, 100 feet wide and dense enough to completely obstruct the line-of sight between the source and the receiver. This size of vegetation may provide up to 5 dBA of noise reduction. The FHWA does not consider the planting of vegetation to be a noise abatement measure.

2.4 NOISE CONTROL

Noise control is the process of obtaining an acceptable noise environment for an observation point or receiver by controlling the noise source, transmission path, receiver, or all three. This concept is known as the source-path-receiver concept. In general, noise control measures can be applied to these three elements.

2.5 NOISE BARRIER ATTENUATION

Effective noise barriers can reduce noise levels by 10 to 15 dBA, cutting the loudness of traffic noise in half. A noise barrier is most effective when placed close to the noise source or receiver. Noise barriers, however, do have limitations. For a noise barrier to work, it must be high enough and long enough to block the path of the noise source. (5)

2.6 LAND USE COMPATIBILITY WITH NOISE

Some land uses are more tolerant of noise than others. For example, schools, hospitals, churches and residences are more sensitive to noise intrusion than are commercial or industrial developments and related activities. As ambient noise levels affect the perceived amenity or livability of a development, so too can the mismanagement of noise impacts impair the economic health and growth potential of a community by reducing the area's desirability as a place to live, shop and work. For this reason, land use compatibility with the noise environment is an important consideration in the planning and design process. The FHWA encourages State and Local government to regulate land development in such a way that noise-sensitive land uses are either prohibited from being located adjacent to a highway, or that the developments are planned, designed, and constructed in such a way that noise impacts are minimized. (6)

2.7 COMMUNITY RESPONSE TO NOISE

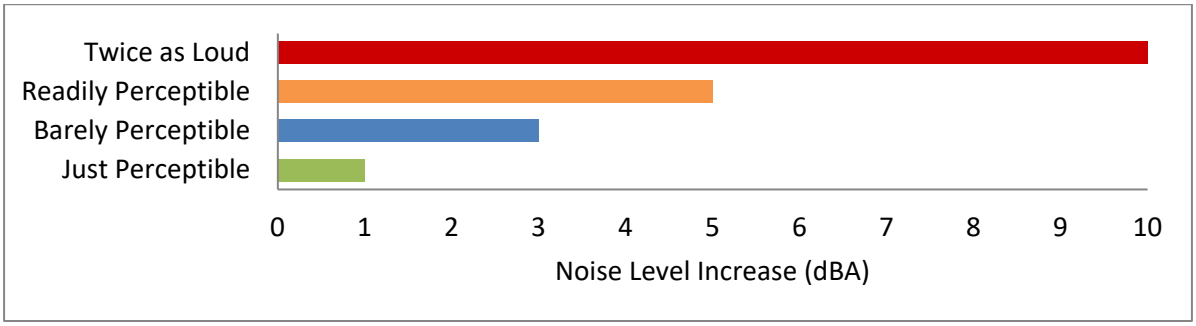
Community responses to noise may range from registering a complaint by telephone or letter, to initiating court action, depending upon everyone's susceptibility to noise and personal attitudes about noise. Several factors are related to the level of community annoyance including:

- Fear associated with noise producing activities;
- Socio-economic status and educational level;
- Perception that those affected are being unfairly treated;
- Attitudes regarding the usefulness of the noise-producing activity;
- Belief that the noise source can be controlled.

Approximately ten percent of the population has a very low tolerance for noise and will object to any noise not of their making. Consequently, even in the quietest environment, some complaints will occur. Another twenty-five percent of the population will not complain even in very severe noise environments. Thus, a variety of reactions can be expected from people exposed to any given noise environment. (7) Surveys have shown that about ten percent of the people exposed to traffic noise of 60 dBA will report being highly annoyed with the noise, and each increase of one dBA is associated with approximately two percent more people being highly annoyed. When traffic noise exceeds 60 dBA or aircraft noise exceeds 55 dBA, people may begin to complain. (7)

Despite this variability in behavior on an individual level, the population can be expected to exhibit the following responses to changes in noise levels as shown on Exhibit 2-B. An increase or decrease of 1 dBA cannot be perceived except in carefully controlled laboratory experiments, a change of 3 dBA are considered *barely perceptible*, and changes of 5 dBA are considered *readily perceptible*. (5)

EXHIBIT 2-B: NOISE LEVEL INCREASE PERCEPTION



2.8 EXPOSURE TO HIGH NOISE LEVELS

The Occupational Safety and Health Administration (OSHA) sets legal limits on noise exposure in the workplace. The permissible exposure limit (PEL) for a worker over an eight-hour day is 90 dBA. The OSHA standard uses a 5 dBA exchange rate. This means that when the noise level is increased by 5 dBA, the amount of time a person can be exposed to a certain noise level to receive the same dose is cut in half. The National Institute for Occupational Safety and Health (NIOSH) has recommended that all worker exposures to noise should be controlled below a level equivalent to 85 dBA for eight hours to minimize occupational noise induced hearing loss. NIOSH also recommends a 3 dBA exchange rate so that every increase by 3 dBA doubles the amount of the noise and halves the recommended amount of exposure time. (8)

OSHA has implemented requirements to protect all workers in general industry (e.g. the manufacturing and the service sectors) for employers to implement a Hearing Conservation Program where workers are exposed to a time weighted average noise level of 85 dBA or higher over an eight-hour work shift. Hearing Conservation Programs require employers to measure noise levels, provide free annual hearing exams and free hearing protection, provide training, and conduct evaluations of the adequacy of the hearing protectors in use unless changes to tools, equipment and schedules are made so that they are less noisy and worker exposure to noise is less than the 85 dBA. This noise study does not evaluate the noise exposure of workers within a project or construction site based on CEQA requirements, and instead, evaluates Project-related operational and construction noise levels at the nearby sensitive receiver locations in the Project study area.

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3 REGULATORY SETTING

To limit population exposure to physically and/or psychologically damaging as well as intrusive noise levels, the federal government, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise. In most areas, automobile and truck traffic is the major source of environmental noise. Traffic activity generally produces an average sound level that remains constant with time. Air and rail traffic, and commercial and industrial activities are also major sources of noise in some areas. Federal, state, and local agencies regulate different aspects of environmental noise. Federal and state agencies generally set noise standards for mobile sources such as aircraft and motor vehicles, while regulation of stationary sources is left to local agencies.

3.1 STATE OF CALIFORNIA NOISE REQUIREMENTS

The State of California regulates freeway noise, sets standards for sound transmission, provides occupational noise control criteria, identifies noise standards and provides guidance for local land use compatibility. State law requires that each county and city adopt a General Plan that includes a Noise Element which is to be prepared per guidelines adopted by the Governor's Office of Planning and Research. (9) The purpose of the Noise Element is to *limit the exposure of the community to excessive noise levels*. In addition, the California Environmental Quality Act (CEQA) requires that all known environmental effects of a project be analyzed, including the potential environmental noise impacts.

3.2 STATE OF CALIFORNIA BUILDING CODE

The State of California's noise insulation standards are codified in the California Code of Regulations, Title 24, Building Standards Administrative Code, Part 2, and the California Building Code. These noise standards are applied to new construction in California for controlling interior noise levels resulting from exterior noise sources. The regulations specify that acoustical studies must be prepared when noise-sensitive structures, such as residential buildings, schools, or hospitals, are developed near major transportation noise sources, and where such noise sources create an exterior noise level of 60 dBA CNEL or higher. Acoustical studies that accompany building plans for noise-sensitive land uses must demonstrate that the structure has been designed to limit interior noise in habitable rooms to acceptable noise levels. For new residential buildings, schools, and hospitals, the acceptable interior noise limit for new construction is 45 dBA CNEL.

3.3 CITY OF LOS ANGELES GENERAL PLAN NOISE ELEMENT

The City of Los Angeles has adopted a Noise Element of the General Plan to identify goals, objectives, and policies for managing noise issues within the City. (10) The following goal and objectives are identified in the General Plan Noise Element:

Goal	*A city where noise does not reduce the quality of urban life.*
Objective 1	*Reduce airport and harbor related noise impacts.*

Objective 2 *Reduce or eliminate nonairport related intrusive noise, especially relative to noise sensitive uses.*

Objective 3 *Reduce or eliminate noise impacts associated with proposed development of land and changes in land use.*

Exhibit I of the City of Los Angeles General Plan Noise Element identifies *Guidelines for Noise Compatible Land Use* to evaluate the potential impacts of transportation-related noise. Multi-family residential land use, such as the Project, is considered *conditionally acceptable* with unmitigated exterior noise levels of less than 65 dBA CNEL. For *conditionally acceptable* exterior noise levels, n*ew construction or development only after a detailed analysis of noise mitigation is made and needed noise insulation features are included in project design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning normally will suffice.* (10)

3.4 CITY OF LOS ANGELES OPERATIONAL NOISE STANDARDS

To analyze noise impacts originating from a designated fixed location or private property such as 511 South Harbor Boulevard Project, stationary-source (operational) noise such as the expected roof-top air conditioning units, outdoor activity, and pad-mounted transformer are typically evaluated against standards established under a jurisdiction's Municipal Code or General Plan.

The City of Los Angeles Municipal Code, Chapter XI *Noise Regulation,* has set exterior noise limits to control community noise impacts from non-transportation noise sources (such as air-conditioning units, refrigeration, heating, pumping, and filtering equipment). Section 112.02 indicates that stationary noise sources shall not operate in such a manner as to cause the noise level at any sensitive use to exceed the existing ambient noise level by 5 dBA. (11) The City of Los Angeles Municipal Code, Chapter XI, is provided in Appendix 3.1.

3.5 CITY OF LOS ANGELES CONSTRUCTION NOISE STANDARDS

Section 112.05 of the City's Municipal Code identifies exterior noise level limits for construction equipment and states: *in any residential zone or within 500 feet thereof, no person shall operate or cause to be operated any powered equipment or powered hand tool that produces a maximum noise level exceeding the following noise limits at a distance of 50 feet therefrom*: (11)

- *75dB(A) for construction, industrial, and agricultural machinery including crawler-tractors, dozers, rotary drills and augers, loaders, power shovels, cranes, derricks, motor graders, paving machines, off-highway trucks, ditchers, trenchers, compactors, scrapers, wagons, pavement breakers, compressors and pneumatic or other powered equipment.*

Therefore, for the purpose of this noise study, the City of Los Angeles Municipal Code 75 dBA L_{eq} threshold is used to determine potential Project-related construction noise level impacts at nearby sensitive receiver locations.

4 SIGNIFICANCE CRITERIA

The following significance criteria are based on currently adopted guidance provided by Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (1) For the purposes of this report, impacts would be potentially significant if the Project results in or causes:

A. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

B. Generation of excessive ground-borne vibration or ground-borne noise levels?

C. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within 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?

While the City of Los Angeles General Plan Guidelines provide direction on noise compatibility and establish noise standards by land use type that are sufficient to assess the significance of noise impacts, they do not define the levels at which increases are considered substantial for use under Guideline A. CEQA Appendix G Guideline C applies to nearby public and private airports, if any, and the Project's land use compatibility.

4.1 CEQA GUIDELINES NOT FURTHER ANALYZED

The Project site is not located within two miles of a public airport or within an airport land use plan; nor is the Project within the vicinity of a private airstrip. As such, the Project site would not be exposed to excessive noise levels from airport operations, and therefore, impacts are considered *less than significant,* and no further noise analysis is conducted in relation to Guideline C.

4.2 SIGNIFICANCE CRITERIA

Noise impacts shall be considered significant if any of the following occur as a direct result of the proposed development. Table 4-1 shows the significance criteria summary matrix.

OFF-SITE OPERATIONAL TRAFFIC NOISE

- When the noise levels at existing and future noise-sensitive land uses (e.g. residential, etc.):
    - are less than 60 dBA CNEL and the Project creates a *readily perceptible* 5 dBA CNEL or greater Project-related noise level increase; or
    - range from 60 to 65 dBA CNEL and the Project creates a *barely perceptible* 3 dBA CNEL or greater Project-related noise level increase; or
    - already exceed 65 dBA CNEL, and the Project creates a community noise level impact of greater than 1.5 dBA CNEL (FICON, 1992).

OPERATIONAL STATIONARY-SOURCE NOISE

- If Project-related operational (stationary source) noise levels exceed the exterior ambient noise levels at adjacent sensitive receiver locations by 5 dBA L_{eq} (City of Los Angeles Municipal Code, Section 112.02).

CONSTRUCTION NOISE

- If Project-related construction activities generate noise levels which exceed the exterior noise level standard of 75 dBA L_{eq} at adjacent sensitive receiver locations (City of Los Angeles Municipal Code, Section 112.05).

CONSTRUCTION VIBRATION

- If short-term Project generated construction vibration levels Exceed the Caltrans building damage vibration standard of 0.3 in/sec PPV at sensitive receiver locations; or

TABLE 4-1: SIGNIFICANCE CRITERIA SUMMARY

Analysis	Land Use	Condition(s)	Significance Criteria	
			Daytime	Nighttime
Off-Site Traffic Noise[1]	Noise-Sensitive[1]	if ambient is < 60 dBA CNEL	≥ 5 dBA CNEL Project increase	
		if ambient is 60 - 65 dBA CNEL	≥ 3 dBA CNEL Project increase	
		if ambient is > 65 dBA CNEL	≥ 1.5 dBA CNEL Project increase	
Operational Noise[2]	Noise-Sensitive	Exterior Noise Level Standards	Existing Ambient Noise Level plus 5 dBA L_{eq}	
Construction	Noise-Sensitive	Exterior Noise Level Standards[3]	75 dBA L_{eq}	n/a
		Vibration Level Standard[4]	0.3 in/sec PPV	n/a

[1] Source: FICON, 1992.
[2] Source: City of Los Angeles Municipal Code, Section 112.02 (Appendix 3.1).
[3] Source: City of Los Angeles Municipal Code, Section 112.05 (Appendix 3.1).
[4] Source: Caltrans, Transportation & Construction Vibration Guidance Manual, September 2013.
"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.; "n/a" = No construction activity is permitted during the nighttime hours.

5 EXISTING NOISE LEVEL MEASUREMENTS

To assess the existing noise level environment, 24-hour noise level measurements were taken at four locations in the Project study area. The receiver locations were selected to describe and document the existing noise environment within the Project study area. Exhibit 5-A provides the boundaries of the Project study area and the noise level measurement locations. To fully describe the existing noise conditions, noise level measurements were collected by Urban Crossroads, Inc. on Wednesday, November 6th, 2019. Appendix 5.1 includes study area photos.

5.1 MEASUREMENT PROCEDURE AND CRITERIA

To describe the existing noise environment, the hourly noise levels were measured during typical weekday conditions over a 24-hour period. By collecting individual hourly noise level measurements, it is possible to describe the daytime and nighttime hourly noise levels and calculate the 24-hour CNEL. The long-term noise readings were recorded using Piccolo Type 2 integrating sound level meter and dataloggers. The Piccolo sound level meters were calibrated using a Larson-Davis calibrator, Model CAL 150. All noise meters were programmed in "slow" mode to record noise levels in "A" weighted form. The sound level meters and microphones were equipped with a windscreen during all measurements. All noise level measurement equipment satisfies the American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-2014/IEC 61672-1:2013. (12)

5.2 NOISE MEASUREMENT LOCATIONS

The long-term noise level measurements were positioned as close to the nearest sensitive receiver locations as possible to assess the existing ambient hourly noise levels surrounding the Project site. Both Caltrans and the FTA recognize that it is not reasonable to collect noise level measurements that can fully represent every part of a private yard, patio, deck, or balcony normally used for human activity when estimating impacts for new development projects. This is demonstrated in the Caltrans general site location guidelines which indicate that, *sites must be free of noise contamination by sources other than sources of interest. Avoid sites located near sources such as barking dogs, lawnmowers, pool pumps, and air conditioners unless it is the express intent of the analyst to measure these sources*. (13) Further, FTA guidance states, t*hat it is not necessary nor recommended that existing noise exposure be determined by measuring at every noise-sensitive location in the project area. Rather, the recommended approach is to characterize the noise environment for clusters of sites based on measurements or estimates at representative locations in the community*. (14)

Based on recommendations of Caltrans and the FTA, it is not necessary to collect measurements at each individual building or residence, because each receiver measurement represents a group of buildings that share acoustical equivalence. (14) In other words, the area represented by the receiver shares similar shielding, terrain, and geometric relationship to the reference noise source. Receivers represent a location of noise sensitive areas and are used to estimate the future noise level impacts. Collecting reference ambient noise level measurements at the nearby sensitive receiver locations allows for a comparison of the before and after Project noise levels

and is necessary to assess potential noise impacts due to the Project's contribution to the ambient noise levels.

5.3 NOISE MEASUREMENT RESULTS

The noise measurements presented below focus on the average or equivalent sound levels (L_{eq}). The equivalent sound level (L_{eq}) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. Table 5-1 identifies the hourly daytime (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) noise levels at each noise level measurement location. Appendix 5.2 provides a summary of the existing hourly ambient noise levels described below:

- Location L1 represents the noise levels north of the Project site on South Harbor Boulevard near the Port of Los Angeles Boys and Girls Club. The noise levels at this location consist primarily of traffic noise from West 5th Street and South Harbor Boulevard. The noise level measurements collected show an overall 24-hour exterior noise level of 62.4 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 59.5 dBA L_{eq} with an average nighttime noise level of 54.6 dBA L_{eq}.
- Location L2 represents the noise levels south of the Project site in the parking lot near the Sunrise Hotel San Pedro. The ambient noise levels at this location account for traffic on South Harbor Boulevard as well as parking lot vehicle movements. The noise level measurements collected show an overall 24-hour exterior noise level of 59.8 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 56.5 dBA L_{eq} with an average nighttime noise level of 52.3 dBA L_{eq}.
- Location L3 represents the noise levels on west of the Project site on South Palos Verdes Street near the Vue Apartments. The noise level measurements collected show an overall 24-hour exterior noise level of 66.8 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 64.4 dBA L_{eq} with an average nighttime noise level of 59.0 dBA L_{eq}. The noise levels at this location consist primarily of traffic noise from West 5th Street and South Palos Verdes Street.
- Location L4 represents the noise levels northwest of the Project site on West 3rd Street and South Palos Verdes Street next to parking structure. The 24-hour CNEL indicates that the overall exterior noise level is 67.6 dBA CNEL. The energy (logarithmic) average daytime noise level was calculated at 63.5 dBA L_{eq} with an average nighttime noise level of 60.5 dBA L_{eq}. Traffic on West 3rd Street and South Palos Verdes Street represents the primary source of noise at this location as well as vehicle movements from the adjacent parking structure.

Table 5-1 provides the (energy average) noise levels used to describe the daytime and nighttime ambient conditions. These daytime and nighttime energy average noise levels represent the average of all hourly noise levels observed during these time periods expressed as a single number. Appendix 5.2 provides summary worksheets of the noise levels for each hour as well as the minimum, maximum, L_1, L_2, L_5, L_8, L_{25}, L_{50}, L_{90}, L_{95}, and L_{99} percentile noise levels observed during the daytime and nighttime periods.

The background ambient noise levels in the Project study area are dominated by the transportation-related noise associated with surrounding surface streets. This includes the auto and heavy truck activities on study area roadway segments near the noise level measurement locations. The 24-hour existing noise level measurement results are shown on Table 5-1.

TABLE 5-1: 24-HOUR AMBIENT NOISE LEVEL MEASUREMENTS

Location[1]	Description	Energy Average Noise Level (dBA L_{eq})[2]		CNEL
		Daytime	Nighttime	
L1	Located north of the Project site on South Harbor Boulevard near the Port of Los Angeles Boys and Girls Club.	59.5	54.6	62.4
L2	Located south of the Project site in the parking lot near the Sunrise Hotel San Pedro.	56.5	52.3	59.8
L3	Located west of the Project site on South Palos Verdes Street near the Vue Apartments.	64.4	59.0	66.8
L4	Located northwest of the Project site on West 3rd Street and South Palos Verdes Street next to parking structure.	63.5	60.5	67.6

[1] See Exhibit 5-A for the noise level measurement locations.
[2] Energy (logarithmic) average levels. The long-term 24-hour measurement worksheets are included in Appendix 5.2. "Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

EXHIBIT 5-A: NOISE MEASUREMENT LOCATIONS



6 METHODS AND PROCEDURES

The following section outlines the methods and procedures used to model and analyze the future traffic noise environment.

6.1 FHWA TRAFFIC NOISE PREDICTION MODEL

The estimated roadway noise impacts from vehicular traffic were calculated using a computer program that replicates the Federal Highway Administration (FHWA) Traffic Noise Prediction Model- FHWA-RD-77-108. (15) The FHWA Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). In California the national REMELs are substituted with the California Vehicle Noise (Calveno) Emission Levels. (16) Adjustments are then made to the REMEL to account for: the roadway classification (e.g., collector, secondary, major or arterial), the roadway active width (i.e., the distance between the center of the outermost travel lanes on each side of the roadway), the total average daily traffic (ADT), the travel speed, the percentages of automobiles, medium trucks, and heavy trucks in the traffic volume, the roadway grade, the angle of view (e.g., whether the roadway view is blocked), the site conditions ("hard" or "soft" relates to the absorption of the ground, pavement, or landscaping), and the percentage of total ADT which flows each hour throughout a 24-hour period.

6.2 OFF-SITE TRAFFIC NOISE PREDICTION MODEL INPUTS

Table 6-1 presents the roadway parameters used to assess the Project's off-site transportation noise impacts. Table 6-1 identifies the study area roadway segments, the distance from the centerline to adjacent land use based on the functional roadway classifications per the City of Los Angeles General Plan Mobility Element. Hard site conditions are used to account for the sound propagation loss over reflective surfaces between the source and receiver.

The Existing and Future average daily traffic volumes used for this study are presented on Table 6-2 and were provided by the *511 South Harbor Boulevard Traffic Impact Study*. (2) Table 6-3 presents the time of day vehicle splits by vehicle type, and Table 6-4 presents the total traffic flow distributions (vehicle mixes) used in this analysis. The vehicle mix provides the hourly distribution percentages of automobile, medium trucks and heavy trucks for input into the FHWA Model based on roadway types.

TABLE 6-1: OFF-SITE ROADWAY PARAMETERS

ID	Roadway	Segment	Distance From Centerline to Nearest Adjacent Land Use (Feet)[2]	Vehicle Speed (mph)[3]
1	Gaffey St.	n/o 5th St.	40'	35
2	Gaffey St.	s/o 5th St.	40'	35
3	Pacific Av.	n/o 5th St.	28'	35
4	Pacific Av.	s/o 5th St.	28'	35
5	Harbor Blvd.	n/o 5th St.	35'	35
6	Harbor Blvd.	s/o 5th St.	35'	35
7	Harbor Blvd.	n/o 1st St.	35'	35
8	Harbor Blvd.	s/o 1st St.	35'	35
9	5th St.	w/o Gaffey St.	28'	25
10	5th St.	e/o Gaffey St.	28'	25
11	5th St.	w/o Pacific Ave.	28'	25
12	5th St.	e/o Pacific Ave.	28'	25
13	5th St.	w/o Harbor Blvd.	28'	25
14	1st St.	w/o Harbor Blvd.	28'	30

[1] Distance to adjacent land use is based upon the right-of-way distances for each functional roadway classification provided in the City of Los Angeles General Plan Mobility Element.
[2] Posted speed limits.

TABLE 6-2: AVERAGE DAILY TRAFFIC VOLUMES

ID	Roadway	Segment	Average Daily Traffic (1,000's)[1]			
			Existing		Future	
			Without Project	With Project	Without Project	With Project
1	Gaffey St.	n/o 5th St.	30.7	30.9	34.6	34.8
2	Gaffey St.	s/o 5th St.	28.4	28.4	31.5	31.5
3	Pacific Av.	n/o 5th St.	14.7	14.8	17.8	17.9
4	Pacific Av.	s/o 5th St.	14.1	14.1	15.4	15.5
5	Harbor Blvd.	n/o 5th St.	17.6	17.7	22.1	22.1
6	Harbor Blvd.	s/o 5th St.	15.0	15.0	18.2	18.1
7	Harbor Blvd.	n/o 1st St.	20.7	20.8	26.5	26.6
8	Harbor Blvd.	s/o 1st St.	18.9	19.0	24.5	24.6
9	5th St.	w/o Gaffey St.	4.6	4.7	6.1	6.1
10	5th St.	e/o Gaffey St.	3.7	3.9	6.7	6.9
11	5th St.	w/o Pacific Ave.	4.2	4.4	7.2	7.4
12	5th St.	e/o Pacific Ave.	5.8	6.1	10.8	11.1
13	5th St.	w/o Harbor Blvd.	3.6	3.7	5.6	5.7
14	1st St.	w/o Harbor Blvd.	2.3	2.3	3.0	3.0

[1] Source: KOA 511 South Harbor Boulevard Traffic Impact Study, September 2019.

TABLE 6-3: TIME OF DAY VEHICLE SPLITS

Time Period	Vehicle Type		
	Autos	Medium Trucks	Heavy Trucks
Daytime (7:00 a.m. - 7:00 p.m.)	77.50%	84.80%	86.50%
Evening (7:00 p.m. - 10:00 p.m.)	12.90%	4.90%	2.70%
Nighttime (10:00 p.m. - 7:00 p.m.)	9.60%	10.30%	10.80%
Total:	100.00%	100.00%	100.00%

Source: Typical southern California vehicle mix.

TABLE 6-4: DISTRIBUTION OF TRAFFIC FLOW BY VEHICLE TYPE (VEHICLE MIX)

Roadway	Total % Traffic Flow			Total
	Autos	Medium Trucks	Heavy Trucks	
All Roadways	97.42%	1.84%	0.74%	100.00%

Source: Typical southern California vehicle mix.

6.3 CONSTRUCTION VIBRATION ASSESSMENT

This analysis focuses on the potential ground-borne vibration associated with vehicular traffic and construction activities. Ground-borne vibration levels from automobile traffic are generally overshadowed by vibration generated by heavy trucks that roll over the same uneven roadway surfaces. However, due to the rapid drop-off rate of ground-borne vibration and the short duration of the associated events, vehicular traffic-induced ground-borne vibration is rarely perceptible beyond the roadway right-of-way, and rarely results in vibration levels that cause damage to buildings in the vicinity.

However, while vehicular traffic is rarely perceptible, construction has the potential to result in varying degrees of temporary ground vibration, depending on the specific construction activities and equipment used. Ground vibration levels associated with various types of construction equipment are summarized on Table 6-5. Based on the representative vibration levels presented for various construction equipment types, it is possible to estimate potential vibration impacts with the following vibration assessment methods defined by the FTA. To describe potential vibration impacts the FTA provides the following equation: $PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$

TABLE 6-5: VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment	PPV (in/sec) at 25 feet
Small bulldozer	0.003
Jackhammer	0.035
Loaded Trucks	0.076
Large bulldozer	0.089

Source: Federal Transit Administration, Transit Noise and Vibration Impact Assessment, September 2018.

7 OFF-SITE TRANSPORTATION NOISE IMPACTS

To assess the off-site transportation CNEL noise level impacts associated with development of the proposed Project, noise contours were developed based on the *511 South Harbor Boulevard Traffic Impact Study*. (2) Noise contour boundaries represent the equal levels of noise exposure and are measured in CNEL from the center of the roadway. Noise contours were developed for the following traffic scenarios:

- Existing Without / With Project Conditions: This scenario refers to the existing present-day noise conditions, without and with the proposed Project.
- Future Without / With Project: This scenario refers to the background future noise conditions without and with the proposed Project, and includes all cumulative projects identified in the Traffic Impact Analysis.

7.1 TRAFFIC NOISE CONTOURS

To quantify the Project's operational traffic noise impacts on the surrounding areas, the changes in traffic noise levels on the study area roadway segments conveying Project traffic were calculated based on the changes in the average daily traffic volumes. Noise contours represent the distance to noise levels of a constant value and are measured from the center of the roadway for the 70, 65, and 60 dBA noise levels. The noise contours do not consider the effect of any existing noise barriers or topography that may affect ambient noise levels. In addition, since the noise contours reflect modeling of vehicular noise on area roadways, they appropriately do not reflect noise contribution from any surrounding stationary noise sources within the Project study area. Tables 7-1 to 7-4 present a summary of the exterior traffic noise levels for the study area roadway segments analyzed from the without Project to the with Project conditions in each of the two timeframes: Existing and Future conditions. Appendix 7.1 includes a summary of the traffic noise level contours for each of the traffic scenarios.

TABLE 7-1: EXISTING WITHOUT PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	CNEL at Nearest Adjacent Land Use (dBA)	Distance to Contour from Centerline (Feet)[1]		
				70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Gaffey St.	n/o 5th St.	67.4	50	158	499
2	Gaffey St.	s/o 5th St.	67.1	46	146	461
3	Pacific Av.	n/o 5th St.	65.5	RW	74	235
4	Pacific Av.	s/o 5th St.	65.3	RW	71	226
5	Harbor Blvd.	n/o 5th St.	65.6	RW	92	292
6	Harbor Blvd.	s/o 5th St.	64.9	RW	79	249
7	Harbor Blvd.	n/o 1st St.	66.3	RW	109	344
8	Harbor Blvd.	s/o 1st St.	65.9	RW	99	313
9	5th St.	w/o Gaffey St.	57.0	RW	RW	33
10	5th St.	e/o Gaffey St.	56.1	RW	RW	RW
11	5th St.	w/o Pacific Ave.	56.6	RW	RW	30
12	5th St.	e/o Pacific Ave.	58.0	RW	RW	41
13	5th St.	w/o Harbor Blvd.	55.9	RW	RW	RW
14	1st St.	w/o Harbor Blvd.	55.9	RW	RW	RW

[1] "RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-2: EXISTING WITH PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	CNEL at Nearest Adjacent Land Use (dBA)	Distance to Contour from Centerline (Feet)[1]		
				70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Gaffey St.	n/o 5th St.	67.5	50	159	501
2	Gaffey St.	s/o 5th St.	67.1	46	146	461
3	Pacific Av.	n/o 5th St.	65.5	RW	75	236
4	Pacific Av.	s/o 5th St.	65.4	RW	72	226
5	Harbor Blvd.	n/o 5th St.	65.6	RW	93	294
6	Harbor Blvd.	s/o 5th St.	64.9	RW	79	250
7	Harbor Blvd.	n/o 1st St.	66.4	35	109	345
8	Harbor Blvd.	s/o 1st St.	66.0	RW	100	315
9	5th St.	w/o Gaffey St.	57.1	RW	RW	34
10	5th St.	e/o Gaffey St.	56.3	RW	RW	28
11	5th St.	w/o Pacific Ave.	56.8	RW	RW	32
12	5th St.	e/o Pacific Ave.	58.2	RW	RW	44
13	5th St.	w/o Harbor Blvd.	56.1	RW	RW	RW
14	1st St.	w/o Harbor Blvd.	55.9	RW	RW	RW

[1] "RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-3: FUTURE WITHOUT PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	CNEL at Nearest Adjacent Land Use (dBA)	Distance to Contour from Centerline (Feet)[1]		
				70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Gaffey St.	n/o 5th St.	68.0	56	178	563
2	Gaffey St.	s/o 5th St.	67.5	51	162	511
3	Pacific Av.	n/o 5th St.	66.4	29	90	286
4	Pacific Av.	s/o 5th St.	65.7	RW	78	247
5	Harbor Blvd.	n/o 5th St.	66.6	37	116	366
6	Harbor Blvd.	s/o 5th St.	65.8	RW	95	301
7	Harbor Blvd.	n/o 1st St.	67.4	44	139	439
8	Harbor Blvd.	s/o 1st St.	67.1	41	129	407
9	5th St.	w/o Gaffey St.	58.2	RW	RW	44
10	5th St.	e/o Gaffey St.	58.6	RW	RW	48
11	5th St.	w/o Pacific Ave.	59.0	RW	RW	52
12	5th St.	e/o Pacific Ave.	60.7	RW	RW	78
13	5th St.	w/o Harbor Blvd.	57.9	RW	RW	40
14	1st St.	w/o Harbor Blvd.	57.0	RW	RW	33

[1] "RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-4: FUTURE WITH PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	CNEL at Nearest Adjacent Land Use (dBA)	Distance to Contour from Centerline (Feet)[1]		
				70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Gaffey St.	n/o 5th St.	68.0	56	179	565
2	Gaffey St.	s/o 5th St.	67.5	51	162	512
3	Pacific Av.	n/o 5th St.	66.4	29	91	287
4	Pacific Av.	s/o 5th St.	65.7	RW	78	247
5	Harbor Blvd.	n/o 5th St.	66.6	37	116	367
6	Harbor Blvd.	s/o 5th St.	65.8	RW	95	301
7	Harbor Blvd.	n/o 1st St.	67.4	44	139	441
8	Harbor Blvd.	s/o 1st St.	67.1	41	129	408
9	5th St.	w/o Gaffey St.	58.2	RW	RW	44
10	5th St.	e/o Gaffey St.	58.8	RW	RW	50
11	5th St.	w/o Pacific Ave.	59.1	RW	RW	54
12	5th St.	e/o Pacific Ave.	60.8	RW	RW	80
13	5th St.	w/o Harbor Blvd.	58.0	RW	RW	41
14	1st St.	w/o Harbor Blvd.	57.0	RW	RW	33

[1] "RW" = Location of the respective noise contour falls within the right-of-way of the road.

7.2 EXISTING PLUS PROJECT BUILDOUT CONDITION PROJECT TRAFFIC NOISE LEVELS

An analysis of existing traffic noise levels plus traffic noise generated by the proposed Project (E+P) has been included in this report. However, the analysis of existing traffic noise levels plus traffic noise generated by the proposed Project (E+P) scenario will not actually occur since the Project would not be fully constructed and operational until Future Year conditions.

Table 7-5 presents a comparison of the Existing without and with Project conditions CNEL noise levels. Table 7-1 presents the Existing without Project conditions noise level contours that are expected to range from 55.9 to 67.4 dBA CNEL. Table 7-2 shows the Existing with Project conditions noise level contours that are expected to range from 55.9 to 67.5 dBA CNEL. As shown on Table 7-5 the Project is expected to generate an exterior noise level increase of up to 0.2 dBA CNEL under Existing conditions at land uses adjacent to the study area the roadway segments.

TABLE 7-5: EXISTING CONDITION OFF-SITE PROJECT-RELATED TRAFFIC NOISE INCREASES

ID	Road	Segment	CNEL at Adjacent Land Use (dBA)[1]		
			No Project	With Project	Project Addition
1	Gaffey St.	n/o 5th St.	67.4	67.5	0.1
2	Gaffey St.	s/o 5th St.	67.1	67.1	0.0
3	Pacific Av.	n/o 5th St.	65.5	65.5	0.0
4	Pacific Av.	s/o 5th St.	65.3	65.4	0.1
5	Harbor Blvd.	n/o 5th St.	65.6	65.6	0.0
6	Harbor Blvd.	s/o 5th St.	64.9	64.9	0.0
7	Harbor Blvd.	n/o 1st St.	66.3	66.4	0.1
8	Harbor Blvd.	s/o 1st St.	65.9	66.0	0.1
9	5th St.	w/o Gaffey St.	57.0	57.1	0.1
10	5th St.	e/o Gaffey St.	56.1	56.3	0.2
11	5th St.	w/o Pacific Ave.	56.6	56.8	0.2
12	5th St.	e/o Pacific Ave.	58.0	58.2	0.2
13	5th St.	w/o Harbor Blvd.	55.9	56.1	0.2
14	1st St.	w/o Harbor Blvd.	55.9	55.9	0.0

[1] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.

7.3 FUTURE PROJECT TRAFFIC NOISE LEVELS

Table 7-6 presents a comparison of the Future without and with Project conditions CNEL noise levels. Table 7-3 presents the Future without Project conditions noise level contours that are expected to range from 57.0 to 68.0 dBA CNEL. Table 7-4 shows the Future with Project conditions noise level contours that are expected to range from 57.0 to 68.0 dBA CNEL. As shown on Table 7-6 the Project is expected to generate an exterior noise level increase of up to 0.2 dBA CNEL, and will satisfy the significance thresholds identified in Section 4 on all roadway segments. Therefore, the off-site Project-related traffic noise level increases are considered *less than significant* under Future conditions at land uses adjacent to the study area the roadway segments.

TABLE 7-6: FUTURE OFF-SITE PROJECT-RELATED TRAFFIC NOISE IMPACTS

ID	Road	Segment	CNEL at Adjacent Land Use (dBA)[1]			Off-Site Traffic Noise Threshold[3]	Threshold Exceeded?[3]
			No Project	With Project	Project Addition		
1	Gaffey St.	n/o 5th St.	68.0	68.0	0.0	1.5	No
2	Gaffey St.	s/o 5th St.	67.5	67.5	0.0	1.5	No
3	Pacific Av.	n/o 5th St.	66.4	66.4	0.0	1.5	No
4	Pacific Av.	s/o 5th St.	65.7	65.7	0.0	1.5	No
5	Harbor Blvd.	n/o 5th St.	66.6	66.6	0.0	1.5	No
6	Harbor Blvd.	s/o 5th St.	65.8	65.8	0.0	1.5	No
7	Harbor Blvd.	n/o 1st St.	67.4	67.4	0.0	1.5	No
8	Harbor Blvd.	s/o 1st St.	67.1	67.1	0.0	1.5	No
9	5th St.	w/o Gaffey St.	58.2	58.2	0.0	5.0	No
10	5th St.	e/o Gaffey St.	58.6	58.8	0.2	5.0	No
11	5th St.	w/o Pacific Ave.	59.0	59.1	0.1	5.0	No
12	5th St.	e/o Pacific Ave.	60.7	60.8	0.1	3.0	No
13	5th St.	w/o Harbor Blvd.	57.9	58.0	0.1	5.0	No
14	1st St.	w/o Harbor Blvd.	57.0	57.0	0.0	5.0	No

[1] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
[2] Significance Criteria (Section 4).

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8 RECEIVER LOCATIONS

The City of Los Angeles General Plan Noise Element defines noise-sensitive uses as: *single-family and multi-unit dwellings, long-term care facilities (including convalescent and retirement facilities), dormitories, motels, hotels, transient lodgings and other residential uses; houses of worship; hospitals; libraries; schools; auditoriums; concert halls; outdoor theaters; nature and wildlife preserves, and parks*. Land uses that are considered relatively insensitive to noise include business, commercial, and professional developments. Land uses that are typically not affected by noise include: industrial, manufacturing, utilities, agriculture, natural open space, undeveloped land, parking lots, warehousing, liquid and solid waste facilities, salvage yards, and transit terminals.

Other sensitive land uses in the Project study area that are located at greater distances than those identified in this noise study will experience lower noise levels than those presented in this report due to the additional attenuation from distance and the shielding of intervening structures.

To assess the potential for long-term operational and short-term construction impacts, the following sensitive receiver locations as shown on Exhibit 8-A were identified as representative locations for analysis.

R1: Located approximately 96 feet north of the Project site, R1 represents the Port of Los Angeles Boys and Girls Club west of South Harbor Boulevard. A 24-hour noise measurement was taken near this location, L1, to describe the existing ambient noise environment.

R2: Location R2 represents the Sunrise Hotel San Pedro located south of the Project site at roughly 73 feet, on the west side of South Harbor Boulevard. A 24-hour noise measurement was taken near this location, L2, to describe the existing ambient noise environment.

R3: Location R3 represents the fourth-floor apartments of the recently completed 550 Palo Verdes Apartments located approximately 24 feet west of the Project site. A 24-hour noise measurement near this location, L3, is used to describe the existing ambient noise environment.

R4: Location R4 represents the existing apartment complex on the north side of West Third Street at approximately 522 feet from the Project site. A 24-hour noise measurement near this location, L4, is used to describe the existing ambient noise environment.

EXHIBIT 8-A: RECEIVER LOCATIONS



9 OPERATIONAL NOISE IMPACTS

This section analyzes the potential stationary-source operational noise impacts due to the Project's stationary noise sources on the off-site sensitive receiver locations identified in Section 8. Exhibit 9-A identifies the noise source locations used to assess the Project-related operational noise levels.

9.1 OPERATIONAL NOISE SOURCES

Project-related stationary-source (operational) noise sources are expected to include: roof-top air conditioning units, outdoor activity, and pad-mounted transformer. Further, the proposed residential land uses are considered noise-sensitive receiving land uses and are not expected to include any specific type of operational noise levels beyond the typical noise sources associated with existing residential land use in the Project study area.

9.2 REFERENCE NOISE LEVELS

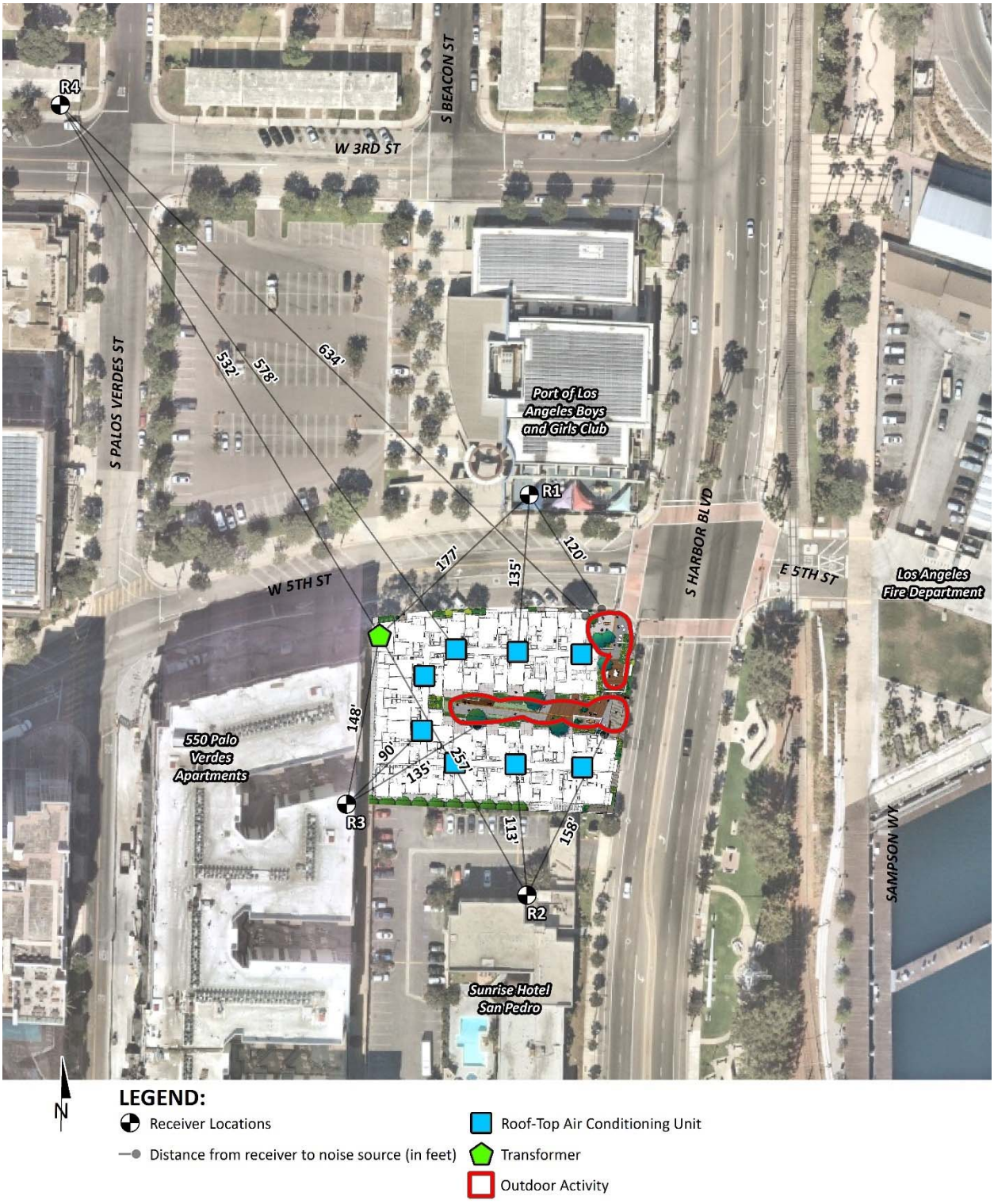
To estimate the Project operational noise impacts, reference noise level measurements were collected from similar types of activities to represent the noise levels expected with the development of the proposed Project. Table 9-1 presents a summary of the reference noise level measurements used in this analysis to describe the Project operational noise levels.

TABLE 9-1: REFERENCE NOISE LEVEL MEASUREMENTS

Noise Source	Duration (hh:mm:ss)	Dist. From Source (Feet)	Noise Source Height (Feet)	Reference Noise Level (dBA L_{eq})	
				@ Ref. Dist.	@ 50 Feet
Roof-Top Air Conditioning Units[1]	01:00:00	5'	5'	77.2	57.2
Outdoor Activity[2]	00:08:00	10'	4'	73.8	59.8
Pad-Mounted Transformer[3]	-[3]	6'	5'	56.0	37.6

[1] As measured by Urban Crossroads, Inc. on 7/27/2015 at the Santee Walmart located at 170 Town Center Parkway.
[2] As measured by Urban Crossroads, Inc. on 9/21/2019 at Louies by the Bay in Newport Beach.
[3] Source: NEMA TR 1-2013 Transformers, Step Voltage Regulators and Reactors, Table 2 sound level for a 500 kVA transformer.

EXHIBIT 9-A: OPERATIONAL NOISE SOURCE AND RECEIVER LOCATIONS



9.2.1 ROOF-TOP AIR CONDITIONING UNITS

At the time this noise study was prepared, the specific model numbers and specifications of the air conditioning units to be used at the Project site were unknown. Therefore, to present a conservative approach, a reference noise level measurement of commercial-sized air conditioning units (roof-top) is used to represent worst-case conditions. The reference noise levels measurements were taken at the Santee Walmart on July 27th, 2015. Located at 170 Town Center Parkway in the City of Santee, the noise level measurements describe mechanical roof-top air conditioning units on the roof of an existing Walmart store. The reference noise level represents Lennox SCA120 series 10-ton model packaged air conditioning units. Using the uniform reference distance of 50 feet, the noise level is 57.2 dBA L_{eq}. The operating conditions of the reference noise level measurement reflect peak summer cooling requirements with measured temperatures approaching 96 degrees Fahrenheit (°F) with average daytime temperatures of 82°F.

9.2.2 OUTDOOR ACTIVITY

An outdoor activity reference noise level measurement was taken at the Louies by the Bay in Newport Beach on September 21, 2019. At 50 feet, the reference noise level is 59.8 dBA L_{eq} at a noise source height of 4 feet. The reference noise level measurement includes outdoor eating, drinking, with laughing and talking.

9.2.3 PAD-MOUNTED TRANSFORMER

To determine the noise level impacts associated with a pad-mounted transformer within the Project site, the National Electrical Manufacturers Association (NEMA) *Transformers, Step Voltage Regulators and Reactors*, Table 2 sound level for a 500 kVA transformer is used in this analysis. (17) The reference NEMA noise level represents the factory tested noise level of the transformer. At the time of this analysis, the exact model of the Project's transformer was unknown, however, the reference noise levels are anticipated to likely overstate the potential noise levels from a residential transformer. Using the uniform reference distance of 50 feet, the reference NEMA transformer noise level is 37.6 dBA L_{eq}.

9.3 OPERATIONAL NOISE LEVELS

Based upon the reference noise levels, it is possible to estimate the Project operational stationary-source noise levels at each of the nearby sensitive receiver locations. The operational noise level calculations shown on Table 9-2 account for the distance attenuation provided due to geometric spreading, when sound from a localized stationary source (i.e., a point source) propagates uniformly outward in a spherical pattern. With geometric spreading, sound levels attenuate (or decrease) at a rate of 6 dB for each doubling of distance from a point source. Table 9-2 indicates that the noise levels associated with the roof-top air conditioning units, outdoor activity, and pad-mounted transformer are expected to range from 36.2 to 53.8 dBA L_{eq} at the nearby sensitive receiver locations.

TABLE 9-2: OPERATIONAL NOISE LEVELS

Receiver Location[1]	Noise Source[2] (dBA Leq)			Unmitigated Total Project Operational Noise Levels (dBA L_{eq})[3]
	Roof-Top Air Conditioning Units	Outdoor Activity	Pad Mounted Transformer	
R1	48.6	52.2	26.6	53.8
R2	50.1	49.8	13.2	53.0
R3	32.8	32.0	28.2	36.2
R4	35.9	37.8	17.0	40.0

[1] See Exhibit 9-A for the receiver and noise source locations.
[2] Reference noise sources as shown on Table 9-1.
[3] Calculations for each noise source are provided in Appendix 9.1.

9.3 PROJECT OPERATIONAL NOISE LEVEL COMPLIANCE

The City of Los Angeles Municipal Code has set exterior noise limits to control community noise impacts from non-transportation noise sources (such as air-conditioning units, refrigeration, heating, pumping, and filtering equipment). Section 112.02 indicates that stationary noise sources shall not operate in such a manner as to cause the noise level at any sensitive use to exceed the existing ambient noise level by 5 dBA. (11) Tables 9-3 and 9-4 show the Project-only operational noise levels, the closest ambient noise level measurement (see Section 5), and the adjusted operational noise level limits at each of the nearby sensitive receiver locations. Both the daytime and nighttime ambient noise levels are used to evaluate the potential Project-related operational noise levels, as shown on Tables 9-3 and 9-4, respectively.

Table 9-3 shows the daytime operational noise levels limits, per the City of Los Angeles Municipal Code, approach 69.4 dBA L_{eq}, and the Project-only operational noise levels ranging from 36.2 to 53.8 dBA L_{eq} will satisfy the standards at each sensitive receiver location. Table 9-4 shows the nighttime operational noise levels limits, per the City of Los Angeles Municipal Code, will approach 65.5 dBA L_{eq}, and the Project-only operational noise levels ranging from 36.2 to 53.8 dBA L_{eq} will satisfy the standards at each sensitive receiver location.

TABLE 9-3: DAYTIME OPERATIONAL NOISE LEVEL COMPLIANCE

Receiver Location[1]	Total Project Operational Noise Level[2]	Measurement Location[3]	Reference Ambient Noise Levels[4]	Ambient Plus 5 dBA	Threshold[5]	Threshold Exceeded?[6]
R1	53.8	L1	59.5	+5	64.5	No
R2	53.0	L2	56.5	+5	61.5	No
R3	36.2	L3	64.4	+5	69.4	No
R4	40.0	L4	63.5	+5	68.5	No

[1] See Exhibit 9-A for the sensitive receiver locations and noise source locations.
[2] Total Project operational noise levels as shown on Table 9-2.
[3] Reference noise level measurement locations as shown on Exhibit 5-A.
[4] Observed daytime ambient noise levels as shown on Table 5-1.
[5] Ambient plus 5 dBA per the Municipal Code Section 112.02(a).
[6] Do the Project operational noise levels exceed the ambient plus 5 dBA threshold identified by the City of Los Angeles?

TABLE 9-4: NIGHTTIME OPERATIONAL NOISE LEVEL COMPLIANCE

Receiver Location[1]	Total Project Operational Noise Level[2]	Measurement Location[3]	Reference Ambient Noise Levels[4]	Ambient Plus 5 dBA	Threshold[5]	Threshold Exceeded?[6]
R1	53.8	L1	54.6	+5	59.6	No
R2	53.0	L2	52.3	+5	57.3	No
R3	36.2	L3	59.0	+5	64.0	No
R4	40.0	L4	60.5	+5	65.5	No

[1] See Exhibit 9-A for the sensitive receiver locations and noise source locations.
[2] Total Project operational noise levels as shown on Table 9-2.
[3] Reference noise level measurement locations as shown on Exhibit 5-A.
[4] Observed nighttime ambient noise levels as shown on Table 5-1.
[5] Ambient plus 5 dBA per the Municipal Code Section 112.02(a).
[6] Do the Project operational noise levels exceed the ambient plus 5 dBA threshold identified by the City of Los Angeles?

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10 CONSTRUCTION IMPACTS

This section analyzes potential impacts resulting from the short-term construction activities associated with the development of the Project. Exhibit 10-A shows the construction activity boundaries in relation to the nearby sensitive receiver locations.

10.1 CONSTRUCTION NOISE LEVELS

Noise generated by the Project construction equipment will include a combination of trucks, power tools, concrete mixers and portable generators that when combined can reach high levels. The number and mix of construction equipment is expected to occur in the following stages:

- Site Preparation
- Grading
- Building Construction
- Paving
- Architectural Coating

This construction noise analysis was prepared using reference noise level measurements taken by Urban Crossroads, Inc. to describe the typical construction activity noise levels for each stage of Project construction. The construction reference noise level measurements represent a list of typical construction activity noise levels. Noise levels generated by heavy construction equipment can range from approximately 62 dBA to more than 80 dBA when measured at 50 feet. However, these noise levels diminish with distance from the construction site at a rate of 6 dBA per doubling of distance. For example, a noise level of 80 dBA measured at 50 feet from the noise source to the receiver would be reduced to 74 dBA at 100 feet from the source to the receiver, and would be further reduced to 68 dBA at 200 feet from the source to the receiver. The construction stages used in this analysis are consistent with the data used to support the construction emissions in the *511 South Harbor Boulevard Air Quality* study prepared by Urban Crossroads Inc. (18)

10.2 CONSTRUCTION REFERENCE NOISE LEVELS

To describe the Project construction noise levels, measurements were collected for similar activities at several construction sites. Table 10-1 provides a summary of the reference construction noise level measurements. Since the reference noise levels were collected at varying distances, all construction noise level measurements presented on Table 10-1 have been adjusted to describe a common reference distance of 50 feet.

TABLE 10-1: CONSTRUCTION REFERENCE NOISE LEVELS

ID	Noise Source	Duration (h:mm:ss)	Reference Distance From Source (Feet)	Reference Noise Levels @ Reference Distance (dBA L_{eq})	Reference Noise Levels @ 50 Feet (dBA L_{eq})[6]
1	Truck Pass-Bys & Dozer Activity[1]	0:01:15	30'	63.6	59.2
2	Dozer Activity[1]	0:01:00	30'	68.6	64.2
3	Construction Vehicle Maintenance Activities[2]	0:01:00	30'	71.9	67.5
4	Foundation Trenching[2]	0:01:01	30'	72.6	68.2
6	Residential Framing[3]	0:02:00	30'	66.7	62.3
7	Concrete Paver Activities[4]	0:01:00	30'	70.0	65.6
8	Concrete Mixer Pour & Paving Activities[4]	0:01:00	30'	70.3	65.9
9	Forklift, Jackhammer, & Metal Truck Bed Loading[5]	0:02:06	50'	67.9	67.9

[1] As measured by Urban Crossroads, Inc. on 10/14/15 at a business park construction site located at the northwest corner of Barranca Parkway and Alton Parkway in the City of Irvine.
[2] As measured by Urban Crossroads, Inc. on 10/20/15 at a construction site located in Rancho Mission Viejo.
[3] As measured by Urban Crossroads, Inc. on 10/20/15 at a residential construction site located in Rancho Mission Viejo.
[4] Reference noise level measurements were collected from a nighttime concrete pour at an industrial construction site, located at 27334 San Bernardino Avenue in the City of Redlands, between 1:00 a.m. to 2:00 a.m. on 7/1/15.
[5] As measured by Urban Crossroads, Inc. on 9/9/16 during the demolition of an existing paved parking lot at 41 Corporate Park in Irvine.
[6] Reference noise levels are calculated at 50 feet using a drop off rate of 6 dBA per doubling of distance (point source).

10.3 CONSTRUCTION NOISE ANALYSIS

Tables 10-2 to 10-6 show the Project construction stages and the reference construction noise levels used for each stage. Table 10-7 provides a summary of the noise levels from each stage of construction at each of the sensitive receiver locations in the City of Los Angeles. Based on the reference construction noise levels, the Project-related construction noise levels when the highest reference noise level is operating at a single point nearest the sensitive receiver location will range from 43.1 to 61.2 dBA L_{eq} at the sensitive receiver locations in the City of Los Angeles. Exhibit 10-A shows the construction activity noise source location and the distance to each nearby sensitive receiver location.

TABLE 10-2: SITE PREPARATION EQUIPMENT NOISE LEVELS

Reference Construction Activity[1]	Reference Noise Level @ 50 Feet (dBA L_{eq})
Truck Pass-Bys & Dozer Activity	59.2
Dozer Activity	64.2
Highest Reference Noise Level at 50 Feet (dBA L_{eq}):	64.2

Receiver Location	Distance to Construction Activity (Feet)[2]	Distance Attenuation (dBA L_{eq})[3]	Estimated Noise Barrier Attenuation (dBA L_{eq})[4]	Construction Noise Level (dBA L_{eq})
R1	152'	-9.7	0.0	54.5
R2	256'	-14.2	-5.0	45.0
R3	385'	-17.7	0.0	46.4
R4	196'	-11.9	0.0	52.3
R5	111'	-6.9	0.0	57.2

[1] Reference construction noise level measurements taken by Urban Crossroads, Inc.
[2] Distance from the nearest point of construction activity to the nearest receiver.
[3] Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.
[4] Estimated barrier/berm attenuation from existing barriers/berms/buildings in the Project study area.

TABLE 10-3: GRADING EQUIPMENT NOISE LEVELS

Reference Construction Activity[1]	Reference Noise Level @ 50 Feet (dBA L_{eq})
Truck Pass-Bys & Dozer Activity	59.2
Dozer Activity	64.2
Highest Reference Noise Level at 50 Feet (dBA L_{eq}):	64.2

Receiver Location	Distance to Construction Activity (Feet)[2]	Distance Attenuation (dBA L_{eq})[3]	Estimated Noise Barrier Attenuation (dBA L_{eq})[4]	Construction Noise Level (dBA L_{eq})
R1	152'	-9.7	0.0	54.5
R2	256'	-14.2	-5.0	45.0
R3	385'	-17.7	0.0	46.4
R4	196'	-11.9	0.0	52.3
R5	111'	-6.9	0.0	57.2

[1] Reference construction noise level measurements taken by Urban Crossroads, Inc.
[2] Distance from the nearest point of construction activity to the nearest receiver.
[3] Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.
[4] Estimated barrier/berm attenuation from existing barriers/berms/buildings in the Project study area.

TABLE 10-4: BUILDING CONSTRUCTION EQUIPMENT NOISE LEVELS

Reference Construction Activity[1]	Reference Noise Level @ 50 Feet (dBA L_{eq})
Construction Vehicle Maintenance Activities	67.5
Foundation Trenching	68.2
Residential Framing	62.3
Highest Reference Noise Level at 50 Feet (dBA L_{eq}):	68.2

Receiver Location	Distance to Construction Activity (Feet)[2]	Distance Attenuation (dBA L_{eq})[3]	Estimated Noise Barrier Attenuation (dBA L_{eq})[4]	Construction Noise Level (dBA L_{eq})
R1	152'	-9.7	0.0	58.5
R2	256'	-14.2	-5.0	49.0
R3	385'	-17.7	0.0	50.4
R4	196'	-11.9	0.0	56.3
R5	111'	-6.9	0.0	61.2

[1] Reference construction noise level measurements taken by Urban Crossroads, Inc.
[2] Distance from the nearest point of construction activity to the nearest receiver.
[3] Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.
[4] Estimated barrier/berm attenuation from existing barriers/berms/buildings in the Project study area.

TABLE 10-5: PAVING EQUIPMENT NOISE LEVELS

Reference Construction Activity[1]	Reference Noise Level @ 50 Feet (dBA L_{eq})
Concrete Paver Activities	65.6
Concrete Mixer Pour & Paving Activities	65.9
Highest Reference Noise Level at 50 Feet (dBA L_{eq}):	65.9

Receiver Location	Distance to Construction Activity (Feet)[2]	Distance Attenuation (dBA L_{eq})[3]	Estimated Noise Barrier Attenuation (dBA L_{eq})[4]	Construction Noise Level (dBA L_{eq})
R1	152'	-9.7	0.0	56.2
R2	256'	-14.2	-5.0	46.7
R3	385'	-17.7	0.0	48.1
R4	196'	-11.9	0.0	54.0
R5	111'	-6.9	0.0	58.9

[1] Reference construction noise level measurements taken by Urban Crossroads, Inc.
[2] Distance from the nearest point of construction activity to the nearest receiver.
[3] Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.
[4] Estimated barrier/berm attenuation from existing barriers/berms/buildings in the Project study area.

TABLE 10-6: ARCHITECTURAL COATING EQUIPMENT NOISE LEVELS

Reference Construction Activity[1]	Reference Noise Level @ 50 Feet (dBA L_{eq})
Residential Framing	62.3
Highest Reference Noise Level at 50 Feet (dBA L_{eq}):	62.3

Receiver Location	Distance to Construction Activity (Feet)[2]	Distance Attenuation (dBA L_{eq})[3]	Estimated Noise Barrier Attenuation (dBA L_{eq})[4]	Construction Noise Level (dBA L_{eq})
R1	152'	-9.7	0.0	52.6
R2	256'	-14.2	-5.0	43.1
R3	385'	-17.7	0.0	44.5
R4	196'	-11.9	0.0	50.4
R5	111'	-6.9	0.0	55.3

[1] Reference construction noise level measurements taken by Urban Crossroads, Inc.
[2] Distance from the nearest point of construction activity to the nearest receiver.
[3] Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.
[4] Estimated barrier/berm attenuation from existing barriers/berms/buildings in the Project study area.

EXHIBIT 10-A: CONSTRUCTION NOISE SOURCE AND RECEIVER LOCATIONS



10.4 CONSTRUCTION NOISE LEVEL COMPLIANCE

The construction noise analysis shows that the highest construction noise levels will occur when construction activities take place at the edge of the Project site boundaries. As shown on Table 10-7, the unmitigated construction noise levels are expected to range from 41.9 to 74.5 dBA L_{eq} at the sensitive receiver locations in the City of Los Angeles. To control noise impacts associated with the construction of the proposed Project, the City of Los Angeles Municipal Code has established an exterior noise level standard of 75 dBA L_{eq}.

TABLE 10-7: UNMITIGATED CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY (DBA L_{EQ})

Receiver Location[1]	Construction Noise Level (dBA Leq)					
	Site Preparation	Grading	Building Construction	Paving	Architectural Coating	Highest Noise Levels[2]
R1	58.5	58.5	62.5	60.2	56.6	62.5
R2	60.9	60.9	64.9	62.6	59.0	64.9
R3	70.5	70.5	74.5	72.2	68.6	74.5
R4	43.8	43.8	47.8	45.5	41.9	47.8

[1] Noise receiver locations are shown on Exhibit 10-A.
[2] Estimated construction noise levels during peak operating conditions.

Based on the Project-related construction noise levels approaching 74.5 dBA L_{eq}, the unmitigated noise levels satisfy the City of Los Angeles Municipal Code 75 dBA L_{eq} exterior noise level standard for construction. Therefore, Project construction noise levels represent a *less than significant* noise impact at adjacent sensitive receiver locations, as shown on Table 10-8.

TABLE 10-8: UNMITIGATED CONSTRUCTION EQUIPMENT NOISE LEVEL COMPLIANCE (DBA L_{EQ})

Receiver Location[1]	Highest Project Construction Noise Level[2]	Threshold[3]	Threshold Exceeded?[4]
R1	62.5	75	No
R2	64.9	75	No
R3	74.5	75	No
R4	47.8	75	No

[1] See Exhibit 10-A for the sensitive receiver locations.
[2] Peak Project construction noise levels as shown on Table 10-8.
[3] Source: City of Los Angeles Municipal Code, Section 112.05.
[6] Do the peak Project construction noise levels exceed the threshold identified by the City of Los Angeles?

10.5 CONSTRUCTION VIBRATION IMPACTS

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods used, distance to the affected structures and soil type. The proposed Project's construction activities most likely to cause vibration impacts are:

- Heavy Construction Equipment: Although all heavy mobile construction equipment has the potential of causing at least some perceptible vibration while operating close to buildings, the vibration is usually short-term and is not of sufficient magnitude to cause building damage.
- Trucks: Trucks hauling building materials to construction sites can be sources of vibration intrusion if the haul routes pass through residential neighborhoods on streets with bumps or potholes. Repairing the bumps and potholes generally eliminates the problem.

Ground-borne vibration levels resulting from construction activities occurring within the Project site were estimated by data published by the Federal Transit Administration. Construction activities that would have the potential to generate low levels of ground-borne vibration within the Project site include grading. Using the vibration source level of construction equipment provided on Table 6-5 and the construction vibration assessment methodology published by the FTA, it is possible to estimate the Project vibration impacts. Table 10-9 presents the expected Project related vibration levels at each of the sensitive receiver locations.

Based on the reference vibration levels provided by the Federal Transit Administration, a large bulldozer represents the peak source of vibration with a reference velocity of 0.089 in/sec peak-particle-velocity (PPV) at 25 feet. At distances ranging from 24 to 522 feet from primary Project construction activities, construction vibration velocity levels are expected to range from 0.001 to 0.095 in/sec PPV at sensitive residential receiver locations. Based on the Caltrans older residential building damage threshold of 0.3 in/sec PPV, the proposed Project construction activities would result in vibration levels which are anticipated to remain below the threshold for building damage, and therefore, represents a *less than significant* impact.

TABLE 10-9: CONSTRUCTION EQUIPMENT VIBRATION LEVELS

Receiver[1]	Distance to Const. Activity (Feet)	Reference Vibration Levels @ 25' & Resulting Vibration at Receiver Locations (in/sec)[2]					Threshold (in/sec PPV)	Threshold Exceeded?[3]
		Small Bulldozer (0.003 in/sec)	Jack-Hammer (0.035)	Loaded Trucks (0.076)	Large Bulldozer (0.089)	Peak Vibration Levels		
R1	96'	0.000	0.005	0.010	0.012	0.012	0.3	No
R2	73'	0.001	0.007	0.015	0.018	0.018	0.3	No
R3	24'	0.003	0.037	0.081	0.095	0.095	0.3	No
R4	522'	0.000	0.000	0.001	0.001	0.001	0.3	No

[1] Receiver locations are shown on Exhibit 10-A.

[2] Based on the FTA's Vibration Source Levels of Construction Equipment previously shown on Table 6-5 at a reference distance of 25 feet. Calculated using the following equation per FTA guidance: PPVequip = PPVref x (25/D)^1.5

Where "PPVequip" = the vibration level at the receiver; "PPVref" = the reference vibration level at 25 feet; and "D" = the distance to each receiver location.

[3] Does the peak vibration exceed the maximum acceptable vibration threshold?

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11 REFERENCES

1. **State of California.** *California Environmental Quality Act, Appendix G.* 2019.
2. **KOA.** *511 South Harbor Boulevard Traffic Impact Study .* September 2019.
3. **California Department of Transportation Environmental Program.** *Technical Noise Supplement - A Technical Supplement to the Traffic Noise Analysis Protocol.* Sacramento, CA : s.n., September 2013.
4. **Environmental Protection Agency Office of Noise Abatement and Control.** *Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety.* March 1974. EPA/ONAC 550/9/74-004.
5. **U.S. Department of Transportation, Federal Highway Administration, Office of Environment and Planning, Noise and Air Quality Branch.** *Highway Traffic Noise Analysis and Abatement Policy and Guidance.* December 2011.
6. **U.S. Department of Transportation, Federal Highway Administration.** *Highway Traffic Noise in the United States, Problem and Response.* April 2000. p. 3.
7. **U.S. Environmental Protection Agency Office of Noise Abatement and Control.** *Noise Effects Handbook-A Desk Reference to Health and Welfare Effects of Noise.* October 1979 (revised July 1981). EPA 550/9/82/106.
8. **Occupational Safety and Health Administration.** *Standard 29 CRF, Part 1910.*
9. **Office of Planning and Research.** *State of California General Plan Guidlines.* 2018.
10. **City of Los Angeles.** *General Plan Noise Element.* February 1999.
11. —. *Municipal Code, Chapter XI - Noise Regulation.*
12. **American National Standards Institute (ANSI).** *Specification for Sound Level Meters ANSI S1.4-2014/IEC 61672-1:2013.*
13. **California Department of Transportation Environmental Program.** *Technical Noise Supplement - A Technical Supplement to the Traffic Noise Analysis Protocol.* Sacramento, CA : s.n., September 2013.
14. **U.S. Department of Transportation, Federal Transit Administration.** *Transit Noise and Vibration Impact Assessment.* May 2006. FTA-VA-90-1003-06.
15. **U.S. Department of Transportation, Federal Highway Administration.** *FHWA Highway Traffic Noise Prediction Model.* December 1978. FHWA-RD-77-108.
16. **California Department of Transportation Environmental Program, Office of Environmental Engineering.** *Use of California Vehicle Noise Reference Energy Mean Emission Levels (Calveno REMELs) in FHWA Highway Traffic Noise Prediction.* September 1995. TAN 95-03.
17. **National Electrical Manufacturers Association.** *TR 1-2013 - Transformers, Step Voltage Regulators and Reactors.* 2014.
18. **Urban Crossroads, Inc.** *Parkview Air Quality.* August 2019.

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12 CERTIFICATION

The contents of this noise study report represent an accurate depiction of the noise environment and impacts associated with the proposed 511 South Harbor Boulevard Project. The information contained in this noise study report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at (949) 336-5979.

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EDUCATION

Master of Science in Civil and Environmental Engineering
California Polytechnic State University, San Luis Obispo • December, 1993

Bachelor of Science in City and Regional Planning
California Polytechnic State University, San Luis Obispo • June, 1992

PROFESSIONAL REGISTRATIONS

PE – Registered Professional Traffic Engineer – TR 2537 • January, 2009
AICP – American Institute of Certified Planners – 013011 • June, 1997–January 1, 2012
PTP – Professional Transportation Planner • May, 2007 – May, 2013
INCE – Institute of Noise Control Engineering • March, 2004

PROFESSIONAL AFFILIATIONS

ASA – Acoustical Society of America
ITE – Institute of Transportation Engineers

PROFESSIONAL CERTIFICATIONS

Certified Acoustical Consultant – County of Orange • February, 2011
FHWA-NHI-142051 Highway Traffic Noise Certificate of Training • February, 2013

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APPENDIX 3.1:

CITY OF LOS ANGELES MUNICIPAL CODE

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CHAPTER XI
NOISE REGULATION

(Added by Ord. No. 144,331, Eff. 3/2/73.)

Article

1 General Provisions
2 Special Noise Sources
3 Sanitary Operations
4 Vehicles
5 Amplified Sounds
6 General Noise

ARTICLE 1
GENERAL PROVISIONS

Section

111.00 Declaration of Policy.
111.01 Definitions.
111.02 Sound Level Measurement Procedure and Criteria.
111.03 Minimum Ambient Noise Level.
111.04 Violations: Additional Remedies, Injunctions.
111.05 Enforcement, Citations.

SEC. 111.00. DECLARATION OF POLICY.

It is hereby declared to be the policy of the City to prohibit unnecessary, excessive and annoying noises from all sources subject to its police power. At certain levels noises are detrimental to the health and welfare of the citizenry and in the public interests shall be systematically proscribed.

SEC. 111.01. DEFINITIONS.

Unless the context otherwise clearly indicates, the words and phrases used in this chapter are defined as follows:

(a) "**Ambient Noise**" is the composite of noise from all sources near and far in a given environment, exclusive of occasional and transient intrusive noise sources and of the particular noise source or sources to be measured. Ambient noise shall be averaged over a period of at least 15 minutes at a location and time of day comparable to that during which the measurement is taken of the particular noise source being measured. **(Amended by Ord. No. 156,363, Eff. 3/29/82.)**

(b) "**Commercial Purpose**" is the use, operation, or maintenance of any sound amplifying equipment for the purpose of advertising any business, goods, or services, or for the purpose of attracting the attention of the public to, advertising for, or soliciting patronage or customers to or for any performance, show, entertainment, exhibition, or event, or for the purpose of demonstrating such sound equipment. **(Amended by Ord. No. 156,363, Eff. 3/29/82.)**

(c) "**Decibel**" (dB) is a unit of level which denotes the ratio between two (2) quantities which are proportional to power; the number of decibels corresponding to the ratio of two (2) amounts of power is ten (10) times the logarithm to the base (10) of this ratio. **(Amended by Ord. No. 156,363, Eff. 3/29/82.)**

(d) "**Emergency Work**" is work made necessary to restore property to a safe condition following a public calamity or work required to protect persons or property from an imminent exposure to danger, or work by private or public utilities when restoring utility service. **(Amended by Ord. No. 156,363, Eff. 3/29/82.)**

(e) "**Impulsive Sound**" is sound of short duration, usually less than one second, with an abrupt onset and rapid decay. By way of example "**impulsive sound**" shall include, but shall not be limited to, explosions, musical base drum beats, or the discharge of firearms. **(Amended by Ord. No. 156,363, Eff. 3/29/82.)**

(f) "**Motor Vehicle**" includes, but shall not be limited to, automobiles, trucks, motorcycles, minibikes and go-carts. **(Amended by Ord. No. 156,363, Eff. 3/29/82.)**

(g) "**Noncommercial Purpose**" is the use, operation, or maintenance of any sound equipment for other than a "commercial purpose". "Noncommercial purpose" shall mean and include, but shall not be limited to, philanthropic, political, patriotic, and charitable purposes. **(Amended by Ord. No. 156,363, Eff. 3/29/82.)**

(h) "**Octave Band Noise Analyzer**" is an instrument for measurement of sound levels in octave frequency bands which satisfies the pertinent requirements for Class II octave band analyzers of the American National Standard Specifications for Octave, Half-Octave, and Third-Octave Band Filters, S1.11-1966 or the most recent revision thereof. **(Amended by Ord. No. 156,363, Eff. 3/29/82.)**

(i) "**Person**" is a person, firm, association, co-partnership, joint venture, corporation, or any entity, private or public in nature. **(Amended by Ord. No. 156,363, Eff. 3/29/82.)**

(j) "**Sound Amplifying Equipment**" **(Amended by Ord. No. 156,363, Eff. 3/29/82.)** is any machine or device for the amplification of the human voice, music or any other sound, but shall not include:

1. Automobile radios, stereo players or television receivers when used and heard only by the occupants of the vehicle in which the same is installed.

2. Radio, stereo players, phonographs or television receivers used in any house or apartment within any residential zone or within 500 feet thereof.

3. Warning devices on emergency vehicles.

4. Horns or other warning devices authorized by law on any vehicle when used for traffic purposes.

(k) "**Sound Level**" (Noise level) in decibels (dB) is the sound measured with the "A" weighting and slow responses by a sound level meter; except for impulsive or rapidly varying sounds, the fast response shall be used. **(Amended by Ord. No. 156,363, Eff. 3/29/82.)**

(l) "**Sound Level Meter**" is an instrument including a microphone, an amplifier, an output meter, and "A" frequency weighting network for the measurement of sound levels which satisfies the pertinent requirements for Type S2A meters in American Standard Specifications for sound level meters in S1.4-1971 or the most recent revision thereof. **(Amended by Ord. No. 156,363, Eff. 3/29/82.)**

(m) "**Sound Truck**" is any motor vehicle, or any other vehicle regardless of motive power, whether in motion or stationary, which carries, is equipped with, or which has mounted thereon, or attached thereto, any sound amplifying equipment. **(Amended by Ord. No. 156,363, Eff. 3/29/82.)**

(n) **Supplementary Definitions of Technical Terms**. Definitions of technical terms not defined herein shall be obtained from American Standard Acoustical Terminology S1-1-1971 or the most recent revision thereof. **(Amended by Ord. No. 156,363, Eff. 3/29/82.)**

SEC. 111.02. SOUND LEVEL MEASUREMENT PROCEDURE AND CRITERIA.

(Title amended by Ord. No. 156,363, Eff. 3/29/82.)

(a) **(Amended by Ord. No. 156,363, Eff. 3/29/82.)** Any sound level measurement made pursuant to the provisions of this chapter shall be measured with a sound level meter using the "A" weighting and response as indicated in Section 111.01(k) of this article.

Except when impractical, the microphone shall be located four to five feet above the ground and ten feet or more from the nearest reflective surface. However, in those cases where another elevation is deemed appropriated, the latter shall be utilized.

Interior sound level measurements shall be made at a point at least four feet from the wall, ceiling, or floor nearest the noise source.

Calibration of the sound level meter, utilizing an acoustic calibrator shall be performed immediately prior to recording any sound level data. The ambient noise level and the level of a particular noise being measured shall be the numerical average of noise measurements taken at a given location during a given time period.

(b) **(Amended by Ord. No. 156,363, Eff. 3/29/82.)** Where the sound alleged to be offending is of a type or character set forth below, the following values shall be added to the sound level measurement of the offending noise:

1. Except for noise emanating from any electrical transformer or gas metering and pressure control equipment existing and installed prior to the effective date of the ordinance enacting this chapter, any steady tone with audible fundamental frequency or overtones have 200 Hz.....+5

2. Repeated impulsive noise.....+5

3. Noise occurring more than 5 but less than 15 minutes in any period of 60 consecutive minutes between the hours of 7:00 a.m. and 10:00 p.m. of any day.....-5

4. Noise occurring five minutes or less in any period of 60 consecutive minutes, between the hours of 7:00 a.m. and 10:00 p.m. of any day.....-5 **(Amended by Ord. No. 161,574, Eff. 9/8/86.)**

(c) For those cases where an objectionable noise is clearly audible, but where the level of ambient noise does not permit direct quantative sound level "A" measurements of the objectionable noise, sound measurements may be performed utilizing an octave band sound analyzer to determine sound level "A" limits as indicated in the Table I below. This table is used to convert the sound pressure level meter readings in dB for each band to SPL in dB(A) for each band.

TABLE I
OCTAVE BAND NOISE VALUES CORRESPONDING TO SOUND LEVEL "A" VALUES

Sound Level	Octave Band Sound Pressure Level, dB re .0002 dyne/cm^2 Octave Band Center Frequency in Hz								
"A"	31.5	63	125	250	500	1000	2000	4000	8000
35	58	50	42	35	32	29	26	23	20
40	61	54	46	40	37	34	31	28	25
45	64	58	51	45	42	39	36	33	30
50	67	61	55	50	47	44	41	38	35
55	70	64	60	55	52	49	46	43	40
60	73	68	64	60	57	54	51	48	45
65	76	72	68	65	62	59	56	53	50
70	79	76	73	70	67	64	61	58	55
75	84	81	78	75	72	69	66	63	60

(d) For those cases where a sound level measurement has been made pursuant to the provisions of this chapter and two or more provisions of this chapter apply, the provision establishing the lower or lowest noise level, respectively, shall be used. **(Added by Ord. No. 156,363, Eff. 3/29/82.)**

SEC. 111.03. MINIMUM AMBIENT NOISE LEVEL.

(Amended by Ord. No. 156,363, Eff. 3/29/82.)

Where the ambient noise level is less than the presumed ambient noise level designated in this section, the presumed ambient noise level in this section shall be deemed to be the minimum ambient noise level for purposes of this chapter.

TABLE II
SOUND LEVEL "A" DECIBELS

(In this chart, daytime levels are to be used from 7:00 a.m. to 10:00 p.m. and nighttime levels from 10:00 p.m. to 7:00 a.m.)

	PRESUMED AMBIENT NOISE LEVEL (dB(A))	
ZONE	**DAY**	**NIGHT**
A1, A2, RA, RE, RS, RD, RW1, RW2, R1, R2, R3, R4, and R5	50	40
P, PB, CR, C1, C1.5, C2, C4, C5, and CM	60	55
M1, MR1, and MR2	60	55
M2 and M3	65	65

At the boundary line between two zones, the presumed ambient noise level of the quieter zone shall be used.

SEC. 111.04. VIOLATIONS: ADDITIONAL REMEDIES, INJUNCTIONS.

As an additional remedy, the operation or maintenance of any device, instrument, vehicle, or machinery in violation of any provision of this chapter, which operation or maintenance causes discomfort or annoyance to reasonable persons or which endangers the comfort, repose, health, or peace of residents in the area, shall be deemed and is declared to be.a public nuisance and may be subject to abatement summarily by a restraining order or injunction issued by a court order of competent jurisdiction. **(Amended by Ord. No. 156,363, Eff. 3/29/82.)**

SEC. 111.05. ENFORCEMENT, CITATIONS.

(Added by Ord. No. 156,363, Eff. 3/29/82.)

(a) The Department of Building and Safety shall have the power and duty to enforce the following noise control provisions of this Code: Section 12.14 A.6.(h), Section 12.19 A.4.(b)(1), Section 112.02 and Section 112.04(c). **(Amended by Ord. No. 172,086, Eff. 7/30/98.)**

(b) The Police Department shall have the power and duty to enforce the following noise control provisions of this Code: Section 41.32, Section 41.40, Section 41.42, Section 41.44, Section 41.57, Section 63.51(m), Section 112.01, Section 112.04, Section 112.05, Section 112.06, Section 113.01, Section 114.01 through Section 114.05, inclusive, Section 115.02 through Section 115.03, inclusive, and Section 116.01. **(Amended by Ord. No. 185,601, Eff. 7/18/18.)**

(c) Any Building Mechanical Inspector assigned to noise enforcement inspection shall have the power, authority and immunity of a

public officer and employee, as set forth in the Penal Code of the State of California, Section 836.5, to make arrests without a warrant whenever such employee has reasonable cause to believe that the person to be arrested has committed a misdemeanor in his presence which is a violation of any provision set forth in Section 111.05(a) of this chapter. The provisions of said Penal Code section regarding issuance of a written promise to appear shall be applicable to arrests authorized herein.

ARTICLE 2
SPECIAL NOISE SOURCES

Section
112.01 Radios, Television Sets, and Similar Devices.
112.02 Air Conditioning, Refrigeration, Heating, Pumping, Filtering Equipment.
112.03 Construction Noise.
112.04 Powered Equipment Intended for Repetitive Use in Residential Areas and Other Machinery, Equipment, and Devices.
112.05 Maximum Noise Level of Powered Equipment or Powered Hand Tools.
112.06 Places of Public Entertainment.

SEC. 112.01. RADIOS, TELEVISION SETS, AND SIMILAR DEVICES.
(Amended by Ord. No. 156,363, Eff. 3/29/82.)

(a) It shall be unlawful for any person within any zone of the City to use or operate any radio, musical instrument, phonograph, television receiver, or other machine or device for the producing, reproducing or amplification of the human voice, music, or any other sound, in such a manner, as to disturb the peace, quiet, and comfort of neighbor occupants or any reasonable person residing or working in the area.

(b) Any noise level caused by such use or operation which is audible to the human ear at a distance in excess of 150 feet from the property line of the noise source, within any residential zone of the City or within 500 feet thereof, shall be a violation of the provisions of this section.

(c) Any noise level caused by such use or operation which exceeds the ambient noise level on the premises of any other occupied property, or if a condominium, apartment house, duplex, or attached business, within any adjoining unit, by more than five (5) decibels shall be a violation of the provisions of this section.

SEC. 112.02. AIR CONDITIONING, REFRIGERATION, HEATING, PUMPING, FILTERING EQUIPMENT.
(Amended by Ord. No. 156,363, Eff. 3/29/82.)

(a) It shall be unlawful for any person, within any zone of the city to operate any air conditioning, refrigeration or heating equipment for any residence or other structure or to operate any pumping, filtering or heating equipment for any pool or reservoir in such manner as to create any noise which would cause the noise level on the premises of any other occupied property or if a condominium, apartment house, duplex, or attached business, within any adjoining unit.to exceed the ambient noise level by more than five (5) decibels

(b) This section shall not be applicable to emergency work as defined in Section 111.01(c) of this chapter, or to periodic maintenance or testing of such equipment reasonably necessary to maintain such equipment in good working order.

SEC. 112.03. CONSTRUCTION NOISE.

Noise due to construction or repair work shall be regulated as provided by Section 41.40 of this Code. **(Amended by Ord. No. 161,574, Eff. 9/8/86.)**

SEC. 112.04. POWERED EQUIPMENT INTENDED FOR REPETITIVE USE IN RESIDENTIAL AREAS AND OTHER MACHINERY, EQUIPMENT, AND DEVICES.

(Title and Section Amended by Ord. No. 161,574, Eff 9/8/86.)

(a) Between the hours of 10:00 p.m and. 7:00 a.m. of the following day, no person shall operate any lawn mower, backpack blower, lawn edger, riding tractor, or any other machinery, equipment, or other mechanical or electrical device, or any hand tool which creates a loud, raucous or impulsive sound, within any residential zone or within 500 feet of a residence.

(b) Except as to the equipment and operations specifically mentioned and related elsewhere in this Chapter or for emergency work as that term is defined in Section 111.01(d), and except as to aircraft, tow tractors, aircraft auxiliary power units, trains and motor vehicles in their respective operations governed by State or federal regulations, no person shall operate or cause to be operated any machinery, equipment, tools, or other mechanical or electrical device, or engage in any other activity in such manner as to create any noise which would cause the noise level on the premises of any other occupied property, or, if a condominium, apartment house, duplex, or attached business, within any adjoining unit, to exceed the ambient noise level by more than five (5) decibels.

(c) Notwithstanding the provisions of Subsection (a) above, no gas powered blower shall be used within 500 feet of a residence at anytime. Both the user of such a blower as well as the individual who contracted for the services of the user, if any, shall be subject to the requirements of and penalty provisions for this ordinance. Violation of the provisions of this subsection shall be punishable as an infraction in an amount not to exceed One Hundred Dollars ($100.00), notwithstanding the graduated fines set forth in LAMC § 11.00(m). **(Amended by Ord. No. 171,890, Eff. 2/13/98.)**

SEC. 112.05. MAXIMUM NOISE LEVEL OF POWERED EQUIPMENT OR POWERED HAND TOOLS.

(Amended by Ord. No. 161,574, Eff. 9/8/86.)

Between the hours of 7:00 a.m. and 10:00 p.m., in any residential zone of the City or within 500 feet thereof, no person shall operate or cause to be operated any powered equipment or powered hand tool that produces a maximum noise level exceeding the following noise limits at a distance of 50 feet therefrom:

(a) 75dB(A) for construction, industrial, and agricultural machinery including crawler-tractors, dozers, rotary drills and augers, loaders, power shovels, cranes, derricks, motor graders, paving machines, off-highway trucks, ditchers, trenchers, compactors, scrapers, wagons, pavement breakers, compressors and pneumatic or other powered equipment;

(b) 75dB(A) for powered equipment of 20 HP or less intended for infrequent use in residential areas, including chain saws, log chippers and powered hand tools;

(c) 65dB(A) for powered equipment intended for repetitive use in residential areas, including lawn mowers, backpack blowers, small lawn and garden tools and riding tractors;

The noise limits for particular equipment listed above in (a), (b) and (c) shall be deemed to be superseded and replaced by noise limits for such equipment from and after their establishment by final regulations adopted by the Federal Environmental Protection Agency and published in the Federal Register.

Said noise limitations shall not apply where compliance therewith is technically infeasible The burden of proving that compliance is technically infeasible shall be upon the person or persons charged with a violation of this section. Technical infeasibility shall mean that said noise limitations cannot be complied with despite the use of mufflers, shields, sound barriers and/or other noise reduction device or techniques during the operation of the equipment.

SEC. 112.06. PLACES OF PUBLIC ENTERTAINMENT.

It shall be unlawful for any person to operate, play, or to permit the operation or playing of any radio, television receiver, phonograph, musical instrument, sound amplifying equipment, or similar device which produces, reproduces, or amplifies sound in any place of public entertainment at a sound level greater than 95dB(A) at any point that is normally occupied by a customer, unless a conspicuous and legible sign is located outside such place, near each public entrance, stating:

"WARNING: SOUND LEVELS WITHIN MAY CAUSE HEARING IMPAIRMENT."

(Added by Ord. No. 156,363, Eff. 3/29/82.)

ARTICLE 3
SANITARY OPERATION

Section
113.01 Rubbish and Garbage Collection and Disposal.

SEC. 113.01. RUBBISH AND GARBAGE COLLECTION AND DISPOSAL.
(Amended by Ord. No. 161,574, Eff. 9/8/86.)

It shall be unlawful for any person engaged in the business of collecting or disposing of rubbish or garbage to operate any refuse disposal truck, parking lot sweeper, or vacuum truck, or to collect, load, pick up, transfer, unload, dump, discard, sweep, vacuum, or dispose of any rubbish or garbage, as such terms are defined in Section 66.00 of this Code, within 200 feet of any residential building between the hours of 9:00 p.m. and 6:00 a.m. of the following day, unless a permit therefore has been duly obtained beforehand from the Board of Police Commissioners.

The standards which shall be considered in determining whether a permit shall be granted are the following:

(a) Whether the work to be done is in the public interest, or

(b) Whether the applicant would suffer hardship, injustice or delay if the permit were not granted, or

(c) Whether fuel conservation would result if the permit were issued.

No permit shall be required to perform emergency work as defined in Sec. 111.01(c) of this chapter.

ARTICLE 4
VEHICLES

Section
114.01 Vehicle Repairs.
114.02 Motor Driven Vehicles.
114.03 Vehicles - Loading and Unloading.
114.04 Audible Signaling Devices.
114.05 Audible Advertising Devices - Commercial Food Vendors.
114.06 Vehicle Theft Alarm Systems.
114.07 Audible Status Indicator

SEC. 114.01. VEHICLE REPAIRS.
(Amended by Ord. No. 156,363, Eff. 3/29/82.)

It shall be unlawful for any person, within any residential property located within any residential zone of the City or within 500 feet thereof, to repair, rebuild, reconstruct or dismantle any motor vehicle between the hours of 8:00 p.m. of one day and 8:00 a.m. of the next day in such manner:

(a) That a reasonable person residing in the area is caused discomfort or annoyance;

(d) That such activity is audible to the human ear at a distance in excess of 150 feet from the property line of the noise source;

(c) As to create any noise which would cause the noise level on the premises of any occupied residential property, or if a condominium, apartment house or duplex, within any adjoining unit, to exceed the ambient noise level by more than five (5) decibels.

SEC. 114.02. MOTOR DRIVEN VEHICLES.

(Amended by Ord. No. 156,363, Eff. 3/29/82.)

(a) It shall be unlawful for any person to unreasonably operate any motor driven vehicle upon any property within the City or to unreasonably accelerate the engine of any vehicle, or unreasonably sound, blow or operate the horn or other warning device of such vehicle in such manner:

1. As to disturb the peace, quiet and comfort of any neighborhood or of any reasonable person residing in such area

2. That such activity is audible to the human ear at a distance in excess of 150 feet from the property line of the noise source;

3. As to create any noise which would cause the noise level on the premises of any occupied residential property, or if a condominium, apartment house or duplex, within any adjoining unit, to exceed the ambient noise level by more than five (5) decibels.

(b) This section shall not be applicable to any vehicle which is operated upon any public highway, street or right-of-way or to the operation of any off-highway vehicle to the extent it is regulated in the Vehicle Code.

SEC. 114.03. VEHICLES - LOADING AND UNLOADING.

(Amended by Ord. No. 166,514, Eff. 1/24/91.)

(a) It shall be unlawful for any person, between the hours of 10:00 p.m. and 7:00 a.m. of the following day, to load or unload any vehicle, or operate any dollies, carts, forklifts, or other wheeled equipment, which causes any impulsive sound, raucous or unnecessary noise within 200 feet of any residential building.

(b) Irrespective of the provisions of Subsection (a), loading or unloading of vehicles of the type of activity referred to in Subsection (a) may occur between the hours of 6:00 a.m. to 11:00 p.m. of the same day pursuant to a permit issued by the Department of Transportation in accordance with a business program as defined by said department. This permit program would be limited to the area bounded by Western Avenue, Santa Monica Freeway, Central Avenue, and the San Diego Freeway, within the limits of the City of Los Angeles. Such permits will not be issued to high-noise businesses such as trash pickup.

SEC. 114.04. AUDIBLE SIGNALING DEVICES.

(Added by Ord. No. 161,574, Eff. 9/8/86.)

It shall be unlawful for any person, within any residential zone of the City or within 500 feet thereof, to sound, blow, or operate any audible signaling device, including sequential airhorns or electronically operated vehicular loud speaker music devices, which can be heard for a distance greater than 200 feet for any purpose. Violation of this section shall constitute an infraction This section does not address horn or warning devices regulated in Article 1 of Chapter 5 of Division 12 of the Vehicle Code of the State of California, commencing at Section 27000. **(Last sentence amended by Ord. No. 165.191, Eff. 10/23/89.)**

SEC. 114.05. AUDIBLE ADVERTISING DEVICES - COMMERCIAL FOOD VENDORS.

(Added by Ord. No. 164,532, Eff. 4/20/89.)

Notwithstanding the provisions of Section 114.04, it shall be unlawful for any person, to sound, blow or operate any music, chimes or bells, or any similar sound device, amplified or otherwise, within 200 feet of any residential building between the hours of 9:00 p.m. and

7:00 a.m. the next day while operating a catering truck, as that term is defined in Section 80.73 of the Municipal Code.

SEC. 114.06. VEHICLE THEFT ALARM SYSTEMS.

(Former Sec. 114.05, Renumbered by Ord. No. 164,532, Eff. 4/20/89.)

It shall be unlawful for any person to install, operate or use any vehicle theft alarm system that emits or causes the emission of an audible sound, which is not, or does not become, automatically and completely silenced within five minutes. The time period shall be calculated based upon the emission of the first audible sound and shall end five minutes thereafter notwithstanding any variation or stoppage in the emissions of audible sound. Violation of this section shall constitute an infraction.

SEC. 114.07. AUDIBLE STATUS INDICATOR.

(Added by Ord. No. 169,785, Eff. 6/9/94.)

It shall be unlawful for any person to install, operate, use or maintain any vehicle theft alarm system which utilizes an audible status indicator emitting or causing the emission of an audible sound for a duration of more than one minute. The time period shall be calculated from the point in time of the emission of the first audible sound used in calculation and shall end one minute thereafter, notwithstanding any variation or temporary stoppage in the emission of audible sound.

As used in this section, an audible status indicator is a component of a vehicle theft alarm system which emits sound audible outside the vehicle for the purpose of warning that a vehicle theft alarm system is installed and armed or operational. The term "**audible status indicator**" shall include any device which emits a chirp, voice message or other sound when an approaching person is within a certain distance of the vehicle in which the device is installed.

In the event enforcement of a violation occurs under this section, no enforcement shall be taken under Section 80.75.1 of the Municipal Code for the same violation.

Violation of any provision of this section shall constitute an infraction.

ARTICLE 5
AMPLIFIED SOUND

Section
115.01 Purpose.
115.02 Prohibition and Regulations.
115.03 Amplified Sound on Unenclosed Tour Buses.

SEC. 115.01. PURPOSE.

The Council enacts this legislation for the sole purpose of securing and promoting the public health, comfort, safety, and welfare of its citizenry. While recognizing that certain uses of sound amplifying equipment are protected by the constitutional rights of freedom of speech and assembly, the Council nevertheless feels obligated to reasonably regulate the use of sound amplifying equipment in order to protect the correlative constitutional rights of the citizens of this community to privacy and freedom from public nuisance of loud and unnecessary noise.

SEC. 115.02. PROHIBITION AND REGULATIONS.

It shall be unlawful for any person, other than personnel of law enforcement or governmental agencies, or permittees duly authorized to use the same pursuant to Sec. 103.111 of this Code, to install, use, or operate within the City a loudspeaker or sound amplifying equipment in a fixed or movable position or mounted upon any sound truck for the purposes of giving instructions, directions, talks, addresses, lectures, or transmitting music to any persons or assemblages of persons in or upon any public street, alley, sidewalk, park

or place, or other public property except when installed, used or operated in compliance with the following provisions:

(a) In all residential zones and within 500 feet thereof, no sound amplifying equipment shall be installed, operated or used for commercial purposes at any time.

(b) The operation or use of sound amplifying equipment for noncommercial purposes in all residential zones and within 500 feet thereof, except when used for regularly scheduled operative functions by any school or for the usual and customary purposes of any church, is prohibited between the hours of 4:30 p.m. and 9:00 a.m. of the following day.

(c) In all other zones, except such portions thereof as may be included within 500 feet of any residential zone, the operation or use of sound amplifying equipment for commercial purposes is prohibited between the hours of 9:00 p.m. and 8:00 a.m. of the following day.

(d) In all other zones, except such portions thereof as may be included within 500 feet of any residential zone, the operation or use of sound amplifying equipment for noncommercial purposes is prohibited between the hours of 10:00 p.m. and 7:00 a.m. of the following day.

(e) The only sounds permitted shall be either music, human speech, or both.

(f) Sound emanating from sound amplifying equipment shall be limited in volume, tone and intensity as follows:

1. The sound shall not be audible at a distance in excess of 200 feet from the sound equipment.

2. In no event shall the sound be loud and raucous or unreasonably jarring, disturbing, annoying or a nuisance to reasonable persons of normal sensitiveness within the area of audibility.

(g) Except as provided in (b) above, no sound amplifying equipment shall be operated upon any property adjacent to and within 200 feet of any hospital grounds or any school or church building while in use.

(h) **(Amended by Ord. No. 145,691, Eff. 5/2/74.)** The operation or use of any sound amplifying equipment installed, mounted, attached or carried in or by any sound truck is further prohibited:

1. Within the Central Traffic district at any time;

2. Upon Hollywood Boulevard between Vermont Avenue and La Brea at any time;

3. Upon Wilshire Boulevard at any time;

4. Upon Sunset Boulevard at any time;

5. Upon Vine Street at any time;

6. Upon any street between the hours of 4:30 p.m. and 9:00 a.m. of the following day;

7. Upon any street on any Sunday.

SEC. 115.03. AMPLIFIED SOUND ON UNENCLOSED TOUR BUSES.

(Added by Ord. No. 185,601, Eff. 7/18/18.)

(a) **Definitions.** As used in this section:

1. "**Operator**" means any person or corporation who conducts a business or enterprise that operates one or more Unenclosed Tour Buses.

2. "**Sound Amplifying Equipment**" shall have the same meaning as in Subsection (j) of Section 111.01 of this chapter, and shall include loud speakers and public address systems.

3. "**Tour Bus**" means a privately-owned bus or passenger vehicle for hire, which is operated by or for a charter-party carrier of passengers or a passenger stage corporation, as set forth in California Vehicle Code Section 612, subsection (a), and as defined in California Public Utilities Code Sections 226 and 5360. A Tour Bus includes any vehicle that is used primarily for the conveyance of passengers over the public streets, for the purpose of visiting or viewing places of interest.

4. "**Unenclosed Tour Bus**" means a Tour Bus that has had its roof substantially structurally modified or removed, as set forth in California Vehicle Code Section 612, Subsection (b), such that it can be and is operated without a solid roof covering all seating areas of the vehicle. An Unenclosed Tour Bus shall also include any Tour Bus that has had its side panels substantially structurally modified and/or removed, such that it can be and is operated without side panels fully enclosing the sides of the vehicle, when doors and windows are closed.

(b) **Use of Sound Amplifying Equipment Prohibited.** It shall be unlawful for any Operator or any person employed by an Operator to cause, allow, or permit the use of Sound Amplifying Equipment on any Unenclosed Tour Bus while the vehicle is operating within the City of Los Angeles.

(c) **Violation and Punishment.** A violation of this Section shall constitute an infraction pursuant to California Vehicle Code Sections 40000.1 and 42001, and shall be punished pursuant to the fine structure set forth in California Vehicle Code Section 42001.

(d) **Severability.** If any subsection, subdivision, sentence, clause, phrase, or portion of this section, or the application thereof to any person, is for any reason held to be invalid or constitutional by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this section or its application to other persons. The City Council hereby declares that it would have adopted this section and each subsection, subdivision, sentence, clause, phrase or portion thereof, irrespective of the fact that any one or more subsections, subdivisions, sentences, clauses, phrases, or portions, or the application thereof to any person, be declared invalid or unconstitutional.

ARTICLE 6
GENERAL NOISE

Section
116.01 Loud, Unnecessary and Unusual Noise.

SEC. 116.01. LOUD, UNNECESSARY AND UNUSUAL NOISE.

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 residing in the area. 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:

(a) The level of noise;

(b) Whether the nature of the noise is usual or unusual;

(c) Whether the origin of the noise is natural or unnatural;

(d) The level and intensity of the background noise, if any;

(e) The proximity of the noise to residential sleeping facilities;

(f) The nature and zoning of the area within which the noise emanates;

(g) The density of the inhabitation of the area within which the noise emanates;

(h) The time of the day and night the noise occurs;

(i) The duration of the noise;

(j) Whether the noise is recurrent, intermittent, or constant; and

(k) Whether the noise is produced by a commercial or noncommercial activity.

APPENDIX 5.1:

STUDY AREA PHOTOS

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JN: 12897 Study Area Photos



L1_E
33, 44' 27.080000", 118, 16' 47.640000"



L1_N
33, 44' 27.030000", 118, 16' 47.610000"



L1_S
33, 44' 27.080000", 118, 16' 47.610000"



L2_E
33, 44' 23.680000", 118, 16' 49.750000"



L2_N
33, 44' 23.440000", 118, 16' 49.840000"

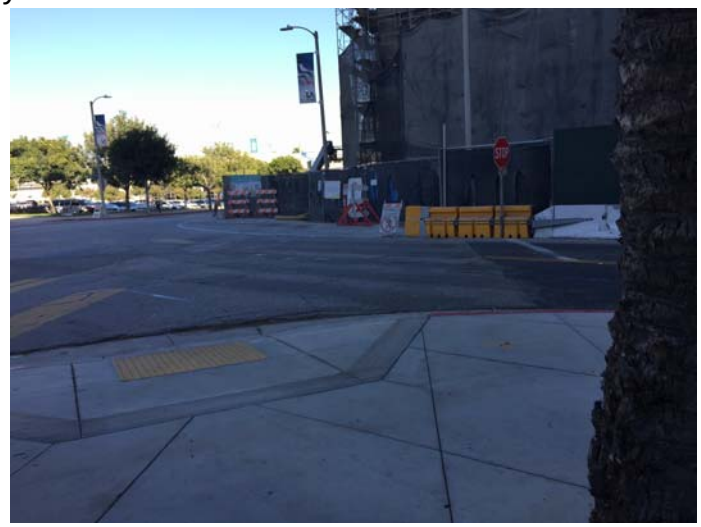


L2_S
33, 44' 23.770000", 118, 16' 50.030000"

JN: 12897 Study Area Photos



L2_W
33, 44' 23.680000", 118, 16' 49.670000"



L3_E
33, 44' 24.130000", 118, 16' 53.490000"



L3_N
33, 44' 24.130000", 118, 16' 53.490000"



L3_S
33, 44' 24.130000", 118, 16' 53.490000"



L3_W
33, 44' 24.130000", 118, 16' 53.490000"



L4_E
33, 44' 28.680000", 118, 16' 53.380000"

JN: 12897 Study Area Photos



L4_N
33, 44' 28.660000", 118, 16' 53.410000"



L4_S
33, 44' 28.660000", 118, 16' 53.410000"



L4_W
33, 44' 28.690000", 118, 16' 53.380000"

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APPENDIX 5.2:

NOISE LEVEL MEASUREMENT WORKSHEETS

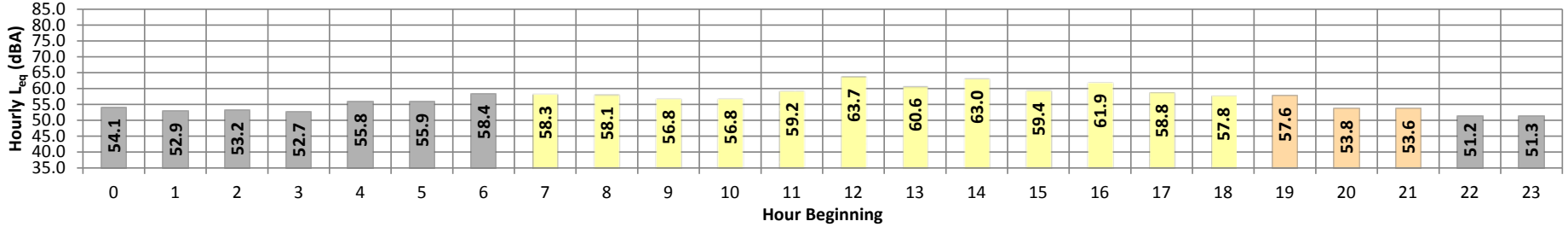
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24-Hour Noise Level Measurement Summary

Date: Wednesday, November 06, 2019 *Location:* L1 - Located north of the Project site on South Harbor Boulevard near the Port of Los Angeles Boys and Girls Club. *Meter:* Piccolo I *JN:* 12897

Project: 511 S. HARBOR BOULEVARD MIXED-USE *Analyst:* P. Mara

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	54.1	63.3	51.1	58.0	56.0	55.0	55.0	54.0	53.0	52.0	52.0	51.0	54.1	10.0	64.1
	1	52.9	65.2	48.4	58.0	56.0	55.0	54.0	53.0	52.0	50.0	50.0	49.0	52.9	10.0	62.9
	2	53.2	76.8	44.1	61.0	58.0	54.0	53.0	50.0	48.0	45.0	45.0	44.0	53.2	10.0	63.2
	3	52.7	76.7	43.5	60.0	58.0	54.0	52.0	49.0	47.0	45.0	45.0	44.0	52.7	10.0	62.7
	4	55.8	73.6	46.5	66.0	64.0	60.0	58.0	54.0	52.0	49.0	48.0	48.0	55.8	10.0	65.8
	5	55.9	77.3	44.5	65.0	64.0	60.0	59.0	55.0	52.0	47.0	47.0	45.0	55.9	10.0	65.9
	6	58.4	75.1	48.2	68.0	65.0	62.0	61.0	58.0	56.0	52.0	51.0	49.0	58.4	10.0	68.4
Day	7	58.3	81.5	48.2	67.0	65.0	61.0	60.0	56.0	54.0	50.0	50.0	49.0	58.3	0.0	58.3
	8	58.1	79.6	47.4	69.0	68.0	62.0	59.0	54.0	52.0	49.0	48.0	48.0	58.1	0.0	58.1
	9	56.8	77.3	47.2	67.0	64.0	60.0	59.0	55.0	53.0	49.0	49.0	48.0	56.8	0.0	56.8
	10	56.8	71.6	48.1	65.0	64.0	61.0	60.0	56.0	54.0	50.0	50.0	49.0	56.8	0.0	56.8
	11	59.2	80.2	48.4	68.0	66.0	62.0	61.0	57.0	55.0	52.0	51.0	50.0	59.2	0.0	59.2
	12	63.7	80.2	50.5	72.0	71.0	69.0	68.0	65.0	58.0	53.0	52.0	51.0	63.7	0.0	63.7
	13	60.6	81.1	50.2	71.0	69.0	66.0	64.0	58.0	55.0	52.0	51.0	51.0	60.6	0.0	60.6
	14	63.0	87.7	50.3	73.0	71.0	66.0	64.0	59.0	57.0	53.0	53.0	51.0	63.0	0.0	63.0
	15	59.4	82.2	51.3	68.0	66.0	63.0	61.0	58.0	56.0	53.0	53.0	52.0	59.4	0.0	59.4
	16	61.9	79.2	51.8	73.0	70.0	66.0	64.0	61.0	58.0	55.0	54.0	53.0	61.9	0.0	61.9
	17	58.8	77.8	50.3	68.0	65.0	62.0	61.0	58.0	56.0	53.0	52.0	51.0	58.8	0.0	58.8
	18	57.8	81.0	48.4	67.0	65.0	61.0	59.0	56.0	54.0	50.0	50.0	49.0	57.8	0.0	57.8
Evening	19	57.6	81.1	48.1	68.0	65.0	60.0	58.0	55.0	53.0	50.0	49.0	49.0	57.6	5.0	62.6
	20	53.8	74.3	45.3	63.0	60.0	57.0	56.0	53.0	51.0	48.0	47.0	46.0	53.8	5.0	58.8
	21	53.6	81.5	43.7	61.0	58.0	55.0	54.0	51.0	48.0	45.0	45.0	44.0	53.6	5.0	58.6
Night	22	51.2	69.8	44.8	60.0	58.0	54.0	53.0	50.0	48.0	46.0	46.0	45.0	51.2	10.0	61.2
	23	51.3	68.9	45.3	58.0	56.0	54.0	53.0	51.0	50.0	47.0	47.0	46.0	51.3	10.0	61.3

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	56.8	71.6	47.2	65.0	64.0	60.0	59.0	54.0	52.0	49.0	48.0	48.0
	Max	63.7	87.7	51.8	73.0	71.0	69.0	68.0	65.0	58.0	55.0	54.0	53.0
Energy Average		60.1	Average:		69.0	67.0	63.3	61.7	57.8	55.2	51.6	51.1	50.2
Evening	Min	53.6	74.3	43.7	61.0	58.0	55.0	54.0	51.0	48.0	45.0	45.0	44.0
	Max	57.6	81.5	48.1	68.0	65.0	60.0	58.0	55.0	53.0	50.0	49.0	49.0
Energy Average		55.4	Average:		64.0	61.0	57.3	56.0	53.0	50.7	47.7	47.0	46.3
Night	Min	51.2	63.3	43.5	58.0	56.0	54.0	52.0	49.0	47.0	45.0	45.0	44.0
	Max	58.4	77.3	51.1	68.0	65.0	62.0	61.0	58.0	56.0	52.0	52.0	51.0
Energy Average		54.6	Average:		61.6	59.4	56.4	55.3	52.7	50.9	48.1	47.9	46.8

L_{eq} (dBA)

24-Hour	*Daytime*	*Nighttime*
58.2	**59.5**	**54.6**

24-Hour CNEL (dBA)

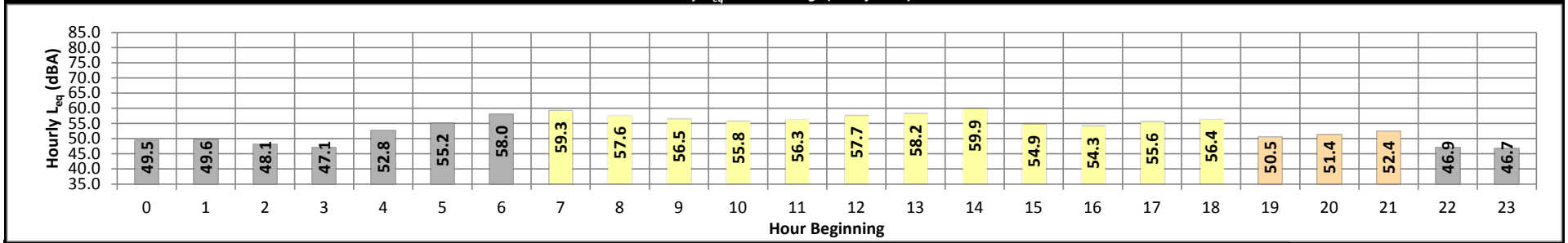
62.4

24-Hour Noise Level Measurement Summary

Date: Wednesday, November 06, 2019 *Location:* L2 - Located south of the Project site in the parking lot near the Sunrise Hotel San Pedro. *Meter:* Piccolo I *JN:* 12897

Project: 511 S. HARBOR BOULEVARD MIXED-USE *Analyst:* P. Mara

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	49.5	57.6	46.7	53.0	52.0	51.0	51.0	49.0	49.0	48.0	47.0	47.0	49.5	10.0	59.5
	1	49.6	57.3	46.0	52.0	52.0	51.0	51.0	50.0	49.0	47.0	47.0	46.0	49.6	10.0	59.6
	2	48.1	61.6	43.8	54.0	53.0	51.0	50.0	48.0	46.0	45.0	44.0	44.0	48.1	10.0	58.1
	3	47.1	63.9	42.7	56.0	53.0	50.0	49.0	46.0	45.0	43.0	43.0	43.0	47.1	10.0	57.1
	4	52.8	70.5	44.3	64.0	60.0	56.0	54.0	51.0	49.0	46.0	46.0	45.0	52.8	10.0	62.8
	5	55.2	79.0	46.6	64.0	61.0	58.0	57.0	53.0	51.0	48.0	48.0	47.0	55.2	10.0	65.2
	6	58.0	80.1	48.2	69.0	66.0	61.0	59.0	55.0	53.0	50.0	49.0	48.0	58.0	10.0	68.0
Day	7	59.3	82.3	49.4	68.0	66.0	63.0	62.0	58.0	55.0	52.0	51.0	50.0	59.3	0.0	59.3
	8	57.6	70.1	47.7	66.0	65.0	63.0	62.0	57.0	54.0	50.0	50.0	48.0	57.6	0.0	57.6
	9	56.5	76.6	47.4	65.0	65.0	63.0	60.0	55.0	52.0	49.0	49.0	48.0	56.5	0.0	56.5
	10	55.8	75.7	46.7	65.0	63.0	61.0	58.0	55.0	52.0	49.0	48.0	47.0	55.8	0.0	55.8
	11	56.3	69.2	46.9	65.0	64.0	62.0	60.0	55.0	53.0	49.0	49.0	48.0	56.3	0.0	56.3
	12	57.7	70.2	47.6	65.0	64.0	63.0	62.0	57.0	54.0	51.0	50.0	49.0	57.7	0.0	57.7
	13	58.2	77.6	47.9	68.0	66.0	62.0	60.0	56.0	55.0	52.0	51.0	49.0	58.2	0.0	58.2
	14	59.9	85.8	48.3	69.0	65.0	62.0	60.0	56.0	53.0	51.0	50.0	49.0	59.9	0.0	59.9
	15	54.9	71.3	48.1	63.0	62.0	59.0	58.0	54.0	52.0	50.0	49.0	49.0	54.9	0.0	54.9
	16	54.3	68.0	47.1	63.0	61.0	58.0	57.0	54.0	52.0	49.0	48.0	48.0	54.3	0.0	54.3
	17	55.6	79.1	46.0	65.0	63.0	58.0	56.0	53.0	51.0	48.0	47.0	47.0	55.6	0.0	55.6
	18	56.4	79.2	45.2	70.0	60.0	56.0	54.0	51.0	49.0	47.0	46.0	46.0	56.4	0.0	56.4
Evening	19	50.5	67.2	44.2	57.0	55.0	54.0	52.0	50.0	48.0	46.0	45.0	44.0	50.5	5.0	55.5
	20	51.4	66.9	46.9	58.0	56.0	54.0	53.0	51.0	50.0	48.0	48.0	47.0	51.4	5.0	56.4
	21	52.4	85.9	40.7	56.0	54.0	52.0	51.0	48.0	45.0	42.0	41.0	41.0	52.4	5.0	57.4
Night	22	46.9	63.0	40.8	53.0	52.0	50.0	49.0	47.0	45.0	43.0	42.0	41.0	46.9	10.0	56.9
	23	46.7	61.8	42.5	53.0	51.0	49.0	49.0	46.0	45.0	43.0	43.0	42.0	46.7	10.0	56.7

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	54.3	68.0	45.2	63.0	60.0	56.0	54.0	51.0	49.0	47.0	46.0	46.0
	Max	59.9	85.8	49.4	70.0	66.0	63.0	62.0	58.0	55.0	52.0	51.0	50.0
Energy Average		57.2	Average:		66.0	63.7	60.8	59.1	55.1	52.7	49.8	49.0	48.2
Evening	Min	50.5	66.9	40.7	56.0	54.0	52.0	51.0	48.0	45.0	42.0	41.0	41.0
	Max	52.4	85.9	46.9	58.0	56.0	54.0	53.0	51.0	50.0	48.0	48.0	47.0
Energy Average		51.5	Average:		57.0	55.0	53.3	52.0	49.7	47.7	45.3	44.7	44.0
Night	Min	46.7	57.3	40.8	52.0	51.0	49.0	49.0	46.0	45.0	43.0	42.0	41.0
	Max	58.0	80.1	48.2	69.0	66.0	61.0	59.0	55.0	53.0	50.0	49.0	48.0
Energy Average		52.3	Average:		57.6	55.6	53.0	52.1	49.4	48.0	45.9	45.4	44.8

L_{eq} (dBA)

24-Hour	*Daytime*	*Nighttime*
55.4	**56.5**	**52.3**

24-Hour CNEL (dBA)

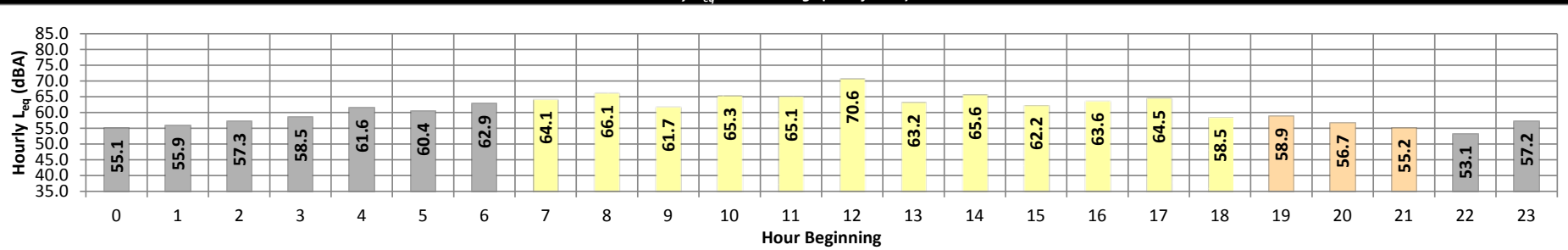
59.8

24-Hour Noise Level Measurement Summary

Date: Wednesday, November 06, 2019 *Location:* L3 - Located west of the Project site on South Palos Verdes Street near the Vue Apartments. *Meter:* Piccolo I *JN:* 12897

Project: 511 S. HARBOR BOULEVARD MIXED-USE *Analyst:* P. Mara

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	55.1	70.0	51.7	60.0	58.0	57.0	56.0	55.0	54.0	53.0	52.0	52.0	55.1	10.0	65.1
	1	55.9	66.0	51.5	60.0	59.0	58.0	57.0	56.0	55.0	54.0	53.0	53.0	55.9	10.0	65.9
	2	57.3	79.8	48.1	64.0	64.0	64.0	64.0	54.0	53.0	49.0	49.0	48.0	57.3	10.0	67.3
	3	58.5	88.9	48.3	63.0	59.0	55.0	54.0	53.0	52.0	49.0	49.0	48.0	58.5	10.0	68.5
	4	61.6	90.2	48.6	68.0	66.0	63.0	62.0	57.0	54.0	50.0	50.0	49.0	61.6	10.0	71.6
	5	60.4	79.9	51.7	72.0	67.0	64.0	62.0	59.0	56.0	53.0	53.0	52.0	60.4	10.0	70.4
	6	62.9	82.7	52.4	73.0	70.0	66.0	65.0	62.0	59.0	55.0	54.0	53.0	62.9	10.0	72.9
Day	7	64.1	83.6	50.0	75.0	71.0	67.0	66.0	63.0	59.0	54.0	54.0	52.0	64.1	0.0	64.1
	8	66.1	93.7	51.7	74.0	71.0	67.0	65.0	61.0	58.0	55.0	54.0	53.0	66.1	0.0	66.1
	9	61.7	78.2	51.3	72.0	70.0	67.0	64.0	60.0	58.0	55.0	54.0	53.0	61.7	0.0	61.7
	10	65.3	92.6	51.2	75.0	73.0	69.0	67.0	62.0	59.0	55.0	54.0	52.0	65.3	0.0	65.3
	11	65.1	87.7	53.5	76.0	73.0	68.0	67.0	63.0	60.0	57.0	56.0	55.0	65.1	0.0	65.1
	12	70.6	91.0	54.1	82.0	80.0	76.0	74.0	66.0	62.0	57.0	57.0	55.0	70.6	0.0	70.6
	13	63.2	87.6	51.9	73.0	71.0	66.0	64.0	60.0	57.0	54.0	53.0	52.0	63.2	0.0	63.2
	14	65.6	89.8	51.3	75.0	72.0	68.0	66.0	62.0	59.0	55.0	54.0	52.0	65.6	0.0	65.6
	15	62.2	80.8	51.6	72.0	69.0	66.0	64.0	61.0	58.0	54.0	54.0	52.0	62.2	0.0	62.2
	16	63.6	87.3	51.1	75.0	71.0	67.0	65.0	61.0	58.0	54.0	53.0	52.0	63.6	0.0	63.6
	17	64.5	92.8	50.2	70.0	67.0	64.0	63.0	59.0	56.0	53.0	52.0	51.0	64.5	0.0	64.5
	18	58.5	75.2	48.4	67.0	65.0	62.0	61.0	58.0	55.0	51.0	50.0	49.0	58.5	0.0	58.5
Evening	19	58.9	83.7	48.3	65.0	64.0	61.0	60.0	57.0	55.0	51.0	50.0	49.0	58.9	5.0	63.9
	20	56.7	78.2	47.5	66.0	63.0	60.0	59.0	55.0	53.0	50.0	49.0	48.0	56.7	5.0	61.7
	21	55.2	75.4	46.3	64.0	61.0	59.0	57.0	53.0	52.0	48.0	47.0	46.0	55.2	5.0	60.2
Night	22	53.1	66.1	46.8	61.0	59.0	57.0	55.0	52.0	51.0	48.0	48.0	47.0	53.1	10.0	63.1
	23	57.2	81.4	46.1	64.0	63.0	63.0	63.0	52.0	51.0	47.0	47.0	46.0	57.2	10.0	67.2

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	58.5	75.2	48.4	67.0	65.0	62.0	61.0	58.0	55.0	51.0	50.0	49.0
	Max	70.6	93.7	54.1	82.0	80.0	76.0	74.0	66.0	62.0	57.0	57.0	55.0
Energy Average		65.2	Average:		73.8	71.1	67.3	65.5	61.3	58.3	54.5	53.8	52.3
Evening	Min	55.2	75.4	46.3	64.0	61.0	59.0	57.0	53.0	52.0	48.0	47.0	46.0
	Max	58.9	83.7	48.3	66.0	64.0	61.0	60.0	57.0	55.0	51.0	50.0	49.0
Energy Average		57.2	Average:		65.0	62.7	60.0	58.7	55.0	53.3	49.7	48.7	47.7
Night	Min	53.1	66.0	46.1	60.0	58.0	55.0	54.0	52.0	51.0	47.0	47.0	46.0
	Max	62.9	90.2	52.4	73.0	70.0	66.0	65.0	62.0	59.0	55.0	54.0	53.0
Energy Average		59.0	Average:		65.0	62.8	60.8	59.8	55.6	53.9	50.9	50.6	49.8

L_{eq} (dBA)		
24-Hour	Daytime	Nighttime
63.0	64.4	59.0

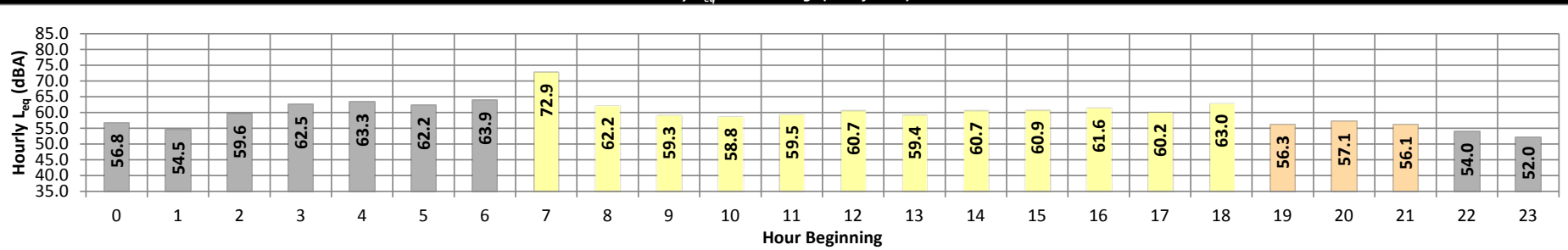
24-Hour CNEL (dBA)
66.8

24-Hour Noise Level Measurement Summary

Date: Wednesday, November 06, 2019 *Location:* L4 - Located northwest of the Project site on West 3rd Street and South Palos Verdes Street next to parking structure. *Meter:* Piccolo I *JN:* 12897

Project: 511 S. HARBOR BOULEVARD MIXED-USE *Analyst:* P. Mara

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	56.8	86.2	49.1	66.0	58.0	57.0	57.0	56.0	55.0	52.0	50.0	49.0	56.8	10.0	66.8
	1	54.5	86.5	48.3	59.0	58.0	56.0	54.0	53.0	52.0	49.0	49.0	48.0	54.5	10.0	64.5
	2	59.6	84.0	48.2	69.0	68.0	67.0	61.0	55.0	49.0	49.0	48.0	48.0	59.6	10.0	69.6
	3	62.5	90.9	49.6	70.0	62.0	60.0	59.0	57.0	57.0	53.0	51.0	50.0	62.5	10.0	72.5
	4	63.3	88.6	48.6	71.0	68.0	66.0	66.0	64.0	60.0	50.0	50.0	49.0	63.3	10.0	73.3
	5	62.2	80.1	57.5	72.0	70.0	66.0	63.0	61.0	59.0	58.0	58.0	58.0	62.2	10.0	72.2
	6	63.9	93.4	47.7	70.0	67.0	63.0	61.0	57.0	54.0	51.0	51.0	49.0	63.9	10.0	73.9
Day	7	72.9	93.2	59.1	84.0	82.0	79.0	77.0	70.0	62.0	61.0	60.0	60.0	72.9	0.0	72.9
	8	62.2	80.1	57.5	72.0	70.0	66.0	63.0	61.0	59.0	58.0	58.0	58.0	62.2	0.0	62.2
	9	59.3	78.5	57.0	64.0	62.0	60.0	59.0	59.0	58.0	58.0	58.0	57.0	59.3	0.0	59.3
	10	58.8	72.4	56.8	62.0	61.0	59.0	59.0	58.0	58.0	57.0	57.0	57.0	58.8	0.0	58.8
	11	59.5	72.7	56.9	63.0	62.0	61.0	61.0	59.0	58.0	58.0	58.0	57.0	59.5	0.0	59.5
	12	60.7	85.9	57.1	66.0	63.0	62.0	61.0	60.0	59.0	58.0	58.0	58.0	60.7	0.0	60.7
	13	59.4	74.0	57.1	63.0	62.0	60.0	60.0	59.0	58.0	58.0	58.0	57.0	59.4	0.0	59.4
	14	60.7	84.4	57.3	67.0	65.0	62.0	61.0	59.0	59.0	58.0	58.0	58.0	60.7	0.0	60.7
	15	60.9	82.5	57.6	67.0	65.0	62.0	61.0	60.0	59.0	58.0	58.0	58.0	60.9	0.0	60.9
	16	61.6	88.4	57.9	68.0	64.0	62.0	61.0	60.0	59.0	59.0	58.0	58.0	61.6	0.0	61.6
	17	60.2	80.6	57.4	65.0	62.0	61.0	60.0	60.0	59.0	59.0	58.0	58.0	60.2	0.0	60.2
	18	63.0	90.3	57.7	74.0	69.0	64.0	63.0	60.0	59.0	59.0	58.0	58.0	63.0	0.0	63.0
Evening	19	56.3	71.0	52.0	61.0	60.0	58.0	58.0	56.0	55.0	54.0	54.0	53.0	56.3	5.0	61.3
	20	57.1	77.1	51.4	65.0	62.0	60.0	59.0	56.0	55.0	53.0	53.0	53.0	57.1	5.0	62.1
	21	56.1	69.4	51.4	61.0	60.0	58.0	57.0	56.0	55.0	53.0	53.0	53.0	56.1	5.0	61.1
Night	22	54.0	70.0	49.7	58.0	57.0	56.0	55.0	54.0	53.0	52.0	51.0	51.0	54.0	10.0	64.0
	23	52.0	68.6	47.4	57.0	56.0	55.0	54.0	52.0	51.0	49.0	49.0	48.0	52.0	10.0	62.0

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	58.8	72.4	56.8	62.0	61.0	59.0	59.0	58.0	58.0	57.0	57.0	57.0
	Max	72.9	93.2	59.1	84.0	82.0	79.0	77.0	70.0	62.0	61.0	60.0	60.0
Energy Average		64.3	Average:		67.9	65.6	63.2	62.2	60.4	58.9	58.4	58.1	57.8
Evening	Min	56.1	69.4	51.4	61.0	60.0	58.0	57.0	56.0	55.0	53.0	53.0	53.0
	Max	57.1	77.1	52.0	65.0	62.0	60.0	59.0	56.0	55.0	54.0	54.0	53.0
Energy Average		56.5	Average:		62.3	60.7	58.7	58.0	56.0	55.0	53.3	53.3	53.0
Night	Min	52.0	68.6	47.4	57.0	56.0	55.0	54.0	52.0	49.0	49.0	48.0	48.0
	Max	63.9	93.4	57.5	72.0	70.0	67.0	66.0	64.0	60.0	58.0	58.0	58.0
Energy Average		60.5	Average:		65.8	62.7	60.7	58.9	56.6	54.4	51.4	50.8	50.0

L_{eq} (dBA)		
24-Hour	Daytime	Nighttime
62.6	63.5	60.5

24-Hour CNEL (dBA)
67.6

APPENDIX 7.1:

OFF-SITE TRAFFIC NOISE CONTOURS

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Gaffey St.
Road Segment: n/o 5th St.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	30,730 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,073 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	40 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	80.0 feet
Centerline Dist. to Observer:	90.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	87.892
Medium Trucks:	87.791
Heavy Trucks:	87.801

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	4.02	-2.52	0.00	*-1.02*	0.000	0.000
Medium Trucks:	75.75	-13.22	-2.51	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	81.57	-17.18	-2.51	0.00	*-1.50*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	65.8	63.9	62.1	56.1	64.7	65.3
Medium Trucks:	60.0	58.5	52.1	50.6	59.1	59.3
Heavy Trucks:	61.9	60.5	51.4	52.7	61.0	61.1
Vehicle Noise:	68.0	66.3	62.9	58.5	67.0	67.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	45	143	452	1,430
CNEL:	50	158	499	1,579

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Gaffey St.
Road Segment: s/o 5th St.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	28,380 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,838 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	40 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	80.0 feet
Centerline Dist. to Observer:	90.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	87.892
Medium Trucks:	87.791
Heavy Trucks:	87.801

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	3.67	-2.52	0.00	*-1.02*	0.000	0.000
Medium Trucks:	75.75	-13.57	-2.51	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	81.57	-17.52	-2.51	0.00	*-1.50*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	65.5	63.6	61.8	55.7	64.4	65.0
Medium Trucks:	59.7	58.2	51.8	50.3	58.7	58.9
Heavy Trucks:	61.5	60.1	51.1	52.3	60.7	60.8
Vehicle Noise:	67.7	66.0	62.5	58.1	66.7	67.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	42	132	418	1,320
CNEL:	46	146	461	1,458

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Pacific Av.
Road Segment: n/o 5th St.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,710 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,471 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	20 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	56.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	65.429
Medium Trucks:	65.294
Heavy Trucks:	65.307

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	0.82	-1.24	0.00	*-0.97*	0.000	0.000
Medium Trucks:	75.75	-16.42	-1.23	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	81.57	-20.38	-1.23	0.00	*-1.65*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	63.9	62.0	60.2	54.2	62.8	63.4
Medium Trucks:	58.1	56.6	50.2	48.7	57.1	57.4
Heavy Trucks:	60.0	58.5	49.5	50.8	59.1	59.2
Vehicle Noise:	66.1	64.4	61.0	56.6	65.1	65.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	21	67	213	674
CNEL:	24	74	235	745

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Pacific Av.
Road Segment: s/o 5th St.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,120 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,412 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	20 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	56.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	65.429
Medium Trucks:	65.294
Heavy Trucks:	65.307

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	0.64	-1.24	0.00	*-0.97*	0.000	0.000
Medium Trucks:	75.75	-16.60	-1.23	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	81.57	-20.56	-1.23	0.00	*-1.65*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	63.7	61.8	60.0	54.0	62.6	63.2
Medium Trucks:	57.9	56.4	50.1	48.5	57.0	57.2
Heavy Trucks:	59.8	58.4	49.3	50.6	58.9	59.1
Vehicle Noise:	65.9	64.2	60.8	56.4	64.9	65.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	20	65	205	647
CNEL:	23	71	226	715

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Harbor Blvd.
Road Segment: n/o 5th St.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		***Site Conditions (Hard = 10, Soft = 15)***	
Average Daily Traffic (Adt):	17,590 vehicles	*Autos:*	10
Peak Hour Percentage:	10%	*Medium Trucks (2 Axles):*	10
Peak Hour Volume:	1,759 vehicles	*Heavy Trucks (3+ Axles):*	10
Vehicle Speed:	35 mph		
Near/Far Lane Distance:	48 feet		

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	70.0 feet
Centerline Dist. to Observer:	80.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	76.479
Medium Trucks:	76.363
Heavy Trucks:	76.374

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	1.59	-1.91	0.00	*-1.00*	0.000	0.000
Medium Trucks:	75.75	-15.65	-1.91	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	81.57	-19.60	-1.91	0.00	*-1.55*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	64.0	62.1	60.3	54.3	62.9	63.5
Medium Trucks:	58.2	56.7	50.3	48.8	57.2	57.5
Heavy Trucks:	60.1	58.6	49.6	50.8	59.2	59.3
Vehicle Noise:	66.2	64.5	61.1	56.7	65.2	65.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	26	84	264	836
CNEL:	29	92	292	923

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Harbor Blvd.
Road Segment: s/o 5th St.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		***Site Conditions (Hard = 10, Soft = 15)***	
Average Daily Traffic (Adt):	15,020 vehicles	*Autos:*	10
Peak Hour Percentage:	10%	*Medium Trucks (2 Axles):*	10
Peak Hour Volume:	1,502 vehicles	*Heavy Trucks (3+ Axles):*	10
Vehicle Speed:	35 mph		
Near/Far Lane Distance:	48 feet		

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	70.0 feet
Centerline Dist. to Observer:	80.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	76.479
Medium Trucks:	76.363
Heavy Trucks:	76.374

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	0.91	-1.91	0.00	*-1.00*	0.000	0.000
Medium Trucks:	75.75	-16.33	-1.91	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	81.57	-20.29	-1.91	0.00	*-1.55*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.3	61.4	59.6	53.6	62.2	62.8
Medium Trucks:	57.5	56.0	49.6	48.1	56.6	56.8
Heavy Trucks:	59.4	58.0	48.9	50.2	58.5	58.6
Vehicle Noise:	65.5	63.8	60.4	56.0	64.5	64.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	23	71	226	714
CNEL:	25	79	249	788

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Harbor Blvd.
Road Segment: n/o 1st St.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		***Site Conditions (Hard = 10, Soft = 15)***	
Average Daily Traffic (Adt):	20,700 vehicles	*Autos:*	10
Peak Hour Percentage:	10%	*Medium Trucks (2 Axles):*	10
Peak Hour Volume:	2,070 vehicles	*Heavy Trucks (3+ Axles):*	10
Vehicle Speed:	35 mph		
Near/Far Lane Distance:	48 feet		

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	70.0 feet
Centerline Dist. to Observer:	80.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	76.479
Medium Trucks:	76.363
Heavy Trucks:	76.374

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	2.30	-1.91	0.00	*-1.00*	0.000	0.000
Medium Trucks:	75.75	-14.94	-1.91	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	81.57	-18.89	-1.91	0.00	*-1.55*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	64.7	62.8	61.0	55.0	63.6	64.2
Medium Trucks:	58.9	57.4	51.0	49.5	57.9	58.2
Heavy Trucks:	60.8	59.3	50.3	51.6	59.9	60.0
Vehicle Noise:	66.9	65.2	61.8	57.4	65.9	66.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	31	98	311	984
CNEL:	34	109	344	1,086

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Harbor Blvd.
Road Segment: s/o 1st St.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		***Site Conditions (Hard = 10, Soft = 15)***	
Average Daily Traffic (Adt):	18,870 vehicles	*Autos:*	10
Peak Hour Percentage:	10%	*Medium Trucks (2 Axles):*	10
Peak Hour Volume:	1,887 vehicles	*Heavy Trucks (3+ Axles):*	10
Vehicle Speed:	35 mph		
Near/Far Lane Distance:	48 feet		

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	70.0 feet
Centerline Dist. to Observer:	80.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	76.479
Medium Trucks:	76.363
Heavy Trucks:	76.374

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	1.90	-1.91	0.00	*-1.00*	0.000	0.000
Medium Trucks:	75.75	-15.34	-1.91	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	81.57	-19.30	-1.91	0.00	*-1.55*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	64.3	62.4	60.6	54.6	63.2	63.8
Medium Trucks:	58.5	57.0	50.6	49.1	57.5	57.8
Heavy Trucks:	60.4	58.9	49.9	51.2	59.5	59.6
Vehicle Noise:	66.5	64.8	61.4	57.0	65.5	65.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	28	90	284	897
CNEL:	31	99	313	990

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: 5th St.
Road Segment: w/o Gaffey St.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,630 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	463 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	20 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	56.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	65.429
Medium Trucks:	65.294
Heavy Trucks:	65.307

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	58.73	-2.74	-1.24	0.00	-0.97	0.000	0.000
Medium Trucks:	70.80	-19.98	-1.23	0.00	-1.15	0.000	0.000
Heavy Trucks:	77.97	-23.94	-1.23	0.00	-1.65	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	54.8	52.9	51.1	45.0	53.7	54.3
Medium Trucks:	49.6	48.1	41.7	40.2	48.6	48.9
Heavy Trucks:	52.8	51.4	42.3	43.6	52.0	52.1
Vehicle Noise:	57.6	56.0	52.1	48.1	56.6	57.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	3	10	30	96
CNEL:	3	11	33	105

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: 5th St.
Road Segment: e/o Gaffey St.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,700 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	370 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	20 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	56.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	65.429
Medium Trucks:	65.294
Heavy Trucks:	65.307

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	58.73	-3.72	-1.24	0.00	-0.97	0.000	0.000
Medium Trucks:	70.80	-20.95	-1.23	0.00	-1.15	0.000	0.000
Heavy Trucks:	77.97	-24.91	-1.23	0.00	-1.65	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	53.8	51.9	50.1	44.1	52.7	53.3
Medium Trucks:	48.6	47.1	40.7	39.2	47.7	47.9
Heavy Trucks:	51.8	50.4	41.4	42.6	51.0	51.1
Vehicle Noise:	56.7	55.0	51.1	47.2	55.7	56.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	2	8	24	77
CNEL:	3	8	27	84

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: 5th St.
Road Segment: w/o Pacific Ave.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,210 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	421 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	20 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	56.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	65.429
Medium Trucks:	65.294
Heavy Trucks:	65.307

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	58.73	-3.16	-1.24	0.00	-0.97	0.000	0.000
Medium Trucks:	70.80	-20.39	-1.23	0.00	-1.15	0.000	0.000
Heavy Trucks:	77.97	-24.35	-1.23	0.00	-1.65	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	54.3	52.4	50.7	44.6	53.2	53.9
Medium Trucks:	49.2	47.7	41.3	39.8	48.2	48.5
Heavy Trucks:	52.4	51.0	41.9	43.2	51.5	51.7
Vehicle Noise:	57.2	55.6	51.6	47.7	56.2	56.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	3	9	28	88
CNEL:	3	10	30	96

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: 5th St.
Road Segment: e/o Pacific Ave.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,760 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	576 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	20 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	56.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	65.429
Medium Trucks:	65.294
Heavy Trucks:	65.307

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	58.73	-1.79	-1.24	0.00	-0.97	0.000	0.000
Medium Trucks:	70.80	-19.03	-1.23	0.00	-1.15	0.000	0.000
Heavy Trucks:	77.97	-22.99	-1.23	0.00	-1.65	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	55.7	53.8	52.0	46.0	54.6	55.2
Medium Trucks:	50.5	49.0	42.7	41.1	49.6	49.8
Heavy Trucks:	53.8	52.3	43.3	44.5	52.9	53.0
Vehicle Noise:	58.6	56.9	53.0	49.1	57.6	58.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	4	12	38	120
CNEL:	4	13	41	131

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: 5th St.
Road Segment: w/o Harbor Blvd.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		***Site Conditions (Hard = 10, Soft = 15)***	
Average Daily Traffic (Adt):	3,580 vehicles	*Autos:*	10
Peak Hour Percentage:	10%	*Medium Trucks (2 Axles):*	10
Peak Hour Volume:	358 vehicles	*Heavy Trucks (3+ Axles):*	10
Vehicle Speed:	25 mph		
Near/Far Lane Distance:	20 feet		
Site Data			
Barrier Height:	**0.0 feet**		
Barrier Type (0-Wall, 1-Berm):	0.0		
Centerline Dist. to Barrier:	56.0 feet		
Centerline Dist. to Observer:	66.0 feet		
Barrier Distance to Observer:	10.0 feet		
Observer Height (Above Pad):	5.0 feet		
Pad Elevation:	0.0 feet		
Road Elevation:	0.0 feet		
Road Grade:	0.0%		
Left View:	-90.0 degrees		
Right View:	90.0 degrees		

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos: 0.000
Medium Trucks: 2.297
Heavy Trucks: 8.006 *Grade Adjustment:* 0.0

Lane Equivalent Distance (in feet)

Autos: 65.429
Medium Trucks: 65.294
Heavy Trucks: 65.307

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	58.73	-3.86	-1.24	0.00	*-0.97*	0.000	0.000
Medium Trucks:	70.80	-21.10	-1.23	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	77.97	-25.05	-1.23	0.00	*-1.65*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	53.6	51.7	50.0	43.9	52.5	53.1
Medium Trucks:	48.5	47.0	40.6	39.1	47.5	47.7
Heavy Trucks:	51.7	50.3	41.2	42.5	50.8	51.0
Vehicle Noise:	56.5	54.8	50.9	47.0	55.5	55.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	2	7	24	75
CNEL:	3	8	26	82

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: 1st St.
Road Segment: w/o Harbor Blvd.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		***Site Conditions (Hard = 10, Soft = 15)***	
Average Daily Traffic (Adt):	2,340 vehicles	*Autos:*	10
Peak Hour Percentage:	10%	*Medium Trucks (2 Axles):*	10
Peak Hour Volume:	234 vehicles	*Heavy Trucks (3+ Axles):*	10
Vehicle Speed:	30 mph		
Near/Far Lane Distance:	20 feet		
Site Data			
Barrier Height:	**0.0 feet**		
Barrier Type (0-Wall, 1-Berm):	0.0		
Centerline Dist. to Barrier:	56.0 feet		
Centerline Dist. to Observer:	66.0 feet		
Barrier Distance to Observer:	10.0 feet		
Observer Height (Above Pad):	5.0 feet		
Pad Elevation:	0.0 feet		
Road Elevation:	0.0 feet		
Road Grade:	0.0%		
Left View:	-90.0 degrees		
Right View:	90.0 degrees		

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos: 0.000
Medium Trucks: 2.297
Heavy Trucks: 8.006 *Grade Adjustment:* 0.0

Lane Equivalent Distance (in feet)

Autos: 65.429
Medium Trucks: 65.294
Heavy Trucks: 65.307

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	61.75	-6.50	-1.24	0.00	*-0.97*	0.000	0.000
Medium Trucks:	73.48	-23.74	-1.23	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	79.92	-27.69	-1.23	0.00	*-1.65*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	54.0	52.1	50.4	44.3	52.9	53.5
Medium Trucks:	48.5	47.0	40.6	39.1	47.6	47.8
Heavy Trucks:	51.0	49.6	40.5	41.8	50.1	50.3
Vehicle Noise:	56.5	54.8	51.2	47.0	55.5	55.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	2	7	24	74
CNEL:	3	8	26	82

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Gaffey St.
Road Segment: n/o 5th St.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		***Site Conditions (Hard = 10, Soft = 15)***	
Average Daily Traffic (Adt):	30,870 vehicles	*Autos:*	10
Peak Hour Percentage:	10%	*Medium Trucks (2 Axles):*	10
Peak Hour Volume:	3,087 vehicles	*Heavy Trucks (3+ Axles):*	10
Vehicle Speed:	35 mph		
Near/Far Lane Distance:	40 feet		
Site Data			
Barrier Height:	**0.0 feet**		
Barrier Type (0-Wall, 1-Berm):	0.0		
Centerline Dist. to Barrier:	80.0 feet		
Centerline Dist. to Observer:	90.0 feet		
Barrier Distance to Observer:	10.0 feet		
Observer Height (Above Pad):	5.0 feet		
Pad Elevation:	0.0 feet		
Road Elevation:	0.0 feet		
Road Grade:	0.0%		
Left View:	-90.0 degrees		
Right View:	90.0 degrees		

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos: 0.000
Medium Trucks: 2.297
Heavy Trucks: 8.006 *Grade Adjustment:* 0.0

Lane Equivalent Distance (in feet)

Autos: 87.892
Medium Trucks: 87.791
Heavy Trucks: 87.801

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	4.04	-2.52	0.00	*-1.02*	0.000	0.000
Medium Trucks:	75.75	-13.20	-2.51	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	81.57	-17.16	-2.51	0.00	*-1.50*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.8	63.9	62.2	56.1	64.7	65.3
Medium Trucks:	60.0	58.5	52.2	50.6	59.1	59.3
Heavy Trucks:	61.9	60.5	51.4	52.7	61.0	61.2
Vehicle Noise:	68.0	66.3	62.9	58.5	67.0	67.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	45	144	454	1,436
CNEL:	50	159	501	1,586

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Gaffey St.
Road Segment: s/o 5th St.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA		NOISE MODEL INPUTS	
Highway Data		***Site Conditions (Hard = 10, Soft = 15)***	
Average Daily Traffic (Adt):	28,400 vehicles	*Autos:*	10
Peak Hour Percentage:	10%	*Medium Trucks (2 Axles):*	10
Peak Hour Volume:	2,840 vehicles	*Heavy Trucks (3+ Axles):*	10
Vehicle Speed:	35 mph		
Near/Far Lane Distance:	40 feet		
Site Data			
Barrier Height:	**0.0 feet**		
Barrier Type (0-Wall, 1-Berm):	0.0		
Centerline Dist. to Barrier:	80.0 feet		
Centerline Dist. to Observer:	90.0 feet		
Barrier Distance to Observer:	10.0 feet		
Observer Height (Above Pad):	5.0 feet		
Pad Elevation:	0.0 feet		
Road Elevation:	0.0 feet		
Road Grade:	0.0%		
Left View:	-90.0 degrees		
Right View:	90.0 degrees		

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos: 0.000
Medium Trucks: 2.297
Heavy Trucks: 8.006 *Grade Adjustment:* 0.0

Lane Equivalent Distance (in feet)

Autos: 87.892
Medium Trucks: 87.791
Heavy Trucks: 87.801

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	3.67	-2.52	0.00	*-1.02*	0.000	0.000
Medium Trucks:	75.75	-13.56	-2.51	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	81.57	-17.52	-2.51	0.00	*-1.50*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.5	63.6	61.8	55.7	64.4	65.0
Medium Trucks:	59.7	58.2	51.8	50.3	58.7	59.0
Heavy Trucks:	61.5	60.1	51.1	52.3	60.7	60.8
Vehicle Noise:	67.7	66.0	62.5	58.1	66.7	67.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	42	132	418	1,321
CNEL:	46	146	461	1,459

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Pacific Av.
Road Segment: n/o 5th St.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,770 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,477 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	20 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	56.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	65.429
Medium Trucks:	65.294
Heavy Trucks:	65.307

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	0.83	-1.24	0.00	-0.97	0.000	0.000
Medium Trucks:	75.75	-16.40	-1.23	0.00	-1.15	0.000	0.000
Heavy Trucks:	81.57	-20.36	-1.23	0.00	-1.65	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.9	62.0	60.2	54.2	62.8	63.4
Medium Trucks:	58.1	56.6	50.2	48.7	57.2	57.4
Heavy Trucks:	60.0	58.6	49.5	50.8	59.1	59.3
Vehicle Noise:	66.1	64.4	61.0	56.6	65.1	65.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	21	68	214	677
CNEL:	24	75	236	748

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Pacific Av.
Road Segment: s/o 5th St.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	14,140 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,414 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	20 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	56.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	65.429
Medium Trucks:	65.294
Heavy Trucks:	65.307

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	0.64	-1.24	0.00	-0.97	0.000	0.000
Medium Trucks:	75.75	-16.59	-1.23	0.00	-1.15	0.000	0.000
Heavy Trucks:	81.57	-20.55	-1.23	0.00	-1.65	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.7	61.8	60.0	54.0	62.6	63.2
Medium Trucks:	57.9	56.4	50.1	48.5	57.0	57.2
Heavy Trucks:	59.8	58.4	49.3	50.6	58.9	59.1
Vehicle Noise:	65.9	64.2	60.8	56.4	64.9	65.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	21	65	205	648
CNEL:	23	72	226	716

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Harbor Blvd.
Road Segment: n/o 5th St.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	17,690 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,769 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	70.0 feet
Centerline Dist. to Observer:	80.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	76.479
Medium Trucks:	76.363
Heavy Trucks:	76.374

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	1.62	-1.91	0.00	-1.00	0.000	0.000
Medium Trucks:	75.75	-15.62	-1.91	0.00	-1.15	0.000	0.000
Heavy Trucks:	81.57	-19.58	-1.91	0.00	-1.55	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	64.0	62.1	60.3	54.3	62.9	63.5
Medium Trucks:	58.2	56.7	50.4	48.8	57.3	57.5
Heavy Trucks:	60.1	58.7	49.6	50.9	59.2	59.4
Vehicle Noise:	66.2	64.5	61.1	56.7	65.2	65.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	27	84	266	841
CNEL:	29	93	294	928

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Harbor Blvd.
Road Segment: s/o 5th St.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	15,040 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,504 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	70.0 feet
Centerline Dist. to Observer:	80.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	76.479
Medium Trucks:	76.363
Heavy Trucks:	76.374

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	0.91	-1.91	0.00	-1.00	0.000	0.000
Medium Trucks:	75.75	-16.33	-1.91	0.00	-1.15	0.000	0.000
Heavy Trucks:	81.57	-20.28	-1.91	0.00	-1.55	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.3	61.4	59.6	53.6	62.2	62.8
Medium Trucks:	57.5	56.0	49.6	48.1	56.6	56.8
Heavy Trucks:	59.4	58.0	48.9	50.2	58.5	58.7
Vehicle Noise:	65.5	63.8	60.4	56.0	64.5	64.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	23	71	226	715
CNEL:	25	79	250	789

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Harbor Blvd.
Road Segment: n/o 1st St.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	20,800 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,080 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	70.0 feet
Centerline Dist. to Observer:	80.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	76.479
Medium Trucks:	76.363
Heavy Trucks:	76.374

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	2.32	-1.91	0.00	-1.00	0.000	0.000
Medium Trucks:	75.75	-14.92	-1.91	0.00	-1.15	0.000	0.000
Heavy Trucks:	81.57	-18.87	-1.91	0.00	-1.55	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	64.7	62.8	61.0	55.0	63.6	64.2
Medium Trucks:	58.9	57.4	51.1	49.5	58.0	58.2
Heavy Trucks:	60.8	59.4	50.3	51.6	59.9	60.1
Vehicle Noise:	66.9	65.2	61.8	57.4	65.9	66.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	31	99	313	989
CNEL:	35	109	345	1,092

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Harbor Blvd.
Road Segment: s/o 1st St.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	18,970 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,897 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	70.0 feet
Centerline Dist. to Observer:	80.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	76.479
Medium Trucks:	76.363
Heavy Trucks:	76.374

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	1.92	-1.91	0.00	-1.00	0.000	0.000
Medium Trucks:	75.75	-15.32	-1.91	0.00	-1.15	0.000	0.000
Heavy Trucks:	81.57	-19.27	-1.91	0.00	-1.55	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	64.3	62.4	60.6	54.6	63.2	63.8
Medium Trucks:	58.5	57.0	50.7	49.1	57.6	57.8
Heavy Trucks:	60.4	59.0	49.9	51.2	59.5	59.7
Vehicle Noise:	66.5	64.8	61.4	57.0	65.5	66.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	29	90	285	902
CNEL:	31	100	315	996

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: 5th St.
Road Segment: w/o Gaffey St.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,680 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	468 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	20 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	56.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	65.429
Medium Trucks:	65.294
Heavy Trucks:	65.307

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	58.73	-2.70	-1.24	0.00	-0.97	0.000	0.000
Medium Trucks:	70.80	-19.93	-1.23	0.00	-1.15	0.000	0.000
Heavy Trucks:	77.97	-23.89	-1.23	0.00	-1.65	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	54.8	52.9	51.1	45.1	53.7	54.3
Medium Trucks:	49.6	48.1	41.8	40.2	48.7	48.9
Heavy Trucks:	52.9	51.4	42.4	43.6	52.0	52.1
Vehicle Noise:	57.7	56.0	52.1	48.2	56.7	57.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	3	10	31	97
CNEL:	3	11	34	107

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: 5th St.
Road Segment: e/o Gaffey St.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,910 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	391 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	20 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	56.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	65.429
Medium Trucks:	65.294
Heavy Trucks:	65.307

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	58.73	-3.48	-1.24	0.00	-0.97	0.000	0.000
Medium Trucks:	70.80	-20.71	-1.23	0.00	-1.15	0.000	0.000
Heavy Trucks:	77.97	-24.67	-1.23	0.00	-1.65	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	54.0	52.1	50.4	44.3	52.9	53.5
Medium Trucks:	48.9	47.3	41.0	39.4	47.9	48.1
Heavy Trucks:	52.1	50.7	41.6	42.9	51.2	51.3
Vehicle Noise:	56.9	55.2	51.3	47.4	55.9	56.3

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	3	8	26	81
CNEL:	3	9	28	89

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: 5th St.
Road Segment: w/o Pacific Ave.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,420 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	442 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	20 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	56.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	65.429
Medium Trucks:	65.294
Heavy Trucks:	65.307

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	58.73	-2.94	-1.24	0.00	-0.97	0.000	0.000
Medium Trucks:	70.80	-20.18	-1.23	0.00	-1.15	0.000	0.000
Heavy Trucks:	77.97	-24.14	-1.23	0.00	-1.65	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	54.6	52.7	50.9	44.8	53.5	54.1
Medium Trucks:	49.4	47.9	41.5	40.0	48.4	48.7
Heavy Trucks:	52.6	51.2	42.1	43.4	51.8	51.9
Vehicle Noise:	57.4	55.8	51.9	47.9	56.4	56.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	3	9	29	92
CNEL:	3	10	32	101

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: 5th St.
Road Segment: e/o Pacific Ave.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,050 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	605 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	20 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	56.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	65.429
Medium Trucks:	65.294
Heavy Trucks:	65.307

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	58.73	-1.58	-1.24	0.00	-0.97	0.000	0.000
Medium Trucks:	70.80	-18.82	-1.23	0.00	-1.15	0.000	0.000
Heavy Trucks:	77.97	-22.77	-1.23	0.00	-1.65	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	55.9	54.0	52.3	46.2	54.8	55.4
Medium Trucks:	50.7	49.2	42.9	41.3	49.8	50.0
Heavy Trucks:	54.0	52.5	43.5	44.8	53.1	53.2
Vehicle Noise:	58.8	57.1	53.2	49.3	57.8	58.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	4	13	40	126
CNEL:	4	14	44	138

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: 5th St.
Road Segment: w/o Harbor Blvd.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	3,700 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	370 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	20 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	56.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	65.429
Medium Trucks:	65.294
Heavy Trucks:	65.307

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	58.73	-3.72	-1.24	0.00	-0.97	0.000	0.000
Medium Trucks:	70.80	-20.95	-1.23	0.00	-1.15	0.000	0.000
Heavy Trucks:	77.97	-24.91	-1.23	0.00	-1.65	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	53.8	51.9	50.1	44.1	52.7	53.3
Medium Trucks:	48.6	47.1	40.7	39.2	47.7	47.9
Heavy Trucks:	51.8	50.4	41.4	42.6	51.0	51.1
Vehicle Noise:	56.7	55.0	51.1	47.2	55.7	56.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	2	8	24	77
CNEL:	3	8	27	84

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: 1st St.
Road Segment: w/o Harbor Blvd.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,340 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	234 vehicles
Vehicle Speed:	30 mph
Near/Far Lane Distance:	20 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	56.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	65.429
Medium Trucks:	65.294
Heavy Trucks:	65.307

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	61.75	-6.50	-1.24	0.00	-0.97	0.000	0.000
Medium Trucks:	73.48	-23.74	-1.23	0.00	-1.15	0.000	0.000
Heavy Trucks:	79.92	-27.69	-1.23	0.00	-1.65	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	54.0	52.1	50.4	44.3	52.9	53.5
Medium Trucks:	48.5	47.0	40.6	39.1	47.6	47.8
Heavy Trucks:	51.0	49.6	40.5	41.8	50.1	50.3
Vehicle Noise:	56.5	54.8	51.2	47.0	55.5	55.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	2	7	24	74
CNEL:	3	8	26	82

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Future Without Project
Road Name: Gaffey St.
Road Segment: n/o 5th St.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	34,630 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,463 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	40 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	80.0 feet
Centerline Dist. to Observer:	90.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	87.892
Medium Trucks:	87.791
Heavy Trucks:	87.801

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	4.53	-2.52	0.00	*-1.02*	0.000	0.000
Medium Trucks:	75.75	-12.70	-2.51	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	81.57	-16.66	-2.51	0.00	*-1.50*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	66.3	64.4	62.7	56.6	65.2	65.8
Medium Trucks:	60.5	59.0	52.7	51.1	59.6	59.8
Heavy Trucks:	62.4	61.0	51.9	53.2	61.5	61.7
Vehicle Noise:	68.5	66.8	63.4	59.0	67.5	68.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	51	161	509	1,611
CNEL:	56	178	563	1,779

Monday, November 25, 2019

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Future Without Project
Road Name: Gaffey St.
Road Segment: s/o 5th St.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	31,470 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,147 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	40 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	80.0 feet
Centerline Dist. to Observer:	90.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	87.892
Medium Trucks:	87.791
Heavy Trucks:	87.801

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	4.12	-2.52	0.00	*-1.02*	0.000	0.000
Medium Trucks:	75.75	-13.12	-2.51	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	81.57	-17.07	-2.51	0.00	*-1.50*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	65.9	64.0	62.2	56.2	64.8	65.4
Medium Trucks:	60.1	58.6	52.2	50.7	59.2	59.4
Heavy Trucks:	62.0	60.6	51.5	52.8	61.1	61.3
Vehicle Noise:	68.1	66.4	63.0	58.6	67.1	67.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	46	146	463	1,464
CNEL:	51	162	511	1,617

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Future Without Project
Road Name: Pacific Av.
Road Segment: n/o 5th St.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	17,840 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,784 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	20 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	56.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	65.429
Medium Trucks:	65.294
Heavy Trucks:	65.307

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	1.65	-1.24	0.00	*-0.97*	0.000	0.000
Medium Trucks:	75.75	-15.58	-1.23	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	81.57	-19.54	-1.23	0.00	*-1.65*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	64.7	62.8	61.1	55.0	63.6	64.2
Medium Trucks:	58.9	57.4	51.1	49.5	58.0	58.2
Heavy Trucks:	60.8	59.4	50.3	51.6	59.9	60.1
Vehicle Noise:	66.9	65.2	61.8	57.4	65.9	66.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	26	82	259	818
CNEL:	29	90	286	903

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Future Without Project
Road Name: Pacific Av.
Road Segment: s/o 5th St.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	15,440 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,544 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	20 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	56.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	65.429
Medium Trucks:	65.294
Heavy Trucks:	65.307

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	1.03	-1.24	0.00	*-0.97*	0.000	0.000
Medium Trucks:	75.75	-16.21	-1.23	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	81.57	-20.17	-1.23	0.00	*-1.65*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	64.1	62.2	60.4	54.4	63.0	63.6
Medium Trucks:	58.3	56.8	50.4	48.9	57.4	57.6
Heavy Trucks:	60.2	58.7	49.7	51.0	59.3	59.4
Vehicle Noise:	66.3	64.6	61.2	56.8	65.3	65.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	22	71	224	708
CNEL:	25	78	247	782

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Future Without Project
Road Name: Harbor Blvd.
Road Segment: n/o 5th St.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	22,080 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,208 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	70.0 feet
Centerline Dist. to Observer:	80.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	76.479
Medium Trucks:	76.363
Heavy Trucks:	76.374

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	2.58	-1.91	0.00	*-1.00*	0.000	0.000
Medium Trucks:	75.75	-14.66	-1.91	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	81.57	-18.61	-1.91	0.00	*-1.55*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	65.0	63.1	61.3	55.2	63.9	64.5
Medium Trucks:	59.2	57.7	51.3	49.8	58.2	58.5
Heavy Trucks:	61.0	59.6	50.6	51.8	60.2	60.3
Vehicle Noise:	67.2	65.5	62.0	57.7	66.2	66.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	33	105	332	1,050
CNEL:	37	116	366	1,159

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Future Without Project
Road Name: Harbor Blvd.
Road Segment: s/o 5th St.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	18,150 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,815 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	70.0 feet
Centerline Dist. to Observer:	80.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	76.479
Medium Trucks:	76.363
Heavy Trucks:	76.374

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	1.73	-1.91	0.00	*-1.00*	0.000	0.000
Medium Trucks:	75.75	-15.51	-1.91	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	81.57	-19.46	-1.91	0.00	*-1.55*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	64.1	62.2	60.5	54.4	63.0	63.6
Medium Trucks:	58.3	56.8	50.5	48.9	57.4	57.6
Heavy Trucks:	60.2	58.8	49.7	51.0	59.3	59.5
Vehicle Noise:	66.3	64.6	61.2	56.8	65.3	65.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	27	86	273	863
CNEL:	30	95	301	953

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Future Without Project
Road Name: Harbor Blvd.
Road Segment: n/o 1st St.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,460 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,646 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	70.0 feet
Centerline Dist. to Observer:	80.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	76.479
Medium Trucks:	76.363
Heavy Trucks:	76.374

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	3.37	-1.91	0.00	*-1.00*	0.000	0.000
Medium Trucks:	75.75	-13.87	-1.91	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	81.57	-17.83	-1.91	0.00	*-1.55*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	65.8	63.9	62.1	56.0	64.7	65.3
Medium Trucks:	60.0	58.5	52.1	50.6	59.0	59.2
Heavy Trucks:	61.8	60.4	51.4	52.6	61.0	61.1
Vehicle Noise:	68.0	66.3	62.8	58.4	67.0	67.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	40	126	398	1,258
CNEL:	44	139	439	1,389

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Future Without Project
Road Name: Harbor Blvd.
Road Segment: s/o 1st St.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	24,510 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,451 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	70.0 feet
Centerline Dist. to Observer:	80.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	76.479
Medium Trucks:	76.363
Heavy Trucks:	76.374

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	3.03	-1.91	0.00	*-1.00*	0.000	0.000
Medium Trucks:	75.75	-14.20	-1.91	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	81.57	-18.16	-1.91	0.00	*-1.55*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	65.4	63.5	61.8	55.7	64.3	64.9
Medium Trucks:	59.6	58.1	51.8	50.2	58.7	58.9
Heavy Trucks:	61.5	60.1	51.0	52.3	60.6	60.8
Vehicle Noise:	67.6	65.9	62.5	58.1	66.6	67.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	37	117	368	1,165
CNEL:	41	129	407	1,286

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Future Without Project | Project Name: 511 S. Harbor Blvd.
Road Name: 5th St. | Job Number: 12897
Road Segment: w/o Gaffey St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,050 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	605 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	20 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	56.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	65.429
Medium Trucks:	65.294
Heavy Trucks:	65.307

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	58.73	-1.58	-1.24	0.00	-0.97	0.000	0.000
Medium Trucks:	70.80	-18.82	-1.23	0.00	-1.15	0.000	0.000
Heavy Trucks:	77.97	-22.77	-1.23	0.00	-1.65	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	55.9	54.0	52.3	46.2	54.8	55.4
Medium Trucks:	50.7	49.2	42.9	41.3	49.8	50.0
Heavy Trucks:	54.0	52.5	43.5	44.8	53.1	53.2
Vehicle Noise:	58.8	57.1	53.2	49.3	57.8	58.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	4	13	40	126
CNEL:	4	14	44	138

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Future Without Project | Project Name: 511 S. Harbor Blvd.
Road Name: 5th St. | Job Number: 12897
Road Segment: e/o Gaffey St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,710 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	671 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	20 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	56.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	65.429
Medium Trucks:	65.294
Heavy Trucks:	65.307

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	58.73	-1.13	-1.24	0.00	-0.97	0.000	0.000
Medium Trucks:	70.80	-18.37	-1.23	0.00	-1.15	0.000	0.000
Heavy Trucks:	77.97	-22.33	-1.23	0.00	-1.65	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	56.4	54.5	52.7	46.6	55.3	55.9
Medium Trucks:	51.2	49.7	43.3	41.8	50.2	50.5
Heavy Trucks:	54.4	53.0	44.0	45.2	53.6	53.7
Vehicle Noise:	59.3	57.6	53.7	49.8	58.3	58.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	4	14	44	140
CNEL:	5	15	48	153

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Future Without Project | Project Name: 511 S. Harbor Blvd.
Road Name: 5th St. | Job Number: 12897
Road Segment: w/o Pacific Ave.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,220 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	722 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	20 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	56.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	65.429
Medium Trucks:	65.294
Heavy Trucks:	65.307

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	58.73	-0.81	-1.24	0.00	-0.97	0.000	0.000
Medium Trucks:	70.80	-18.05	-1.23	0.00	-1.15	0.000	0.000
Heavy Trucks:	77.97	-22.01	-1.23	0.00	-1.65	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	56.7	54.8	53.0	47.0	55.6	56.2
Medium Trucks:	51.5	50.0	43.6	42.1	50.6	50.8
Heavy Trucks:	54.7	53.3	44.3	45.5	53.9	54.0
Vehicle Noise:	59.6	57.9	54.0	50.1	58.6	59.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	5	15	48	150
CNEL:	5	16	52	164

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Future Without Project | Project Name: 511 S. Harbor Blvd.
Road Name: 5th St. | Job Number: 12897
Road Segment: e/o Pacific Ave.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,760 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,076 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	20 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	56.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	65.429
Medium Trucks:	65.294
Heavy Trucks:	65.307

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	58.73	0.92	-1.24	0.00	-0.97	0.000	0.000
Medium Trucks:	70.80	-16.32	-1.23	0.00	-1.15	0.000	0.000
Heavy Trucks:	77.97	-20.27	-1.23	0.00	-1.65	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	58.4	56.5	54.8	48.7	57.3	57.9
Medium Trucks:	53.2	51.7	45.4	43.8	52.3	52.5
Heavy Trucks:	56.5	55.0	46.0	47.3	55.6	55.7
Vehicle Noise:	61.3	59.6	55.7	51.8	60.3	60.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	7	22	71	224
CNEL:	8	25	78	245

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Future Without Project
Road Name: 5th St.
Road Segment: w/o Harbor Blvd.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,620 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	562 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	20 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	56.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	65.429
Medium Trucks:	65.294
Heavy Trucks:	65.307

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	58.73	-1.90	-1.24	0.00	-0.97	0.000	0.000
Medium Trucks:	70.80	-19.14	-1.23	0.00	-1.15	0.000	0.000
Heavy Trucks:	77.97	-23.10	-1.23	0.00	-1.65	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	55.6	53.7	51.9	45.9	54.5	55.1
Medium Trucks:	50.4	48.9	42.6	41.0	49.5	49.7
Heavy Trucks:	53.6	52.2	43.2	44.4	52.8	52.9
Vehicle Noise:	58.5	56.8	52.9	49.0	57.5	57.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	4	12	37	117
CNEL:	4	13	40	128

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Future Without Project
Road Name: 1st St.
Road Segment: w/o Harbor Blvd.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,970 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	297 vehicles
Vehicle Speed:	30 mph
Near/Far Lane Distance:	20 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	56.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	65.429
Medium Trucks:	65.294
Heavy Trucks:	65.307

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	61.75	-5.46	-1.24	0.00	-0.97	0.000	0.000
Medium Trucks:	73.48	-22.70	-1.23	0.00	-1.15	0.000	0.000
Heavy Trucks:	79.92	-26.66	-1.23	0.00	-1.65	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	55.1	53.2	51.4	45.3	54.0	54.6
Medium Trucks:	49.6	48.0	41.7	40.1	48.6	48.8
Heavy Trucks:	52.0	50.6	41.6	42.8	51.2	51.3
Vehicle Noise:	57.6	55.9	52.2	48.0	56.6	57.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	3	9	30	94
CNEL:	3	10	33	104

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Future With Project
Road Name: Gaffey St.
Road Segment: n/o 5th St.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	34,770 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,477 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	40 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	80.0 feet
Centerline Dist. to Observer:	90.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	87.892
Medium Trucks:	87.791
Heavy Trucks:	87.801

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	4.55	-2.52	0.00	-1.02	0.000	0.000
Medium Trucks:	75.75	-12.69	-2.51	0.00	-1.15	0.000	0.000
Heavy Trucks:	81.57	-16.64	-2.51	0.00	-1.50	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	66.3	64.4	62.7	56.6	65.2	65.8
Medium Trucks:	60.5	59.0	52.7	51.1	59.6	59.8
Heavy Trucks:	62.4	61.0	52.0	53.2	61.6	61.7
Vehicle Noise:	68.6	66.8	63.4	59.0	67.5	68.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	51	162	512	1,618
CNEL:	56	179	565	1,786

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Future With Project
Road Name: Gaffey St.
Road Segment: s/o 5th St.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	31,490 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	3,149 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	40 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	80.0 feet
Centerline Dist. to Observer:	90.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	87.892
Medium Trucks:	87.791
Heavy Trucks:	87.801

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	4.12	-2.52	0.00	-1.02	0.000	0.000
Medium Trucks:	75.75	-13.12	-2.51	0.00	-1.15	0.000	0.000
Heavy Trucks:	81.57	-17.07	-2.51	0.00	-1.50	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.9	64.0	62.2	56.2	64.8	65.4
Medium Trucks:	60.1	58.6	52.3	50.7	59.2	59.4
Heavy Trucks:	62.0	60.6	51.5	52.8	61.1	61.3
Vehicle Noise:	68.1	66.4	63.0	58.6	67.1	67.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	46	147	463	1,465
CNEL:	51	162	512	1,618

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Future With Project
Road Name: Pacific Av.
Road Segment: n/o 5th St.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	17,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,790 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	20 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	56.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	65.429
Medium Trucks:	65.294
Heavy Trucks:	65.307

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	1.67	-1.24	0.00	*-0.97*	0.000	0.000
Medium Trucks:	75.75	-15.57	-1.23	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	81.57	-19.53	-1.23	0.00	*-1.65*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	64.7	62.8	61.1	55.0	63.6	64.2
Medium Trucks:	59.0	57.4	51.1	49.5	58.0	58.2
Heavy Trucks:	60.8	59.4	50.4	51.6	60.0	60.1
Vehicle Noise:	67.0	65.2	61.8	57.4	65.9	66.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	26	82	260	821
CNEL:	29	91	287	906

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Future With Project
Road Name: Pacific Av.
Road Segment: s/o 5th St.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	15,460 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,546 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	20 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	56.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	65.429
Medium Trucks:	65.294
Heavy Trucks:	65.307

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	1.03	-1.24	0.00	*-0.97*	0.000	0.000
Medium Trucks:	75.75	-16.21	-1.23	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	81.57	-20.16	-1.23	0.00	*-1.65*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	64.1	62.2	60.4	54.4	63.0	63.6
Medium Trucks:	58.3	56.8	50.4	48.9	57.4	57.6
Heavy Trucks:	60.2	58.8	49.7	51.0	59.3	59.5
Vehicle Noise:	66.3	64.6	61.2	56.8	65.3	65.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	22	71	224	709
CNEL:	25	78	247	783

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Future With Project
Road Name: Harbor Blvd.
Road Segment: n/o 5th St.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	22,140 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,214 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	70.0 feet
Centerline Dist. to Observer:	80.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	76.479
Medium Trucks:	76.363
Heavy Trucks:	76.374

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	2.59	-1.91	0.00	*-1.00*	0.000	0.000
Medium Trucks:	75.75	-14.65	-1.91	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	81.57	-18.60	-1.91	0.00	*-1.55*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	65.0	63.1	61.3	55.3	63.9	64.5
Medium Trucks:	59.2	57.7	51.3	49.8	58.2	58.5
Heavy Trucks:	61.1	59.6	50.6	51.8	60.2	60.3
Vehicle Noise:	67.2	65.5	62.1	57.7	66.2	66.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	33	105	333	1,052
CNEL:	37	116	367	1,162

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Future With Project
Road Name: Harbor Blvd.
Road Segment: s/o 5th St.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	18,130 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,813 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	70.0 feet
Centerline Dist. to Observer:	80.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	*Day*	*Evening*	*Night*	*Daily*
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	*Grade Adjustment:*	0.0

Lane Equivalent Distance (in feet)

Autos:	76.479
Medium Trucks:	76.363
Heavy Trucks:	76.374

FHWA Noise Model Calculations

VehicleType	*REMEL*	*Traffic Flow*	*Distance*	*Finite Road*	*Fresnel*	*Barrier Atten*	*Berm Atten*
Autos:	64.30	1.72	-1.91	0.00	*-1.00*	0.000	0.000
Medium Trucks:	75.75	-15.51	-1.91	0.00	*-1.15*	0.000	0.000
Heavy Trucks:	81.57	-19.47	-1.91	0.00	*-1.55*	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	*Leq Peak Hour*	*Leq Day*	*Leq Evening*	*Leq Night*	*Ldn*	*CNEL*
Autos:	64.1	62.2	60.4	54.4	63.0	63.6
Medium Trucks:	58.3	56.8	50.5	48.9	57.4	57.6
Heavy Trucks:	60.2	58.8	49.7	51.0	59.3	59.5
Vehicle Noise:	66.3	64.6	61.2	56.8	65.3	65.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	*65 dBA*	*60 dBA*	*55 dBA*
Ldn:	27	86	273	862
CNEL:	30	95	301	952

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Future With Project
Road Name: Harbor Blvd.
Road Segment: n/o 1st St.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	26,560 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,656 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	70.0 feet
Centerline Dist. to Observer:	80.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	76.479
Medium Trucks:	76.363
Heavy Trucks:	76.374

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	3.38	-1.91	0.00	-1.00	0.000	0.000
Medium Trucks:	75.75	-13.86	-1.91	0.00	-1.15	0.000	0.000
Heavy Trucks:	81.57	-17.81	-1.91	0.00	-1.55	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.8	63.9	62.1	56.1	64.7	65.3
Medium Trucks:	60.0	58.5	52.1	50.6	59.0	59.3
Heavy Trucks:	61.8	60.4	51.4	52.6	61.0	61.1
Vehicle Noise:	68.0	66.3	62.8	58.5	67.0	67.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	40	126	399	1,262
CNEL:	44	139	441	1,394

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Future With Project
Road Name: Harbor Blvd.
Road Segment: s/o 1st St.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	24,610 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	2,461 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	70.0 feet
Centerline Dist. to Observer:	80.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	76.479
Medium Trucks:	76.363
Heavy Trucks:	76.374

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	3.05	-1.91	0.00	-1.00	0.000	0.000
Medium Trucks:	75.75	-14.19	-1.91	0.00	-1.15	0.000	0.000
Heavy Trucks:	81.57	-18.14	-1.91	0.00	-1.55	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	65.4	63.5	61.8	55.7	64.3	64.9
Medium Trucks:	59.7	58.1	51.8	50.2	58.7	58.9
Heavy Trucks:	61.5	60.1	51.1	52.3	60.7	60.8
Vehicle Noise:	67.7	65.9	62.5	58.1	66.7	67.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	37	117	370	1,170
CNEL:	41	129	408	1,292

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Future With Project
Road Name: 5th St.
Road Segment: w/o Gaffey St.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,100 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	610 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	20 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	56.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	65.429
Medium Trucks:	65.294
Heavy Trucks:	65.307

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	58.73	-1.54	-1.24	0.00	-0.97	0.000	0.000
Medium Trucks:	70.80	-18.78	-1.23	0.00	-1.15	0.000	0.000
Heavy Trucks:	77.97	-22.74	-1.23	0.00	-1.65	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	56.0	54.1	52.3	46.2	54.9	55.5
Medium Trucks:	50.8	49.3	42.9	41.4	49.8	50.1
Heavy Trucks:	54.0	52.6	43.5	44.8	53.2	53.3
Vehicle Noise:	58.8	57.2	53.3	49.3	57.8	58.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	4	13	40	127
CNEL:	4	14	44	139

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Future With Project
Road Name: 5th St.
Road Segment: e/o Gaffey St.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,920 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	692 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	20 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	56.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	65.429
Medium Trucks:	65.294
Heavy Trucks:	65.307

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	58.73	-1.00	-1.24	0.00	-0.97	0.000	0.000
Medium Trucks:	70.80	-18.24	-1.23	0.00	-1.15	0.000	0.000
Heavy Trucks:	77.97	-22.19	-1.23	0.00	-1.65	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	56.5	54.6	52.8	46.8	55.4	56.0
Medium Trucks:	51.3	49.8	43.5	41.9	50.4	50.6
Heavy Trucks:	54.6	53.1	44.1	45.3	53.7	53.8
Vehicle Noise:	59.4	57.7	53.8	49.9	58.4	58.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	5	14	46	144
CNEL:	5	16	50	158

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Future With Project
Road Name: 5th St.
Road Segment: w/o Pacific Ave.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	7,430 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	743 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	20 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	56.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	65.429
Medium Trucks:	65.294
Heavy Trucks:	65.307

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	58.73	-0.69	-1.24	0.00	-0.97	0.000	0.000
Medium Trucks:	70.80	-17.93	-1.23	0.00	-1.15	0.000	0.000
Heavy Trucks:	77.97	-21.88	-1.23	0.00	-1.65	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	56.8	54.9	53.1	47.1	55.7	56.3
Medium Trucks:	51.6	50.1	43.8	42.2	50.7	50.9
Heavy Trucks:	54.9	53.4	44.4	45.7	54.0	54.1
Vehicle Noise:	59.7	58.0	54.1	50.2	58.7	59.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	5	15	49	155
CNEL:	5	17	54	169

Monday, November 25, 2019

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Future With Project
Road Name: 5th St.
Road Segment: e/o Pacific Ave.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,050 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,105 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	20 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	56.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	65.429
Medium Trucks:	65.294
Heavy Trucks:	65.307

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	58.73	1.04	-1.24	0.00	-0.97	0.000	0.000
Medium Trucks:	70.80	-16.20	-1.23	0.00	-1.15	0.000	0.000
Heavy Trucks:	77.97	-20.16	-1.23	0.00	-1.65	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	58.5	56.6	54.9	48.8	57.4	58.0
Medium Trucks:	53.4	51.9	45.5	44.0	52.4	52.6
Heavy Trucks:	56.6	55.2	46.1	47.4	55.7	55.9
Vehicle Noise:	61.4	59.7	55.8	51.9	60.4	60.8

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	7	23	73	230
CNEL:	8	25	80	252

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Future With Project
Road Name: 5th St.
Road Segment: w/o Harbor Blvd.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,740 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	574 vehicles
Vehicle Speed:	25 mph
Near/Far Lane Distance:	20 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	56.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	65.429
Medium Trucks:	65.294
Heavy Trucks:	65.307

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	58.73	-1.81	-1.24	0.00	-0.97	0.000	0.000
Medium Trucks:	70.80	-19.05	-1.23	0.00	-1.15	0.000	0.000
Heavy Trucks:	77.97	-23.00	-1.23	0.00	-1.65	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	55.7	53.8	52.0	46.0	54.6	55.2
Medium Trucks:	50.5	49.0	42.7	41.1	49.6	49.8
Heavy Trucks:	53.7	52.3	43.3	44.5	52.9	53.0
Vehicle Noise:	58.6	56.9	53.0	49.1	57.6	58.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	4	12	38	120
CNEL:	4	13	41	131

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Future With Project
Road Name: 1st St.
Road Segment: w/o Harbor Blvd.
Project Name: 511 S. Harbor Blvd.
Job Number: 12897

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	2,970 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	297 vehicles
Vehicle Speed:	30 mph
Near/Far Lane Distance:	20 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	56.0 feet
Centerline Dist. to Observer:	66.0 feet
Barrier Distance to Observer:	10.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	10
Medium Trucks (2 Axles):	10
Heavy Trucks (3+ Axles):	10

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	65.429
Medium Trucks:	65.294
Heavy Trucks:	65.307

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	61.75	-5.46	-1.24	0.00	-0.97	0.000	0.000
Medium Trucks:	73.48	-22.70	-1.23	0.00	-1.15	0.000	0.000
Heavy Trucks:	79.92	-26.66	-1.23	0.00	-1.65	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	55.1	53.2	51.4	45.3	54.0	54.6
Medium Trucks:	49.6	48.0	41.7	40.1	48.6	48.8
Heavy Trucks:	52.0	50.6	41.6	42.8	51.2	51.3
Vehicle Noise:	57.6	55.9	52.2	48.0	56.6	57.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	3	9	30	94
CNEL:	3	10	33	104

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APPENDIX 9.1:

OPERATIONAL NOISE CALCULATIONS

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STATIONARY SOURCE NOISE PREDICTION MODEL

11/25/2019

Observer Location: **R1**
Source: Roof-Top Air Conditioning Units
Condition: Operational

Project Name: 511 S. Harbor Blvd.
Job Number: 12897
Analyst: B. Lawson

NOISE MODEL INPUTS

Noise Distance to Observer	135.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	135.0 feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	85.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	135.0	-28.6	-28.6	-28.6	-28.6	-28.6	-28.6
Shielding (Barrier Attenuation)	135.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		48.6	-28.6	-28.6	-28.6	-28.6	-28.6
60 Minute Hourly Adjustment		**48.6**	**-28.6**	**-28.6**	**-28.6**	**-28.6**	**-28.6**

STATIONARY SOURCE NOISE PREDICTION MODEL

11/25/2019

Observer Location: **R1**
Source: Outdoor Activity
Condition: Operational

Project Name: 511 S. Harbor Blvd.
Job Number: 12897
Analyst: B. Lawson

NOISE MODEL INPUTS

Noise Distance to Observer	120.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	120.0 feet	*Noise Source Height:*	4.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	74.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	73.8	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	120.0	-21.6	-21.6	-21.6	-21.6	-21.6	-21.6
Shielding (Barrier Attenuation)	120.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		52.2	-21.6	-21.6	-21.6	-21.6	-21.6
60 Minute Hourly Adjustment		**52.2**	**-21.6**	**-21.6**	**-21.6**	**-21.6**	**-21.6**

STATIONARY SOURCE NOISE PREDICTION MODEL

11/25/2019

Observer Location: **R1**
Source: Pad-Mounted Transformer
Condition: Operational

Project Name: 511 S. Harbor Blvd.
Job Number: 12897
Analyst: B. Lawson

NOISE MODEL INPUTS

Noise Distance to Observer	177.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	177.0 feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	6.0	56.0	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	177.0	-29.4	-29.4	-29.4	-29.4	-29.4	-29.4
Shielding (Barrier Attenuation)	177.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		26.6	-29.4	-29.4	-29.4	-29.4	-29.4
60 Minute Hourly Adjustment		**26.6**	**-29.4**	**-29.4**	**-29.4**	**-29.4**	**-29.4**

STATIONARY SOURCE NOISE PREDICTION MODEL

11/25/2019

Observer Location: **R2**
Source: Roof-Top Air Conditioning Units
Condition: Operational

Project Name: 511 S. Harbor Blvd.
Job Number: 12897
Analyst: B. Lawson

NOISE MODEL INPUTS

Noise Distance to Observer	113.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	113.0 feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	85.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	113.0	-27.1	-27.1	-27.1	-27.1	-27.1	-27.1
Shielding (Barrier Attenuation)	113.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		50.1	-27.1	-27.1	-27.1	-27.1	-27.1
60 Minute Hourly Adjustment		**50.1**	**-27.1**	**-27.1**	**-27.1**	**-27.1**	**-27.1**

STATIONARY SOURCE NOISE PREDICTION MODEL 11/25/2019

Observer Location: **R2**
Source: Outdoor Activity
Condition: Operational

Project Name: 511 S. Harbor Blvd.
Job Number: 12897
Analyst: B. Lawson

NOISE MODEL INPUTS

Noise Distance to Observer	158.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	158.0 feet	*Noise Source Height:*	4.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	74.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	73.8	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	158.0	-24.0	-24.0	-24.0	-24.0	-24.0	-24.0
Shielding (Barrier Attenuation)	158.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		49.8	-24.0	-24.0	-24.0	-24.0	-24.0
60 Minute Hourly Adjustment		**49.8**	**-24.0**	**-24.0**	**-24.0**	**-24.0**	**-24.0**

STATIONARY SOURCE NOISE PREDICTION MODEL 11/25/2019

Observer Location: **R2**
Source: Pad-Mounted Transformer
Condition: Operational

Project Name: 511 S. Harbor Blvd.
Job Number: 12897
Analyst: B. Lawson

NOISE MODEL INPUTS

Noise Distance to Observer	257.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	257.0 feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	6.0	56.0	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	257.0	-32.6	-32.6	-32.6	-32.6	-32.6	-32.6
Shielding (Barrier Attenuation)	257.0	-10.2	-10.2	-10.2	-10.2	-10.2	-10.2
Raw (Distance + Barrier)		13.2	-42.8	-42.8	-42.8	-42.8	-42.8
60 Minute Hourly Adjustment		**13.2**	**-42.8**	**-42.8**	**-42.8**	**-42.8**	**-42.8**

STATIONARY SOURCE NOISE PREDICTION MODEL

11/25/2019

Observer Location: **R3**
Source: Roof-Top Air Conditioning Units
Condition: Operational

Project Name: 511 S. Harbor Blvd.
Job Number: 12897
Analyst: B. Lawson

NOISE MODEL INPUTS

Noise Distance to Observer	90.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	90.0 feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	50.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	85.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	90.0	-25.1	-25.1	-25.1	-25.1	-25.1	-25.1
Shielding (Barrier Attenuation)	90.0	-19.3	-19.3	-19.3	-19.3	-19.3	-19.3
Raw (Distance + Barrier)		32.8	-44.4	-44.4	-44.4	-44.4	-44.4
60 Minute Hourly Adjustment		**32.8**	**-44.4**	**-44.4**	**-44.4**	**-44.4**	**-44.4**

STATIONARY SOURCE NOISE PREDICTION MODEL

11/25/2019

Observer Location: **R3**
Source: Outdoor Activity
Condition: Operational

Project Name: 511 S. Harbor Blvd.
Job Number: 12897
Analyst: B. Lawson

NOISE MODEL INPUTS

Noise Distance to Observer	135.0 feet	***Barrier Height:***	**6.0 feet**
Noise Distance to Barrier:	135.0 feet	*Noise Source Height:*	4.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	50.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	74.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	73.8	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	135.0	-22.6	-22.6	-22.6	-22.6	-22.6	-22.6
Shielding (Barrier Attenuation)	135.0	-19.2	-19.2	-19.2	-19.2	-19.2	-19.2
Raw (Distance + Barrier)		32.0	-41.8	-41.8	-41.8	-41.8	-41.8
60 Minute Hourly Adjustment		**32.0**	**-41.8**	**-41.8**	**-41.8**	**-41.8**	**-41.8**

STATIONARY SOURCE NOISE PREDICTION MODEL 11/25/2019

Observer Location: **R3**
Source: Pad-Mounted Transformer
Condition: Operational

Project Name: 511 S. Harbor Blvd.
Job Number: 12897
Analyst: B. Lawson

NOISE MODEL INPUTS

Noise Distance to Observer	148.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	148.0 feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	50.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	6.0	56.0	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	148.0	-27.8	-27.8	-27.8	-27.8	-27.8	-27.8
Shielding (Barrier Attenuation)	148.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		28.2	-27.8	-27.8	-27.8	-27.8	-27.8
60 Minute Hourly Adjustment		**28.2**	**-27.8**	**-27.8**	**-27.8**	**-27.8**	**-27.8**

STATIONARY SOURCE NOISE PREDICTION MODEL 11/25/2019

Observer Location: **R4**
Source: Roof-Top Air Conditioning Units
Condition: Operational

Project Name: 511 S. Harbor Blvd.
Job Number: 12897
Analyst: B. Lawson

NOISE MODEL INPUTS

Noise Distance to Observer	578.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	578.0 feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	85.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	578.0	-41.3	-41.3	-41.3	-41.3	-41.3	-41.3
Shielding (Barrier Attenuation)	578.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		35.9	-41.3	-41.3	-41.3	-41.3	-41.3
60 Minute Hourly Adjustment		**35.9**	**-41.3**	**-41.3**	**-41.3**	**-41.3**	**-41.3**

STATIONARY SOURCE NOISE PREDICTION MODEL

11/25/2019

Observer Location: **R4**
Source: Outdoor Activity
Condition: Operational

Project Name: 511 S. Harbor Blvd.
Job Number: 12897
Analyst: B. Lawson

NOISE MODEL INPUTS

Noise Distance to Observer	634.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	634.0 feet	*Noise Source Height:*	4.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	74.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	73.8	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	634.0	-36.0	-36.0	-36.0	-36.0	-36.0	-36.0
Shielding (Barrier Attenuation)	634.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		37.8	-36.0	-36.0	-36.0	-36.0	-36.0
60 Minute Hourly Adjustment		**37.8**	**-36.0**	**-36.0**	**-36.0**	**-36.0**	**-36.0**

STATIONARY SOURCE NOISE PREDICTION MODEL

11/25/2019

Observer Location: **R4**
Source: Pad-Mounted Transformer
Condition: Operational

Project Name: 511 S. Harbor Blvd.
Job Number: 12897
Analyst: B. Lawson

NOISE MODEL INPUTS

Noise Distance to Observer	532.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	532.0 feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	6.0	56.0	0.0	0.0	0.0	0.0	0.0
Distance Attenuation	532.0	-39.0	-39.0	-39.0	-39.0	-39.0	-39.0
Shielding (Barrier Attenuation)	532.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		17.0	-39.0	-39.0	-39.0	-39.0	-39.0
60 Minute Hourly Adjustment		**17.0**	**-39.0**	**-39.0**	**-39.0**	**-39.0**	**-39.0**