GARDEN GROVE

A G E N D A

GARDEN GROVE PLANNING COMMISSION

SEPTEMBER 18, 2025 - 7:00 PM

COMMUNITY MEETING CENTER
11300 STANFORD AVENUE

Meeting Assistance: Any person requiring auxiliary aids and services, due to a disability, to address the Planning Commission, should contact the Community Development Department at (714) 741-5312 or email planning@ggcity.org 72 hours prior to the meeting to arrange for special accommodations. (Government Code §5494.3.2).

Agenda Item Descriptions: Agenda item descriptions are intended to give a brief and general description of the item. The Planning Commission may take legislative action deemed appropriate with respect to the item and is not limited to the recommended action indicated in staff reports or the agenda.

Documents/Writings: Any revised or additional documents/writings related to an item on the agenda distributed to all or a majority of the Planning Commission within 72 hours of a meeting, are made available for public inspection at the same time (1) in the Planning Services Division Office at 11222 Acacia Parkway, Garden Grove, CA 92840, during normal business hours; and (2) at the Community Meeting Center at the time of the meeting.

Public Comments: Members of the public who attend the meeting in-person and would like to address the Planning Commission are requested to complete a yellow speaker card indicating their name and address, and identifying the subject matter they wish to address. This card should be given to the Recording Secretary before the meeting begins. General comments are made during "Oral Communications" and are limited to three (3) minutes and to matters the Planning Commission has jurisdiction over. Persons wishing to address the Planning Commission regarding a Public Hearing matter will be called to the podium at the time the matter is being considered. Members of the public who wish to comment on matters before the Commission, in lieu of doing so in person, may submit comments by emailing public-comment@ggcity.org no later than 3:00 p.m. the day of the meeting. The comments will be provided to the Commission as part of the meeting record.

PLEASE SILENCE YOUR CELL PHONES DURING THE MEETING.

REGULAR MEETING AGENDA

ROLL CALL: COMMISSIONERS ASHLAND, BEARD, CUEVA, FLANDERS, LARICCHIA, LINDSAY, RAMIREZ

PLEDGE OF ALLEGIANCE TO THE FLAG OF THE UNITED STATES OF AMERICA

A. ORAL COMMUNICATIONS - PUBLIC

B. APPROVAL OF MINUTES – August 21, 2025

C. PUBLIC HEARING(S) (Authorization for the Chair to execute Resolution shall be included in the motion.)

C.1. SITE PLAN NO. SP-162-2025

APPLICANT: WILLIAM JAGER

LOCATION: EAST OF COAST STREET, BETWEEN GARDEN GROVE BOULEVARD AND LARSON AVENUE, AT 13040 COAST STREET

REQUEST: A request to construct a five-story, thirty-four (34) unit apartment building and associated site improvements on an approximately 0.50-acre lot. The proposal includes three (3) affordable units for "very-low-income" households and three (3) affordable units for "moderate-income" households. Inclusion of the six (6) affordable units qualifies the project for a Density Bonus, concessions, waivers, and reduced parking pursuant to the state density bonus law. In conjunction with the request, the Planning Commission will consider a determination that the project is categorically exempt from the California Environmental Quality Act (CEQA).

STAFF RECOMMENDATION: Recommend approval of Site Plan No. SP-162-2025 pursuant to the recommended Conditions of Approval.

D. ITEM FOR CONSIDERATION

D.1. Presentation on the California Environmental Quality Act (CEQA).

E. MATTERS FROM COMMISSIONERS

F. MATTERS FROM STAFF

G. ADJOURNMENT

GARDEN GROVE PLANNING COMMISSION
Community Meeting Center
11300 Stanford Avenue, Garden Grove, CA 92840

Meeting Minutes
Thursday, August 21, 2025

CALL TO ORDER: 7:00 p.m.

ROLL CALL:

Commissioner Ashland
Commissioner Beard
Commissioner Cueva
Commissioner Flanders
Commissioner Laricchia
Commissioner Lindsay
Commissioner Ramirez

Absent: Ramirez

PLEDGE OF ALLEGIANCE: Led by Commissioner Lindsay.

ORAL COMMUNICATIONS – PUBLIC – None

June 5, 2025 MINUTES:

Action: Received and filed.

Motion: Beard Second: Flanders

Ayes:	(4)	Beard, Flanders, Laricchia, Lindsay
Noes:	(0)	
Absent:	(1)	Ramirez
Abstain:	(1)	Ashland, Cueva

PUBLIC HEARING – AMENDMENT NO. A-045-2025

Applicant: CITY OF GARDEN GROVE
Date: August 21, 2025

Request: A City-initiated Zoning Text Amendment to Title 9 of the Garden Grove Municipal Code (GGMC) to add definitions, special operating conditions, and parking standards to allow Substance Abuse Treatment Centers as a conditionally permitted use for properties zoned M-1 (Limited Industrial). In conjunction with the request, the Planning Commission will also consider a recommendation that the City Council determine that

the proposed Amendment is exempt from the California Environmental Quality Act (CEQA).

Action: Resolution No. 6124-25 was approved.

Motion: Beard Second: Lindsay

Ayes: (5) Ashland, Beard, Flanders, Laricchia, Lindsay
Noes: (1) Cueva
Absent: (1) Ramirez

ITEM FOR CONSIDERATION - PRESENTATION ON THE THE GENERAL PLAN, ZONING CODE AND MUNICIPAL CODE: Staff gave a presentation and discussion on the general plan, zoning code, and municipal code.

Commission Laricchia ask where the City is in meeting its RHNA, and staff stated that they will follow-up, including if JADUs are included in the RHNA. Staff clarified that HCD only looks at the number of building permits issued for RHNA.

Commissioner Cueva requested clarification on the City's ability to act on residential projects. Staff explained that, under state housing law and the Housing Accountability Act, the City must approve qualifying housing projects that meet applicable standards.

Commissioner Lindsay commented about future code amendments addressing conflicts with current building code standards, and staff stated that they will take that into consideration in the next code update.

MATTERS FROM COMMISSIONERS:

None

MATTERS FROM STAFF: Staff stated that the September 4, 2025 Planning Commission Meeting would be cancelled, and gave a brief description of the upcoming items for the September 18, 2025 meeting.

ADJOURNMENT: At 7:47 p.m.

_____

Carol Sebbo
Recording Secretary

COMMUNITY DEVELOPMENT DEPARTMENT PLANNING STAFF REPORT

AGENDA ITEM NO.: **C.1.**	**SITE LOCATION:** East side of Coast Street, between Garden Grove Boulevard and Larson Avenue, at 13040 Coast Street
HEARING DATE: September 18, 2025	**GENERAL PLAN:** Medium Density Residential (MDR)
CASE NO.: Site Plan No. SP-162-2025	**ZONE:** R-3 (Multiple-Family Residential)
APPLICANT: The Jager Company, Ltd.	**APN:** 097-011-03
PROPERTY OWNERS: West St. Investments, LLC.	**CEQA DETERMINATION:** Exempt – Section 15332 – In-fill Development Projects

REQUEST:

A request for Site Plan approval to construct a five-story, thirty-four (34) unit apartment building and associated site improvements on an approximately 21,829 square feet (or 0.50-acre) lot. The proposal includes three (3) affordable units for "very low-income" households and three (3) affordable units for "moderate-income" households. Inclusion of the six (6) affordable units qualifies the project for two density bonuses, concessions, waivers or reductions of development standards, and reduced parking pursuant to the State Density Bonus Law and Section 9.60.040 of the Garden Grove Municipal Code (DBL).

BACKGROUND:

The subject site is a rectangular shaped lot located to the east side of Coast Street, between Garden Grove Boulevard and Larson Avenue. The site has a total gross lot area of 23,508 square feet (or 0.54 acres) and a net lot size of 21,829 square feet (or 0.50 acres). The site has a General Plan Land Use Designation of Medium Density Residential (MDR) and is zoned R-3 (Multiple-Family Residential). The site abuts R-3 properties to the north, east and across an alley to the south, and a GGMU-1 (Garden Grove Boulevard Mixed Use 1) zoned property across Coast Street to the west. Surrounding uses include auto repair shops to the north and to the east, a multifamily residential structure across the alley to the south, and a vacant religious facility, Gospel First Korean Baptist Church, across Coast Street to the west.

Prior to 1999, the subject property was zoned C-1 (Neighborhood Commercial) and improved with a commercial building. The property was previously owned by the Gospel First Korean Baptist Church, which formerly occupied the vacant religious facility located across Coast Street to the west. In 1999, the City Council approved a Zone Change, General Plan Amendment, Conditional Use Permit, and Variance request initiated by the Gospel Frist Korean Baptist Church to change the zoning of

the project site from C-1 to R-3 in order to use the building as an ancillary facility for the church. In 2002, the Planning Commission approved Conditional Use Permit No. CUP-626-02 allowing a preschool to operate in conjunction with the church's religious activities. The church and the preschool continued to operate at the subject location until 2019.

In 2023, the property underwent a change in ownership. The current owner, West St. Investments, LLC, proposes to re-develop the site with a thirty-four (34) unit apartment building. To facilitate the proposed project, all existing improvements would be demolished to allow for the proposed development.

The proposed apartment building would include six (6) rental affordable housing units: three (3) for "very low-income" households and three (3) for "moderate-income" households. With the inclusion of six (6) affordable units, pursuant the DBL and AB 1287, the project qualifies for a combined density bonus of up to 85% over the base density, reduced parking ratios, up to four (4) incentives / concessions, and unlimited waivers / reductions of development standards set forth in the Garden Grove Municipal Code (GGMC). The applicant has proposed the following four (4) incentives / concessions and five (5) waivers / reductions of development standards pursuant to the DBL to facilitate the proposed development:

1) An incentive / concession to increase the maximum height limit from thirty-five feet (35'-0") to fifty-five feet and six inches (55'-6")[1] (Section 9.12.040.020(A));

2) An incentive / concession to increase the maximum allowed number of building stories from three (3) to five (5) (Section 9.12.040.020(A));

3) An incentive / concession to increase the maximum lot coverage limit from fifty percent (50%) to seventy-one percent (71%) (Section 9.12.040.020(A));

4) An incentive / concession to forgo the undergrounding requirements of utilities and to allow the existing power lines along Coast Street to remain in place (Section 9.48.030);

5) A reduction of the required minimum front setback for the first and second floors from twenty feet (20'-0") to six feet (6'-0") (Section 9.12.040.020(A));

6) A reduction of the required minimum front setback for the third through fifth floor from twenty-five feet (25'-0") to six feet (6'-0") (Section 9.12.040.020(A));

[1] Section 9.12.040.010 of the Municipal Code allows roof structures to be extended fifteen feet (15'-0") above the roof line for the housing of elevators, stairways, tanks, ventilating fans or similar equipment. This concession pertains to the height limit of the main structure measured from the highest grade to the top of the roof, and would exclude the ten-foot height parapet above the roof that would cover the rooftop mechanical system.

7) A reduction of the required minimum interior side yard setback at the third through fifth floor from fifteen feet (15'-0") to ten feet (10'-0") (Section 9.12.040.020(A));;

8) A reduction of the required minimum rear yard setback for the third through fifth floor from fifteen feet (15'-0") to ten feet (10'-0") (Section 9.12.040.020(A)); and

9) A reduction of the minimum unit size requirement for one-bedroom units from 750 to 656 square feet (Section 9.12.040.020(E)).

The applicant's justifications for each of the above incentives / concessions and waivers / reductions can be found in Attachment 3 and Attachment 4. An Affordable Housing Regulatory Agreement consistent with the DBL would be recorded to ensure affordability of the affordable units for the occupants of said units, for a period of fifty-five (55) years.

Neighborhood Meeting

On November 14, 2024, the applicant and the property owner held a neighborhood meeting at the City of Garden Grove Community Meeting Center, located at 11300 Stanford Avenue, to inform property owners located within a 300-foot radius of the project site about the proposed project. Two (2) residents who lived nearby were present at the meeting and in support of the project.

PROJECT STATISTICS:

Standard	Provided	Code Requirement	Meets Code
Lot Size			
Gross area	23,508 square feet (0.54 acres)	7,200 square feet	Yes
Net area	21,829 square feet (0.50 acres)		Yes
Lot Coverage	71%	Max. 50%	**Concession requested**
Building Setbacks			
1st – 2nd floor			
Front	6'-0"	20'-0"	**Waiver requested**
Rear	10'-0"	10'-0"	Yes
Side	10'-0"	10'-0"	Yes
Street side	15'-0"	10'-0"	Yes
3rd – 5th floor			
Front	6'-0"	25'-0"	**Waiver requested**
Rear	10'-0"	15'-0"	**Waiver requested**
Side	10'-0"	15'-0"	**Waiver requested**
Street side	15'-0"	15'-0"	
Density[2]	34 units (70 units per acre)	18 units (32 units per acre)	**Density Bonus Law**
Total Parking	45 spaces	45 spaces	**Density Bonus Law**
Recreation Area Total	10,735 square feet	Min. 10,200 square feet	Yes

[2] The California Department of Housing and Community Development (HCD) has determined that the gross acreage may be utilized to calculate base density for projects under SDBL.

Standard	Provided	Code Requirement	Meets Code
Building Height	55'-6"	Max. 35'-0"	**Concession requested**
Stories	5 stories	3 stories	**Concession requested**
Unit Size			
1-bedroom unit	656 square feet	Min. 750 square feet	**Waiver requested**
2- bedroom unit	935 square feet	Min. 900 square feet	Yes

DISCUSSION:

DENSITY BONUS LAW (DBL)

The DBL entitles applicants to a density bonus, incentives or concessions, waivers or reductions of development standards, and reduced parking ratios to encourage the construction of affordable housing units. The project qualifies for four (4) incentives/concessions, and unlimited waivers or reductions of development standards by providing three (3) "very low-income" units and three (3) "moderate" units.

Density Bonus

The maximum residential density permitted in the R-3 Zone is thirty-two (32) units per acre. Therefore, the maximum allowable residential density, or the base density, for the subject site pursuant to the DBL is eighteen (18) units. Pursuant to the DBL, the inclusion of three (3) "very low-income" units entitles the project to a fifty percent (50%) density bonus above the base density, or an additional nine (9) units.

Assembly Bill 1287 (AB 1287), which was signed into State Law in 2023, allows for an additional "stackable" density bonus on top of the fifty percent (50%) density bonus provided by the DBL when a project provides an additional set-aside of affordable units for either "very low-income" or "moderate-income" households. With the inclusion of an additional three (3) "moderate-income" affordable units, which is equivalent to seventeen percent (17%) of the base density, the project is entitled to an additional 38.75% of density bonus above the base density, which is equivalent to an additional seven (7) units. Combining the two density bonuses, the project is entitled to a total of thirty-four (34) units, which is the number of units being proposed by the applicant.

Reduced Parking Ratio

The inclusion of six (6) affordable units entitles the project to a reduced parking ratio under the DBL at the ratio of one (1) parking space for each one-bedroom unit, and one and one-half (1.5) parking spaces for each two-bedroom unit. Based on the proposed plans and the unit characteristics, the project is required to provide a minimum of forty-five (45) parking spaces for the project, as shown on Table A, and would provide forty-five (45) spaces. Therefore, the project complies with the residential parking requirements allowed by the DBL.

Table A - Minimum Parking Spaces Required

Unit Type	Number of Units	Parking Ratio	Required Parking
One-bedroom	12 units	1 space per unit	12
Two- bedroom	22 units	1.5 spaces per unit	33
Total			**45**

Incentives / Concessions and Waivers / Reductions of Development Standards

The DBL provides that an applicant is entitled to four (4) "concessions or incentives" if it offers to restrict at least sixteen percent (16%) of the housing units for "very low-income" households. The project would provide three (3) affordable units for "very low-income" households, making the project eligible for four (4) incentives/concessions. In addition, the project is allotted an unlimited number of waivers / reductions of development standards.

The applicant has proposed four (4) incentives / concessions, and five (5) waivers / reductions of development standards pursuant to the DBL to facilitate the proposed development. A copy of the Density Bonus Application is appended as Attachment 3, and a summary of the proposed incentives / concessions and waivers / reductions of development standards is appended as Attachment 4. The two attachments collectively include the applicant's justifications for granting the incentives / concessions and waivers / reductions of development standards to facilitate the development of the project.

SITE PLAN

Site Design and Circulation

As shown on the submitted plans (Attachment 2), the project proposes a singular five-story structure fronting Coast Street along the west side of the site. The building would be set back six feet (6'-0") from the front (west) property line along Coast Street, ten feet (10'-0") from the interior side (north), and from the rear (east) property lines, and fifteen feet (15'-0") from the street (south) property line.

A new thirty-foot-wide (30'-0") driveway approach along Coast Street would provide vehicular access from the public right-of-way to the site. This approach would connect to a new twenty-five-foot-wide (25'-0") driveway leading directly to the parking garage on the ground floor.

Pedestrian access would be provided along the northern and eastern property lines, connecting the front and rear of the building to the public sidewalk along Coast Street and to the alley to the south. Landscaping and trees would be incorporated throughout the site, particularly along the main drive aisle and property boundaries.

Parking

The project provides a total of forty-five (45) parking spaces within the parking garage on the first floor, which complies with the minimum parking requirements of the DBL. The provided parking spaces would include a mix of standard, tandem, and ADA compliant stalls. All parking stalls would be accessible at ground-level located within the parking garage. Of these, thirty-six (36) parking spaces would be accessed from the main drive aisle, while the remaining nine (9) spaces would be accessed via the abutting public alley to the south. In addition to vehicle parking, a designated bicycle storage area would be located at the southwest corner of the garage. The parking lot has been designed to comply with City Standards for parking lot landscaping, parking stall sizes, vehicle turnarounds, and maneuvering areas.

Building design

While the majority of the ground floor would be dedicated to parking spaces for the future residents, the proposed design at this floor also includes a main lobby area with mail room, utility rooms and a trash collecting room supporting the daily operation of the apartment building.

The second floor would feature seven (7) apartments along with the main communal open space area to serve the residents. The uppermost three (3) levels would be identical in design with each consisting of nine (9) units along with a storage area that is equivalent to 120 cubic feet of storage area for each unit. In total, the building would contain a total of thirty-four (34) units across the second, third, fourth and fifth floors.

Unit Design

Among thirty-four (34) units, twelve (12) units would be one-bedroom labeled as "Unit Type A" on the proposed plans. The remaining twenty-two (22) units would be two-bedrooms labeled as "Unit Type B" on the proposed plan.

Table B – Unit Design

Unit Type	Bedrooms/Bathrooms	Living Area	Total Number of Units
A	1 bedroom/1 bathroom	656 s.f.	12 units
B	2 bedrooms/1 bathroom	935 s.f.	22 units

Type A units would consist of 656 square feet of living space and a 95 square feet private of balcony. All Type A units would consist of a kitchen area, living room area, one (1) bedroom and one (1) full bathroom.

Type B units would consist of 935 square feet of living space and a 95 square feet private balcony. All Type B units would consist of a kitchen area, living room area, two (2) bedrooms and one (1) full bathroom.

Open Space and Recreational Area

Section 9.12.040.050.J of the Municipal Code requires the proposed apartment building to provide a minimum of 10,200 square feet of open space (combination of private and common open space area), which is calculated at 300 square feet per unit. The project provides a total of 10,323 square feet of open space in the form of private, common, and passive open spaces. The provided open space exceeds the minimum open space requirements of the GGMC.

Each unit would include a private balcony measuring approximately ninety-five (95) square feet as private open spaces. These balconies would be accessible via the living room within each respective unit. They would measure seven feet (7'-0") by thirteen feet and eight inches (13'-8"), thereby meeting the minimum private open space standards set by the GGMC.

The common open spaces proposed as part of the project would be distributed across different locations. The first is a 2,264 square-foot passive common open space on the ground floor, consisting of a landscaped pathway along the northerly and easterly property lines. This pathway connects the main entrance to the rear of the property and includes landscaping features such as ground covers, benches, water elements, and pet waste stations. This passive area accounts for approximately twenty-two percent (22%) of the total common open space, thus complying with the standard.

The active common open space would be located on the building's second floor and is divided into two (2) outdoor areas: a 1,747 square-foot space at the center of the floor and a 1,300 square-foot space on the south side. Between the two (2) outdoor areas is a 1,782 square-foot indoor amenity space, which includes a clubhouse, business center, meeting room, and a gym. The GGMC permits up to fifty percent (50%) of required common open space to be located indoors. The indoor clubhouse area accounts for approximately seventeen percent (17%) of the total common open space, thereby meeting this requirement. All indoor and outdoor common areas are easily accessible via hallways and stairways throughout the development.

Amenities

Based on the lot size, and on the number of units proposed, the common open space / recreation areas would be subject to the amenity requirement list of GGMC Section 9.12.040.050.J. The GGMC also allows for amenities further down the list (i.e., higher quality/value amenities) to substitute for amenities listed higher up the list (i.e., lesser quality/value amenities).

The proposed project would comply with the amenity requirements of the GGMC. Based on the number of units proposed (34 units), the project would require all of the following amenities: barbecues, a community garden, an active use area, a community clubhouse with a kitchen, a business center with workstations, and an indoor or outdoor gym. The project would provide all of these amenities, at or more than the minimum quantities/sizes required.

The gym, business center, and community room would all be provided as indoor facilities on the second-floor. These spaces would provide direct access to a second-floor open space area that would include barbecue, yoga lawn, and community garden areas. Additional seating and communal outdoor lounge, and bathroom areas are provided throughout the second-floor deck. Collectively, the proposed project would meet or exceed all of the Municipal Code amenity requirements.

Refuse Storage

The building is equipped with a trash collecting room located on the ground floor at the southeast corner of the building. Each floor above the ground floor would feature a trash chute at the same corner allowing the residents to distribute their refuse from the upper level directly into the collecting room on the ground floor A condition of approval is incorporated requiring the property owner or the operator of the building to maintain the trash room. Based on the amount of waste disposed, per week, the property owner or the operator of the building must coordinate with the local recycling/trash company to ensure the adequate frequency of trash pick-up is serviced to the site for municipal solid waste (MSW), recyclables, and organic green waste, including any other type of waste.

Site Landscaping

Section 9.12.040.090 (Landscaping Requirements) requires all areas that are not designated for walkways, parking spaces, drive aisles, and private recreation areas, to be fully landscaped and automatically irrigated. In addition, the applicant is required to provide a landscape and irrigation plan that complies with the requirements of the GGMC. The project proposes landscaping in all required setbacks, with the exception of areas designated for certain recreation areas, and parking areas, using a variety of plant materials. The total landscaping area throughout the project would be 2,441 square feet, including 2,161 square feet of landscape area on the ground level, and 280 square feet of landscape area within the podium level. All of the landscaped areas would be fitted with automatic irrigation systems and a planting palate that complies with the City's Water Efficiency Guidelines.

Building Architecture

The proposed multiple-family apartment building would be five (5) stories, and approximately fifty-six feet and six inches (56'-6") to the top of the roof. The stair parapet would extend to approximately sixty-five feet (65'-0"). The proposed architecture generally features a contemporary design, with multiple façade planes, a predominantly flat roof with a variety of parapet heights, wood framed awnings, sliding glass doors, and a mixture of materials and colors to provide visual intrigue. The building design would include a mixture of stucco, exterior stone veneer, metal cladding, and fiber cement exterior materials. The building roof would generally be flat, with a parapet featuring a painted coping. The private balcony spaces would feature metal railings. The proposed color scheme would include earth tones, in shades of brown, white, beige, and red. The proposed materials and colors would be complementary to the contemporary architecture. The balcony spaces, open

hallways, exterior windows, and color scheme combined would help give the development an airier design.

REPLACEMENT HOUSING AND TENANT PROTECTIONS

Pursuant to Government Code §66300.6(a), the City may not approve a development project that will require the demolition of residential dwelling units unless the project will create at least as many residential dwelling units as will be demolished, and must require the replacement of any demolished "protected" units and the provision of certain benefits to displaced occupants of protected units. The existing structure is a non-residential structure that was previously used as a preschool. This proposed project does not necessitate the demolition of any residential units to accommodate the development of the proposed project. Therefore, the replacement housing and tenant protection provisions of Government Code Section 66300.6 do not apply.

NO NET LOSS FINDINGS

Government Code Section 65863 requires jurisdictions to maintain adequate sites to accommodate their remaining unmet Regional Housing Needs Allocation (RHNA) by each income category at all times throughout the Housing Element planning period. A jurisdiction may not take any action to reduce a parcel's residential density unless it makes findings that the reduction is consistent with the General Plan, including the Housing Element, and that the remaining sites identified in its Housing Element sites inventory can accommodate its remaining unmet RHNA by each income category or it identifies additional sites so that there is no net loss of residential unit capacity.

In addition, if a jurisdiction approves a development on a parcel identified in its Housing Element sites inventory with fewer units than shown in the Housing Element, the jurisdiction must either make findings that the Housing Element's remaining sites have sufficient capacity to accommodate the remaining unmet RHNA by each income level, or identify and make available additional adequate sites to accommodate the remaining unmet RHNA for each income category. However, a jurisdiction may not disapprove a housing development project on the basis that approval of the development would trigger the identification or zoning of additional adequate sites to accommodate the remaining RHNA.

The City's 6th Cycle RHNA requires the City to plan for 19,168 housing units for all income levels. A component of preparing the City's Housing Element is the identification of vacant and underutilized sites suitable for residential development, and an evaluation of the housing development potential of these sites in fulfilling the City's RHNA. The project site (APN: 097-011-03) is identified in the site inventory as having a realistic capacity to accommodate fourteen (14) "moderate-income" units. The proposed project consists of three (3) "very low-income", three (3) "moderate-income" units and twenty-eight (28) "above moderate-income" units. Because the proposed project includes fewer "moderate-income" units than shown in the Housing Element sites inventory, the City must determine whether the remaining Housing Element inventory sites have sufficient capacity to accommodate the City's remaining unmet RHNA by income level if the project is approved as proposed. Staff has

evaluated the housing projects that have been permitted or approved during the current planning period, or which are otherwise not accounted for in the Housing Element site analysis, and has determined that the remaining sites identified in the sites inventory have sufficient capacity to accommodate the City's remaining unmet RHNA need for each income level.

At the time the Housing Element was prepared and adopted, the City's *unmet* RHNA was calculated to be 18,208 units, broken down as follows: 6,567 "low- and very low-income" units, 3,087 "moderate-income" units, and 8,554 "above moderate-income" units. The sites identified in the certified adopted Housing Element were determined adequate to accommodate a total of 19,239 units, including 442 more units than the City's unmet RHNA in the "low- and very low-income" categories, 207 more units than the City's unmet RHNA for the "moderate-income" category, and 382 more units than the City's unmet RHNA for the "above moderate-income" category. Overall, the sites inventory in the adopted Housing Element reflected a total capacity surplus of 1,031 units.

After accounting for permitted and entitled units since the beginning of the 6th RHNA cycle, October 15, 2021, and the thirty-four (34) units in the proposed project, the City's total remaining unmet RHNA would be 17,559 units, broken down as follows: 6,519 "low- and very low-income" units, 3,081 "moderate-income" units, and 7,959 "above moderate-income" units. The remaining capacity of the sites identified in the Housing Element would be 15,718 units, resulting in a total capacity surplus of 3,007 units. The remaining sites are also adequate to accommodate a surplus of "low- and very low-income" units (469), "moderate-income" units (7), and "above-moderate-income" units (2,531). Due to this surplus, the overall residential capacity on sites identified in the Housing Element would still be sufficient to accommodate the City's total remaining unmet RHNA if the proposed project is approved. The required No Net Loss findings can be made and are included in Resolution No. 6123-25 (Attachment 6).

CALIFORNIA ENVIRONMETAL QUALITY ACT (CEQA)

CEQA's Class 32 exemption applies to in-fill development projects (CEQA Guidelines §15332). A project can qualify for a Class 32 exemption if the proposed project: (1) is consistent with applicable General Plan designation and all General Plan policies, as well as with applicable zoning designation and regulations; (2) the proposed development occurs within City limits on a project site of no more than five (5) acres substantially surrounded by urban uses; (3) the project site has no value as habitat for endangered, rare, or threatened species; (4) the approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality; and (5) the site can be adequately served by all required utilities and public services (CEQA Guidelines §15332).

The project is consistent with General Plan policies and regulations. The subject site is located entirely within an urbanized area in the City, on a 0.50-acre site (net area). The subject site was surveyed, and does not contain any known habitat for

endangered, threatened, or rare species of wildlife. Traffic, noise, air quality, and water quality studies have been prepared by licensed firms to study the impacts of the proposed development, and no significant impacts have been identified. The traffic, noise, air quality, and water quality studies are appended to the Staff Report (Attachment 5). Lastly, the Public Works Department has reviewed the proposed development, and found that it can be adequately served by all required utilities and public services. Consequently, it can be determined that the project can be exempted from further CEQA action under the Class 32 exemption.

RECOMMENDATION:

Staff recommends that the Planning Commission hold a public hearing and take the following action:

1. Adopt the attached Resolution No. 6123-25 approving Site Plan No. SP-162-2025, subject to the recommended Conditions of Approval.

Maria Parra

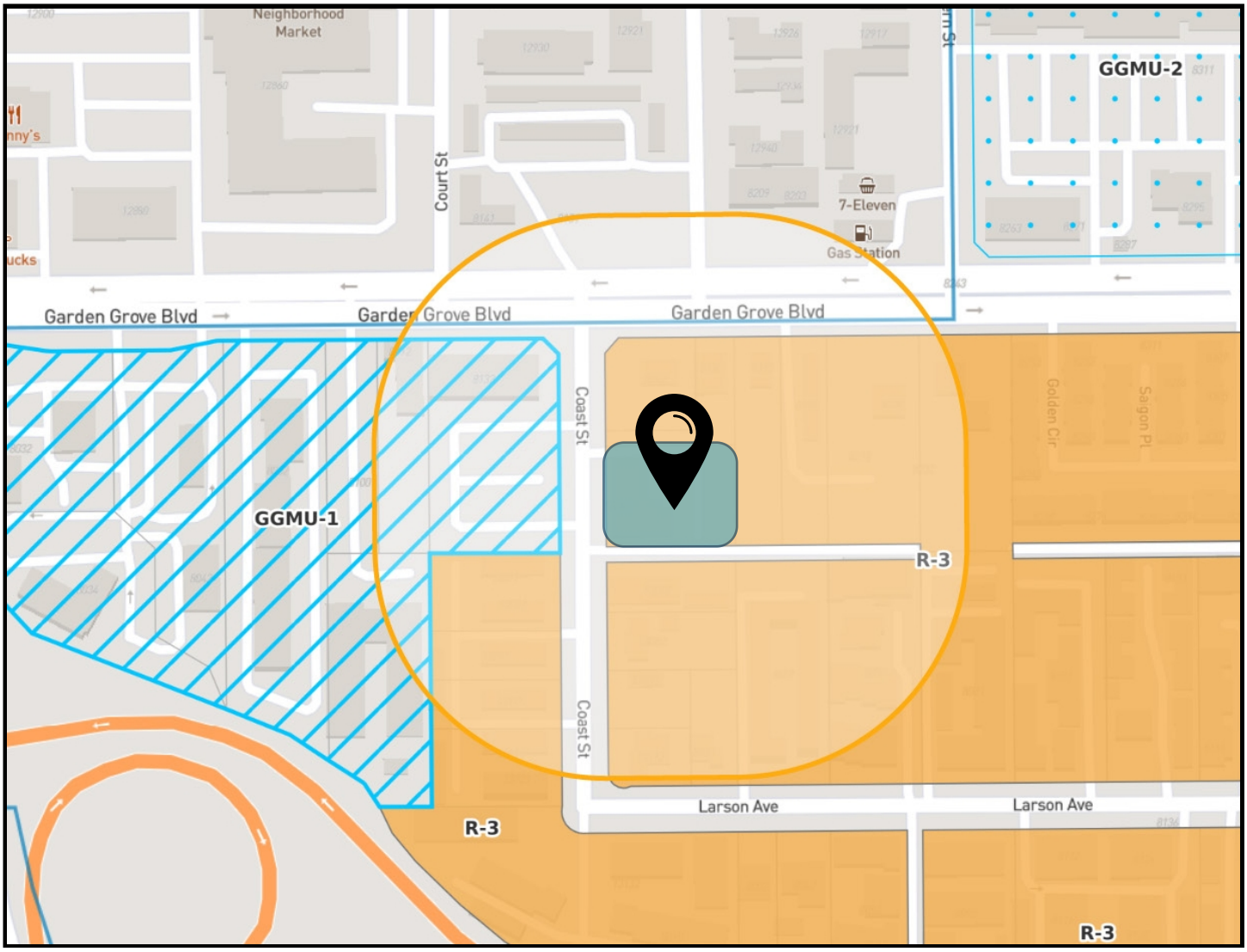
Planning Services Manager

By: Huong Ly, AICP
Associate Planner

Attachment 1: Vicinity Map
Attachment 2: Plans
Attachment 3: Density Bonus Application
Attachment 4: Summary Table of Proposed Density Bonus Incentives / Concessions & Waivers / Reductions
Attachment 5: Class 32 Categorical Exemption Memorandum with attached Technical Studies
Attachment 6: Resolution No. 6123-25 with Exhibit "A" – Conditions of Approval

ATTACHMENT 1

SITE PLAN NO. SP-162-2025
13040 COAST STREET



LEGEND

SUBJECT SITE(S) – 13040 COAST STREET.

300 FOOT RADIUS

NOTES

1. SITE ADDRESS — 13040 COAST STREET.

CITY OF GARDEN GROVE
COMMUNITY DEVELOPMENT DEPARTMENT
PLANNING SERVICES DIVISION
SEPTEMBER 18, 2025

ATTACHMENT 2

COAST STREET APARTMENTS

13040 COAST ST., GARDEN GROVE, CA. 92844

APPLICANT:

BSB DESIGN
970 West 190th Street Suite 250
Torrance, CA 90502
t. 310. 217. 8885 f. 310. 217. 0425

July 08, 2025

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PROJECT SUMMARY

PROJECT SITE INFORMATION

APN#	ADDRESS	ZONING	LAND USE	NET LOT AREA (SF)	NET LOT AREA (ACRE)	GROSS LOT AREA (SF)	GROSS LOT AREA (ACRE)
097-011-03	13040 COAST STREET, GARDEN GROVE	R-3	MEDIUM DENSITY RESIDENTIAL	**21,829.0 SF**	**.50 ACRES**	**23,508 SF**	**.54 ACRES**

PROJECT CONSTRUCTION TYPE — S13-R FULLY SPRINKLERED 4 STORY TYPE V-A OVER 1 STORY TYPE I (PARKING / R-2 RESIDENTIAL) - 5 STORY TOTAL

	REQUIRED SETBACK	REQUIRED STEPBACKS			PROPOSED SETBACK	PROPOSED STEPBACKS	NOTES
	1ST AND 2ND FLOOR	**3RD FLOOR**	**4TH FLOOR**	**5TH FLOOR**	**1ST & 2ND FLOOR**	**3RD TO 5TH FLOOR**	G.G.M.C. 9.12.040.020 General Development Standards
FRONT	20'-0" MIN.	25'-0" MIN.	25'-0" MIN.	25'-0" MIN.	6'-0"	6'-0"	WAIVER REQUESTED
SIDE	10'-0" MIN.	15'-0" MIN.	15'-0" MIN.	15'-0" MIN.	10'-0"	10'-0"	WAIVER REQUESTED
STREET SIDE (ALLEY)	10'-0" MIN.	15'-0" MIN.	15'-0" MIN.	15'-0" MIN.	15'-0"	15'-0"	
REAR	10'-0" MIN.	15'-0" MIN.	15'-0" MIN.	15'-0" MIN.	10'-0"	10'-0"	WAIVER REQUESTED

DENSITY

	32 DU/AC 18 DU.	BASE DENSITY (32 DU/AC) =	18 DU.	G.G.M.C. 9.12.040.020 General Development Standards
	88.75% DENSITY INCREASE WITH STATE DENSITY LAW	67 DU / NET AC =	34 DU.	
		TOTAL (64 DU/AC) =	**34 DU.**	DENSITY BONUS / STACKED DENSITY

FLOOR AREA RATIO

		1.81	

FLOOR AREA

	TOTAL NET FLOOR AREA =	**42,594 SF**	

BUILDING HEIGHT

	3 STORY / 35'-0" ALLOWED	5 STORY / 55'-6" TOP OF ROOF STRUCTURE	G.G.M.C. 9.12.040.020 General Development Standards

LOT COVERAGE

LOT COVERAGE AREA	BUILDING FOOTPRINT =	11,904.0 SF	54.5%	G.G.M.C. 9.12.040.020 General Development Standards
	PODIUM LEVEL HARDSCAPE AREA =	3,257 SF	15.0%	
	PODIUM LEVEL LANDSCAPED AREA =	338 SF	1.5%	
	OPEN DRIVE WAY =	2,042 SF	9.4%	
	GROUND LEVEL HARDSCAPE AREA =	2,073 SF	9.5%	
	GROUND LEVEL LANDSCAPE AREA =	2,215 SF	10.1%	
	TOTAL =	21,829.0 SF		
BUILDING LOT COVERAGE (50% MAX.)	**TOTAL LOT COVERAGE AREA =**	**15,499.0 SF**	**71%**	**CONCESSION REQUESTED**
FRONT SETBACK COVERAGE (50% MAX.)	HARDSCAPE AREA ALONG FRONT SETBACK	337 SF /780 SF	43%	
TOTAL LANDSCAPE / OUTDOOR AREA	PODIUM LEVEL LANDSCAPED AREA =	338 SF	2%	10% MINIMUM LANDSCAPE AREA REQUIRED
	GROUND LEVEL LANDSCAPE AREA =	2,215 SF	10%	

UNIT SUMMARY

PLAN	DESCRIPTION		QUANTITY	REQUIRED MIN. AREA		PROPOSED MIN. AREA	AREA SUBTOTAL	DECK	TOTAL DECK
UNIT A	1 BEDROOM / 1 BATH FLAT		12 UNITS	750 SF	WAIVER	656 SF	7,872 SF	95 SF (270 SF UNIT #207)	1,398 SF
UNIT B	2 BEDROOM / 2 BATH FLAT		22 UNITS	900 SF		935 SF	20,570 SF	95 SF	2,090 SF
PROJECT UNIT TOTAL			**34 UNITS**				**28,442 SF**		**3,488 SF**

PARKING SUMMARY — CALCULATED PER CA STATE DENSITY BONUS LAW

	REQUIRED			PROVIDED		PARKING BREAK DOWN
	MINIMUM REQUIRED					STANDARD = 11 SPACES
	1 BR UNIT	1.0 SPACE PER UNIT	12 SPACES	GARAGE ACCESS PARKING SPACES=	36 SPACES	* TANDEM = 11 SPACES
	2 BR UNIT	1.5 SPACES PER UNIT	33 SPACES	TUCK-UNDER PARKING SPACES =	9 SPACES	STANDARD EV READY = 12 SPACES
						STANDARD EV CAPABLE = 5 SPACES
						STANDARD EV EQUIPPED= 2 SPACES
						HC EV EQUIPPED = 1 SPACES
						HC ACCESSIBLE = 3 SPACES
		TOTAL =	**45 SPACES**	**TOTAL =**	**45 SPACES**	**TOTAL = 45 SPACES**

* TANDEM PARKING PROPOSED PER STATE DENSITY BONUS CAL GOV CODE SECTION 65915 (p) (4)

BUILDING SUMMARY

	RESIDENTIAL / COMM. ROOM	DECK	CIRCULATIONS / LOBBY	MECHANICAL / VERTICAL CIRCULATION / GARAGE	NET BUILDING FLOOR AREA	TOTAL GROSS BUILDING FLOOR AREA
LEVEL 1			496 SF	14,892 SF	496 SF	15,388 SF
LEVEL 2	7,490 SF	665 SF	2,161 SF	1,048 SF	10,316 SF	11,364 SF
LEVEL 3	7,578 SF	855 SF	2,161 SF	921 SF	10,594 SF	11,515 SF
LEVEL 4	7,578 SF	855 SF	2,161 SF	921 SF	10,594 SF	11,515 SF
LEVEL 5	7,578 SF	855 SF	2,161 SF	921 SF	10,594 SF	11,515 SF
TOTAL	**30,224 SF**	**3,230 SF**	**9,140 SF**	**18,703 SF**	**42,594 SF**	**61,297 SF**

GARAGE — **14,892 SF**

OPEN SPACE / AMMENITY SUMMARY

	REQUIRED G.G.M.U. 9.12.040.050 J Multi-Family Residential	PROPOSED
COMMON OPEN SPACE	* 1,700 SF MIN. OUTDOOR ACTIVE OPEN SPACE REQUIRED WITH	GROUND LEVEL PASSIVE = 2,264 SF
	4 BBQ AREA WITH SEATING, COMMUNITY GARDEN AT 68 SF, INDOOR GYM AT 250 SF	PODIUM ACTIVE / PASSIVE OPEN AREA (400 SF ACTIVE YOGA LAWN) = 3,201 SF
	CLUBHOUSE WITH KITCHEN AT 400 SF AND BUSINESS CENTER WITH 5 STATIONS	COMMUNITY ROOM / INDOOR RECREATIONAL AREA = 1,782 SF
	205 SF COMMON OPEN SPACE / UNIT = 6,970 SF	**SUB-TOTAL = 7,247 SF**
PRIVATE OPEN SPACE		
	95 SF MIN. PRIVATE OPEN SPACE / UNIT = 3,230 SF	**PRIVATE DECK = 3,488 SF**
TOTAL OPEN SPACE	**300 SF COMBINED OPEN SPACE / UNIT TOTAL = 10,200 SF**	**TOTAL = 10,735 SF**

STORAGE — G.G.M.C. 9.12.040.050 E. Special Requirements

	120 CF PER UNIT OF STORAGE SPACE (34 UNITS)	34 STORAGE SPACES AT 120 CF MIN. PROVIDED AT EVERY RESIDENTIAL FLOORS

BICYCLE SUMMARY — G.G.M.U. 9.18.140.040 (E)

	REQUIRED	PROVIDED
BICYCLE SPACE	1 SPACE PER 10 REQUIRED PARKING SPACES (34 SPACES/10) =	BICYCLE RACK LOCATED IN GARAGE = 5 SPACES
	BICYCLE SPACE REQUIRED 5 SPACES	**TOTAL PROVIDED BICYCLE SPACE = 5 SPACES**

AERIAL MAP — SCALE: N.T.S.

SHEET INDEX

ARCHITECTURAL
SD-0.1 TITLE SHEET
SD-0.2 PROJECT INFORMATION
SD-0.3 PROJECT NOTE
SD-1.1 SITE PLAN
SD-1.2 SIGHT DISTANCE DIAGRAM
SD-1.3 LOT COVERAGE DIAGRAM
SD-1.4 CODE ANALYSIS
SD-2.1 GROUND LEVEL BUILDING PLAN
SD-2.2 2ND (PODIUM) LEVEL BUILDING PLAN
SD-2.3 3RD LEVEL BUILDING PLAN
SD-2.4 4TH LEVEL BUILDING PLAN
SD-2.5 5TH LEVEL BUILDING PLAN
SD-2.6 ROOF PLAN
SD-3.1 BUILDING SECTIONS
SD-3.2 BUILDING ELEVATIONS
SD-3.3 BUILDING ELEVATIONS
SD-4.1 UNIT PLANS
SD-4.2 CONCEPTUAL OPEN SPACE PLAN
SD-4.3 OPEN SPACE DIAGRAM
SD-5.1 MATERIAL BOARD
CIVIL
PRELIM GRADING PLAN
PRELIM DETAILS
TOPOGRAPHIC SURVEY
LANDSCAPE
L1.0 GROUND LEVEL LANDSCAPE
L1.1 PODIUM LEVEL LANDSCAPE
FIRE
F-1 PRELIMINARY FIRE ACCESS PLAN

REQUESTED INCENTIVES AND WAIVERS

CONCESSIONS / WAIVERS
- BUILDING HEIGHT GREATER THAN 35'-0"
- BUILDING STORIES GREATER THAN 3
- LOT COVERAGE MORE THAN 50%
- FRONT YARD SETBACK REDUCTION
- FRONT YARD STEP BACK REDUCTIONS
- SIDE YARD STEP BACK REDUCTIONS (NORTH)
- REAR YARD STEP BACK REDUCTIONS
- REDUCE MINIMUM AREA FOR 1 BEDROOM UNITS

PROPOSED UNITS
- 3 VERY LOW INCOME UNITS
- 3 MODERATE INCOME UNITS
- 28 MARKET RATE UNITS

COAST STREET APARTMENTS

13040 COAST ST., GARDEN GROVE, CA. 92844

APPLICANT:

PROJECT INFORMATION

BSB DESIGN
970 West 190th Street Suite 250
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July 08, 2025

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GENERAL NOTE

ALL WORKS SHALL COMPLY WITH THE LATEST CA BUILDING STANDARDS CODE AT TIME OF PERMIT APPLICATION.

SOIL REPORT COMPLYING CBC CHAPTER 18 IS REQUIRED AND SHALL BE SUBMITTED AT TIME OFPERMIT APPLICATION.

AUTOMATIC FIRE SPRINKLER ACCORDING TO CBC CHAPTER 9 IS REQUIRED THROUGHOUT.

MULTISTORY DWELLING UNITS CONTAINED IN BUILDINGS WITH ELEVATORS SHALL COMPLY WITH SECTION CB 1102A.3.2. THE STORY OF THE UNIT THAT IS SERVED BY THE BUILDING ELEVATOR IS CONSIDERED A GROUND FLOOR AND THE PRIMARY ENTRY FLOOR TO THE UNIT AND SHALL COMPLY WITH THE FOLLOWING:

1. AT LEAST 1 POWDER ROOM OR BATHROOM SHALL BE LOCATED ON THE PRIMARY ENTRY LEVEL.
2. AT LEAST 1 KITCHEN SHALL BE LOCATED ON THE PRIMARY ENTRY LEVEL.
3. ALL ROOMS OR SPACES LOCATED ON THE PRIMARY ENTRY LEVEL SHALL BE SERVED BY AN ACCESSIBLE ROUTE AND SHALL COMPLY WITH DIVISION IV.

AT LEAST ONE ACCESSIBLE ROUTE SHALL CONNECT ACCESSIBLE BUILDING OR FACILITY ENTRANCES WITH ALL ACCESSIBLE SPACES, ELEMENTS AND COVERED MULTIFAMILY DWELLING UNITS.

ALL EXTERIOR EXITS SHALL BE CONNECTED TO PUBLIC SIDEWALK BY AN ACCESSIBLE ROUTE. THE ACCESSIBLE ROUTE SHALL BE THE MOST PRACTICAL DIRECT ROUTE AND TO THE MAXIMUM EXTENT FEASIBLE, COINCIDE WITH THE ROUTE FOR THE GENERAL PUBLIC AND BUILDING RESIDENTS.

ACCESSIBLE ROUTE NOTE

A CONTINUOUS UNOBSTRUCTED PATH CONNECTING ACCESSIBLE ELEMENTS AND SPACES OF AN ACCESSIBLE SITE, BUILDING OR FACILITY THAT CAN BE NEGOTIATED BY A PERSON WITH A DISABILITY USING A WHEELCHAIR, AND THAT IS ALSO SAFE FOR AND USABLE BY PERSONS WITH OTHER DISABILITIES.

AN ACCESSIBLE ROUTE SHALL BE PROVIDED THROUGH ALL ROOMS AND SPACES OF THE DWELLING UNIT. THE ACCESSIBLE ROUTE SHALL PASS THROUGH THE PRIMARY ENTRY DOOR, AND SHALL CONNECT WITH ALL ADDITIONAL EXTERIOR DOORS, REQUIRED CLEAR FLOOR SPACES AT KITCHEN APPLIANCES AND BATHROOM FIXTURES. FOR THE PURPOSE OF THIS SECTION, "ACCESSIBLE ROUTES" MAY INCLUDE HALLWAYS, CORRIDORS AND RAMPS.

THE ACCESSIBLE ROUTE INTO AND THROUGHOUT COVERED MULTIFAMILY DWELLING UNITS SHALL BE AT LEAST 36" WIDE (1130A.2).

THE MINIMUM MANEUVERING CLEARANCE AT DOORS OR GATES, WITHIN AN ACCESSIBLE ROUTE, SHALL COMPLY WITH CBC SECTION 1126A.3.1.

THE WIDTH OF ACCESSIBLE ROUTES THROUGHOUT A COVERED DWELLING UNIT SHALL BE 36" MINIMUM CLEAR BETWEEN FINISH ELEMENTS ALONG HALLWAY OR CORRIDOR WALLS (E.G. BASE BOARDS, CHAIR RAILS, PANELING, OR WAINSCOTING). CONSTRUCTION PLANS ARE OFTEN DIMENSIONED TO THE FRAMING, NOT THE FINISH. IF THE WIDTH OF THE ACCESSIBLE ROUTE IS SHOWN AS 36" ON CONSTRUCTION PLANS, IT SHOULD BE CLARIFIED THAT THIS IS THE MINIMUM CLEAR DIMENSION.

CONDITIONS

CONSTRUCTION TYPE WILL BE SUBJECT TO COMPLIANCE WITH CHAPTER 5 CBC.

OPENING AREAS AND/OR PROTECTION WILL BE SUBJECT TO 705.8 CBC.

PROJECT WILL BE SUBJECT TO BUILDING PLAN REVIEW AND MUST ILLUSTRATE COMPLIANCE WITH ALL APPLICABLE CODES, REGULATIONS AND LOCAL ORDINANCES.

BUILDING CONDITIONS

1. PROJECT WILL BE SUBJECT TO BUILDING PLAN REVIEW AND WILL ILLUSTRATE COMPLIANCE WITH ALL LOCALLY ADOPTED CODES AND ORDINANCES AS WELL AS APPLICABLE STATUTES AND REGULATIONS.
2. A CODE ANALYSIS WILL BE REQUIRED TO JUSTIFY HEIGHTS, AREAS AND CONSTRUCTION TYPES. ADDRESS 504, 506 AND 510.4 CBC. IF EXCEEDING 50' HEIGHT, FIREWALLS MAY BE REQUIRED FOR ALLOWABLE AREA.
3. OPENING PROTECTION WHERE CLOSE PROXIMITY TO INTERIOR PROPERTY LINES OCCURS WILL COMPLY WITH 705.8 CBC.
4. IF OCCUPANCY OF ROOF AREA IS INTENDED, IT WILL HAVE EXITS AS REQUIRED FOR A FLOOR.
5. IF PODIUM CONSTRUCTION PER 510.4, SHAFT FOR TRASH CHUTE WILL BE 2-HR RATED PER 510.2.
6. 8'-2" MIN HEAD CLEARANCE FOR VAN PARKING IS REQUIRED.

ACCESSIBLE PARKING NOTE

ASSIGNED ACCESSIBLE PARKING SPACES:
WHEN ASSIGNED PARKING SPACES ARE PROVIDED FOR A RESIDENT OR A GROUP OF RESIDENTS, AT LEAST 2% OF THE ASSIGNED PARKING SPACES SERVING COVERED MULTIFAMILY DWELLING UNITS SHALL BE ACCESSIBLE IN EACH TYPE OF PARKING FACILITY. AT LEAST ONE SPACE OF EACH TYPE OF PARKING FACILITY SHALL BE MADE ACCESSIBLE EVEN IF THE TOTAL NUMBER EXCEEDS 2%. WHEN ASSIGNED PARKING IS PROVIDED, SIGNAGE AS REQUIRED BY "PARKING SIGNAGE" SHALL NOT BE REQUIRED. (1109A.4)

UNASSIGNED AND VISITOR PARKING SPACES:
WHEN PARKING IS PROVIDED FOR COVERED MULTIFAMILY DWELLINGS AND IS NOT ASSIGNED TO A RESIDENT OR A GROUP OF RESIDENTS AT LEAST 5% OF THE PARKING SPACES SHALL BE ACCESSIBLE AND PROVIDE ACCESS TO GRADE-LEVEL ENTRANCES OF COVERED MULTIFAMILY DWELLINGS AND FACILITIES (E.G., SWIMMING POOLS, CLUB HOUSES, RECREATION AREAS, AND LAUNDRY ROOMS) THAT SERVE COVERED MULTIFAMILY DWELLINGS. ACCESSIBLE PARKING SPACES SHALL BE PROVIDED WITH SIGNAGE AS REQUIRED BY "PARKING SIGNAGE." SUCH SIGNAGE SHALL NOT BE BLOCKED FROM VIEW BY A VEHICLE PARKED IN THE SPACE.

LANDSCAPE NOTE

TREE SIZE. FORTY PERCENT OF THE TREES ON A SITE SHALL CONSIST OF MINIMUM SIZE 24-INCH BOX, AND THE REMAINING 60 PERCENT SHALL BE OF MINIMUM SIZE 15 GALLONS.

ALL TREES SHALL BE DOUBLE STAKED IN ACCORDANCE WITH CITY STANDARDS.

THE MINIMUM WIDTH OF ALL PLANTERS SHALL BE THREE FEET CLEAR, INTERIOR DIMENSIONS, NOT INCLUSIVE OF RETAINING CURB OR WALL.

FIFTY PERCENT OF ALL REQUIRED SHRUBS SHALL BE A MINIMUM SIZE OF FIVE GALLONS AT TIME OF PLANTING.

LIVE GROUNDCOVER SHALL BE PLANTED AND MAINTAINED WHERE SHRUBBERY IS NOT SUFFICIENT TO COVER EXPOSED SOIL. MULCH MAY BE USED IN PLACE OF GROUNDCOVER WHERE GROUNDCOVER WILL NOT GROW OR WHERE GROUNDCOVER WILL CAUSE HARM TO OTHER PLANTS, BUT NOT MORE THAN 30 PERCENT OF THE GROUNDCOVER AREA SHALL HAVE THE MULCH SUBSTITUTE.

COAST STREET APARTMENTS

APPLICANT:

13040 COAST ST., GARDEN GROVE, CA. 92844

PROJECT NOTES

BSB DESIGN
970 West 190th Street Suite 250
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t. 310. 217. 8885 f. 310. 217. 0425

July 08, 2025

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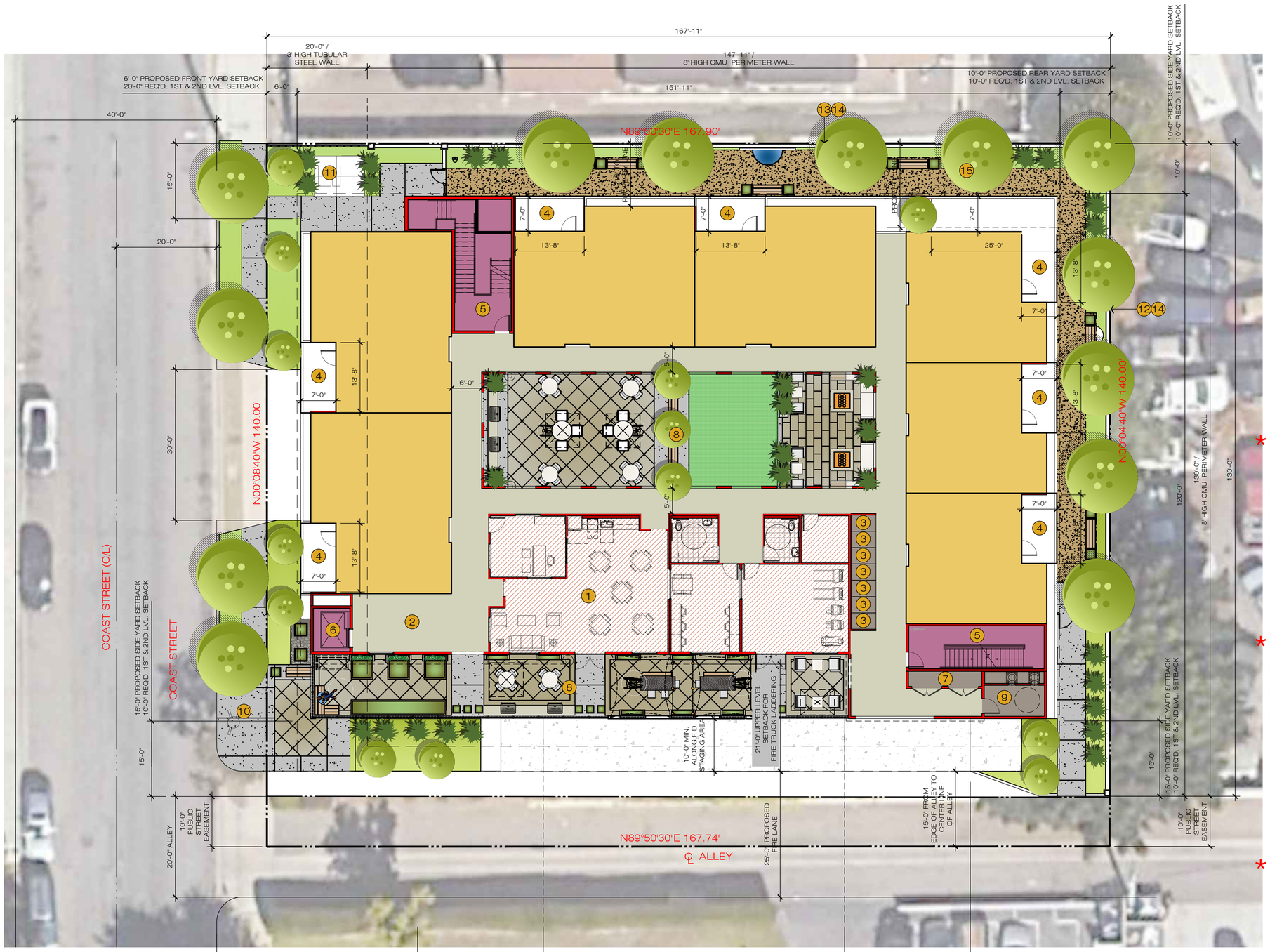
BSB DESIGN



LEGEND

- RESIDENTIAL
- INTERIOR CORRIDOR / CIRCULATION
- MECHANICAL / UTILITY
- VERTICAL CIRCULATION
- COMMUNITY ROOM / INDOOR RECREATION AREA
- PATHWAY WITH GROUND COVER
- PROPOSED TRANSFORMER
- EXISTING / PROPOSED FIRE HYDRANT
- 150' HOSE PULL

KEY NOTE

★ 1 COMMUNITY ROOM / INDOOR RECREATION AREA @ 1,782 SF

2 ELEVATOR LOBBY

3 PRIVATE STORAGE @ 120 CF EACH

4 PRIVATE DECK @ 95 SF MIN., TYP.

5 EXIT STAIR

6 GURNEY-SIZE ELEVATOR PER CBC 3002.4(A)

7 INTERMEDIATE DISTRIBUTION FRAME CLOSET

★ 8 PODIUM COMMON OPEN SPACE @ 3,201 SF TOTAL

9 TRASH CHUTE

10 EXISTING FIRE HYDRANT

11 PROPOSED TRANSFORMER LOCATION

12 EXISTING BLOCK WALL TO BE REMOVED

13 EXISTING CHAIN LINK FENCE TO BE REMOVED

14 NEW CMU 8'-0" PERIMETER WALL

15 GROUND LEVEL COMMON OPEN SPACE @ 2,295 SF

★ REFER TO SHEET 4.2 FOR DETAIL OF OPEN SPACES

SITE PLAN

COAST STREET APARTMENTS

APPLICANT:

13040 COAST ST., GARDEN GROVE, CA. 92844

scale: 1/16" = 1'-0"

0 16 32 48 64

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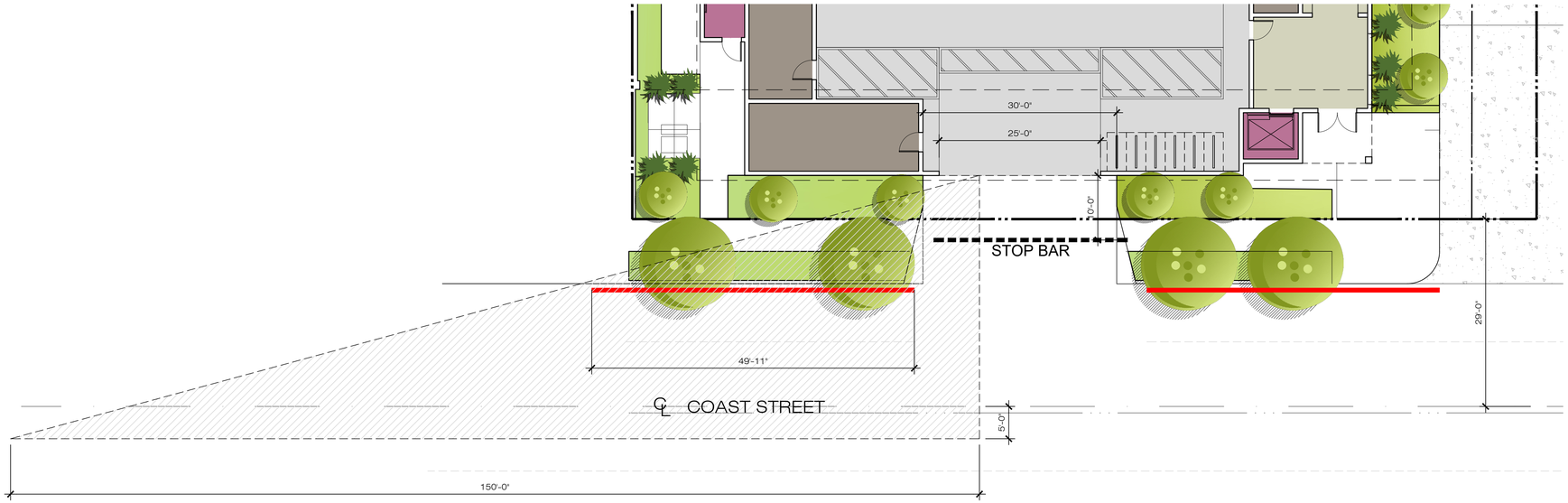

RIGHT TURN INTERSECTION MANEUVER

LEFT TURN INTERSECTION MANEUVER

LEGEND

PROPOSED TRANSFORMER

EXISTING / PROPOSED FIRE HYDRANT

STOPPING SIGHT DISTANCE

THE MINIMUM STOPPING SIGHT DISTANCE IS THE DISTANCE REQUIRED BY THE DRIVER OF A VEHICLE, TRAVELING AT A GIVEN SPEED, TO BRING HIS VEHICLE TO A STOP AFTER AN OBJECT ON THE ROAD BECOMES VISIBLE. STOPPING SIGHT DISTANCE IS MEASURED FROM THE DRIVER'S EYES, WHICH ARE ASSUMED TO BE 3.5 FEET ABOVE THE PAVEMENT SURFACE, TO AN OBJECT 0.5-FOOT HIGH ON THE ROAD

TO LAY OUT A SIGHT DISTANCE TRIANGLE, PLACE THE ENTERING DRIVER'S EYE 10 FEET BACK OF FLOW LINE, MEASURE TO THE CENTER OF THE APPROACH LANE THE REQUIRED SIGHT DISTANCE. IF THE APPROACH LANE IS WIDER THAN 12 FEET, MEASURE TO A POINT 6 FEET FROM THE ADJACENT LANE LINE OR CENTER LINE OF ROADWAY

THE STOPPING SIGHT DISTANCES SHOWN IN THE TABLE SHOULD BE INCREASED BY 20% ON SUSTAINED DOWNGRADES STEEPER THAN 3% AND LONGER THAN ONE MILE

TABLE
Sight Distance Standards

Design Speed * (mph)	Stopping * (ft.)	Passing * (ft.)
20	125	800
25	150	950
30	200	1100
35	250	1300
40	300	1500
45	360	1650
50	430	1800
55	500	1950
60	580	2100
65	660	2300
70	750	2500
75	840	2600
80	930	2700

SITE DISTANCE DIAGRAM

COAST STREET APARTMENTS

APPLICANT:

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scale: 1/16" = 1'-0"

0 16 32 48 64

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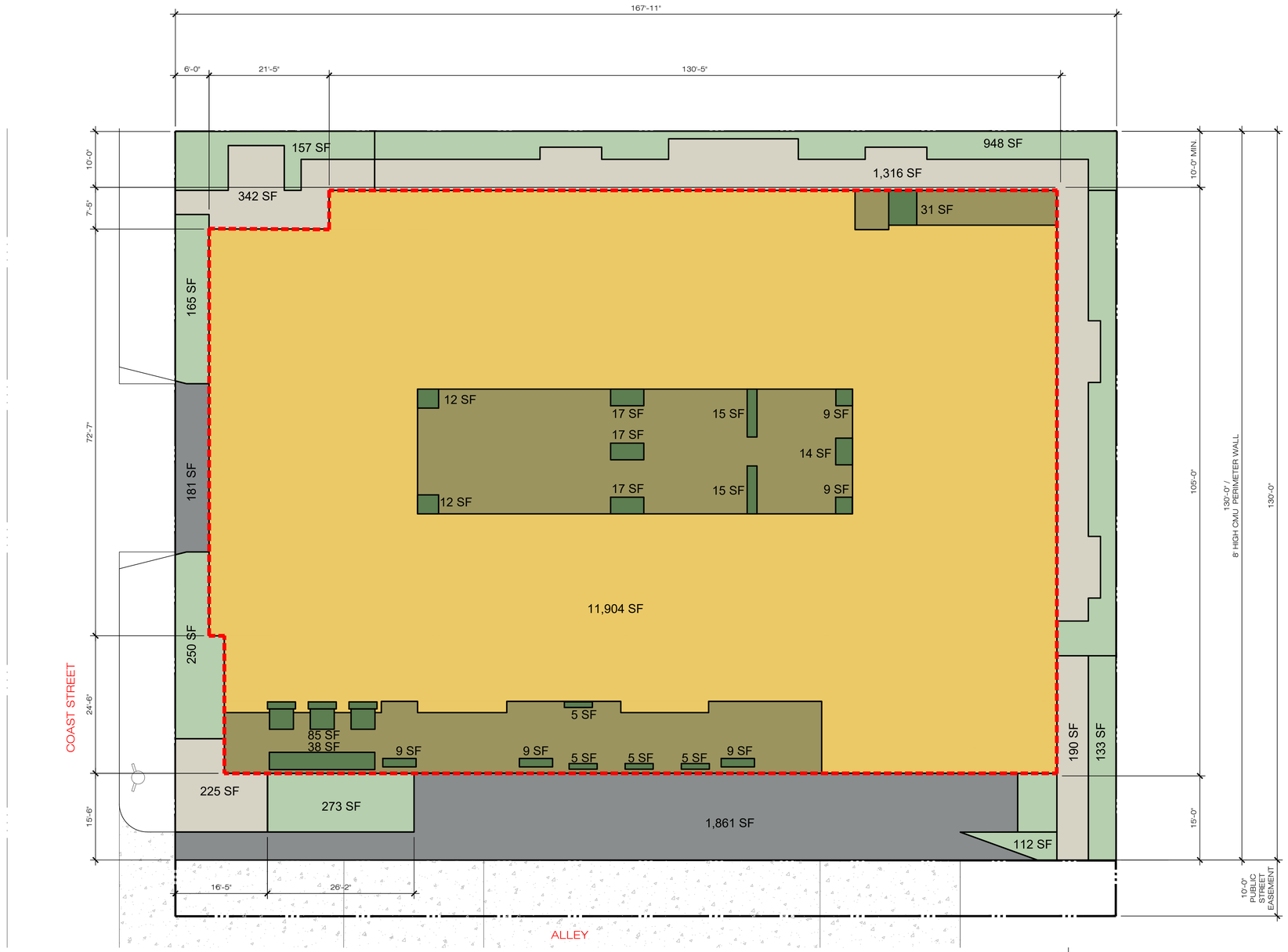

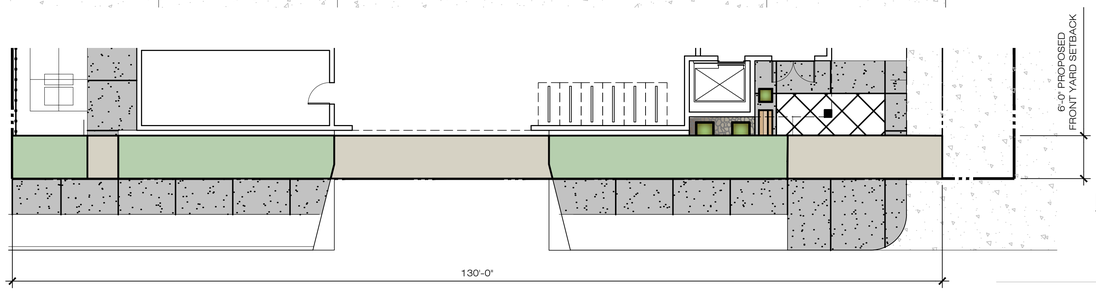

PARTIAL FRONT YARD SITE PLAN

LEGEND

BUILDING FOOTPRINT
11,904.0 SF TOTAL (54.5%)

PODIUM LEVEL HARDSCAPE AREA
3,257 SF TOTAL (15.0%)

PODIUM LEVEL LANDSCAPE AREA
338 SF TOTAL (1.5%)

TOTAL LOT COVERAGE
15,499.0 SF TOTAL (71.0%) -WAIVER REQUESTED

OPEN DRIVE WAY
2,042 SF TOTAL (9.4%)

GROUND LEVEL HARDSCAPE AREA
2,073 SF TOTAL (9.5%)

GROUND LEVEL LANDSCAPE AREA

2,215 SF TOTAL (10.1%)

TOTAL NET LOT AREA = 21,829 SF

TOTAL FRONT YARD SETBACK AREA = 780 SF

PER G.G.M.C. 9.12.040.020
50% MAX. HARD SCAPE ALLOWED= 390 SF

337 SF TOTAL HARDSCAPE
(390 SF MAX.) (43%)

443 SF TOTAL LANDSCAPE
(57%)

LOT COVERAGE DIAGRAM

COAST STREET APARTMENTS

APPLICANT:

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scale: 1/16" = 1'-0"

0 16 32 48 64

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July 08, 2025

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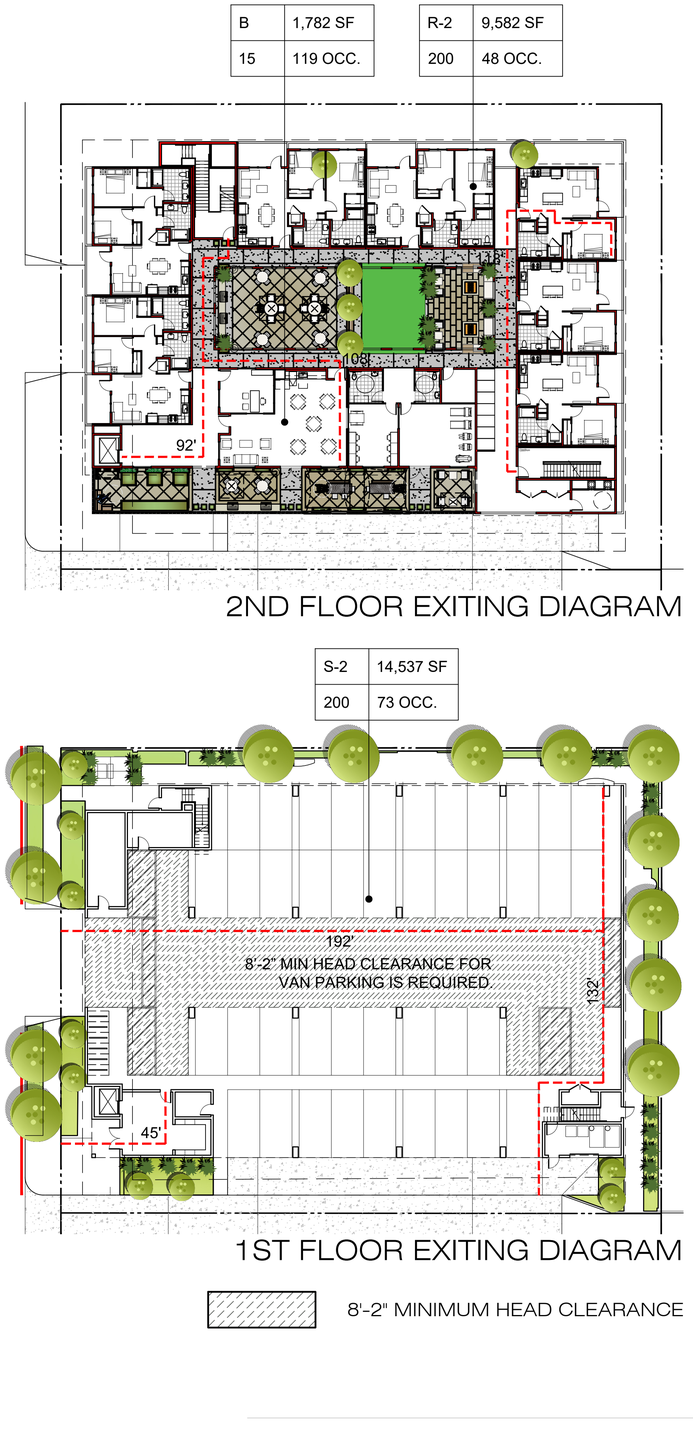
BSB DESIGN

BUILDING CONDITIONS:
1. PROJECT WILL BE SUBJECT TO BUILDING PLAN REVIEW AND WILL ILLUSTRATE COMPLIANCE WITH ALL LOCALLY ADOPTED CODES AND ORDINANCES AS WELL AS APPLICABLE STATUTES AND REGULATIONS.
2. A CODE ANALYSIS WILL BE REQUIRED TO JUSTIFY HEIGHTS, AREAS AND CONSTRUCTION TYPES. ADDRESS 504, 506 AND 510.4 CBC. IF EXCEEDING 50' HEIGHT, FIREWALLS MAY BE REQUIRED FOR ALLOWABLE AREA.
3. OPENING PROTECTION WHERE CLOSE PROXIMITY TO INTERIOR PROPERTY LINES OCCURS WILL COMPLY WITH 705.8 CBC.
4. IF OCCUPANCY OF ROOF AREA IS INTENDED, IT WILL HAVE EXITS AS REQUIRED FOR A FLOOR.
5. IF PODIUM CONSTRUCTION PER 510.4, SHAFT FOR TRASH CHUTE WILL BE 2-HR RATED PER 510.2.
6. 8'-2" MIN HEAD CLEARANCE FOR VAN PARKING IS REQUIRED.

TYPICAL FLOOR EXITING DIAGRAM



2ND FLOOR EXITING DIAGRAM

1ST FLOOR EXITING DIAGRAM

8'-2" MINIMUM HEAD CLEARANCE

GOVERNING CODE
PROJECT SHALL COMPLY WITH THE CURRENT STATE BUILDING CODES ADOPTED BY THE CITY OF GARDEN GROVE AT THE TIME OF PERMIT APPLICATION SUBMITTAL. 2022 CALIFORNIA BUILDING CODE (CBC), 2022 CALIFORNIA RESIDENTIAL CODE (CRC), 2022 CALIFORNIA MECHANICAL CODE, 2022 CALIFORNIA PLUMBING CODE, 2022 CALIFORNIA ELECTRICAL CODE, 2022 CALIFORNIA ENERGY CODE, 2022 CALIFORNIA GREEN STANDARDS CODE (CALGREEN) AND THE GARDEN GROVE MUNICIPAL CODE.

OCCUPANCY	
1 STORY TYPE - IA (FULLY SPRINKLERED) - UNLIMITED	GROUP S-2
4 STORY TYPE - VA (FULLY SPRINKLERED) - 60'-0" MAX.	GROUP R-2
NOTE: ALL THE MIXED-OCCUPANCY RESIDENTIAL BUILDINGS IN THIS PROJECT SHALL BE CLASSIFIED AS SEPARATED OCCUPANCIES PER CBC TABLE 504.4 AND SECTION 508.4.	

SEPARATED OCCUPANCIES JUSTIFICATIONS	PER CBC SECTION 508.4
IN EACH STORY, THE BUILDING AREA SHALL BE SUCH THAT THE SUM OF THE RATIOS OF THE ACTUAL BUILDING AREA OF EACH SEPARATED OCCUPANCY DIVIDED BY THE ALLOWABLE BUILDING AREA OF EACH SEPARATED OCCUPANCY SHALL NOT EXCEED 1. CBC SECTION 508.4.2	
NOTE: ALLOWABLE BUILDING AREA =TABLE 506.2 ALLOWABLE BUILDING AREA FACTOR OR TABLE 506.2 ALLOWABLE BUILDING AREA FACTOR WITH FRONTAGE INCREASE PER SECTION 506.3	
BUILDING 1 (TYPE VA CONSTRUCTION)	FULLY SPRINKLERED
FIRST LEVEL - 14,537 S.F.	
TOTAL ALLOWABLE AREA - UNLIMITED	COMPLIED
SECOND LEVEL - 1,782 S.F. (GYM / COMMUNITY)	
(1,782 S.F. / 36,000 S.F.) = 0.05 < 1	COMPLIED
SECOND LEVEL - 9,582 S.F. (RESIDENTIAL)	
(9,582 S.F. / 36,000 S.F.) = 0.27 < 1	COMPLIED
THIRD LEVEL - 11,515 S.F. (RESIDENTIAL)	
(11,515 S.F. / 36,000 S.F.) = 0.32 < 1	COMPLIED
FORTH LEVEL - 11,515 S.F. (RESIDENTIAL)	
(11,515 S.F. / 36,000 S.F.) = 0.32 < 1	COMPLIED
FIFTH LEVEL - 11,515 S.F. (RESIDENTIAL)	
(11,515 S.F. / 36,000 S.F.) = 0.32 < 1	COMPLIED
TYPE OF CONSTRUCTION	PER CBC TABLE 508.4 & SECTION 406.3.4
GROUP-R2 RESIDENTIAL BUILDINGS : TYPE VA - FULLY SPRINKLERED (NFPA 13)	
FULLY SPRINKLERED (NFPA 13): AUTOMATIC SPRINKLER SYSTEM INSTALLED IN ACCORDANCE WITH SECTION 903.3.1.1. QUICK RESPONSE SPRINKLERS SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 903.3.2 IN ALL DWELLING UNITS.	

CODE ANALYSIS

COAST STREET APARTMENTS

APPLICANT:

13040 COAST ST., GARDEN GROVE, CA. 92844

scale: 1/16" = 1'-0"

0 16 32 48 64

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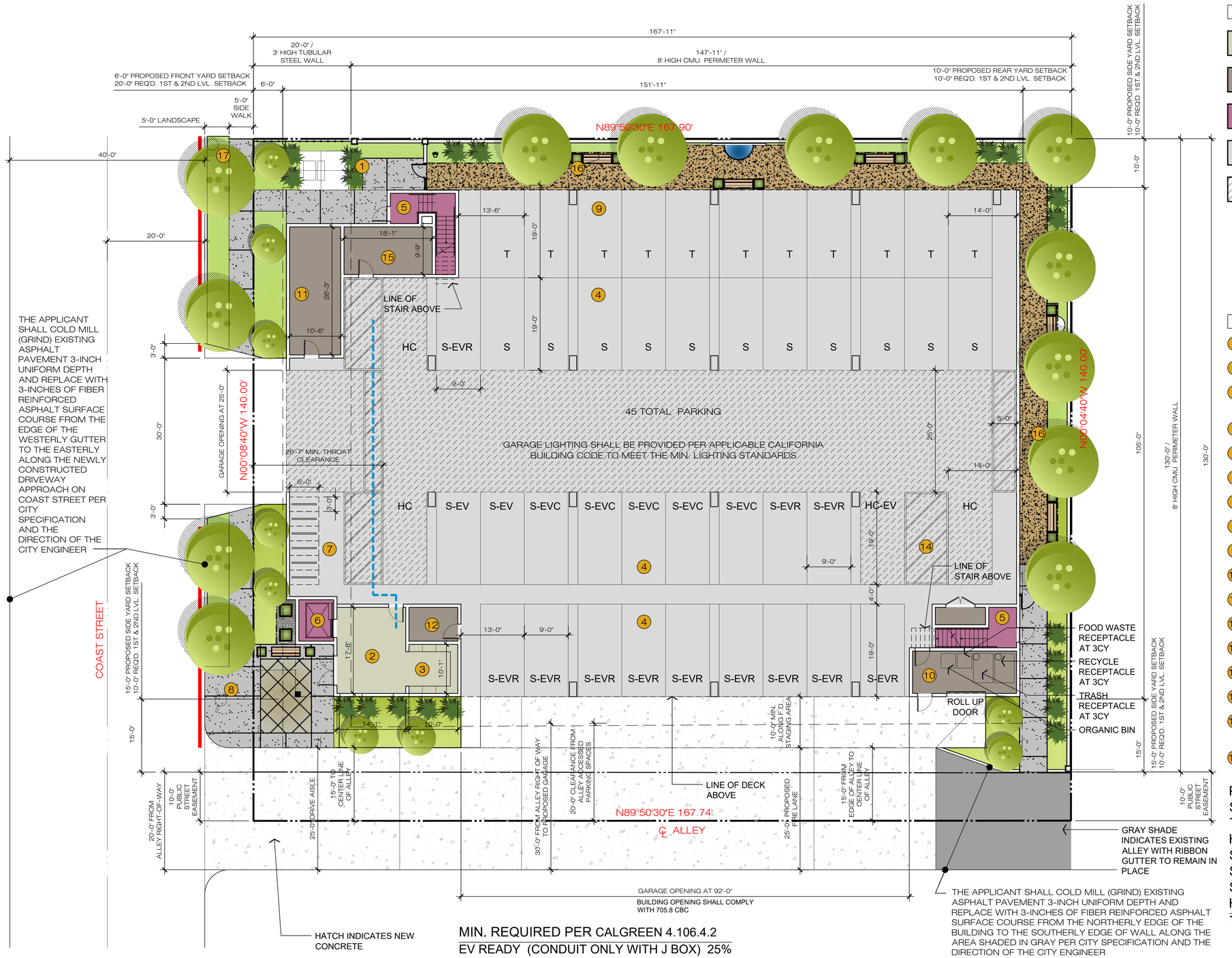

LEGEND

- CIRCULATION
- MECHANICAL / UTILITY
- VERTICAL CIRCULATION
- PARKING
- 8'-2" MINIMUM HEAD CLEARANCE
- PROPOSED TRANSFORMER
- EXISTING / PROPOSED FIRE HYDRANT
- ADA / PEDESTRIAN ROUTE

KEY NOTE

1. PROPOSED TRANSFORMER LOCATION
2. MAIN ENTRANCE LOBBY @ 245 SF
3. MAIL & PACKAGE @ 100 SF
   - ACCESSIBLE PER CBC 1127A.1
4. 9'-0"x19'-0" STANDARD PARKING STALL TYP.
5. EXIT STAIR
6. GURNEY-SIZE ELEVATOR PER CBC 3002.4(a)
7. 3'x6' EACH LOCKABLE BICYCLE STORAGE RACKS
8. EXISTING FIRE HYDRANT LOCATION
9. 9'-0"x19'-0" TANDEM PARKING STALL TYP.
10. TRASH ROOM @ 185 SF
11. ELECTRICAL ROOM
12. ELEVATOR MACHINE ROOM
13. THERMO STORAGE / MAINT. ROOM
14. VEHICLE TURN AROUND SPACE AT 9'-0"X19'-0"
15. CENTRAL WATER HEATER
16. DECOMPOSED GRANITE PATHWAY WITH GROUND COVER, BENCHES AND WATER FEAURES
17. EXISTING POWER POLE

PARKING LEGEND / SUMMARY

S (9'X19' STANDARD)	11 SPACES	24.5 %
T (9'x19' TANDEM)	11 SPACES	24.5 %
HC (ACCESSIBLE)	3 SPACES	7 %
S-EVR (9'X19' STANDARD EV READY)	12 SPACES	27 %
S-EVC (9'X19' STANDARD EV CAPABLE)	5 SPACES	11 %
S-EV (9'X19' STANDARD EV EQUIPPED)	2 SPACES	4 %
HC-EV (ACCESSIBLE EV EQUIPPED)	1 SPACE	2 %
TOTAL	45 SPACES	

MIN. REQUIRED PER CALGREEN 4.106.4.2

EV READY (CONDUIT ONLY WITH J BOX) 25%
EV CAPABLE (CONDUIT, J BOX, INSTALLED PANEL) 10%
EQUIPPED (EVERYTHING INSTALLED FOR LEVEL 2 CHARGING) 5%

GROUND LEVEL BUILDING PLAN

COAST STREET APARTMENTS

APPLICANT:

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scale: 1" = 10'-0"

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LEGEND

- RESIDENTIAL
- INTERIOR CIRCULATION
- MECHANICAL / UTILITY
- VERTICAL CIRCULATION
- COMMUNITY ROOM / INDOOR RECREATION AREA

KEY NOTE

* 1 COMMUNITY ROOM / INDOOR RECREATION AREA @ 1,782 SF

2 ELEVATOR LOBBY

3 PRIVATE STORAGE @ 120 CF EACH FOR EVERY UNIT PER FLOOR

4 PRIVATE DECK @ 95 SF MIN., TYP.

5 EXIT STAIR

6 GURNEY-SIZE ELEVATOR PER CBC 3002.4(A)

7 INTERMEDIATE DISTRIBUTION FRAME CLOSET

* 8 PODIUM COMMON OPEN SPACE

9 TRASH CHUTE

10 OUTDOOR ACTIVE USE AREA (YOGA LAWN)

11 COMMUNITY GARDEN

12 SITTING AREA

13 BBQ AREA

14 OUTDOOR ACTIVE USE AREA

* REFER TO SHEET 4.2 FOR DETAIL OF OPEN SPACES

2ND (PODIUM) LEVEL BUILDING PLAN

COAST STREET APARTMENTS

APPLICANT:

13040 COAST ST., GARDEN GROVE, CA. 92844

scale: 1" = 10'-0"

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LEGEND

- RESIDENTIAL
- INTERIOR CIRCULATION
- MECHANICAL / UTILITY
- VERTICAL CIRCULATION

KEY NOTE

1. TRASH CHUTE
2. ELEVATOR LOBBY
3. PRIVATE STORAGE @ 120 CF EACH FOR EVERY UNIT PER FLOOR
4. PRIVATE DECK @ 95 SF MIN., TYP.
5. EXIT STAIR
6. GURNEY-SIZE ELEVATOR PER CBC 3002.4(A)
7. INTERMEDIATE DISTRIBUTION FRAME CLOSET
8. COURTYARD BELOW

3RD LEVEL BUILDING PLAN

COAST STREET APARTMENTS

APPLICANT:

13040 COAST ST., GARDEN GROVE, CA. 92844

scale: 1" = 10'-0"

0 10 20 30 40

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LEGEND

- RESIDENTIAL
- INTERIOR CIRCULATION
- MECHANICAL / UTILITY
- VERTICAL CIRCULATION

KEY NOTE

1. TRASH CHUTE
2. ELEVATOR LOBBY
3. PRIVATE STORAGE @ 120 CF EACH FOR EVERY UNIT PER FLOOR
4. PRIVATE DECK @ 95 SF MIN., TYP.
5. EXIT STAIR
6. GURNEY-SIZE ELEVATOR PER CBC 3002.4(A)
7. INTERMEDIATE DISTRIBUTION FRAME CLOSET
8. COURTYARD BELOW

4TH LEVEL BUILDING PLAN

COAST STREET APARTMENTS

APPLICANT:

13040 COAST ST., GARDEN GROVE, CA. 92844

scale: 1" = 10'-0"

0 10 20 30 40

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LEGEND

- RESIDENTIAL
- INTERIOR CIRCULATION
- MECHANICAL / UTILITY
- VERTICAL CIRCULATION

KEY NOTE

1. TRASH CHUTE
2. ELEVATOR LOBBY
3. PRIVATE STORAGE @ 120 CF EACH FOR EVERY UNIT PER FLOOR
4. PRIVATE DECK @ 95 SF MIN., TYP.
5. EXIT STAIR
6. GURNEY-SIZE ELEVATOR PER CBC 3002.4(A)
7. INTERMEDIATE DISTRIBUTION FRAME CLOSET
8. COURTYARD BELOW

5TH LEVEL BUILDING PLAN

COAST STREET APARTMENTS

APPLICANT:

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scale: 1" = 10'-0"

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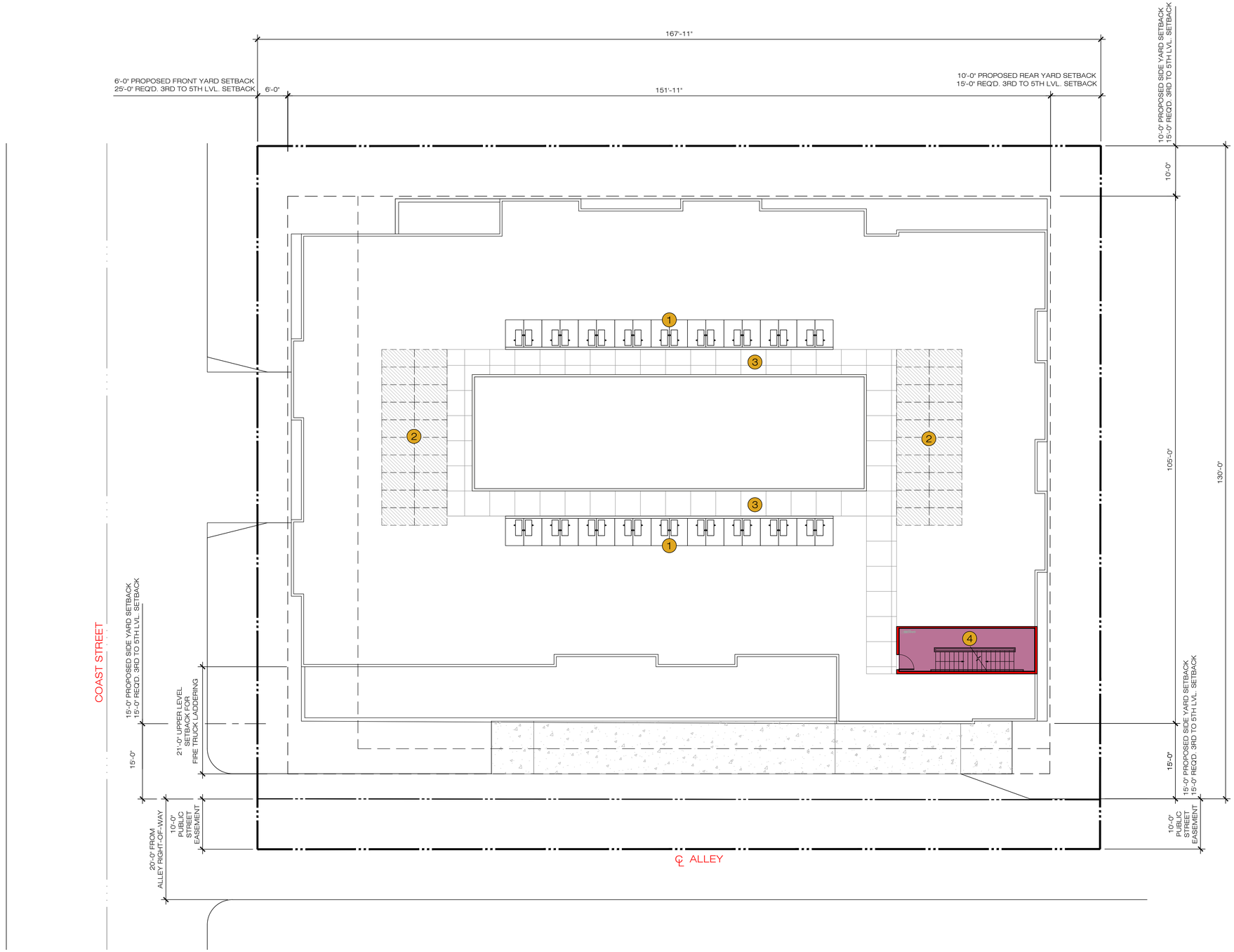

LEGEND

VERTICAL CIRCULATION

KEY NOTE

1. CONDENSING UNITS WITH ISOLATION PAD TYP.
2. FUTURE SOLAR PANEL AREA (15% OF ROOF AREA)
3. ROOF MEMBRANE TRAFFIC PAD
4. 'EXIT' STAIR

ROOF PLAN

COAST STREET APARTMENTS

13040 COAST ST., GARDEN GROVE, CA. 92844

APPLICANT:

scale: 1" = 10'-0"

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2. BUILDING SECTION 2

1. BUILDING SECTION 1

LEGEND

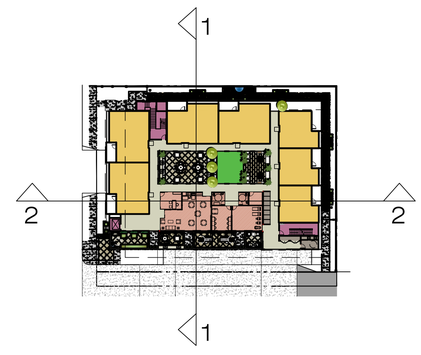
- RESIDENTIAL
- INTERIOR CIRCULATION
- MECHANICAL / UTILITY
- VERTICAL CIRCULATION
- PARKING

KEY NOTE

1. RESIDENTIAL UNIT TYP.
2. PRIVATE DECK, TYP.
3. COMMUNITY ROOM
4. INTERIOR CIRCULATION
5. PARKING GARAGE
6. PODIUM OPEN SPACES
7. CONDENSING UNITS WITH ISOLATION PAD TYP.
8. PRIVATE STORAGE @ 120 CF EACH FOR EVERY UNIT PER FLOOR

BUILDING CONDITIONS:

1. PROJECT WILL BE SUBJECT TO BUILDING PLAN REVIEW AND WILL ILLUSTRATE COMPLIANCE WITH ALL LOCALLY ADOPTED CODES AND ORDINANCES AS WELL AS APPLICABLE STATUTES AND REGULATIONS.
2. A CODE ANALYSIS WILL BE REQUIRED TO JUSTIFY HEIGHTS, AREAS AND CONSTRUCTION TYPES. ADDRESS 504, 506 AND 510.4 CBC. IF EXCEEDING 50' HEIGHT, FIREWALLS MAY BE REQUIRED FOR ALLOWABLE AREA.
3. OPENING PROTECTION WHERE CLOSE PROXIMITY TO INTERIOR PROPERTY LINES OCCURS WILL COMPLY WITH 705.8 CBC.
4. IF OCCUPANCY OF ROOF AREA IS INTENDED, IT WILL HAVE EXITS AS REQUIRED FOR A FLOOR.
5. IF PODIUM CONSTRUCTION PER 510.4, SHAFT FOR TRASH CHUTE WILL BE 2-HR RATED PER 510.2.
6. 8'-2" MIN HEAD CLEARANCE FOR VAN PARKING IS REQUIRED.



BUILDING SECTIONS

COAST STREET APARTMENTS

13040 COAST ST., GARDEN GROVE, CA. 92844

APPLICANT:

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2. SOUTH ELEVATION (ALLEY)

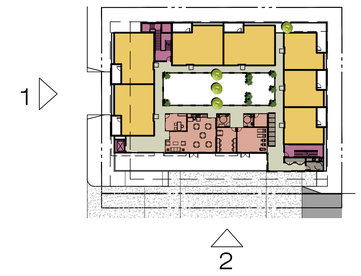
1. WEST ELEVATION (COAST STREET)

KEY NOTE

1. EXTERIOR CEMENT STUCCO COLOR 1
2. EXTERIOR CEMENT STUCCO COLOR 2
3. EXTERIOR CEMENT STUCCO COLOR 3
4. SYNTHETIC EXTERIOR BOARD
5. ENHANCED EXTERIOR VENEER
6. EXTERIOR METAL CLADDING
7. 2" MIN. RECESSED DUAL GLAZED VINYL WINDOWS WHITE COLORED FRAME
8. WOOD FRAMED AWNING
9. METAL CANOPY
10. SCREED LINE
11a. 3' HIGH TUBULAR STEEL WALL
11b. 8' HIGH CMU PERIMETER WALL
12. PAINTED METAL GUARD RAIL WITH TREX
13. 2" MIN. RECESSED STOREFRONT WINDOW AND DOOR
14. PAINTED METAL COPING

NOTE:
STOREFRONTS AND WINDOWS SHALL BE INSET FROM EXTERIOR FAÇADE PLANES AND/OR ADJOINING EXTERIOR WALL PLANES A MINIMUM OF TWO INCHES TO REALIZE INCREASED SHADE, SHADOW, AND VISUAL TEXTURE ALONG THE BUILDING FACE

KEY MAP



BUILDING ELEVATIONS

COAST STREET APARTMENTS

APPLICANT:

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scale: 1/16" = 1'-0"

0 16 32 48 64

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4. NORTH ELEVATION

3. EAST ELEVATION

KEY NOTE

1. EXTERIOR CEMENT STUCCO COLOR 1
2. EXTERIOR CEMENT STUCCO COLOR 2
3. EXTERIOR CEMENT STUCCO COLOR 3
4. SYNTHETIC EXTERIOR BOARD
5. ENHANCED EXTERIOR VENEER
6. EXTERIOR METAL CLADDING
7. 2" MIN. RECESSED DUAL GLAZED VINYL WINDOWS WHITE COLORED FRAME
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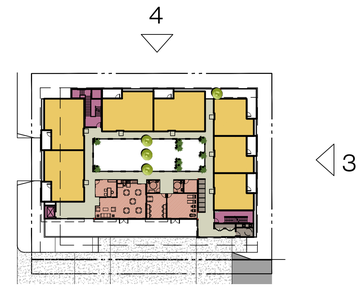
14. PAINTED METAL COPING

NOTE:
STOREFRONTS AND WINDOWS SHALL BE INSET FROM EXTERIOR FAÇADE PLANES AND/OR ADJOINING EXTERIOR WALL PLANES A MINIMUM OF TWO INCHES TO REALIZE INCREASED SHADE, SHADOW, AND VISUAL TEXTURE ALONG THE BUILDING FACE

KEY MAP



BUILDING ELEVATIONS

COAST STREET APARTMENTS

13040 COAST ST., GARDEN GROVE, CA. 92844

APPLICANT:

scale: 1/16" = 1'-0"

0 16 32 48 64

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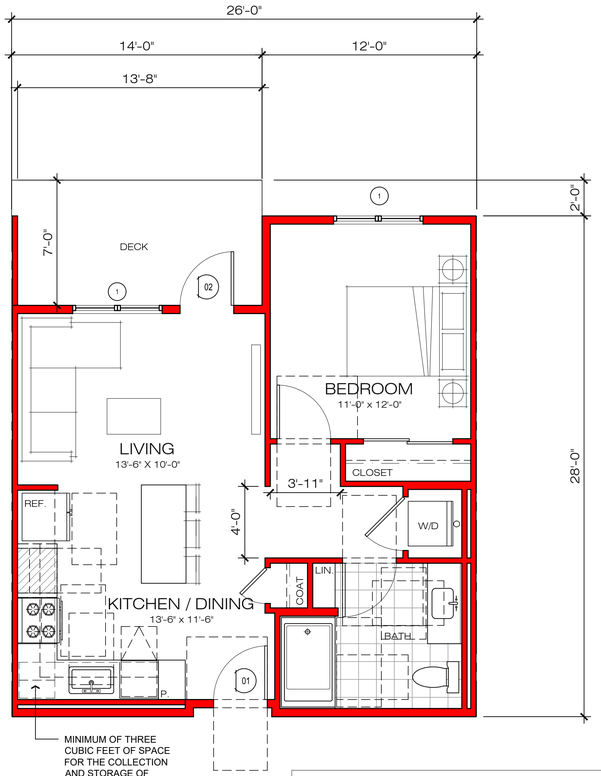
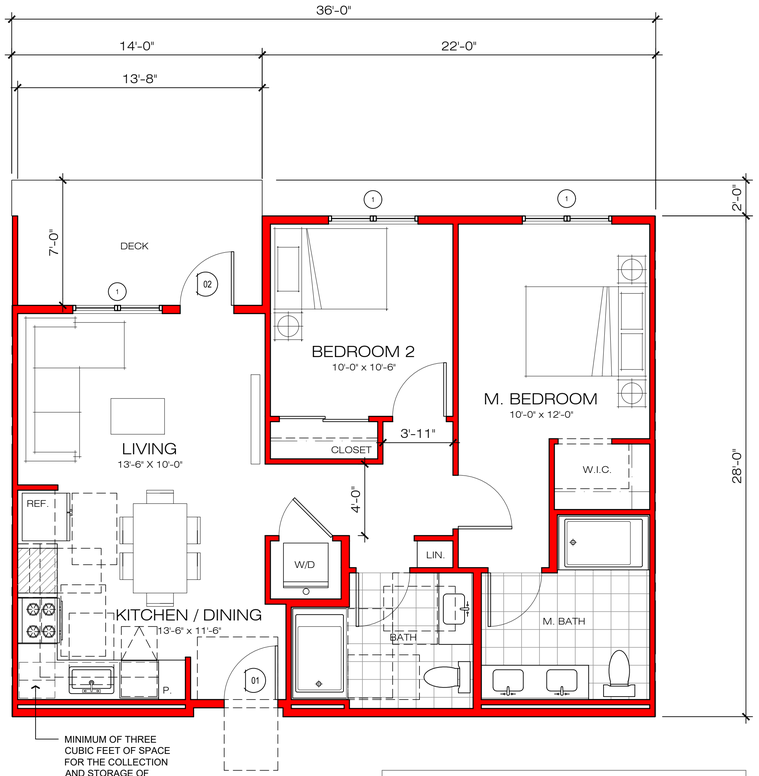


UNIT TYPE A

1 BEDROOM / 1 BATH
GROSS UNIT SF = 656 S.F.
DECK AREA = 95 SF
12 UNITS



UNIT TYPE B

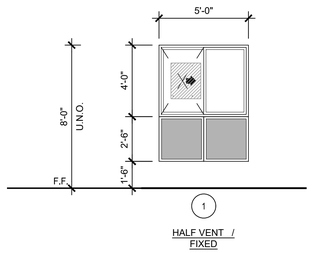
2 BEDROOM / 2 BATH
GROSS UNIT SF = 935 S.F.
DECK AREA = 95 SF
22 UNITS

window schedule

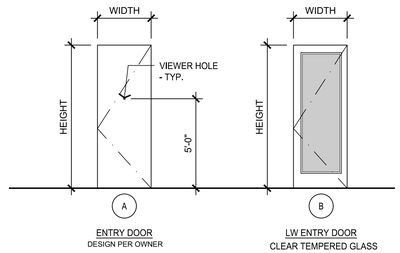
WINDOW SYMBOL	DESCRIPTION	WINDOW SIZE		FRAME		REMARKS
		WIDTH	HEIGHT	MATERIAL	FINISH COLOR	
1	HALF VENT / FIXED	5'-0"	6'-6"	VINYL	WHITE	5'-0" x 4'-0" HALF VENT WINDOW O/ 5'-0" x 2'-6" FIXED WINDOW FACTORY MULLED

unit door schedule

DOOR SYMBOL	AREA	DOOR TYPE	SIZE			DOOR CONSTRUCTION	REFER TO COMPOSITE BLDG. PLANS FOR LOCATIONS WHERE FIRE RATED ASSEMBLIES ARE REQUIRED
			WIDTH	HEIGHT	THICKNESS		
01	ENTRY	A	3'-0"	8'-0"	1 3/4"	FIBERGLASS	WEATHER SEAL, SELF CLOSER AND LATCH, KEY LOCK
02	EXTERIOR	B	3'-0"	8'-0"	1 3/4"	FIBERGLASS	0.20 OVERALL U-FACTOR SEE T-24 CALCULATION FOR MORE INFORMATION



HALF VENT / FIXED



ENTRY DOOR
DESIGN PER OWNER

LW ENTRY DOOR
CLEAR TEMPERED GLASS

ACCESSIBLE NOTE:

ACCESSIBLE ROUTE - A CONTINUOUS UNOBSTRUCTED PATH CONNECTING ACCESSIBLE ELEMENTS AND SPACES OF AN ACCESSIBLE SITE, BUILDING OR FACILITY THAT CAN BE NEGOTIATED BY A PERSON WITH A DISABILITY USING A WHEELCHAIR, AND THAT IS ALSO SAFE FOR AND USABLE BY PERSONS WITH OTHER DISABILITIES.

AN ACCESSIBLE ROUTE SHALL BE PROVIDED THROUGH ALL ROOMS AND SPACES OF THE DWELLING UNIT. THE ACCESSIBLE ROUTE SHALL PASS THROUGH THE PRIMARY ENTRY DOOR, AND SHALL CONNECT WITH ALL ADDITIONAL EXTERIOR DOORS, REQUIRED CLEAR FLOOR SPACES AT KITCHEN APPLIANCES AND BATHROOM FIXTURES. FOR THE PURPOSE OF THIS SECTION, "ACCESSIBLE ROUTES" MAY INCLUDE HALLWAYS, CORRIDORS AND RAMPS.

THE ACCESSIBLE ROUTE INTO AND THROUGHOUT COVERED MULTIFAMILY DWELLING UNITS SHALL BE AT LEAST 36" WIDE (1130A.2).

ALL DWELLING UNITS IN BUILDING EQUIPPED WITH ELEVATOR IS CONSIDERED A GROUND FLOOR AND ALL ROOMS/SPACES SHALL BE SERVED BY AN ACCESSIBLE ROUTE AND SHALL COMPLY WITH DIVISION IV
THE MINIMUM MANEUVERING CLEARANCE AT DOORS OR GATES, WITHIN AN ACCESSIBLE ROUTE, SHALL COMPLY WITH CBC SECTION 1126A.3.1.

THE WIDTH OF ACCESSIBLE ROUTES THROUGHOUT A COVERED DWELLING UNIT SHALL BE 36" MINIMUM CLEAR BETWEEN FINISH ELEMENTS ALONG HALLWAY OR CORRIDOR WALLS (E.G. BASE BOARDS, CHAIR RAILS, PANELING, OR WAINSCOTING). CONSTRUCTION PLANS ARE OFTEN DIMENSIONED TO THE FRAMING, NOT THE FINISH. IF THE WIDTH OF THE ACCESSIBLE ROUTE IS SHOWN AS 36" ON CONSTRUCTION PLANS, IT SHOULD BE CLARIFIED THAT THIS IS THE MINIMUM CLEAR DIMENSION.

UNIT NOTE:

ALL RESIDENTIAL PROJECTS SHALL PROVIDE A MINIMUM OF THREE CUBIC FEET OF SPACE FOR THE COLLECTION AND STORAGE OF REFUSE AND RECYCLABLE MATERIAL WITHIN EACH UNIT.

NY FENESTRATION WITH "U" VALUE LOWER THAN THE DEFAULT VALUE MUST HAVE A PERMANENT LABEL. OTHER FENESTRATION MAY HAVE A FACTORY REMOVABLE LABEL.

ALL EXTERIOR AND INTERIOR GLAZED DOORS TO BE TEMPERED.

COAST STREET APARTMENTS

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APPLICANT:

UNIT PLANS

scale: 1/4" = 1'-0"

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KEY NOTE

1. BARBEQUE AREA WITH TABLE SEATING
2. COMMUNITY GARDEN AREA @ 85 SF TOTAL
3. BUSINESS CENTER WITH WORK STATIONS @ 238 SF
4. GYM @ 369 SF
5. CLUBHOUSE WITH KITCHEN @ 725 SF
6. OUTDOOR ACTIVE USE AREA (YOGA LAWN)= 400 SF
7. OUTDOOR LOUNGE SEATING WITH FIRETABLE
8. OUTDOOR ACTIVITY / SEATING AREA
9. OUTDOOR PODIUM OPEN SPACE / 3,201 SF TOTAL
10. PET WASTE STATIONS
11. PRIVATE RESIDENT STORAGE (SEE BUILDING PLAN)
12. OFFICE / MEETING ROOM @ 183 SF
13. COMMUNITY STORAGE @ 88 SF
14. RESTROOM
15. KITCHEN
16. INTERMEDIATE DISTRIBUTION FRAME CLOSET
17. DECOMPOSED GRANITE PATHWAY WITH GROUND COVER, BENCHES & WATER FEATURES @ 2,295 SF
18. PASSIVE USE COURTYARD AREA = 1,726 SF TOTAL

REQUIRED AMENITY	PROVIDED AMENITY
BBQ : 1 PER 10 UNITS = 4 BBQ	BBQ : 4 BBQ GRILLES
COMMUNITY GARDEN: 8 SF / 4 UNITS = 68 SF	PODIUM COMMUNITY GARDEN = 85 SF
OUTDOOR ACTIVE USE AREA = 400 SF MIN.	OUTDOOR ACTIVE USE AREA : = 400 SF
GYM: 5 SF / UNIT = 170 SF (250 SF MIN.)	GYM: = 369 SF
BUSINESS CENTER : 1 / 8 UNITS = 5 STATIONS	BUSINESS CENTER : 5 STATIONS TOTAL
CLUB HOUSE WITH KITCHEN: 5 SF / UNIT (400 SF MIN.)	CLUB HOUSE WITH KITCHEN: 729 SF
COMMON OPEN SPACE: 205 SF / UNITS = 6,970 SF	COMMON OPEN SPACE: 258 SF / UNITS = 7,278 SF
PRIVATE OPEN SPACE: 95 SF (60 MIN.) / UNITS = 3,230 SF	PRIVATE OPEN SPACE: 95 SF / UNITS = 3,230 SF
TOTAL OPEN SPACE: 300 SF / UNITS = 10,200 SF	TOTAL OPEN SPACE: 353 SF / UNITS = 10,508 SF

* TOTAL OF 2 PET WASTE STATION TO BE LOCATED THROUGH OUT THE COMMUNITY
-ONE PET WASTE STATION AT PODIUM DECKS / ONE ALONG EAST PASSIVE OPEN SPACE

LEGEND

COMMUNITY ROOM / INDOOR RECREATIONAL AREA

PATHWAY WITH GROUND COVER

CONCEPTUAL OPEN SPACE PLAN

COAST STREET APARTMENTS

13040 COAST ST., GARDEN GROVE, CA. 92844

APPLICANT:

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

0 2 8 16 32

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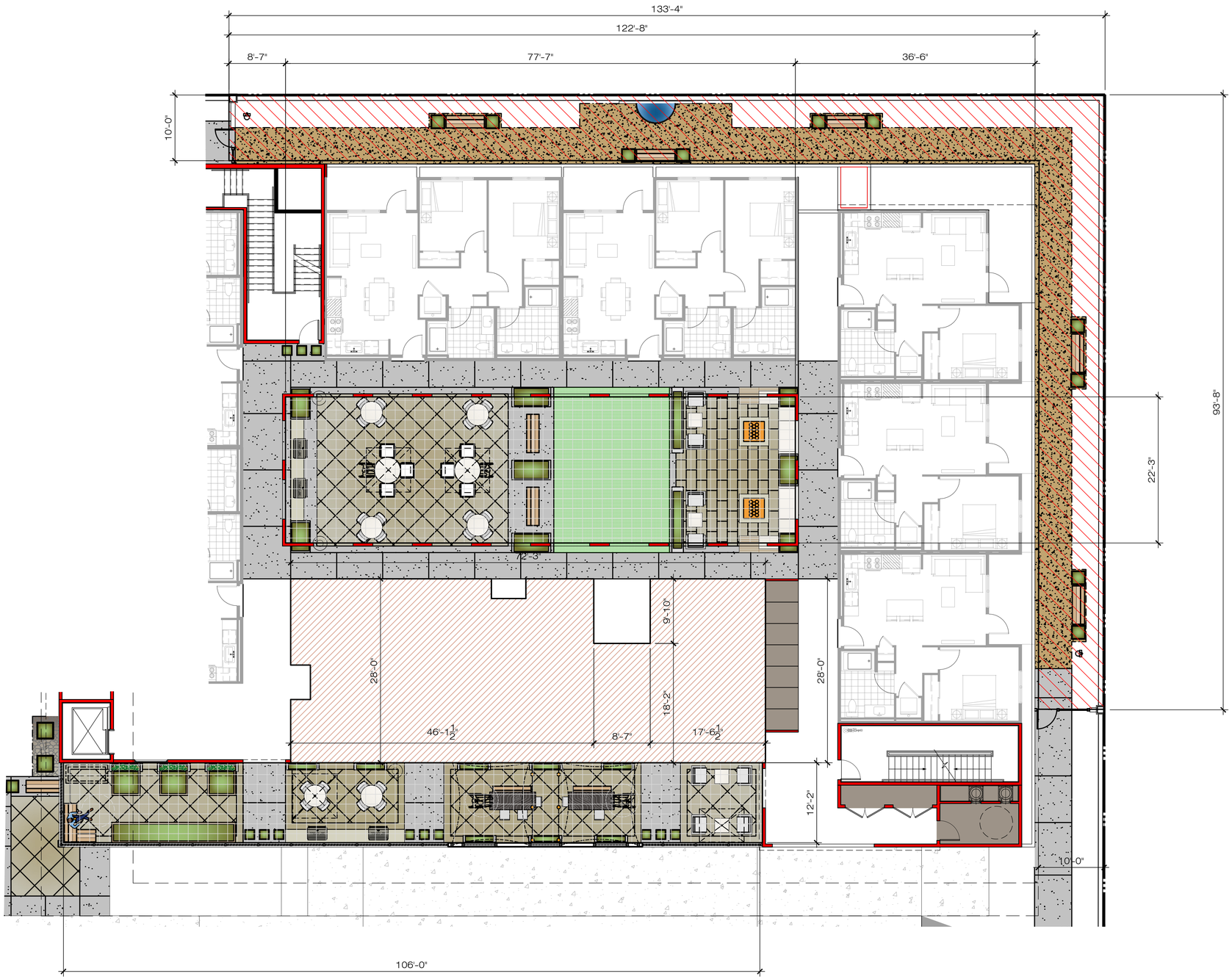

LEGEND

GROUND LEVEL OUTDOOR PASSIVE OPEN SPACE
= 2,264 SF

OUTDOOR ACTIVE / PASSIVE PODIUM OPEN SPACE
= 3,201 SF

COMMUNITY ROOM / INDOOR RECREATIONAL AREA
= 1,782 SF

OPEN SPACE DIAGRAM

COAST STREET APARTMENTS

13040 COAST ST., GARDEN GROVE, CA. 92844

APPLICANT:

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

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EXTERIOR PAINT COLOR

A COLOR
SW 7100 ARCADE WHITE

D COLOR
SW 7698 STRAW HARVEST

B COLOR
SW 6881 CAYENNE

E COLOR
SW 7055 ENDURING BRONZE

C COLOR
SW 7622 HOMBURG GRAY

1 EXTERIOR CEMENT PLASTER

2 VERTICAL METAL CLADDING

3 EXTERIOR STONE VENEER

4 DUAL GLAZED VINYL WINDOW

5 STOREFRONT DOOR / WINDOW

6 COMPOSITE HORIZONTAL RAILING

7 PAINTED METAL GUARDRAIL

8 WOOD FRAMED AWNING

9 CONTROL JOINT

10 SIGNAGE

11 METAL COPING

MATERIAL BOARD

COAST STREET APARTMENTS

13040 COAST ST., GARDEN GROVE, CA. 92844

APPLICANT:

BSB DESIGN
970 West 190th Street Suite 250
Torrance, CA 90502
t. 310. 217. 8885 f. 310. 217. 0425

July 08, 2025

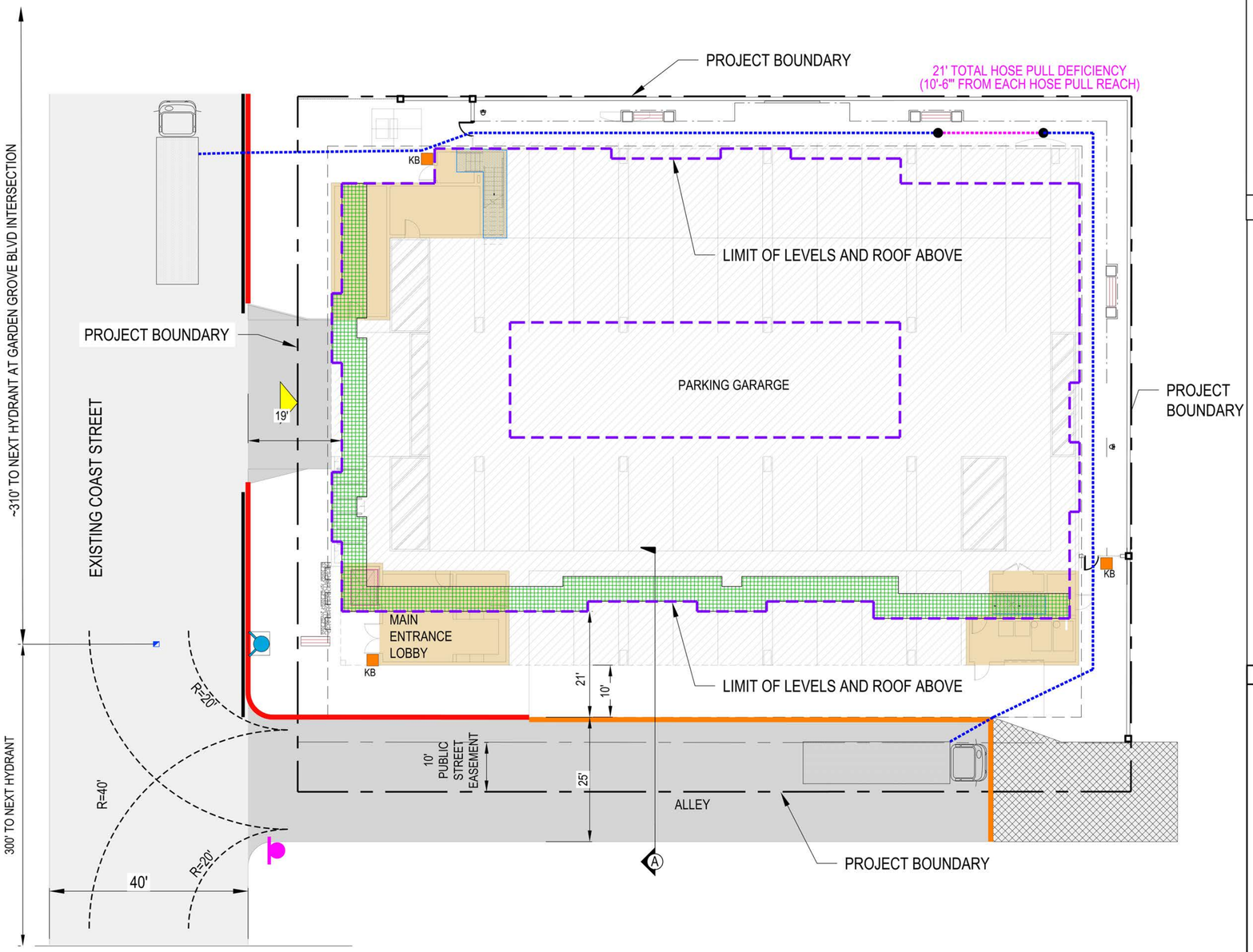
SD-5.1

BSB DESIGN

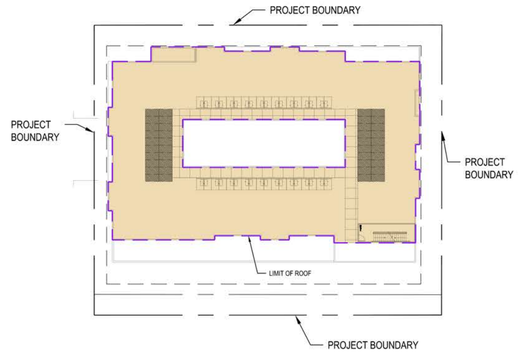
COAST STREET APARTMENTS

PRELIMINARY FIRE ACCESS PLAN

13040 COAST STREET, GARDEN GROVE, CA 92844



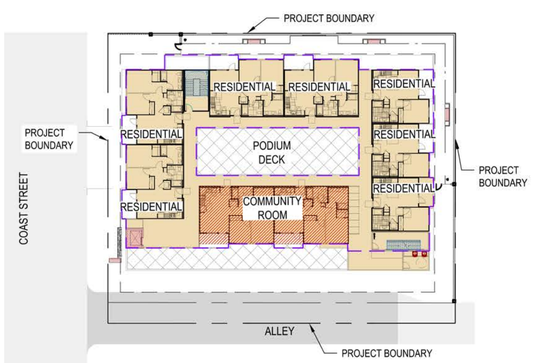
ROOF PLAN N.T.S.



LEGEND

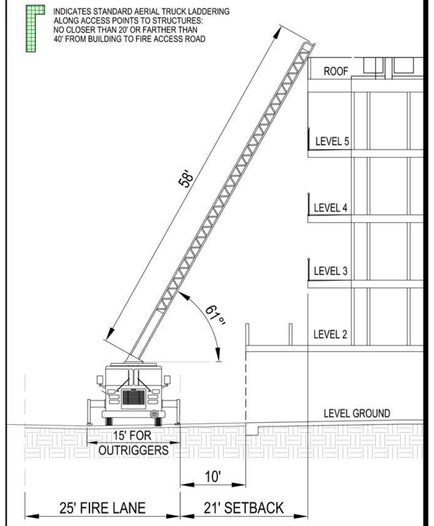
- EXISTING 'NO PARKING IN ALLEY' SIGN .
- EXISTING PUBLIC FIRE HYDRANT WITH BLUE MARKER.
- 150' HOSE PULL DISTANCE - MAXIMUM
- HOSE PULL DEFICIENCY
- INDICATES APPROXIMATE LOCATION OF SUB-KEYED KNOX BOX WITH 3-SETS OF ENTRY DOOR/GATE KEYS
- INDICATES LIMITS OF ROOFLINE
- AERIAL TRUCK LADDER ACCESS TO BUILDING (BETWEEN 20' - 40' FROM ACCESS ROAD)
- INDICATES VIHICULAR ENTRY TO PARKING GARAGE
- INDICATES RESIDENTIAL PORTION OF THE BUILDING
- INDICATES STAIR LOCATIONS. ALL STAIRS SHALL PROVIDE ACCESS TO THE RESIDENTIAL ROOF WITH EITHER FULL STAIR ACCESS, OVERSIZED ROOF HATCH WITH AN ANGLED LADDER, OR DIRECT ACCESS FROM THE PARKING GARAGE LEVELS.
- INDICATES ELEVATOR LOCATIONS
  ALL ELEVATORS SHALL BE SIZED TO ACCOMMODATE A GURNEY
- PROPOSED CONCRETE PAVING. NOT A PART OF FIRE ACCESS
- PROPOSED ACCESS ROAD THAT SHALL BE DESIGNED TO MAINTAINED SUPPORT AN IMPOSED LOAD OF 94,000 LBS. AND CONCRETE SURFACE TO PROVIDE ALL WEATHER DRIVING CAPABILITIES PER OCFA B-01 GUIDELINE REQUIREMENTS.
- INDICATES THE EXISTING ASPHALT ALLEY THAT IS NOT A PART OF FIRE ACCESS
- EXISTING DRIVE - NOT A PART OF THIS REVIEW
- CONTRASTING AND REFLECTIVE PERMANENT PAVING BAND DELINEATING END OF FIRE ACCESS OR RED PAINT PAVEMENT PER DETAILS HEREON
- PAINT CURB RED WITH 'NO PARKING FIRE LANE' STENCIL AT 30' O.C. PER DETAILS HEREON AND OCFA REQUIREMENTS
- FIRE APPARATUS
  TURNING RADII: 20' WIDE PATH WITH 20' INSIDE AND 40' OUTSIDE

SECOND (PODIUM) LEVEL N.T.S.

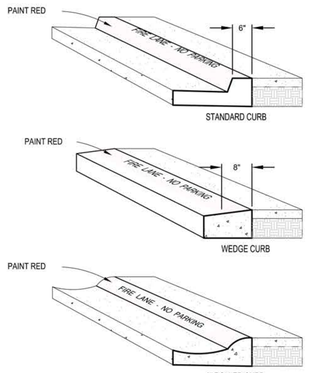


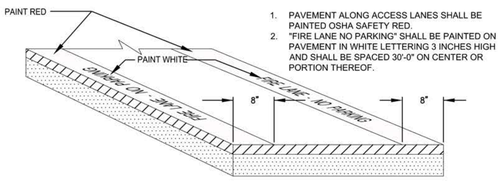
AERIAL TRUCK LADDERING SECTION 'A'

- INDICATES STANDARD AERIAL TRUCK LADDERING ALONG ACCESS POINTS TO STRUCTURES; NO CLOSER THAN 20' OR FARTHER THAN 40' FROM BUILDING TO FIRE ACCESS ROAD



FIRE LANE RED CURB MARKING DETAILS





1. PAVEMENT ALONG ACCESS LANES SHALL BE PAINTED OSHA SAFETY RED.
2. "FIRE LANE NO PARKING" SHALL BE PAINTED ON PAVEMENT IN WHITE LETTERING 3 INCHES HIGH AND SHALL BE SPACED 30'-0" ON CENTER OR PORTION THEREOF.

NOTE
1. CURBS ALONG ACCESS LANES SHALL BE PAINTED OSHA SAFETY RED OR EQUIVALENT. "FIRE LANE NO PARKING" SHALL BE PAINTED ON TOP OF CURB IN WHITE LETTERING 3 INCHES HIGH AND SHALL BE SPACED 30'-0" ON CENTER OR PORTION THEREOF.

DRAWING SCALE

GRAPHIC SCALE
0 10' 20'
1 inch = 10' ft.

ARCHITECTURE/PLANNING:
BSB DESIGN
970 WEST 190TH STREET
TORRANCE, CA 90502
P: 310.217.8885

PREPARED BY:
firesafe PLANNING, INC.
28506 AIROSO STREET
RANCHO MISSION VIEJO, CA 92679
OFFICE: (949) 240-5911

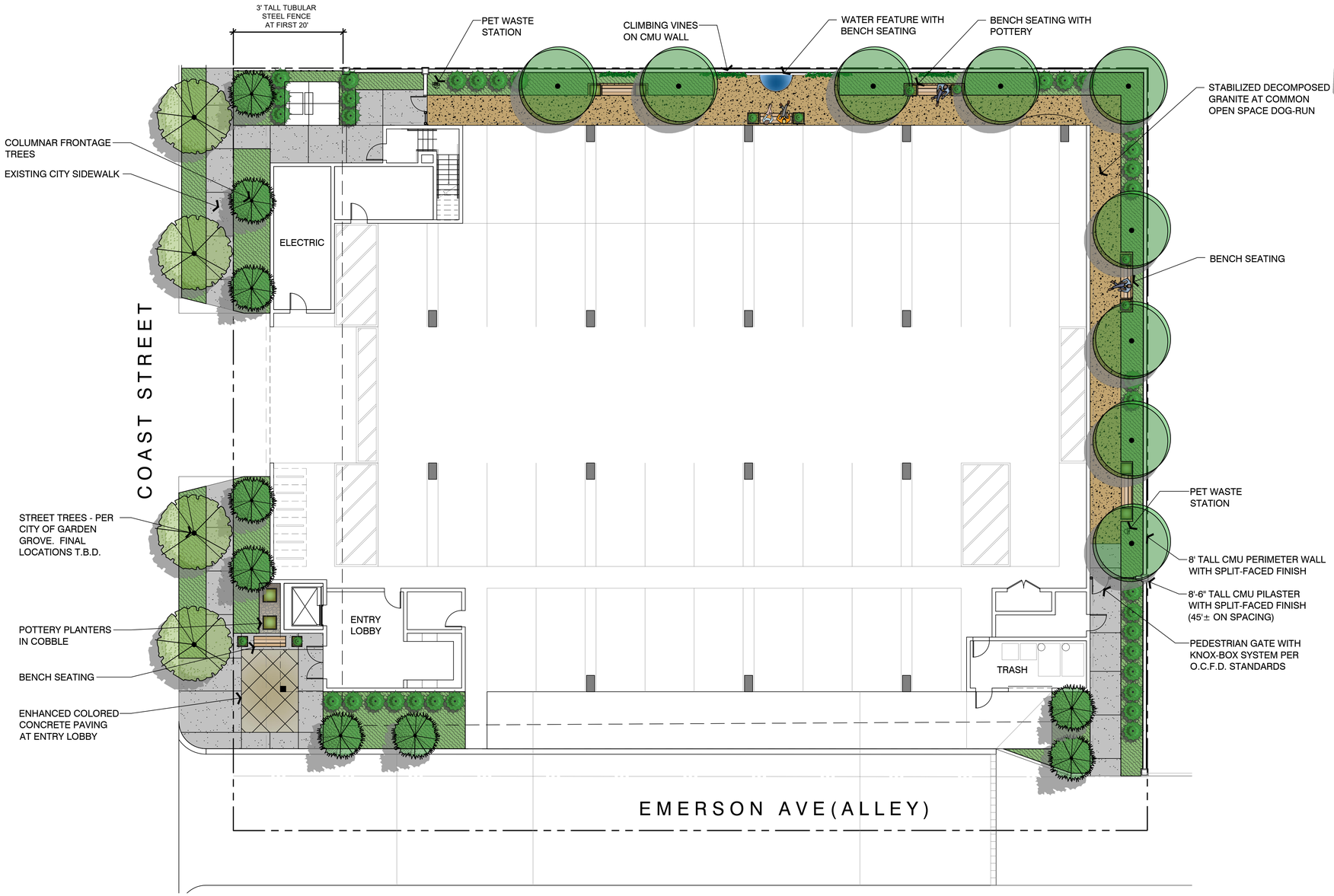
PREPARED FOR:
COAST STREET APARTMENTS
13040 COAST STREET
GARDEN GROVE, CA 92844

TITLE:
COAST STREET APARTMENTS
PRELIMINARY FIRE ACCESS PLAN
13040 COAST STREET, GARDEN GROVE, CA 92844

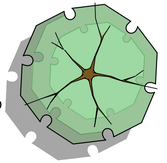
DATE: 05/01/2025

SHEET: F-1

1 OF 1

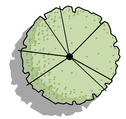


CONCEPT PLANT SCHEDULE



GROUND LEVEL TREES

Cassia leptophylla / Gold Medallion Tree	15 Gal, M
Chilopsis linearis / Desert Willow	24" Box, VL
Fraxinus angustifolia oxycarpa 'Raywood' / Raywood Ash	24" Box, M
Searsia lancea / African Sumac	24" Box, L



STREET TREE
Installed in Tree Grates in ROW at 30` Max. On Center Spacing. Species per Chapman Specific Plan

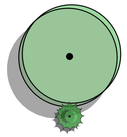
Cassia leptophylla / Gold Medallion Tree	15 Gal, M

PODIUM TREES

Arbutus x 'Marina' / Marina Strawberry Tree Multi-Trunk	36" Box, M
Chilopsis linearis 'Monhews' / Timeless Beauty® Desert Willow	15 Gal., VL
Olea europaea 'Fruitless' / Fruitless Olive	15 Gal, L

COLUMNAR FRONTAGE TREE

Pyrus calleryana 'Capital' / Capital Callery Pear	24" Box, M
Zelkova serrata 'Musashino' / Musashino Japanese Zelkova	24" Box, L



PERIMETER EVERGREEN SCREEN TREE

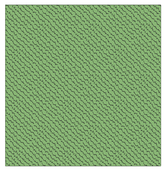
Fraxinus angustifolia oxycarpa 'Raywood' / Raywood Ash	24" Box, M
Tristania conferta / Brisbane Box	15 Gal., L

HEDGE SCREEN

Dodonaea viscosa / Hopseed Bush	15 Gal., L
Ligustrum japonicum 'Texanum' / Texas Japanese Privet	15 Gal., L
Westringia fruticosa `Wynabbie Gem` / Wynabbie Gem Coast Rosemary	5 Gal., L

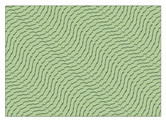
VINES

Ficus repens / Creeping Fig	5 Gal.
Trachelospermum jasminoides / Chinese Star Jasmine	5 Gal.



GROUND LEVEL

Agave attenuata / Foxtail Agave	15 Gal., L
Callistemon viminalis 'Little John' / Little John Weeping Bottlebrush	1 Gal., L
Hesperaloe parviflora / Red Yucca	1 Gal., VL
Muhlenbergia rigens / Deer Grass	1 Gal., L
Pennisetum x advena 'Rubrum' / Red Fountain Grass	1 Gal., L
Pittosporum crassifolium 'Compactum' / Dwarf Karo Pittosporum	5 Gal., M
Pittosporum tenuifolium 'Silver Sheen' / Silver Sheen Tawhiwhi	5 Gal., M
Senecio serpens / Blue Chalksticks	1 Gal., L
Stipa tenuissima / Mexican Feather Grass	1 Gal., L
Westringia fruticosa 'Morning Light' / Morning Light Coast Rosemary	1 Gal., L
Westringia x 'Wynyabbie Gem' / Wynyabbie Gem Coast Rosemary	1 Gal., L
Agave x 'Blue Glow' / Blue Glow Agave	5 Gal., L



PODIUM LEVEL

Dietes bicolor / Fortnight Lily	5 Gal., L
Cordyline australis / Grass Palm	5 Gal., L
Echeveria x 'Afterglow' / Afterglow Echeveria	1 Gal., L
Feijoa sellowiana / Pineapple Guava	5 Gal., L
Hesperaloe parviflora / Red Yucca	1 Gal., L
Kalanchoe beharensis / Felt Plant	15 Gal., L
Pittosporum tenuifolium 'Silver Sheen' / Silver Sheen Tawhiwhi	15 Gal., M
Strelitzia juncea / Narrow-leafed Bird of Paradise	1 Gal., L

COAST STREET TREES PROVIDED:
124' LIN. FT. OF FRONTAGE
REQUIRED TREES = 3 COLUMNAR TREES
= 3 PUBLIC R.O.W. TREES
TREES PROVIDED = 5 COLUMNAR TREES
= 4 PUBLIC R.O.W. TREES

IRRIGATION SYSTEM DESIGN STATEMENT:

A PERMANENT AUTOMATIC SUB-SURFACE IRRIGATION SYSTEM SHALL BE DESIGNED AND INSTALLED TO IRRIGATE ALL PLANTING AREAS. THE IRRIGATION CONTROLLER(S) SHALL BE SMART WEATHER-BASED AND EQUIPPED FROM THE MANUFACTURER WITH WEATHER/EVAPOTRANSPIRATION (ET) SENSING CAPABILITIES TO AUTOMATICALLY ADJUST WATERING SCHEDULES AND AMOUNTS. THE DESIGN OF THE IRRIGATION SYSTEM SHALL EMPHASIZE WATER CONSERVATION AND PROVIDE EFFICIENT AND UNIFORM DISTRIBUTION OF IRRIGATION WATER. DRIP AND/OR BUBBLER IRRIGATION, OR OTHER LOW-VOLUME, LOW-PRESSURE MICRO-IRRIGATION SYSTEMS SHALL BE INSTALLED IN PLANTER AREAS TO PROVIDE WATER DIRECTLY TO THE ROOT ZONE OF PLANTS.

PRELIMINARY WATER USE CALCULATIONS:

GROUND LEVEL = 2,161 SQ.FT. OF PLANTING AREA
PODIUM LEVEL = 280 SQ.FT. OF PLANTING AREA

M.A.W.A. = (47.2) (0.62) [(0.55 x 2,441)] = 39,288 gal / yr.

E.T.W.U. = (47.2) (0.62) [(0.40 x 2,441) / 0.81] = 35,276 gal / yr.

WATER EFFICIENT LANDSCAPE NOTE:

Landscaping for the project shall be designed to comply with the City of Garden Grove's Water Efficient Landscape Ordinance and with the Guidelines for Implementation of the Water Efficient Landscape Ordinance.

COAST STREET APARTMENTS

13040 COAST ST., GARDEN GROVE, CA. 92844

APPLICANT:

Wilson Davis Associates
Landscape Architecture
2825 Litchfield Dr.
Riverside, CA 92503
Ph.(951) 353-2436

Job No. 24039

GROUND LEVEL LANDSCAPE

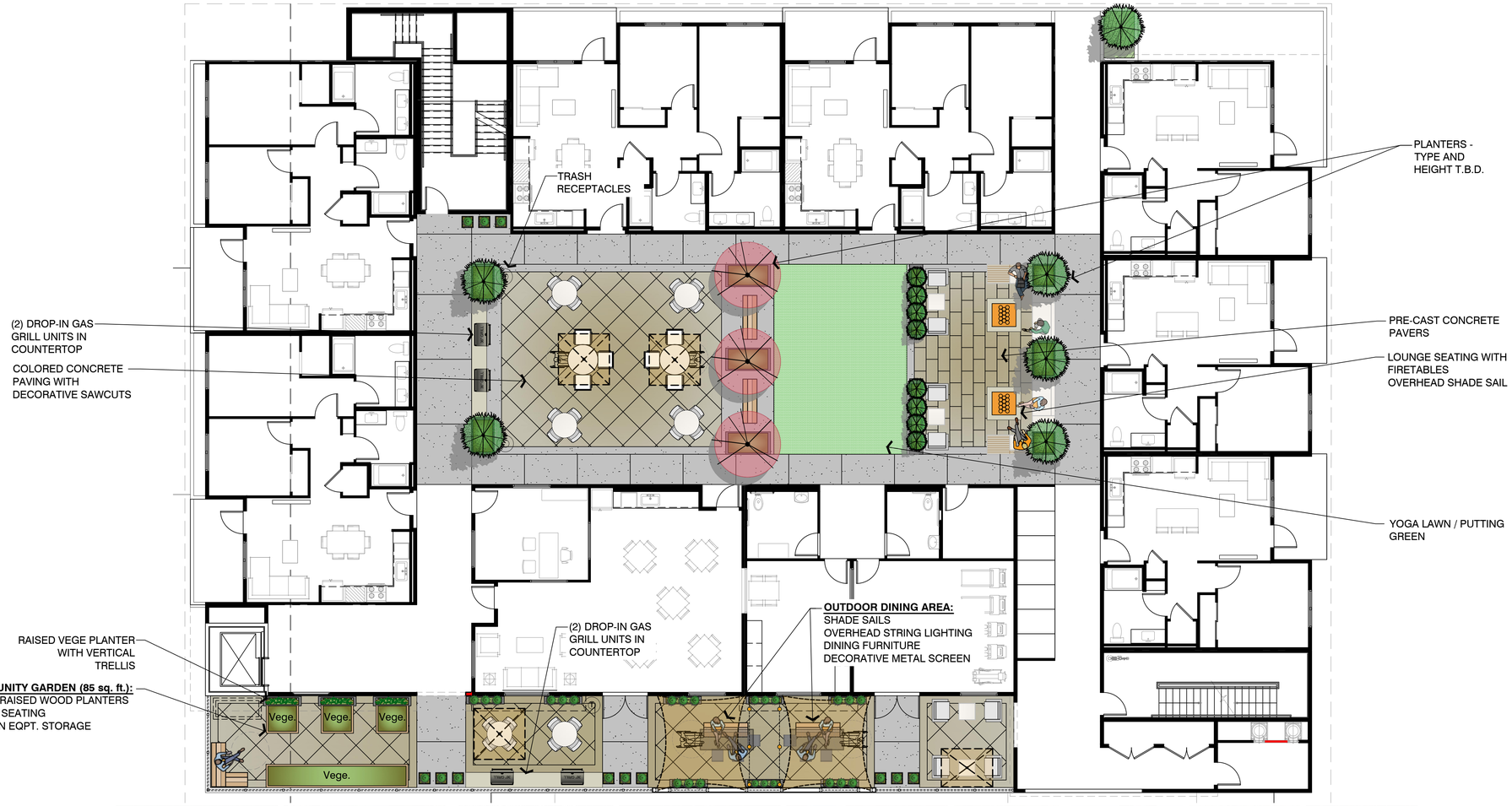
0 8 16 24 32 feet
1/8" = 1' - 0"
NORTH

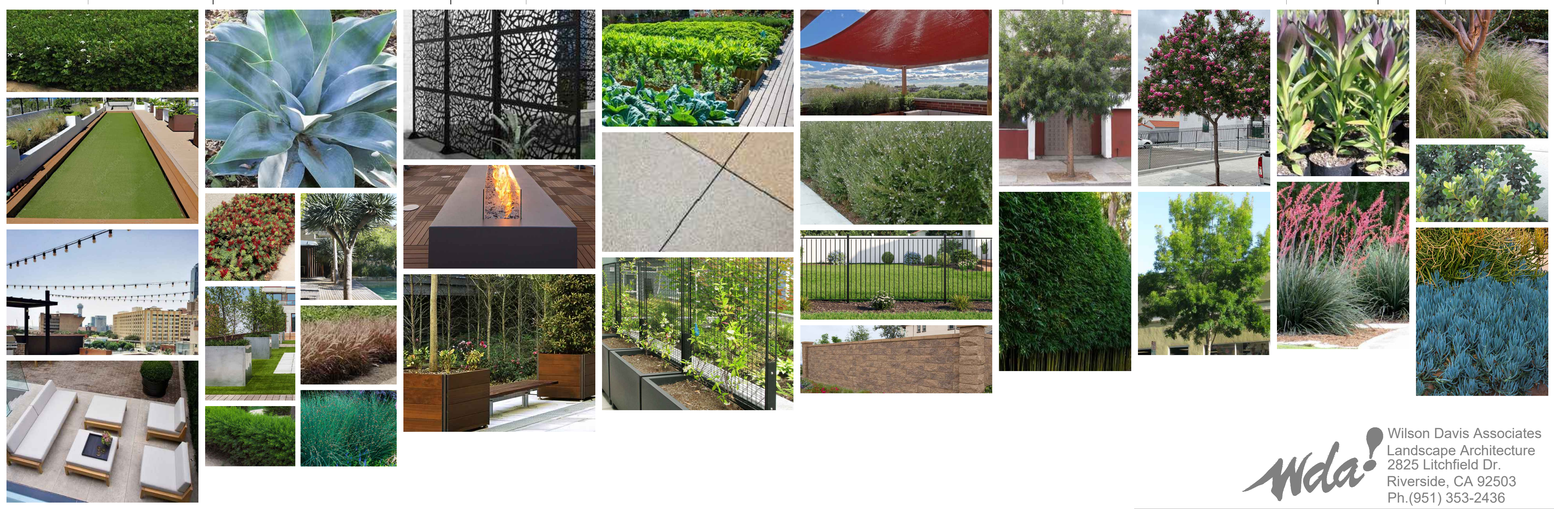
BSB DESIGN
970 West 190th Street Suite 250
Torrance, CA 90502
t. 310. 217. 8885 f. 310. 217. 0425

May 8, 2025

L1.0

BSB DESIGN





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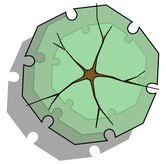

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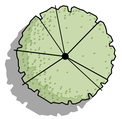

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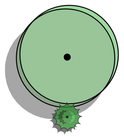

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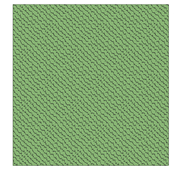

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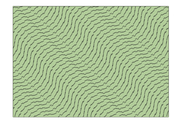

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COAST STREET APARTMENTS

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APPLICANT:

Wilson Davis Associates
Landscape Architecture
2825 Litchfield Dr.
Riverside, CA 92503
Ph.(951) 353-2436

Job No. 24039

PODIUM LEVEL LANDSCAPE

0 10 20 30 40 feet

1" = 10'

NORTH

BSB DESIGN
970 West 190th Street Suite 250
Torrance, CA 90502
t. 310. 217. 8885 f. 310. 217. 0425

May 8, 2025

L1.1

BSB DESIGN

ATTACHMENT 3

CITY OF GARDEN GROVE
PLANNING SERVICES DIVISION
11222 ACACIA PARKWAY
GARDEN GROVE, CA 92840
TEL: (714) 741-5312 FAX: (714) 741-5578
ggcity.org

Density Bonus Application
(Government Code §65915 *et seq.*)

Housing development project applicants intending to request a density bonus, incentives or concessions, modifications or waivers, and/or reduced parking pursuant to the Section 65915 et seq. of the California Government (Density Bonuses and Other Incentives) must complete the following application. For additional information regarding density bonuses and affordability agreements, please refer to Section 9.12.030.070 of the Garden Grove Municipal Code, and to the Garden Grove Density Bonus Agreement Guidelines.

Date Filed: 07-14-2025

DENSITY BONUS TYPE	
Please check one of the following (as proposed at the time of application submittal):	
☐	100% of all units in the development, including Total Units and density bonus units, but exclusive of a manager's unit or units, are for low income households, as defined by Section 50079.5 of the Health and Safety Code, except that up to 20 percent of the units in the development, including Total Units and density bonus units, may be for moderate income households, as defined in Section 50053 of the Health and Safety Code.
☒	At least 5% of the Total Units for very low income households, as defined in Section 50105 of the California Health and Safety Code.
☐	At least 10% of the Total Units for lower income households, as defined in Section 50079.5 of the California Health and Safety Code.
☐	At least 10% of the Total Units for moderate income households, as defined in Section 50093 of the California Health and Safety Code (common interest development offered to the public for purchase unless on-site option for Impact Fees, see 15.72.100.B.4).
☐	A senior citizen housing development, as defined in Sections 51.3 and 51.12 of the California Civil Code.
☐	At least 10% of the Total Units for transitional foster youth, as defined in California Education Code section 66025.9 (very low income households as defined in Section 50105 of the California Health and Safety Code).
☐	At least 10% of the Total Units for disabled veterans, as defined in California Government Code Section 18541 (very low income households as defined in Section 50105 of the California Health and Safety Code).
☐	At least 10% of the Total Units for homeless persons, as defined in the federal McKinney-Vento Homeless Assistance Act (42 U.S.C. Sec. 11301 et seq.) (very low income households, as defined in Section 50105 of the California Health and Safety Code).
☐	At least 20% of the Total Units for lower income students in a student housing development (that satisfies the requirements of California Government Code Section 65915(b)(1)(F)).
☐	Land donation (at least one acre in size, or of sufficient size to permit development of at least 40 units and otherwise satisfies the requirements of California Government Code Section 65915(g).)
☐	Child care facility (that satisfies the requirements of California Government Code Subsection 65915(h)).
☐	Condominium Conversion (that satisfies the requirements of California Government Code 65915.5)).

PRIMARY CONTACT INFORMATION	
Name:	William D. Jager
Contact Type: ☐ Architect ☐ Engineer ☐ Property Owner ☒ Representative ☐ Other	
Mailing Address:	872 Wendt Ter.
City, State, Zip Code:	Laguna Beach, CA 92651-2209
Phone No.:	949-280-0758
E-mail:	Jagerco@gmail.com

PROPERTY OWNER CONTACT INFORMATION (If different than Primary Contact)	
Name:	West St. Investments, LLC
Mailing Address:	9535 Garden Grove Blvd.
City, State, Zip Code:	Garden Grove, Ca. 92841
Phone No.:	(214) 682-5559
E-mail:	tran.tpi@gmail.com

PROJECT INFORMATION:		
Project Address: 13040 Coast St., Garden Grove, CA		
APN(s): 097-011-03		
Zoning & General Plan Land Use: Zoning: R-3; Land Use: Medium Density Residential		
Maximum Allowable Residential Density (before density bonus): 17.26 units		
Total Base Number of Housing Units (before density bonus): 18 Units		
Market Rate Base Housing Units (before density bonus): 18 units		
Affordable Base Housing Units (before density bonus): 6 units		
Size of Market Rate Units (# of Studios, 1 bedroom, 2 bedroom, etc.): 656sq, ft. 1bdrm, 935sq. ft. 2 bdrm		
Size of Affordable Units (# of Studios, 1 bedroom, 2 bedroom, etc.): 656sq, ft. 1bdrm, 935sq. ft. 2 bdrm		
Proposed number of Very Low Income units : 3 units		
Proposed number of Low Income units : 0		
Proposed number Moderate Income units : 3 units		
Percentage of Total Base Housing Units that are Affordable: 16%		
Maximum Density Bonus Percentage (See Density Bonus Chart): 100%		
Number of Required Parking Spaces: 45 spaces		
Number of Parking Spaces Provided: 45 spaces		
Residential Tenure: Does the project propose rental or ownership units? Rental		
DENSITY BONUS REQUEST		
Density Bonus Percentage (calculate using "Density Bonus Chart"): 88.75%		
Total Number of Density Bonus Units: 16 units		
Total Units in Development After Density Bonus is Applied: 34 units		
If requesting a Density Bonus for the following project types, please check the appropriate box and provide the following information:		
☐	Land Donation	Address (or APN) of land to be dedicated:
		Attach proof of site control.
		Attach evidence of meeting conditions for a land transfer density bonus as specified in the State Housing Density Bonuses and Incentives Law
☐	Child-Care Facility	Address and APN of child-care facility:
		Square footage of facility:
		Attach evidence of meeting conditions for a child care facility density bonus or Incentive as specified in the State Housing Density Bonuses and Incentives Law.
☐	Condominium Conversion	Attach evidence of meeting conditions for a condominium conversion Density Bonus as specified in the State Housing Density Bonuses and Incentives Law.

INCENTIVES/CONCESSIONS REQUEST

An applicant for a density bonus may also propose specific incentives/concessions pursuant to Subsection (d) of Government Code Section 65915. The number of incentives/concessions an applicant may receive is based on the number of affordable units and level of affordability provided. Use the Incentives/Concessions Calculator below to determine the number of incentives or concessions you are eligible for.

INCENTIVES/CONCESSIONS CALCULATOR

Affordability Level	Restricted Affordable Units Provided in Project	% of Base Project	Threshold for one (1) Incentive/ Concession (# of units)		Threshold for two (2) Incentives/ Concessions (# of units)		Threshold for three (3) Incentives/ Concessions (# of units)		Threshold for four (4) Incentives/ Concessions* (# of units)	
Very Low Income	3	16%	5%		10%		15%		16% 0r 100% affordable with ≥80% low income, ≤20% moderate	3
Low Income			10%		17%		24%			
Moderate Income	3	12%	10%		20%		30%			

** If a 100% affordable project is located within ½ mile of a major transit stop, the project is eligible for a height increase of up to three (3) additional stories, or thirty-three feet (33'-0"); however, if the project also seeks a waiver from any maximum controls on density, the project cannot receive a waiver of any other development standards (but can still receive four incentives). If this allowance is sought, please describe/identify the major transit stop that is within ½ mile of the qualifying 100% affordable project:*

DESCRIPTION OF INCENTIVES/CONCESSIONS REQUESTED

List all requested incentives/concessions. If a reduction in site development standards or a modification of zoning code requirements is sought, include references to specific Municipal Code Sections in question, and reference the requested incentives/concessions on the submitted plans.

1) A concession to GGMC Section 9.12.040.020(A) to allow for an increase of the height of the main structure to 55' 6".
2) A concession to GGMC Section 9.12.040.020(A) to allow for an increase in the number of stories to five.
3) A concession to GGMC Section 9.12.040.020(A) to allow for an increase of Lot Coverage to 71%.
4) A concession to GGMC Section 9.48.030 to allow the existing power lines along Coast Street to remain in place and not be subject to the undergrounding requirements of the code.

Provide evidence substantiating the applicant's eligibility for each incentive/concession requested, including information that clearly demonstrates that the requested incentive/concession will result in identifiable and actual cost reductions to provide for affordable housing costs. The Applicant may attach additional documentation as required.

The above-described four concessions reduce the cost of providing affordable units. For example, restricting the building height and number of stories would preclude the ability to develop the number of units proposed within a 3 story or lower height structure without resorting to expensive below grade structured parking. Relief from these development standards would reduce the cost of the housing development by allowing for the structure to be built at grade in a less expensive building type thereby reducing the cost of the affordable units. Relief from these development standards will also allow more market rate dwelling units to be constructed which would help subsidize the cost of providing affordable units. With respect to the required maximum lot coverage, the increased lot coverage is necessary to provide adequate space for the building to accommodate the affordable and market rate dwelling units and parking spaces. Having adequate space for the dwelling units reduces the cost of providing the affordable housing units, as without sufficient building area, not as many market rate units would be provided and therefore, there would be a diminished subsidy for the affordable units. Lastly, undergrounding of utilities (power lines) is extremely costly. The undergrounding of utilities is not necessary for the function of the residential units and only contributes to unnecessary cost. Relief from undergrounding utilities clearly helps subsidize affordable rent rates.

MODIFICATION/WAIVER REQUEST

Pursuant to Subsection (e) of Government Code Section 65915, an applicant may also propose the waiver or reduction of development standards that have the effect of physically precluding the construction of a housing development incorporating the density bonus and any incentives or concessions granted to the applicant.

DESCRIPTION OF MODIFICATIONS/WAIVERS REQUESTED

List all development standards for which you are seeking a waiver or reduction pursuant to Subsection (e) of Government Code Section 65915. Include references to specific Municipal Code Sections in question, and reference development standards to be modified or waived on the submitted plans.

1) A waiver of GGMC Section 9.12.040.020(A) to allow for a reduction of the required front yard setback at the 1st and 2nd floors to 6 feet.
2) A waiver of GGMC Section 9.12.040.020(A) to allow for a reduction of the required front yard stepback at the 3rd through 5th floors to 6 feet.
3) A waiver of GGMC Section 9.12.040.020(A) to allow for a reduction of the required north side yard stepback at the 3rd through 5th floors to 10 feet.
4) A waiver of GGMC Section 9.12.040.020(A) to allow for a reduction of the required rear yard stepback at the 3rd through 5th floors to 10 feet.
5) A waiver of GGMC Section 9.12.040.020(E) to allow for a reduction of the minimum unit size requirement to approximately 656 square feet in lieu of 750 square feet for the one-bedroom units.

Provide evidence substantiating the applicant's eligibility for each waiver or reduction of a development standard being requested, including documentation demonstrating that the waiver or reduction is physically necessary to construct the housing development with the additional density allowed pursuant to the density bonus and incorporating any incentives or concessions required to be granted. Where more than one modification or waiver is sought, the applicant should clearly demonstrate why the modifications/waivers are cumulatively necessary to prevent a development standard from physically precluding the construction of the development.

The Project also requests the aforementioned five waivers of development standards, such as the front-yard, side yard and rear yard setback limits, and minimum unit size requirements. Without relief from these development standards, these items would have the effect of physically precluding the construction of the Project at the density permitted in the R-3 zone and proposed for the Project. For example, if the building did not encroach into the front yard, side yard and rear yard setback and stepback areas, building area would be reduced, thereby reducing the ability to provide sufficient living space for dwelling units. Without the waiver for dwelling unit size, fewer dwelling units would fit within the square footage of the building. Larger one bedroom dwelling units would cause a reduction in the number of dwelling units.

PARKING RATIOS			
Are you requesting application of the onsite vehicular parking ratios set forth in Subsection (p)(1) of Government Code Section 65915?			
☒	Yes	☐	No

SPECIAL PARKING REQUIREMENTS	
If you are requesting application of a reduced onsite parking ratio pursuant to Subsections (p)(2), (p)(3), or (p)(4) of Government Code Section 65915, select the onsite parking standard requested per the appropriate development type:	
☐	Rental/for sale projects with at least 11% very low income or 20% lower income units, within ½ mile of accessible major transit stop** – 0.5 spaces per unit
☐	Rental projects 100% affordable to lower income, within ½ mile of accessible major transit stop** – 0 spaces per unit
☐	Rental senior projects 100% affordable to lower income, either with paratransit service or within ½ half mile of accessible bus route** (operating ≥8 times per day) – 0 spaces per unit
☐	Rental special needs projects 100% affordable to lower income households, either with paratransit service or within ½ half mile of accessible bus route** (operating ≥8 times per day) – 0 spaces per unit
☐	Rental supportive housing developments 100% affordable to lower income households – 0 spaces
*** If applicable, please describe/identify the major transit stop or accessible bus route that is within ½ mile of the project.*	

ASSOCIATED HOUSING DEVELOPMENT FORMS & APPLICATIONS	
Dependent upon the nature of the request, and the design of the project, the following forms may also be required:	
☐ Replacement Unit Determination	☐ SB 330 Housing Development Pre-Application
☐ SB 35 Housing Streamlining Eligibility Checklist	☒ Preliminary Development Review Application

CERTIFICATION:

I certify and declare under penalty of perjury under the laws of the State of California that the answers furnished above, and in any attached exhibits, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief. I further understand that additional information may be required by the City of Garden Grove to complete my review. Furthermore, developments requesting a density bonus shall enter into a density bonus housing agreement with the City. A density bonus housing agreement shall be made a condition of the discretionary planning permits for all housing developments, and shall be recorded as a restriction on any parcels on which the target units or density bonus units will be constructed. The density bonus housing agreement shall be recorded prior to final or parcel map approval, or, where the housing development does not include a map, prior to issuance of a building permit for any structure in the housing development. The density bonus housing agreement shall run with the land and bind on all future owners and successors in interest.

_____ _____

Applicant Signature Date

_____ _____

Property Owner Signature Date

PARKING RATIOS			
Are you requesting application of the onsite vehicular parking ratios set forth in Subsection (p)(1) of Government Code Section 65915?			
☒	Yes	☐	No

SPECIAL PARKING REQUIREMENTS	
If you are requesting application of a reduced onsite parking ratio pursuant to Subsections (p)(2), (p)(3), or (p)(4) of Government Code Section 65915, select the onsite parking standard requested per the appropriate development type:	
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*** If applicable, please describe/identify the major transit stop or accessible bus route that is within ½ mile of the project.*	

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Applicant Signature — Date: 10/02/2024

Property Owner Signature — Date: 10/01/24

DENSITY BONUS CHART*							
Affordable Unit Percentage**	Very Low Income Density Bonus	Low Income Density Bonus	Moderate Income Density Bonus***	Land Donation Density Bonus	Senior****	Foster Youth/ Disabled Vets/ Homeless	College Students
5%	20%	-	-	-	20%	-	-
6%	22.50%	-	-	-	20%	-	-
7%	25%	-	-	-	20%	-	-
8%	27.50%	-	-	-	20%	-	-
9%	30%	-	-	-	20%	-	-
10%	32.50%	20%	5%	15%	20%	20%	-
11%	35%	21.50%	6%	16%	20%	20%	-
12%	38.75%	23%	7%	17%	20%	20%	-
13%	42.50%	24.50%	8%	18%	20%	20%	-
14%	46.25%	26%	9%	19%	20%	20%	-
15%	50%	27.50%	10%	20%	20%	20%	-
16%	50%	29%	11%	21%	20%	20%	-
17%	50%	30.50%	12%	22%	20%	20%	-
18%	50%	32%	13%	23%	20%	20%	-
19%	50%	33.50%	14%	24%	20%	20%	-
20%	50%	35%	15%	25%	20%	20%	35%
21%	50%	38.75%	16%	26%	20%	20%	35%
22%	50%	42.5%	17%	27%	20%	20%	35%
23%	50%	46.25%	18%	28%	20%	20%	35%
24%	50%	50%	19%	29%	20%	20%	35%
25%	50%	50%	20%	30%	20%	20%	35%
26%	50%	50%	21%	31%	20%	20%	35%
27%	50%	50%	22%	32%	20%	20%	35%
28%	50%	50%	23%	33%	20%	20%	35%
29%	50%	50%	24%	34%	20%	20%	35%
30%	50%	50%	25%	35%	20%	20%	35%
31%	50%	50%	26%	35%	20%	20%	35%
32%	50%	50%	27%	35%	20%	20%	35%
33%	50%	50%	28%	35%	20%	20%	35%
34%	50%	50%	29%	35%	20%	20%	35%
35%	50%	50%	30%	35%	20%	20%	35%
36%	50%	50%	31%	35%	20%	20%	35%
37%	50%	50%	32%	35%	20%	20%	35%
38%	50%	50%	33%	35%	20%	20%	35%
39%	50%	50%	34%	35%	20%	20%	35%
40%	50%	50%	35%	35%	20%	20%	35%
41%	50%	50%	38.75%	35%	20%	20%	35%
42%	50%	50%	42.50%	35%	20%	20%	35%
43%	50%	50%	46.25%	35%	20%	20%	35%
44%	50%	50%	50%	35%	20%	20%	35%
100%*****	80%	80%	80%	35%	20%	20%	35%

**All density bonus calculations resulting in fractions are rounded up to the next whole number*

***Affordable unit percentage is calculated excluding units added by a density bonus.*

****Moderate income density bonus applies to for sale units, not to rental units.*

*****No affordable units are required for senior units.*

******Applies when 100% of the total units (other than manager's units) are restricted to very low, lower and moderate income (maximum 20% moderate).*

Garden Grove Density Bonus Agreement Guidelines

Housing development projects applicants that receive a density bonus, incentives or concessions, modifications or waivers, and/or reduced parking pursuant to the Section 65915 et seq. of the California Government (Density Bonuses and Other Incentives) and the City's density bonus ordinance are required to enter into a density bonus housing agreement with the City in the form approved by the City Attorney to ensure the continued affordability of all affordable units, the continued reservation of such units for qualifying senior citizens, and the requirements of the City's density bonus ordinance and these Guidelines.

Prior to receiving a building permit for any project that receives a density bonus or any incentive, concession, waiver, or reduction of development standards, the density bonus housing agreement shall be recorded as a covenant against the property. The agreement shall remain a senior, non-subordinate covenant and as an encumbrance running with the land for the full term thereof. In no event shall the agreement be made junior or subordinate to any deed of trust or other documents providing financing for the construction or operation of the project, or any other lien or encumbrance whatsoever for the entire term of the required covenants.

A sample of the City's standard density bonus housing agreement containing the requirements typically applied to density bonus projects is attached to these Guidelines. Standard requirements of the density bonus housing agreement include, but are not limited to, the following:

Affordability Covenants

Rental Projects

- The property owner must ensure the continued affordability of all very low and low-income rental units that qualified the applicant for the density bonus for 55 years or longer. This includes any replacement units required to be provided pursuant to subdivision (c)(3) of California Government Code Section 65915.

- Throughout the term of the 55-year term of the agreement, the owner must make available, restrict occupancy to, and rent the affordable units to qualified households at an "affordable rent." Maximum household income and rental amounts are based on State law and the area median income ("AMI") determined annually by regulation of the California Department of Housing and Community Development ("HCD"). For very low income units, rents generally may not exceed 30% of 50% of AMI for a household size appropriate for the unit. For lower income units, rents generally may not exceed 30% of 60% of AMI for a household size appropriate to the unit. In 100% affordable housing developments, the rent for at least 20% of the units must meet the rent standards of California Health and Safety Code Section 50053, and the remaining units may instead meet Low Income Housing Tax Credit rent standards. Copies of the most current rent and income limits as published by the State are available to applicants upon request from City staff.

- Annually, during the 55-year affordability period, the property owner is required to submit a Tenant Income Certification Form for each restricted unit, as well as an Annual Project Compliance Form for the project as a whole. Copies of the most current rent and income limits as published by the State and the required Tenant Income Certification Form and Annual Project Compliance Form are available to applicants upon request from City staff.

For-Sale Projects

- The property owner must ensure that the initial occupant of all for-sale units that qualified the applicant for the density bonus are persons and families of very low, low, or moderate income (as applicable), and that the units are sold to the initial buyer at an "affordable housing cost" (as defined in Section 50052.5 of the California Health and Safety Code). This includes any replacement units required to be provided pursuant to subdivision (c)(3) of California Government Code Section 65915. Housing related costs include mortgage payments, mortgage insurance payments, property taxes and assessments, homeowner association fees, reasonable utilities allowance, insurance premiums, maintenance costs, and space rent. For very low income units, housing costs generally may not exceed 30% of 50% of AMI for a household size appropriate for the unit. For lower income unit, housing costs generally may not exceed 30% of 70% of AMI for a household size suitable for the unit. For moderate income units, housing costs generally may not exceed 35% of 110% of AMI for a household size appropriate for the unit.

- Buyers must enter into an equity sharing agreement with the City outlining the terms and conditions that are triggered if the affordable unit is sold before the termination of the affordability covenants. The equity sharing agreement does not restrict the resale price, but requires the original owner to pay the City a portion of any appreciation received on resale. The City's proportions share of appreciation is the purchase price discount received by the original buyer, plus any down payment assistance provided by the City. For example, if the original sales price is $300,000, and the original fair market value is $400,000, and there is no city down payment assistance, the city subsidy is $100,000, and the City's share of appreciation is 25%. The seller is permitted to retain its original down payment, the value of any improvements made to the home, and the remaining share of the appreciation.

- Prior to entering into a purchase agreement with a buyer for an affordable unit, the applicant is required to submit to the City an Income Certification Form and an acknowledgment signed by the purchasing party as to their understanding of the equity sharing component.

Provisions regarding Section 8 Vouchers for Rental Projects

The applicant shall accept as tenants on the same basis as all other prospective tenants, persons who are recipients of federal certificates for rent subsidies pursuant to the existing program under Section 8 of the United States Housing Act of 1937, or its successor; provided, the applicant shall not rent one of the affordable units to a tenant household holding a Section 8 certificate unless none of the Housing Units not restricted to occupancy by the affordability covenants are available. If the only available housing unit is an affordable unit, the applicant shall no longer designate the housing unit rented to a tenant household holding a Section 8 certificate as an affordable unit, shall designate the next-available housing unit as an affordable unit, and shall make available, re-strict occupancy to, and rent such newly designated affordable unit to a qualified tenant at the applicable affordable rent pursuant to the affordability covenants, such that at all times reasonably possible all of the required affordable units shall not be occupied by tenants holding Section 8 certificates. Furthermore, in the event the applicant rents an affordable unit to a household holding a federal certificate, the rental agreement (or lease agreement, as applicable) between the applicant, as landlord, and the tenant shall expressly provide that monthly rent charged shall be the affordable rent required for the affordable unit (not fair market rent) and that the rent collected directly from such tenant holding a federal certificate shall be not more than 30% of the tenant's actual gross income pursuant to the applicable federal certificate program regulations; i.e., the rent charged to such tenant under the rental agreement shall be the affordable rent chargeable under the affordability covenant and not fair market rent for the area, as would otherwise be permitted under the applicable federal certificate program. If and to the extent these restrictions conflict with the provisions of Section 8 of the United States Housing Act of 1937 or any rules or regulations promulgated thereunder, the provisions of Section 8 of the United States Housing Act of 1937 and all implementing rules and regulations thereto shall control. The applicant shall not apply selection criteria to Section 8 certificate holders which are more burdensome than criteria applied to any other prospective tenants.

Construction and Integration of Affordable Units

Construction of Affordable Units. The affordable units that qualify the project as eligible for a density bonus, must be constructed concurrently with or prior to the construction of any market rate units.

Integration of Affordable Units. The affordable units must be integrated with the market rate units so that there is a mix of affordable and market rate units, if any, in each building of the development project. For rental project, the affordable units may be "floating" units that are not permanently designated, provided that at no time shall a majority of the affordable units be congregated to a specific section of the project.

Marketing and Management

Marketing Program. Prior to the issuance of a certificate of occupancy for the project, the applicant shall prepare and obtain City's approval of a marketing program for the leasing or sale of the housing units, which sets forth in detail marketing strategy for the Project. The leasing or sale of the housing units shall thereafter be marketed in accordance with the marketing program. Developer shall provide City with periodic reports with respect to the leasing or sale of the housing units. The marketing program for rental projects may be combined with the required management plan.

Management Plan. Prior to the issuance of the certificate of occupancy for a rental project, the applicant shall submit for the approval of the City a management plan which sets forth in detail the applicant's property management duties, a tenant selection process in compliance with the required affordability restrictions, a security system and crime prevention program, the procedures for the collection of rent, the procedures for eviction of tenants, the rules and regulations of the property and manner of enforcement, a standard lease form, an operating budget, the identity of the professional property management company to be contracted with to provide property management services at the property, and other matters relevant to the management of the property.

Sample marketing and management plans may be obtained from City staff upon request.

For additional information regarding the requirements for density bonus housing agreements, please contact Nate Robbins, Senior Program Specialist, in Neighborhood Improvement at (714) 741-5206 or nater@ggcity.org.

SAMPLE DENSITY BONUS HOUSING AGREEMENT
(LOWER INCOME RENTAL PROJECT)

RECORDING REQUESTED BY AND WHEN RECORDED RETURN TO: City of Garden Grove 11222 Acacia Parkway Garden Grove, California 92840 Attention: City Clerk	
APN: _____	This document is recorded at the request and for the benefit of the City of Garden Grove and exempt from payment of a recording fee pursuant to Government Code Sections 6103 and 27383.

DENSITY BONUS HOUSING AGREEMENT
(___ Units Apartments at [ADDRESS].)

[THIS AGREEMENT CONTAINS SUBORDINATION REQUIREMENTS TO PRESERVE PRIORITY OF LAND USE AND REGULATORY COVENANTS]

This **DENSITY BONUS HOUSING AGREEMENT** ("Agreement"), dated for identification purposes only as of _____, _____ ("Date of Agreement"), is entered into by and between the **CITY OF GARDEN GROVE**, a California municipal corporation ("City"), and [**DEVELOPER'S NAME]** ("Developer").

RECITALS

A. Developer is the owner of approximately _____ square feet of real property in the City, generally located at 8218-8242 Garden Grove Blvd., Garden Grove, California, as more particularly described in the Legal Description attached hereto as Exhibit A and incorporated herein ("Site").

B. Developer submitted an application to City for approval of a site plan to construct a ___-unit apartment project on the Site with a ____% affordable housing density bonus for low-income families ("Project").

C. In response to Developer's application, pursuant to Planning Commission Resolution No. _____, the City approved Site Plan No. _____ for the Project, subject to certain "Conditions of Approval," which were accepted by Developer, as evidenced by Developer's execution of a "Notice of Agreement with Conditions of Approval and Discretionary Permit Approval" and recordation of such notice in the Official Records of Orange County on _____, _____ as Instrument No. _____.

D. The City will grant _____ concessions to the Project pursuant to California Government Code Section 65915, *et seq*., and Garden Grove Municipal Code Section 9.12.030.070 (collectively, "Density Bonus Law"), in exchange for Developer's agreement to

restrict __ of the ___ rental Housing Units at the Site to rental to and occupancy by Lower Income Households at an Affordable Rent (as those terms are defined below).

E. In connection with the density bonus and concessions granted to the Project, the Density Bonus Law and the Garden Grove Municipal Code require Developer to enter into this Agreement with City to implement Developer's affordable housing obligations at the Project. Pursuant to the Density Bonus Law and the Conditions of Approval, this Agreement must be executed and recorded against the Site in the Official Records of Orange County, California prior to City's issuance of building permits for the Project.

F. Developer and City desire to enter into this Agreement to provide for Developer's rental of ___ of the ___ rental Housing Units at the Site to Lower Income Households at an Affordable Rent, as required by the Density Bonus Law, and the Conditions of Approval, in accordance with the terms, conditions, and restrictions set forth below in this Agreement.

G. This Agreement shall be recorded, prior to the issuance of building permits for the Project, in the Official Records of Orange County, California, as senior, non-subordinate covenants and as an encumbrance running with the land for the full Term (defined below) of this Agreement. In no event shall this Agreement be made junior or subordinate to any deed of trust or other documents providing financing for the construction or operation of the Project, or any other lien or encumbrance whatsoever for the entire Term of this Agreement. Nor shall this Agreement be made junior or subordinate to any extension, amendment, or modification of any lien or encumbrance recorded against the Site prior to the date hereof.

I. The foregoing Recitals are true and correct and constitute a substantive part of this Agreement.

NOW, THEREFORE, in consideration of the mutual promises and covenants contained herein, the City and Developer agree as follows:

Section 1. Definitions.

(i) Affordable Rent. Affordable Rent means an affordable rent for Lower Income Households, as defined in California Health and Safety Code Section 50053. For Lower Income Households whose gross incomes exceed the maximum income for low income households (as defined in Health and Safety Code Section 50105), Affordable Rent means the product of thirty (30) percent times sixty (60) percent of the Area Median Income for Orange County adjusted for family size appropriate to the unit. "Adjusted for family size appropriate to the unit" has the same meaning as in Health and Safety Code Section 50052.5(h).

For purposes of this Agreement, "Affordable Rent" means the total of monthly payments for (a) use and occupancy of each Affordable Unit and land and facilities associated therewith, (b) any separately charged fees or service charges assessed by Developer which are required of all tenants, other than security deposits, (c) a reasonable allowance for an adequate level of service of utilities not included in (a) or (b) above, including garbage collection, sewer, water, electricity, gas and other heating, cooking and refrigeration fuels, but not including telephone, internet, television or digital access services, and (d) possessory interest, taxes or other fees or charges assessed for use of the land and real property facilities associated therewith by a public or private entity other

than Developer. In the event that all utility charges are paid by the landlord rather than the tenant, no utility allowance shall be deducted from the rent.

(ii) Affordable Units. Affordable Units means the ___ Housing Units at the Project which are required to be made available for, rented to, and occupied by Lower Income Households paying an Affordable Rent, as set forth in more detail below.

(iii) Agreement. Agreement means this Density Bonus Housing Agreement between City and Developer.

(iv) Area Median Income. Area Median Income means the median income as determined and published annually for each county in California by the California Department of Housing and Community Development.

(v) City. City means the City of Garden Grove, a California municipal corporation.

(vi) Conditions of Approval. Conditions of Approval means the conditions imposed by the City in connection with the approval of Developer's Site Plan No. _____ with the approval of Planning Commission Resolution No. 5944-19, as referenced in that certain "Notice of Agreement with Conditions of Approval and Discretionary Permit Approval" recorded in the Official Records of Orange County on _____, 2019 as Instrument No. _____.

(vii) Date of Agreement. Date of Agreement means the date set forth in the first paragraph of this Agreement.

(viii) Density Bonus Law. Density Bonus Law means California Government Code Section 65915, *et seq*., and Garden Grove Municipal Code Section 9.12.030.070. In the event of a conflict between State and City law, Government Code Section 65915 *et seq.* shall control.

(ix) Developer. Developer means _____, and all of his/her/its successors and assigns.

(x) Housing Units. Housing Units means each of the ___ total residential rental units to be constructed by Developer at the Site. The Housing Units range in size at ____-____ square feet (one-bedroom), ____-____ square feet (two-bedroom), and ____-____ square feet (three-bedroom) units.

(xi) Lower Income Household. Lower Income Household has the meaning set forth in California Health and Safety Code Section 50079.5.

(xii) Project. Project means the ___-unit apartment complex to be constructed by Developer on the Site, which includes the Housing Units, all in accordance with Site Plan No. _____, the Conditions of Approval, and this Agreement.

(xiii) Site. Site means that certain _____ square feet of real property in the City, generally located at _____, Garden Grove, California, as more

particularly described in the Legal Description attached hereto as Exhibit A and incorporated herein.

(xiv) Term. Term means the term of effectiveness of this Agreement, which shall continue for 55 years from the date the final certificate of occupancy is issued for the Project.

Section 2. Density Bonus and Development Concessions and Incentives. As set forth in the Conditions of Approval and the Density Bonus Law, Developer petitioned for and was granted the following concessions and incentives as part of the approval of Developer's Site Plan No. _____ for the Project:

(i) Density Bonus. The Garden Grove Municipal Code permits a maximum density of ____ residential units for the Site. By providing __ Housing Units reserved for Lower Income Households, the Density Bonus Law and the Conditions of Approval permit the Developer to develop the Site with an additional density of ____% for a total of ___ additional Housing Units.

(ii) Third Story Building Maximum Threshold. Garden Grove Municipal Code Section 9.12.040.050(C)(c) provides that for portions of buildings located beyond 40 feet from property zoned R-1, 50% of the building area may be situated in a three-story configuration at or below the 35-foot height limits. Site Plan No. _____ approves a waiver of this requirement, allowing 100% of the third floor to be built out.

(iii) Guest Parking Separation Waiver. Garden Grove Municipal Code Section 9.12.040.050(A)(2)(d) requires a minimum separation of 15 feet between residential units and open guest parking areas. Site Plan No. _____ approves a waiver of this requirement by allowing a distance between open guest parking areas and residences at 6 feet.

(iv) Parking. Garden Grove Municipal Code Section 9.12.040.180 requires a minimum of 3.25 parking spaces per dwelling unit to be provided in connection with multifamily residential developments similar to the Project. The Density Bonus Law requires the Project to provide a minimum of 1 space for each one-bedroom unit, and 2 spaces for each two and three-bedroom units. The Project includes ___ one-bedroom, ___ two-bedroom and ___ three-bedroom units for a total of ____ required on-site parking spaces. The Project will provide the required ___ spaces, including __ attached tuck-under stalls, ___ remote carports and ___ open stalls.

Section 3. No Further Incentives or Waivers. Developer acknowledges and agrees that the waivers and incentives set forth in Section 2 above fully satisfy any duty City may have under the Garden Grove Municipal Code, the Density Bonus Law, or any other law or regulation applicable to the Project, to provide any development incentive or to waive any building, zoning, or other requirement. By this Agreement, Developer releases any and all claims Developer may have against City in any way relating to or arising from City's obligation to waive requirements of or provide development incentives pursuant to any state, federal, or local law, rule, or regulation applicable to the Project.

Section 4. Affordable Units. Developer hereby agrees to make available, restrict occupancy to, and rent __ of the Housing Units at the Project to Lower Income Households at an Affordable Rent. The ___ Affordable Units shall be "floating" units that are not permanently designated; however, at no time shall all ___ Affordable Units be congregated to a certain section of the Project. The unit size of the Affordable Units shall range in size from ___ to ____ square feet. The ___ Affordable Units shall consist of 1-3 bedroom units that are part of the Project. A

minimum of __ one-bedroom, __ two-bedroom and __ three-bedroom units shall be reserved and allocated at all times. In accordance with Garden Grove Municipal Code Section 9.12.030.070(G)(4), all Affordable Units shall be of similar design and appearance of the total Project.

(a) A person or family (i.e., a "tenant household") who qualifies as a Lower Income Household at the time he/she/it first occupies an Affordable Unit shall be deemed to continue to be so qualified until such time as a recertification of such tenant household's income in accordance with Section 14 below demonstrates that such tenant household no longer qualifies as a Lower Income Household. Moreover, a unit previously occupied by a Lower Income Household and then vacated shall be considered occupied by such Lower Income Household for a temporary period until reoccupied, at which time the character of the unit shall be re-determined. In no event shall such temporary period exceed thirty-one (31) days.

(b) At such time as a tenant household occupying an Affordable Unit ceases to qualify as a Lower Income Household, the unit occupied by such tenant household shall cease to be an Affordable Unit. Developer shall replace each such Affordable Unit by designating the next available unit and any necessary units thereafter as an Affordable Unit. For purposes of this Agreement, such designated unit will be considered an Affordable Unit if it is held vacant and available for occupancy by a Lower Income Household and, upon occupancy, the income eligibility of the tenant household as a Lower Income Household is verified and the tenant household pays an Affordable Rent.

(c) In the event a tenant household occupying an Affordable Unit initially qualifies as a Lower Income Household but the income of such tenant household increases, such increase shall not be deemed to result in a violation of the restrictions of this Agreement concerning limitations upon income of occupants, provided that the occupancy by such household is for a reasonable time of not to exceed one year (measured from the time the income of the household ceases to qualify as a Lower Income Household), at which time the Housing Unit shall cease to be an Affordable Unit and the provisions of the immediately preceding paragraph shall apply.

Section 5. Use of the Site. All uses conducted on the Site, including, without limitation, all activities undertaken by the Developer pursuant to this Agreement shall conform to all applicable provisions of the Garden Grove Municipal Code and other applicable federal, state, and local laws, rules, and regulations. The Project shall at all times during the term of this Agreement be used as a residential apartment project and none of the Housing Units in the Project shall at any time be utilized on a transient basis, nor shall the Housing Units or any portion thereof ever be used as a hotel, motel, dormitory, fraternity or sorority house, rooming house, hospital, nursing home, sanitarium or rest home, short-term or vacation rental, or be converted to condominium ownership. All of the community facilities and any social programs provided to the Project's residents shall be available at all times on an equal, non-discriminatory basis to residents of all Housing Units at the Project.

Section 6. Duration of Affordability Requirements. The Affordable Units shall be subject to the requirements of this Agreement throughout the entire Term of this Agreement.

Section 7. Construction of Affordable Units. The Affordable Units shall be constructed and completed concurrently with the non-restricted Housing Units in the Project.

Section 8. Occupancy Limits. The maximum occupancy for each of the Housing Units shall not exceed two persons per bedroom, plus one, as set forth in the Conditions of Approval.

Section 9. Maintenance. Developer shall maintain or cause to be maintained the interior and exterior of the Project and the Site in a decent, safe and sanitary manner, and in accordance with the standard of maintenance of first class multifamily rental apartment complexes within Orange County. If at any time Developer fails to maintain the Project or the Site in accordance with this Agreement and such condition is not corrected within five days after written notice from City with respect to graffiti, debris, and waste material, or thirty days after written notice from City with respect to general maintenance, landscaping and building improvements, then City, in addition to whatever remedy it may have at law or at equity, shall have the right to enter upon the applicable portion of the Project or the Site and perform all acts and work necessary to protect, maintain, and preserve the Project and the Site, and to attach a lien upon the Site, or to assess the Site, in the amount of the expenditures arising from such acts and work of protection, maintenance, and preservation by City and/or costs of such cure, including a reasonable administrative charge, which amount shall be promptly paid by Developer to City upon demand.

Section 10. Marketing Program. Each Affordable Unit shall be leased to Lower Income Households selected by Developer who meet all of the requirements provided herein. Prior to the issuance of a certificate of occupancy for the Project, Developer shall prepare and obtain City's approval, which approval shall not be unreasonably withheld, of a marketing program for the leasing of the Housing Units at the Project ("Marketing Program"). The leasing of the Housing Units shall thereafter be marketed in accordance with the Marketing Program as the same may be amended from time to time with City's prior written approval, which approval shall not unreasonably be withheld. Developer shall provide City with periodic reports with respect to the leasing of the Housing Units in accordance with Sections 14 and 15.

Section 11. Management Plan. Prior to the issuance of the certificate of occupancy for the Project, Developer shall submit for the reasonable approval of City a "Management Plan" which sets forth in detail Developer's property management duties, a tenant selection process in accordance with this Agreement, a security system and crime prevention program, the procedures for the collection of rent, the procedures for eviction of tenants, the rules and regulations of the Site and manner of enforcement, a standard lease form, an operating budget, the identity of the professional property management company to be contracted with to provide property management services at the Site ("Property Manager"), and other matters relevant to the management of the Site. The Management Plan shall require Developer to adhere to a fair lease and grievance procedure. The management of the Site shall be in compliance with the Management Plan as approved by City.

If City determines that the performance of the Property Manager is deficient based upon the standards set forth in the approved Management Plan and in this Agreement, City shall provide notice to Developer of such deficiencies and Developer shall use its best efforts to correct such deficiencies. In the event that such deficiencies have not been cured within the time set forth in Section 19 hereof, City shall have the right to require Developer to immediately remove and replace the Property Manager with another property manager or property management company

which is reasonably acceptable to the City Manager, which is not related to or affiliated with Developer, and which has not less than five (5) years' experience in property management, including significant experience managing housing facilities of the size, quality and scope of the Project.

Section 12. Selection of Tenants. Developer shall be responsible for the selection of tenants for the Housing Units in compliance with lawful and reasonable criteria and the requirements of this Agreement. To the extent permitted by law, a reasonable preference in the leasing of the Housing Units shall be given to prospective tenants on the Garden Grove Housing Authority's Section 8 Housing Vouchers waiting list and Affordable Housing waiting list, and to prospective tenants that live or work in the City.

Prior to the rental or lease of an Affordable Unit to a tenant(s), Developer shall require the tenant(s) to execute a written lease and to complete a Tenant Income Verification Form (in substantially the form attached hereto as Exhibit B) certifying that the tenant(s) occupying the Affordable Unit is/are a Lower Income Household and otherwise meet(s) the eligibility requirements established for the Affordable Unit. Developer shall verify the income of the tenant(s) as set forth in Section 14 below.

Section 13. Provisions regarding Section 8 Vouchers. Developer shall accept as tenants on the same basis as all other prospective tenants, persons who are recipients of federal certificates for rent subsidies pursuant to the existing program under Section 8 of the United States Housing Act of 1937, or its successor; provided, Developer shall not rent one of the Affordable Units to a tenant household holding a Section 8 certificate unless none of the Housing Units not restricted to occupancy by Lower Income Households pursuant to this Agreement are available. If the only available Housing Unit is an Affordable Unit, Developer shall no longer designate the Housing Unit rented to a tenant household holding a Section 8 certificate as an Affordable Unit, shall designate the next-available Housing Unit as an Affordable Unit, and shall make available, restrict occupancy to, and rent such newly designated Affordable Unit to a Lower Income Household at an Affordable Rent pursuant to this Agreement, such that at all times reasonably possible 8 of the Housing Units at the Project shall be Affordable Units not occupied by tenants holding Section 8 certificates. Furthermore, in the event Developer rents an Affordable Unit to a household holding a federal certificate, the rental agreement (or lease agreement, as applicable) between Developer, as landlord, and the tenant shall expressly provide that monthly rent charged shall be the Affordable Rent required hereunder for the Affordable Unit (not fair market rent) and that the rent collected directly from such tenant holding a federal certificate shall be not more than 30% of the tenant's actual gross income pursuant to the applicable federal certificate program regulations; i.e., the rent charged to such tenant under the rental agreement shall be the Affordable Rent chargeable hereunder and not fair market rent for the area, as would otherwise be permitted under the applicable federal certificate program. Thus, the subsidy payment to Developer under any federal certificate shall not exceed the difference between 30% of the tenant's actual gross income and Affordable Rent chargeable for the applicable Affordable Unit hereunder. If and to the extent any restrictions in this Agreement conflict with the provisions of Section 8 of the United States Housing Act of 1937 or any rules or regulations promulgated thereunder, the provisions of Section 8 of the United States Housing Act of 1937 and all implementing rules and regulations thereto shall control. Developer shall not apply selection criteria to Section 8 certificate holders which are more burdensome than criteria applied to any other prospective tenants.

Section 14. Income Verification and Certification. Following the initial lease-up of the Project, and annually thereafter throughout the Term of this Agreement, Developer shall submit to City, at Developer's expense, a summary of the income, household size and rent payable by each of the tenants of the Affordable Units. At City's request, Developer shall provide to City completed income computation and certification forms, in substantially the form of the Tenant Income Verification Form attached hereto as Exhibit B or such other form as may reasonably be requested by City, for any Lower Income Households renting the Affordable Units at the Project. Developer shall obtain, or shall cause to be obtained by the Property Manager, a certification from each household leasing an Affordable Unit demonstrating that such household meets the applicable income requirements and eligibility requirements established for a Lower Income Household renting such Affordable Unit. Developer shall verify, or shall cause the Property Manager to verify, the income certification of the Lower Income Household.

Section 15. Monitoring and Recordkeeping. Throughout the Term of this Agreement, Developer shall annually complete and submit to City an Annual Project Compliance Report in the form attached hereto as Exhibit C, or such other form as may reasonably be requested by City. Representatives of City shall be entitled to enter the Site, upon at least thirty-six (36) hours' notice, to monitor compliance with this Agreement, and shall be entitled, at City's sole cost and expense, to inspect the records of the Project and to conduct an independent audit or inspection of such records at a location within the City that is reasonably acceptable to the City Manager. Developer agrees to cooperate with City in making the Site and the records of the Project available for such inspection or audit. Developer agrees to maintain each record of the Project for no less than 5 years after creation of each such record.

Section 16. Indemnity. Developer shall, at its expense, defend (with counsel acceptable to City and subject to approval by Developer), indemnify, and hold harmless City, and their officers, agents, employees and representatives from any and all losses, liabilities, claims, lawsuits, causes of action, judgments, settlements, court costs, attorneys' fees, expert witness fees, and other legal expenses, costs of evidence of title, costs of evidence of value, and other damages of whatsoever nature arising out of or in connection with Developer's failure to perform Developer's obligations under this Agreement, Developer's ownership or operation of the Site, or the development of the Project, except for such liability arising from the gross negligence or willful misconduct of City.

Section 17. Agreement to be Recorded; Covenants Run with the Land; Priority. This Agreement shall be recorded, prior to the issuance of building permits for the Project, in the Official Records of Orange County, California, as senior, non-subordinate covenants and as an encumbrance running with the land for the full Term of this Agreement. In no event shall this Agreement be made junior or subordinate to any deed of trust or other documents providing financing for the construction or operation of the Project, or any other lien or encumbrance whatsoever for the entire Term of this Agreement. Nor shall this Agreement be made junior or subordinate to any extension, amendment, or modification of any lien or encumbrance recorded against the Site prior to the date hereof. Prior to recordation of this Agreement, Developer shall provide City with evidence satisfactory to the City that all deeds of trust, liens, encumbrances, or other documents recorded against the Site since _____, _____, if any, have been or will be subordinated to this Agreement, at Developer's sole cost and expense.

Section 18. Mortgage Protection. No breach or default under this Agreement shall defeat, terminate, extinguish, render invalid or otherwise affect the lien of any junior mortgage or deed of trust encumbering the Site, the Project, or any part thereof or interest therein.

Section 19. Default. An event of default occurs under this Agreement when: (a) there is a breach of any condition, covenant or promise set forth herein; (b) written notice thereof has been given to the defaulting party; and (c) such breach has not been cured within thirty (30) days after such notice was given to the defaulting party or, if such breach cannot reasonably be cured within such thirty (30) day period, the defaulting party fails to commence to cure the breach and/or fails thereafter to diligently proceed to complete such cure. A waiver by either party of any such breach shall not be construed as a waiver of any succeeding breach of the same or other condition, covenant or promise.

Section 20. Remedies. The occurrence of an event of default hereunder shall give the non-defaulting party the right to proceed with any and all remedies available at law or equity. Such remedies may include an action for damages, an action or proceeding for specific performance, and/or an action or proceeding for injunctive relief. Such actions or proceedings may require the defaulting party to pay damages, to perform its obligations and covenants under this Agreement, and to enjoin or cease and desist from acts which may be unlawful or in violation of the provisions of this Agreement.

Section 21. Additional Remedies for Certain Defaults; Remedy For Excessive Rent Charge.

(a) It shall constitute a default for the Developer to charge or accept for any Affordable Unit rent amounts in excess of the Affordable Rent. In the event that the Developer charges or receives such higher rental amounts, in addition to any other legal or equitable remedy that the City shall have for such default, the Developer shall be required to pay to the City an amount equal to the difference between the Affordable Rent that should have been charged and the amount of the rent received from the tenant, plus interest compounded at the maximum rate allowable for judgments.

(b) It shall also constitute a default for the Developer to fail to rent any of the required Affordable Units to a Lower Income Household, or to knowingly (or without investigation as required herein) initially rent any Affordable Unit to a tenant who is not a Lower Income Household. In the event the Developer violates this provision, in addition to any other remedy at law or equity that the City shall have for such default, the Developer, for each separate violation, shall be required to pay to the City an amount equal to the total rent the Developer received from such ineligible tenant, plus interest compounded at the maximum rate allowable for judgments.

Section 22. Attorneys' Fees and Costs. In addition to any other remedies provided hereunder or available pursuant to law, if either party to this Agreement commences an action against the other party to this Agreement arising out of or in connection with this Agreement, the prevailing party shall be entitled to recover reasonable attorneys' fees, expert witness fees, costs of investigation, and costs of suit from the losing party.

Section 23. Rights and Remedies Cumulative. The rights and remedies of the parties are cumulative, and the exercise by either party of one or more of its rights or remedies shall not preclude the exercise by it, at the same or different times, of any other rights or remedies for the same default or any other default by the other party.

Section 24. Time of Essence. Time is expressly made of the essence with respect to the performance by City and Developer of each and every obligation and condition of this Agreement.

Section 25. Third Party Beneficiaries. No persons or entities other than the parties and their successors and assigns shall have any right of action under this Agreement.

Section 26. City Approvals and Actions. City shall maintain authority of this Agreement and the authority to implement this Agreement through City Manager (or his duly authorized representative). City Manager (or his designee) shall have the authority to make approvals, issue interpretations, waive provisions, make and execute further agreements and/or enter into amendments of this Agreement on behalf of City so long as such actions do not materially or substantially change the uses or development permitted on the Site, or materially or substantially add to the costs incurred or to be incurred by City as specified herein, and such interpretations, waivers and/or amendments may include extensions of time to perform. All other material and/or substantive interpretations, waivers, or amendments shall require the consideration, action and written consent of the City.

Section 27. Successor and Assigns. This Agreement shall run with the land, and all of the terms, conditions, restrictions, and covenants contained in this Agreement shall be binding upon Developer, City, their permitted successors and assigns, and all successors in interest to all or any portion of the Site or the Project. Whenever the terms "Developer" or "City" are used in this Agreement, such terms shall include any other successors and assigns as herein provided. Not later than 30 days prior to a transfer of any interest in the Site or the Project or any interest in Developer, Developer shall provide written notice to the City of such transfer.

Section 28. Notices. Any approval, disapproval, demand, document or other notice which either party may desire to give to the other party under this Agreement must be in writing and may be given either by (i) personal service, (ii) delivery by reputable document delivery service such as Federal Express that provides a receipt showing date and time of delivery, (iii) mailing in the United States first-class mail, postage prepaid, or (iv) by email, with confirmation of receipt to the intended recipient, addressed to the address of the party as set forth below, or at any other address as that party may later designate by notice:

If to the City: City of Garden Grove
11222 Acacia Parkway
Garden Grove, CA 92840
Attention: Community & Econ. Development Dir.

If to the Developer: _____
c/o _____
_____
_____
Attention: _____
Email: _____

Section 29. Amendment. Any alteration, change or modification of or to this Agreement, in order to become effective, shall be made in writing and in each instance signed on behalf of each party. Each alteration, change, or modification to this Agreement shall be recorded against the Site in the Official Records of Orange County, California.

Section 30. Legal Advice. Each party represents and warrants to the other the following: they have carefully read this Agreement, and in signing this Agreement, they do so with full knowledge of any right which they may have; they have received independent legal advice from their respective legal counsel as to the matters set forth in this Agreement, or have knowingly chosen not to consult legal counsel as to the matters set forth in this Agreement, and they have freely signed this Agreement without any reliance upon any agreement, promise, statement or representation by or on behalf of the other party, or their respective agents, employees or attorneys, except as specifically set forth in this Agreement, and without duress or coercion, whether economic or otherwise.

Section 31. Project as a Private Undertaking. It is specifically understood and agreed by and between the parties hereto that the development of the Project is a private development, that neither party is acting as the agent of the other in any respect hereunder, and that each party is an independent contracting entity with respect to the terms, covenants and conditions contained in this Agreement. No partnership, joint venture or other association of any kind is formed by this Agreement. The only relationship between City and Developer is that of a government entity regulating the development of private property and the owner of such property.

Section 32. Exhibits. This Agreement includes the following exhibits, each of which is attached hereto and incorporated herein by this reference:

(i) Exhibit A: Legal Description of Site

(ii) Exhibit B: Tenant Income Verification Form

(iii) Exhibit C: Annual Project Compliance Report

[**Signatures appear on following page.**]

IN WITNESS WHEREOF, City and Developer have executed this Density Bonus Housing Agreement as of the date first set forth above.

DEVELOPER:

By: _____
Its: _____

By:
Name:
Its:

CITY OF GARDEN GROVE,
a California municipal corporation

_____
City Manager

ATTEST:

_____
City Clerk

APPROVED AS TO FORM:

_____
City Attorney

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

STATE OF CALIFORNIA)
)
COUNTY OF ORANGE)

On _____, 2019, before me, _____, Notary Public, personally appeared , who proved to me on the basis of satisfactory evidence to be the person(s) whose name is subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity, and that by his/her/their signature on the instrument the person, or the entity upon behalf of which the person acted, executed the instrument.

I certify UNDER PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.

WITNESS my hand and official seal.

Signature _____

(seal)

EXHIBIT A

LEGAL DESCRIPTION OF SITE

THE LAND REFERRED TO HEREIN BELOW IS SITUATED IN THE CITY OF GARDEN GROVE, IN THE COUNTY OF ORANGE, STATE OF CALIFORNIA, AND IS DESCRIBED AS FOLLOWS:

APN: _____

EXHIBIT B

TENANT INCOME VERIFICATION FORM

GARDEN GROVE

TENANT INCOME CERTIFICATION

☐ Initial Certification* ☐ Recertification* ☐ Other _____

Effective Date: _____
Move-in Date: _____
(MM/DD/YYYY)

PART I - DEVELOPMENT DATA

Property Name: _____

Address: _____ Unit Number: _____ # Bedrooms: _____

PART II - DEVELOPMENT DATA

HH Mbr #	Last Name	First Name & Middle Initial	Relationship to Head of Household	Date of Birth (MM/DD/YYYY)	F/T Student (Y or N)
1			HEAD		
2					
3					
4					
5					
6					
7					

PART III. GROSS ANNUAL INCOME (USE ANNUAL AMOUNTS) See Definition of Income on Page Two

HH Mbr #	(A) Employment or Wages	(B) Soc. Security/Pensions	(C) Public Assistance	(D) Other Income (*state type of income*)
TOTALS	$	$	$	$

Add totals from (A) through (D), above **TOTAL INCOME (E):** $

PART IV. INCOME FROM ASSETS

Hshld Mbr #	(F) Type of Asset	(G) Cash Value of Asset	(H) Annual Income from Asset

Net Cash Value of Assets (G): $

Total Actual Income from Assets (H):

If line G is greater than $5,000, multiply line by the current passbook rate, 2.00% and enter results here; otherwise, leave blank. Imputed Income (I): $

Enter the greater of the total of column H, or I (Imputed income) **TOTAL INCOME FROM ASSETS (J)** $

(K) Total Annual Household Income from all Sources [Add (E) + (J)] $

HOUSEHOLD CERTIFICATION & SIGNATURES

The information on this form will be used to determine maximum income eligibility. I/we have provided for each person(s) set forth in Part II acceptable verification of current anticipated annual income. I/we agree to notify the landlord immediately upon any member of the household moving out of the unit or any new member moving in. I/we agree to notify the landlord immediately upon any member becoming a full time student.

Under penalties of perjury, I/we certify that the information presented in this Certification is true and accurate to the best of my/our knowledge and belief. The undersigned further understands that providing false representations herein constitutes an act of fraud. False, misleading or incomplete information may result in the termination of the lease agreement.

_____ _____ _____ _____
Signature *(Date)* Signature *(Date)*

_____ _____ _____ _____
Signature *(Date)* Signature *(Date)*

SIGNATURE OF OWNER/REPRESENTATIVE

I hereby; certify that the above information agrees with the rental applications and documents presented by the above applicants, and that I have reviewed and attached documentation and the above information is true and correct to the best of my knowledge and belief. Based on the representations herein and upon the proofs and documentation required to be submitted, the individual(s) named in Part II of this Tenant Income Certification is/are eligible under the provisions of the Affordable Housing Agreement and in accordance with the HOME Investments Partnerships Act (HOME) Final Rule, 24 CFR 92.203.

SIGNATURE OF OWNER/REPRESENTATIVE _____ DATE _____

PART V. RENT

Tenant Paid Rent $_____
Utility Allowance $_____

Rent Assistance: $_____
Other non-optional charges: $_____

GROSS RENT FOR UNIT:
(Tenant paid rent plus Utility Allowance & other non-optional charges) $_____

Unit Meets Rent Restriction at:

❑ 80% ❑ 60% ❑ 50%

Maximum Rent Limit for this unit: $_____

DEFINITION OF INCOME

Federal regulations at 24 CFR 5.609 (Part 5) define annual income as the *gross amount* of *income of all adult household members* that is *anticipated to be received* during the coming 12-month period. Each of the italicized phrases in this definition is key to understanding the requirements for calculating annual income:

24 CFR Part 5 Annual Income Inclusions

1. The full amount, before any payroll deductions, of wages and salaries, overtime pay, commissions, fees, tips and bonuses, and other compensation for personal services.

2. The net income from the operation of a business or profession. Expenditures for business expansion or amortization of capital indebtedness shall not be used as deductions in determining net income. An allowance for depreciation of assets used in a business or profession may be deducted, based on straight-line depreciation, as provided in Internal Revenue Service regulations. Any withdrawal of cash or assets from the operation of a business or profession will be included in income, except to the extent the withdrawal is reimbursement of cash or assets invested in the operation by the family.

3. Interest, dividends, and other net income of any kind from real or personal property. Expenditures for amortization of capital indebtedness shall not be used as deductions in determining net income. An allowance for depreciation is permitted only as authorized in number 2 (above). Any withdrawal of cash or assets from an investment will be included in income, except to the extent the withdrawal is reimbursement of cash or assets invested by the family. Where the family has net family assets in excess of $5,000, annual income shall include the greater of the actual income derived from all net family assets or a percentage of the value of such assets based on the current passbook savings rate, as determined by HUD.

4. The full amount of periodic amounts received from Social Security, annuities, insurance policies, retirement funds, pensions, disability or death benefits, and other similar types of periodic receipts, including a lump-sum amount or prospective monthly amounts for the delayed start of a periodic amount (except for certain exclusions, listed in Exhibit 3.2, number 14).

5. Payments in lieu of earnings, such as unemployment and disability compensation, worker's compensation, and severance pay (except for certain exclusions, as listed in Exhibit 3.2, number 3).

6. Welfare Assistance. Welfare assistance payments made under the Temporary Assistance for Needy Families (TANF) program are included in annual income:

• Qualify as assistance under the TANF program definition at 45 CFR 260.31; and

• Are otherwise excluded from the calculation of annual income per 24 CFR 5.609(c).

If the welfare assistance payment includes an amount specifically designated for shelter and utilities that is subject to adjustment by the welfare assistance agency in accordance with the actual cost of shelter and utilities, the amount of welfare assistance income to be included as income shall consist of:

• the amount of the allowance or grant exclusive of the amount specifically designated for shelter or utilities; ***plus***

• the maximum amount that the welfare assistance agency could in fact allow the family for shelter and utilities. If the family's welfare assistance is reduced from the standard of need by applying a percentage, the amount calculated under 24 CFR 5.609 shall be the amount resulting from one application of the percentage.

24 CFR Part 5 Annual Income Exclusions

1. Income from employment of children (including foster children) under the age of 18 years.

2. Payments received for the care of foster children or foster adults (usually persons with disabilities, unrelated to the tenant family, who are unable to live alone).

3. Lump-sum additions to family assets, such as inheritances, insurance payments (including payments under health and accident insurance and worker's compensation), capital gains, and settlement for personal or property losses (except as provided in Exhibit 3.1, number 5 of Income Inclusions).

4. Amounts received by the family that are specifically for, or in reimbursement of, the cost of medical expenses for any family member.

5. Income of a live-in aide (as defined in 24 CFR 5.403).

6. Certain increases in income of a disabled member of qualified families residing in HOME-assisted housing or receiving HOME tenant-based rental assistance (24 CFR 5.671(a)).

7. The full amount of student financial assistance paid directly to the student or to the educational institution.

8. The special pay to a family member serving in the Armed Forces who is exposed to hostile fire.

9. (a) Amounts received under training programs funded by HUD.
(b) Amounts received by a person with a disability that are disregarded for a limited time for purposes of Supplemental Security Income eligibility and benefits because they are set side for use under a Plan to Attain Self-Sufficiency (PASS).
(c) Amounts received by a participant in other publicly assisted programs that are specifically for, or in reimbursement of, out-of-pocket expenses incurred (special equipment, clothing, transportation, childcare, etc.) and which are made solely to allow participation in a specific program.
(d) Amounts received under a resident service stipend. A resident service stipend is a modest amount (not to exceed $200 per month) received by a resident for performing a service for the PHA or owner, on a part-time basis, that enhances the quality of life in the development. Such services may include, but are not limited to, fire patrol, hall monitoring, lawn maintenance, resident initiatives coordination, and serving as a member of the PHA's governing board. No resident may receive more than one such stipend during the same period of time

(e) Incremental earnings and benefits resulting to any family member from participation in qualifying state or local employment training programs (including training not affiliated with a local government) and training of a family member as resident management staff. Amounts excluded by this provision must be received under employment training programs with clearly defined goals and objectives, and are excluded only for the period during which the family member participates in the employment training program.

10. Temporary, nonrecurring, or sporadic income (including gifts).

11. Reparation payments paid by a foreign government pursuant to claims filed under the laws of that government by persons who were persecuted during the Nazi era.

12. Earnings in excess of $480 for each full-time student 18 years old or older (excluding the head of household or spouse).

13. Adoption assistance payments in excess of $480 per adopted child.

14. Deferred periodic amounts from supplemental security income and social security benefits that are received in a lump sum amount or in prospective monthly amounts.

15. Amounts received by the family in the form of refunds or rebates under state or local law for property taxes paid on the dwelling unit.

16. Amounts paid by a state agency to a family with a member who has a developmental disability and is living at home to offset the cost of services and equipment needed to keep the developmentally disabled family member at home.

17. Amounts specifically excluded by any other Federal statute from consideration as income for purposes of determining eligibility or benefits under a category of assistance programs that includes assistance under any program to which the exclusions set forth in 24 CFR 5.609(c) apply. A notice will be published in the Federal Register and distributed to housing owners identifying the benefits that qualify for this exclusion.

Part 5 Annual Income Net Family Asset Inclusions and Exclusions

Inclusions	Exclusions
1. Cash held in savings accounts, checking accounts, safe deposit boxes, homes, etc. For savings accounts, use the current balance. For checking accounts, use the average 6-month balance. Assets held in foreign countries are considered assets. 2. Cash value of revocable trusts available to the applicant. 3. Equity in rental property or other capital investments. Equity is the estimated current market value of the asset less the unpaid balance on all loans secured by the asset and all reasonable costs (e.g., broker fees) that would be incurred in selling the asset. Under HOME, equity in the family's primary residence is not considered in the calculation of assets for owner-occupied rehabilitation projects. 4. Cash value of stocks, bonds, Treasury bills, certificates of deposit, mutual funds, and money market accounts. 5. Individual retirement, 401(K), and Keogh accounts (even though withdrawal would result in a penalty). 6. Retirement and pension funds. 7. Cash value of life insurance policies available to the individual before death (e.g., surrender value of a whole life or universal life policy). 8. Personal property held as an investment such as gems, jewelry, coin collections, antique cars, etc. 9. Lump sum or one-time receipts, such as inheritances, capital gains, lottery winnings, victim's restitution, insurance settlements and other amounts not intended as periodic payments. 10. Mortgages or deeds of trust held by an applicant.	1. Necessary personal property, except as noted in number 8 of Inclusions, such as clothing, furniture, cars, and vehicles specially equipped for persons with disabilities. 2. Interest in Indian trust lands. 3. Assets not effectively owned by the applicant. That is, when assets are held in an individual's name, but the assets and any income they earn accrue to the benefit of someone else who is not a member of the household and that other person is responsible for income taxes incurred on income generated by the asset. 4. Equity in cooperatives in which the family lives. 5. Assets not accessible to and that provide no income for the applicant.

EXHIBIT C

ANNUAL PROJECT COMPLIANCE REPORT

[Excel Spreadsheet]

GARDEN GROVE

ANNUAL PROJECT COMPLIANCE REPORT

[PROJECT NAME]

Monitoring Period:

Owner Name: _____

Project Address: _____

Prepared By: _____

Date Prepared:

Total Number of Units: _____

Number of Affordable Units: _____

Affordability:

General Information		Rent Information for Affordable Units							Income Information for Affordable Units				Certification/ Recertification Information	
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
Unit No.	How Many Bedrooms?	Rent Designation (%):	Maximum Rent Limit	Tenant's Share of Rent	If Section 8, Amount of Subsidy	Utility Allowance	Total (E+F+G)	Does (H) exceed (D)? Y / N	Tenant Name	Household Size	Annual Gross Household Income	Is Income: Low, Very-Low or Over 80%?	Initial Occupancy Date	Effective Date of Last Annual Income
			$0.00	$0.00	$0.00	$0.00	$0.00				$0.00			
			$0.00	$0.00	$0.00	$0.00	$0.00				$0.00			
			$0.00	$0.00	$0.00	$0.00	$0.00				$0.00			
			$0.00	$0.00	$0.00	$0.00	$0.00				$0.00			
			$0.00	$0.00	$0.00	$0.00	$0.00				$0.00			
			$0.00	$0.00	$0.00	$0.00	$0.00				$0.00			
			$0.00	$0.00	$0.00	$0.00	$0.00				$0.00			
			$0.00	$0.00	$0.00	$0.00	$0.00				$0.00			
			$0.00	$0.00	$0.00	$0.00	$0.00				$0.00			
			$0.00	$0.00	$0.00	$0.00	$0.00				$0.00			
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			$0.00	$0.00	$0.00	$0.00	$0.00				$0.00			
			$0.00	$0.00	$0.00	$0.00	$0.00				$0.00			
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			$0.00	$0.00	$0.00	$0.00	$0.00				$0.00			
			$0.00	$0.00	$0.00	$0.00	$0.00				$0.00			
			$0.00	$0.00	$0.00	$0.00	$0.00				$0.00			
			$0.00	$0.00	$0.00	$0.00	$0.00				$0.00			

Reviewed By: _____ Date:_____

ATTACHMENT 4

Summary Table of Proposed Density Bonus Incentives/Concessions & Waivers/Reductions

Site Plan No. SP-162-2025

13040 COAST STREET

#	GGMC Section	Requirement	Proposed	Incentive/Concession or Waiver/Reduction	Applicant's Justification
1	9.12.040.020(A)	The maximum height of the main structure is 35 feet	55'-6"	Incentive / Concession	Restricting the building height and number of stories would preclude the ability to develop the number of units proposed within a 3 story or lower height structure without resorting to expensive below grade structured parking. Relief from these development standards would reduce the cost of the housing development by allowing for the structure to be built at grade in a less expensive building type thereby reducing the cost of the affordable units.
2	9.12.040.020(A)	Maximum three (3) stories	Five (5) stories	Incentive / Concession	
3	9.12.040.020(A)	Maximum 50% lot coverage	71%	Incentive / Concession	The increased lot coverage is necessary to provide adequate space for the building to accommodate the affordable and market rate dwelling units and parking spaces. Having adequate space for the dwelling units reduces the cost of providing the affordable housing units, as without sufficient building area, not as many market rate units would be provided and therefore, there would be a diminished subsidy for the affordable units.
4	9.48.030	To underground existing utilities	Forgo the undergrounding requirements and to allow the existing power lines to remain in place	Incentive / Concession	Undergrounding of utilities (power lines) is extremely costly. The undergrounding of utilities is not necessary for the function of the residential units and only contributes to unnecessary cost. Relief from undergrounding utilities clearly helps subsidize affordable rent rates
5	9.12.040.020(A)	Minimum front yard setback at the 1st and 2nd floor is 20 feet	Six feet (6'-0")	Waiver / Reduction	Without relief from the minimum required setbacks, these requirement would have the effect of physically precluding the construction of the Project at the density permitted in the R-3 zone and proposed for the Project. If the building did not encroach into the front yard, side yard and rear yard setback and stepback areas, building area would be reduced, thereby reducing the
6	9.12.040.020(A)	Minimum front yard setback at the 3rd to 5th floor is 25 feet	Six feet (6'-0")	Waiver / Reduction	
7	9.12.040.020(A)	Minimum side yard setback at the 3rd and 5th floor is 15 feet	Ten feet (10'-0")	Waiver / Reduction	
8	9.12.040.020(A)	Minimum side rear setback at the 3rd and 5th floor is 15 feet	Ten feet (10'-0")	Waiver / Reduction	

#	GGMC Section	Requirement	Proposed	Incentive/Concession or Waiver/Reduction	Applicant's Justification
					ability to provide sufficient living space for dwelling units.
9	9.12.040.020(E)	Minimum one-bedroom unit size is 750 square feet	656 square feet	Waiver / Reduction	Without the waiver for dwelling unit size, fewer dwelling units would fit within the square footage of the building. Larger one bedroom dwelling units would cause a reduction in the number of dwelling units.

ATTACHMENT 5

COAST STREET APARTMENTS PROJECT

CLASS 32 EXEMPTION CHECKLIST

Site Plan No. SP-162-2025

Lead Agency:

City of Garden Grove
Community Development Department
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Garden Grove, CA 92840

Project Contact:

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September 2025

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Acronym List

ADT	Average Daily Trips
AQMP	Air Quality Management Plan
AB	Assembly Bill
APN	Assessor Parcel Number

BMPs	Best Management Practices
CAA	Clean Air Act
CalEEMod	California Emissions Estimator Model
CARB	California Air Resources Board
CBC	California Building Code
CCR	California Code of Regulations
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CNEL	Community Noise Equivalent Level
CMU	Concrete Masonry Unit
CO	Carbon Monoxide
CY	Cubic Yards
DAMP	Drainage Area Management Plan
dBA	A-weighted decibel
FAR	Floor Area Ratio
FTA	Federal Transit Administration
GGMC	Garden Grove Municipal Code
GHG	Greenhouse Gas
HQTA	High-Quality Transit Area
ITE	Institute of Transportation Engineers
lbs	pounds
LCFS	Low Carbon Fuel Standard
LID	Low Impact Development
LOS	Level of Service
LST	Local Significance Thresholds
MBTA	Migratory Bird Treaty Act
MLD	Most Likely Descendant
MTCO2e	metric tons carbon dioxide equivalent
NPDES	National Pollutant Discharge Elimination System
NAHC	Native American Heritage Commission
NOx	Nitrous Oxides
OCTA	Orange County Transportation Authority
OPR	Governor's Office of Planning and Research
PM	Particulate Matter
PPM	parts per million
PPV	peak particle velocity
PRC	Public Resources Code
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SCH	State Clearinghouse
SF	Square Foot
SOx	Oxides of Sulfur
SR	State Route
SRA	Source Receptor Area
SWPPP	Storm Water Pollution Prevention Plan
TAC	Toxic Air Contaminant
TAZ	Traffic Analysis Zone

TPA	Transit Priority Area
VdB	velocity in decibels
VMT	Vehicle Miles Traveled
UCACE	United States Army Corps of Engineers
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geologic Survey
WDRs	Waste Discharge Requirements
WQMP	Water Quality Management Plan

1.0 INTRODUCTION

The applicant (West Street Investments, LLC) is requesting approval from the City of Garden Grove (the City) to redevelop 13040 Coast Street (the Project site) with a five-story multi-family residential building with 34 one and two-bedroom apartments (the Project). The Project would also provide onsite parking and open space areas. The City is the Lead Agency for the proposed Project.

1.1 PURPOSE OF THE NOTICE OF EXEMPTION

This Class 32 Infill Exemption has been prepared in accordance with the following:

- California Environmental Quality Act (CEQA) of 1970 (Public Resources Code Sections 21000 et seq.)
- California Code of Regulations, Title 14, Division 6, Chapter 3 (CEQA Guidelines, Sections 15000 et seq.).

Article 19 of the California Environmental Quality Act (CEQA) Guidelines includes, as required by Public Resources Code Section 21084, a list of classes of projects which have been determined not to have a significant effect on the environment.

Pursuant to CEQA Guidelines Section 15332, the Project would qualify for a Class 32 Exemption if it is: (a) consistent with the General Plan designation and policies and zoning regulations; (b) is located within the City limits, surrounded by urban uses and is less than 5 acres in size; (c) has no value for endangered, rare or threatened species; (d) would not result in any significant effects related to traffic, noise, air quality or water quality; and (e) can be adequately served by all required utilities and public services. Additionally, in order to qualify for the exemption, none of the exceptions identified in CEQA Guidelines Section 15300.2 can apply. As shown in this document, the Project meets all the aforementioned qualifying criteria and none of the exceptions applies.

Existing Regulations that Reduce Potential Impacts
Throughout the analysis in this Class 32 Exemption Checklist, reference is made to requirements that are applied to all development on the basis of federal, state, or local law that reduce the potential for environmental impacts to occur.

1.2 DOCUMENT ORGANIZATION

This Class 32 Exemption Checklist includes the flowing sections:

Section 1.0 Introduction
It provides information about CEQA, its requirements for environmental review, and explains the Exemption Checklist that evaluates the potential impacts of the proposed Project to the physical environment.

Section 2.0 Project Setting
It provides information about the Project's location, a description of existing site uses, and identifies the existing General Plan and zoning designations.

Section 3.0 Project Description
It includes a description of the Project's physical features, along with construction and operational activities. Describes anticipated approvals and permits needed for implementation of the proposed Project.

Section 4.0 Class 32 Infill Exemption Requirements
It provides the CEQA Guidelines detailing the types of projects exempt from CEQA review related to urban infill development and exceptions to the exemptions.

Section 5.0 Proposed Project CEQA Exemption Compliance Analysis
Evaluates the Project's potential to result in significant adverse effects to the physical environment as required by CEQA Guidelines Section 15332 and identifies applicable regulations. In addition, Section 5.0 analyzes whether the proposed Project would result in any of the exceptions in the criteria of CEQA Guidelines Section 15300.2(b)-(f) (Exceptions) to the Project.

Section 6.0 References
It includes a list of sources that were used in preparation of this CEQA document.

2.0 PROJECT SETTING

2.1 PROJECT LOCATION

The Project site is located at 13040 Coast Street in the southwestern portion of the City, as shown in Figure 1, *Regional Location*. The Project site is located along the east side of Coast Street, just south of the intersection with Garden Grove Boulevard. Regional access to the site is provided by State Route 22 (SR-22) and the Beach Boulevard interchange. Beach Boulevard connects to Garden Grove Boulevard approximately 0.15-mile west of the Coast Street Garden Grove Boulevard intersection. The Project location is shown in Figure 2, *Local Vicinity*.

The Project site is identified as Assessor Parcel Number (APN): 097-011-03; and is located within the Anaheim United States Geological Survey (USGS) 7.5' topographic quadrangle. The site is within Township 05S, Range: 11W, Section 01, and Baseline San Bernardino. The latitude and longitude for the Project site are 33° 46' 23" North, 117° 59' 23" West.

The Project site is located within a Southern California Association of Governments (SCAG) 2045 High-Quality Transit Area (HQTA), which (as of January 1, 2025 per Assembly Bill 2553, Friedman) are areas within 0.5-mile of a transit stop or a transit corridor with 20-minute or less service frequency during peak commute hours. The site is also within a Transit Priority Area (TPA) as identified by Exhibit 4.14-6, *Transit Priority Areas*, of the Focused General Plan Update and Zoning Amendments Draft EIR.

2.2 EXISTING PROJECT SITE

The 0.54-acre Project site is currently developed with a vacant 3,252 square foot building that was constructed in 1967 and previously used by the Gospel First Korean Baptist Church that was once located across Coast Street from the Project site (on the southwesterly corner of Coast Street and Garden Grove Boulevard) and has relocated. The Project site building was used by the church as a school, pre-school, and location for meetings; but has remained vacant, except for storage uses, since purchase by its existing owner in August 2022.

The one-story building is wood-frame construction, with stucco and wood-trim exterior facings. As shown in Figure 3, *Aerial View*, the site also contains limited ornamental landscaping, and a parking area with a driveway connection to Coast Street. The site is bound by existing walls along the north, east, and south sides of the site. The site frontage includes limited ornamental landscaping, ground covers, and is bound by an existing sidewalk along Coast Street, and an alley called Emerson Avenue to the south.

2.3 EXISTING GENERAL PLAN LAND USE AND ZONING OF THE PROJECT SITE

The Project site has a City of Garden Grove General Plan land use designation of Medium Density Residential (MDR) with a maximum density of 32 units per acre, and a zoning designation of R-3 (Multiple-Family Residential) that also has a maximum density of 32 units/acre (Garden Grove Municipal Code [GGMC] 9.12.040.020). The surrounding development consists of residential, church, commercial, and auto repair uses. The zoning of the Project site and surrounding areas are shown in Figure 4.

2.4 SURROUNDING LAND USES

The Project site is located within a fully developed area. The surrounding land uses and zoning are described in Table 1.

Table 1: Surrounding Existing Land Uses and Designations

Direction	Existing Land Use	General Plan Land Use Designation	Zoning Designations
North	Commercial and Auto Repair	Medium Density Residential (MDR)	R-3 (Multiple-Family Residential)
East	Commercial/Vehicle Storage	Medium Density Residential (MDR)	R-3 (Multiple-Family Residential)
South	Multi-Family Residential south of Emerson Avenue	Medium Density Residential (MDR)	R-3 (Multiple-Family Residential)
West	Parking lot for the vacant church to the northwest across Coast Street	Residential/Commercial Mixed Use 1	GGMU-1 (Garden Grove Blvd Mixed Use Zone 1)

Figure 1: Regional Location

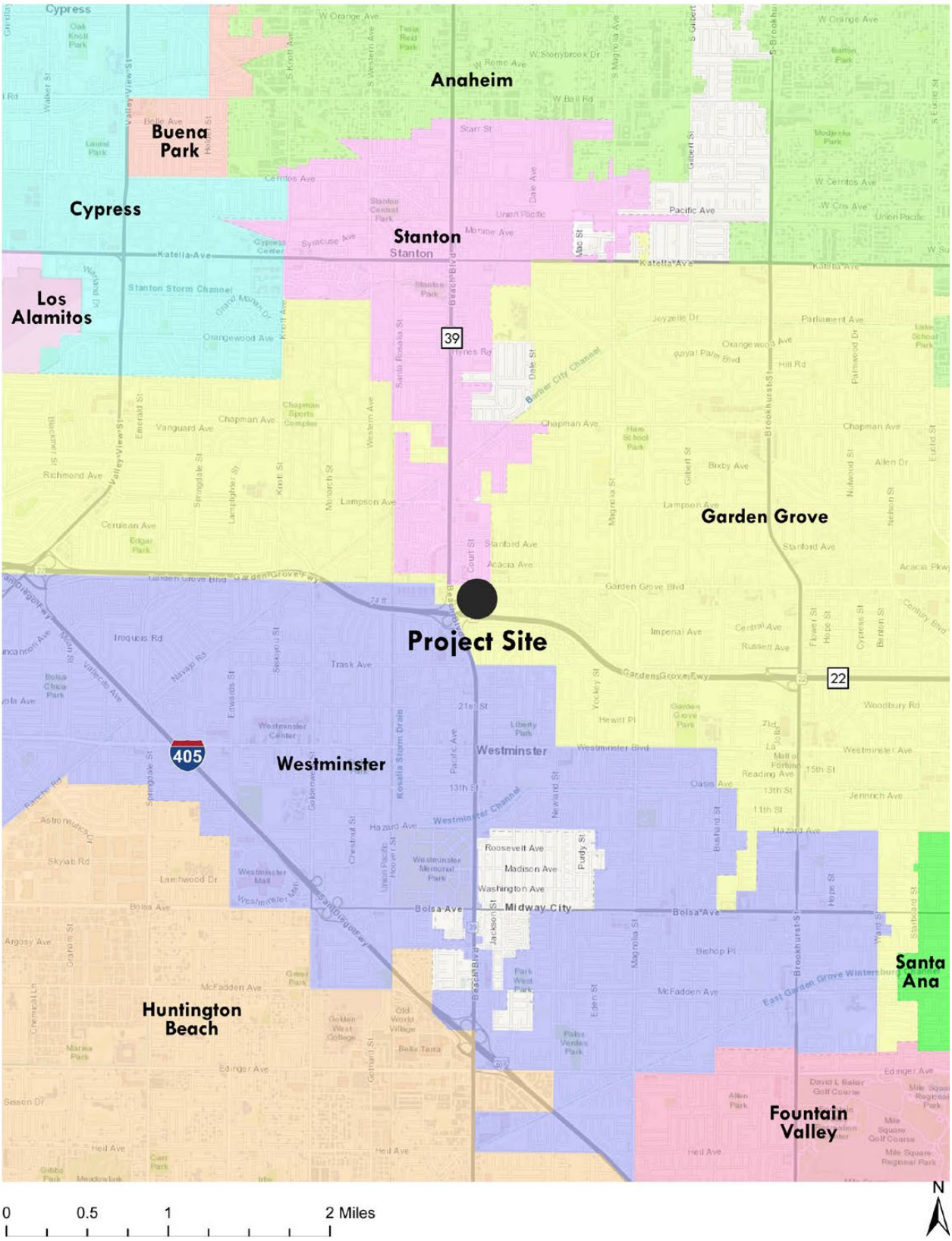


Figure 2: Local Vicinity

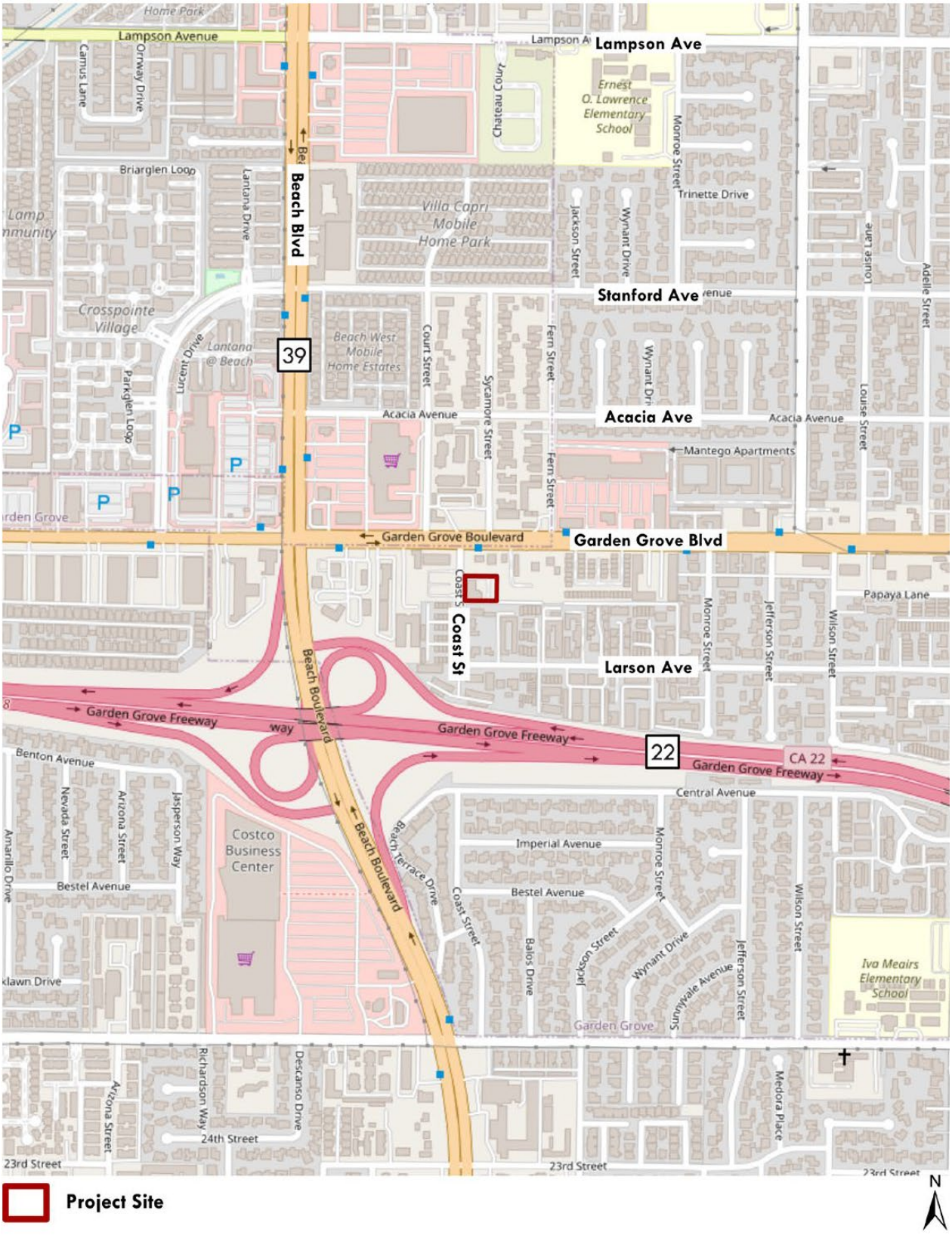
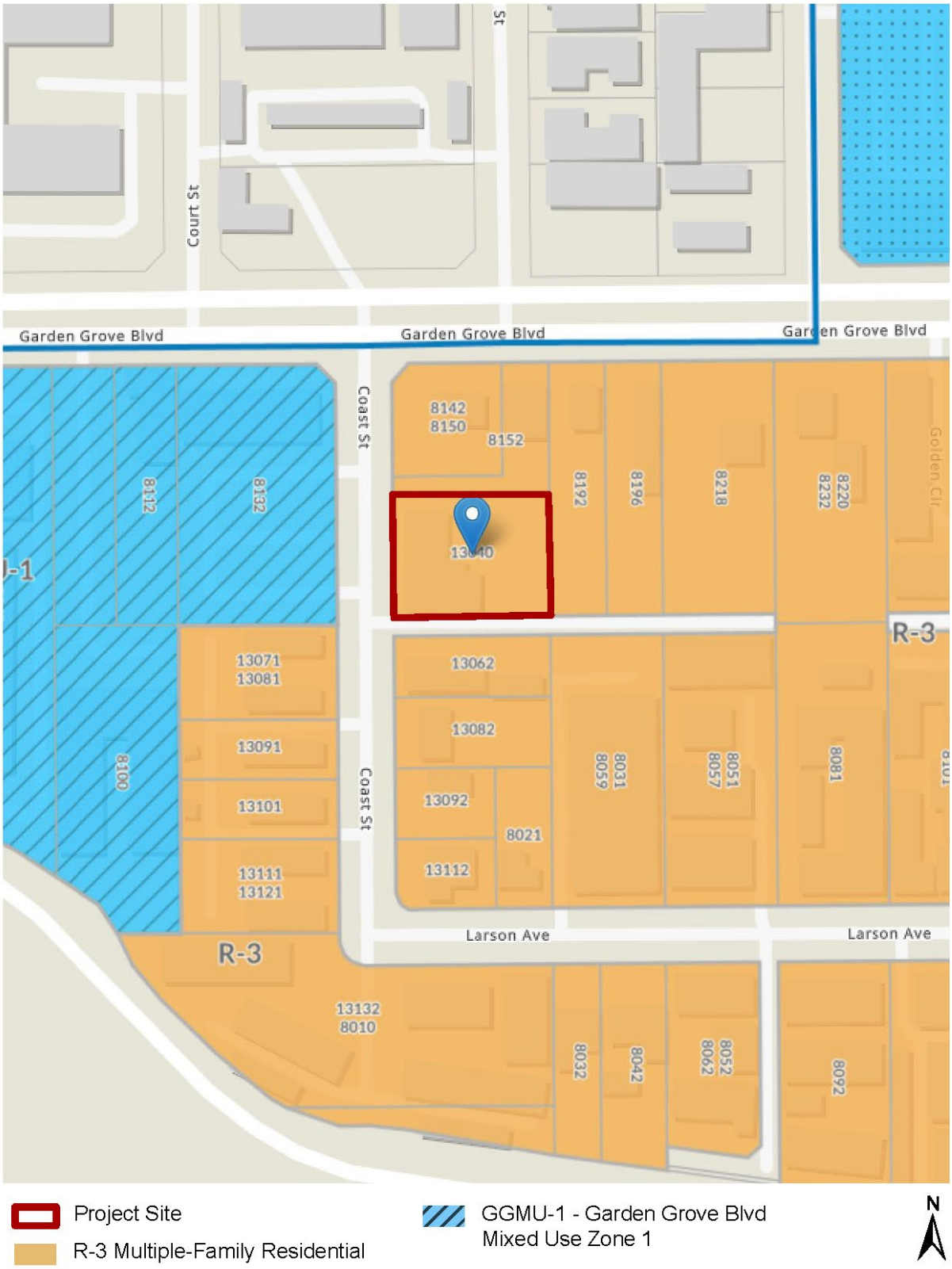


Figure 3: Aerial View

Figure 4: Project Site and Surrounding Zoning Designations



3.0 PROJECT DESCRIPTION

3.1 PROJECT OVERVIEW

The proposed Project would remove the existing building and related improvements and infrastructure and redevelop the site with 34 new for rent residential units within one building that would have one level of parking and four levels of one- and two-bedroom residences. The Project also includes a community room, onsite landscaped areas, and a private deck. Onsite parking area would be accessed from a proposed driveway along Coast Street and off the alley on the south side of the Project.

Three of the proposed units would be very-low Income affordable units and three of the proposed units would be moderate-income affordable units. The base density allowed for the 0.54 gross acre site is 32 dwelling units per acre or 18 dwelling units (0.54 gross acres x 32 dwelling units per acre equals 17.28 dwelling units rounded to 18 dwelling units). By providing three very low income housing units, which would be 16.7 percent of the allowable base units, the proposed Project would receive a 50 percent density bonus (Government Code Section 65915(f)(2)). Also, three of the proposed units would be moderate-income affordable units, which would exceed 12 percent of the allowable base units; and therefore, is eligible for an additional 38.75 percent density bonus (Government Code Section 65915(v)). With approval of the State Density Bonus Law entitlement request, the proposed Project would be eligible for a density of 68 units per gross acre. The Project requires approval of a Site Plan.

3.2 PROJECT FEATURES

Building Structure
The Project would develop the site with a five-story multi-family residential building that would have one level of at grade parking under four levels of one- and two-bedroom residences, and a second story podium deck, as shown in Figure 5, *Conceptual Site Plan*. The five-story building would have a total gross building floor area of 61,297 square feet and a net floor area, as defined in the GGMC, of 42,594 square feet. The building would have a footprint of 11,904 square feet and a height of 65 feet to top of parapet, with the roof at 55 feet 6 inches.

The building would be a cement and stucco structure with veneer, metal panel walls and canopies, wood awnings, and large windows, as shown in Figures 6 and 7. The proposed building would have a minimum front setback of six feet, minimum side setback of 10-feet, minimum street side (alley) setback of 15 feet, and minimum rear setback of 10 feet in compliance with the GGMC Section 9.12.040.020 and modified with density bonus waivers for the front setback and the front, side, and rear stepbacks.

Residential Units
The proposed residences would consist of one- and two-bedroom units, which are detailed in Table 2. Each unit would each have a 95 square foot balcony.

Table 2: Proposed Residential Units

Floor Plan	Bedrooms	Bathrooms	Net Area	# of Units
Unit A	1	1	656	12
Unit B	2	2	935	22
Total				**34**

The Project also includes a 1,782 square foot community room; a 3,201 square-foot open podium on the second level of the building that would have open space amenities for residents, such as barbeques, fitness equipment, yoga area; and 2,264 square feet of ground level open space, as shown in Figure 8.

Of the proposed residential units, three would be very-low-income affordable units and three would be moderate-income affordable units, as defined in Sections 50093 and 50105 of the California Health and Safety Code. Pursuant to Govt Code Section 65915, the Project includes an additional density bonus (an allowance for additional units) as follows: in exchange for providing 16 percent very-low-income affordable units the Project is entitled to a 50 percent density bonus and in exchange for providing 12 percent moderate-income affordable units the Project is entitled to an additional density bonus of 38.75 percent. Additionally, the Project is entitled to incentives and waivers pursuant to Govt Code Section 65915.

Access, Circulation, and Parking

The proposed Project would be accessed through a 30-foot-wide driveway entrance off Coast Street, as shown in Figure 5 *Conceptual Site Plan*. The driveway would lead directly to a parking garage on the ground level (first floor) of the building that would include 36 vehicle parking spaces and bike racks/storage. An additional nine (9) vehicle parking spaces would be accessed off the 25-foot-wide alley on the south side of the proposed building. A total of 45 onsite vehicle spaces are proposed.

Lighting

Outdoor lighting included as part of the Project would be typical of residential uses and would consist of primarily wall-mounted lighting, entrance lighting, landscaping and sign lighting, and parking garage lighting. All the Project's outdoor lighting would be directed downward and shielded to minimize off-site spill in compliance with City's lighting regulations related to multi-family residential uses (GGMC Section 9.12.040.210).

Landscaping

The proposed Project would include landscaping around the proposed building and along the Coast Street frontage. As shown in Figure 9, *Conceptual Landscape Plan,* the landscaping would include 15-gallon and 24-inch box trees, various shrubs, and ground cover per GGMC Section 9.12.040.090. Landscaping would be drought tolerant, in compliance with the City's landscaping regulations.

Walls and Gates

The Project includes removal of the existing walls along the north and east sides of the site that would be replaced with 8-foot-high concrete masonry unit (CMU) walls. The first 20 feet of the north and east sides of the site from the eastern property line would be delineated by a 3-foot-high tubular steel fence. Gates would be provided to access the proposed passive open space areas along the north and east sides of the site.

Infrastructure Improvements

The proposed Project would provide roadway frontage improvements and would install new utilities on the Project site that would serve the Project and connect to existing offsite infrastructure.

Street: The proposed Project would remove the existing curb, gutter, and roadway pavement and would provide new pavement, curb, gutter, and sidewalk along the Project site frontage.

Alley: The existing 20-foot-wide asphalt alley along the southern boundary of the site would be expanded to 25 feet in width to allow for fire ladder access and the asphalt would be removed and replaced with concrete. The entrance to the garage from the alley would also be made of concrete to support emergency access.

Water and Sewer: The proposed Project would install 6-inch water lines and sewer lines on the site that would connect to the existing 8-inch water line and 8-inch sewer line in Coast Street.

Drainage: The proposed Project would install an onsite drainage and bioretention system to capture and treat stormwater. Stormwater on the Project site would be conveyed to biofiltration areas so storm water will be filtered by a biofiltration basin. Excess storm runoff would flow to proposed sump pump and then would be discharged to the street, as detailed in the Preliminary Water Quality Management Plan (WQMP) (Appendix F).

3.3 PROJECT CONSTRUCTION

Construction activities for the Project would occur in one phase. Per the California Emissions Estimator Model (CalEEMod) default construction timeline estimator, construction would last approximately six months. Construction would occur in the following stages that would not overlap: (1) demolition; (2) site preparation; (3) grading and excavation; (4) building construction; (5) paving; and (6) application of architectural coatings. Construction of the Project would require demolition and removal of approximately 450 cubic yards (cy) of demolition debris and import of approximately 233 cubic yards of soil during grading. Table 3 details total working days for each phase of construction for analytical modeling purposes. Project construction would not involve the use of vibratory rollers, which is consistent with CalEEMod default assumptions. Construction activities would be limited to the hours allowed by the GGMC Section 8.47.060(D) that limits the hours and days of construction activities.

Table 3: Construction Schedule

Construction Phase	Working Days	Equipment
Demolition	10	Tractors, Loaders, Backhoes, Rubber Tired Dozer, Concrete/Industrial saw
Site Preparation	1	Grader, Tractors, Loaders, Backhoes, Crawler Tractors
Grading	2	Grader, Rubber Tired Dozer, Tractors, Loaders, Backhoes, Crawler Tractors
Building Construction	100	Crane, Forklifts, Tractors, Loaders, Backhoes,
Paving	5	Tractors, Loaders, Backhoes, Cement and Mortar Mixers, Pavers, Rollers
Architectural Coating	10	Air Compressor

3.4 GENERAL PLAN LAND USE AND ZONING

The Project site has City of Garden Grove General Plan land use designation of Medium Density Residential (MDR). The General Plan states that the Medium Density Residential designation provides for multi-family residential neighborhoods that provide a variety of housing types; including traditional multi-family apartments, condominiums, townhomes, and single-family small-lot subdivisions. The General Plan states that the densities for Medium Density Residential are intended to range from 21.1 to 32.0 dwelling units per acre and that the land use designation is implemented by the R-3 zoning designation.

The Project site has a zoning designation of R-3 (Multiple-Family Residential), which is intended to provide for a variety of types and densities of multiple-family residential dwellings. This zone is intended to promote housing opportunities in close proximity to employment and commercial centers (GGMC Section 9.12.020.020). The zoning and General Plan allow projects with building heights of three stories (35-foot height limit) and residential densities up to 32 units per acre.

3.5 DISCRETIONARY APPROVALS AND PERMITS

The following discretionary approval and permits are anticipated from the City of Garden Grove to be necessary for implementation of the proposed Project:

- Approval of a Site Plan
- Approval of a Density Bonus, including concessions and waivers as follows:
    1. A concession to GGMC Section 9.12.040.020(A) to allow for an increase of the height of the main structure to 55 feet 6 inches.
    2. A concession to GGMC Section 9.12.040.020(A) to allow for an increase in the number of stories to five.
    3. A concession to GGMC Section 9.12.040.020(A) to allow for an increase of lot coverage to 71%.
    4. A concession to GGMC Section 9.48.030 to allow the existing power lines along Coast Street to remain in place and not be subject to the undergrounding requirements of the code.
    5. A waiver of GGMC Section 9.12.040.020(A) to allow for a reduction of the required front yard setback at the first and second floors to 6 feet.
    6. A waiver of GGMC Section 9.12.040.020(A) to allow for a reduction of the required front yard stepback at the third through fifth floors to 6 feet.
    7. A waiver of GGMC Section 9.12.040.020(A) to allow for a reduction of the required north side yard stepback at the third through fifth floors to 10 feet.
    8. A waiver of GGMC Section 9.12.040.020(A) to allow for a reduction of the required rear yard stepback at the third through fifth floors to 10 feet.
    9. A waiver of GGMC Section 9.12.040.020(E) to allow for a reduction of the minimum unit size requirement to approximately 656 square feet in lieu of 750 square feet for the one-bedroom units.
- Approvals and permits necessary to execute the proposed Project, including but not limited to, grading permit, building permit, etc.

Figure 5: Conceptual Site Plan

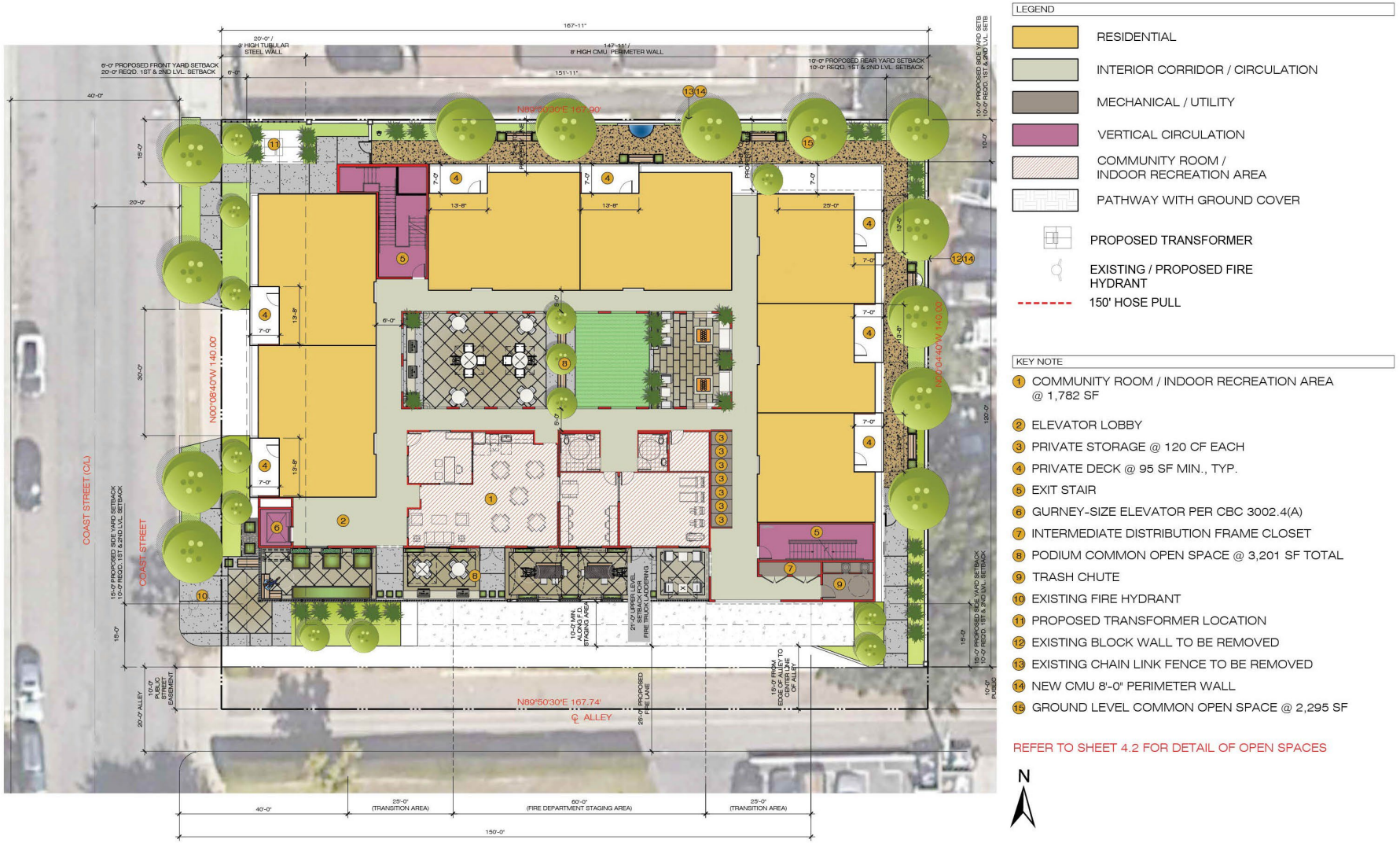


Figure 6: Building Elevations South and West

2. SOUTH ELEVATION (ALLEY)

1. WEST ELEVATION (COAST STREET)

KEY NOTE

1. EXTERIOR CEMENT STUCCO COLOR 1
2. EXTERIOR CEMENT STUCCO COLOR 2
3. EXTERIOR CEMENT STUCCO COLOR 3
4. SYNTHETIC EXTERIOR BOARD
5. ENHANCED EXTERIOR VENEER
6. EXTERIOR METAL CLADDING
7. 2" MIN. RECESSED DUAL GLAZED VINYL WINDOWS WHITE COLORED FRAME
8. WOOD FRAMED AWNING
9. METAL CANOPY
10. SCREED LINE
11a. 3' HIGH TUBULAR STEEL WALL
11b. 8' HIGH CMU PERIMETER WALL
12. PAINTED METAL GUARD RAIL WITH TREX
13. 2" MIN. RECESSED STOREFRONT WINDOW AND DOOR
14. PAINTED METAL COPING

NOTE:
STOREFRONTS AND WINDOWS SHALL BE INSET FROM EXTERIOR FAÇADE PLANES AND/OR ADJOINING EXTERIOR WALL PLANES A MINIMUM OF TWO INCHES TO REALIZE INCREASED SHADE, SHADOW, AND VISUAL TEXTURE ALONG THE BUILDING FACE

KEY MAP

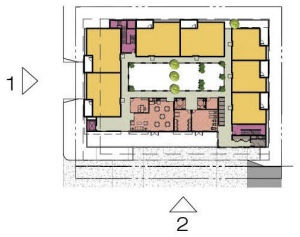


Figure 7: Building Elevations North and East

4. NORTH ELEVATION

3. EAST ELEVATION

KEY NOTE

1. EXTERIOR CEMENT STUCCO COLOR 1
2. EXTERIOR CEMENT STUCCO COLOR 2
3. EXTERIOR CEMENT STUCCO COLOR 3
4. SYNTHETIC EXTERIOR BOARD
5. ENHANCED EXTERIOR VENEER
6. EXTERIOR METAL CLADDING
7. 2" MIN. RECESSED DUAL GLAZED VINYL WINDOWS WHITE COLORED FRAME
8. WOOD FRAMED AWNING
9. METAL CANOPY
10. SCREED LINE
11a. 3' HIGH TUBULAR STEEL WALL
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14. PAINTED METAL COPING

NOTE:
STOREFRONTS AND WINDOWS SHALL BE INSET FROM EXTERIOR FAÇADE PLANES AND/OR ADJOINING EXTERIOR WALL PLANES A MINIMUM OF TWO INCHES TO REALIZE INCREASED SHADE, SHADOW, AND VISUAL TEXTURE ALONG THE BUILDING FACE

KEY MAP

Figure 8: Conceptual Open Space Plan

Figure 9: Conceptual Ground Level Landscape Plan

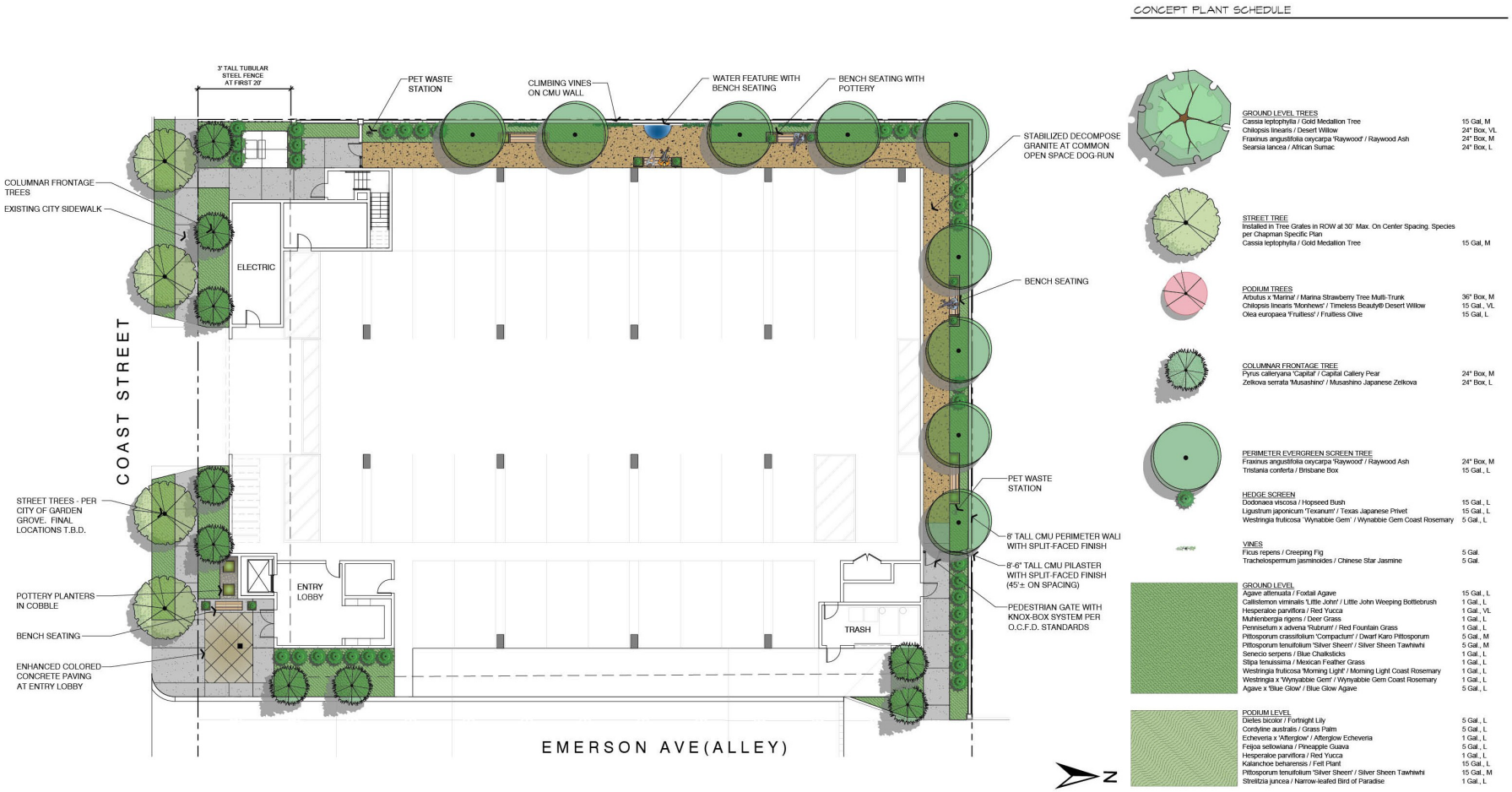
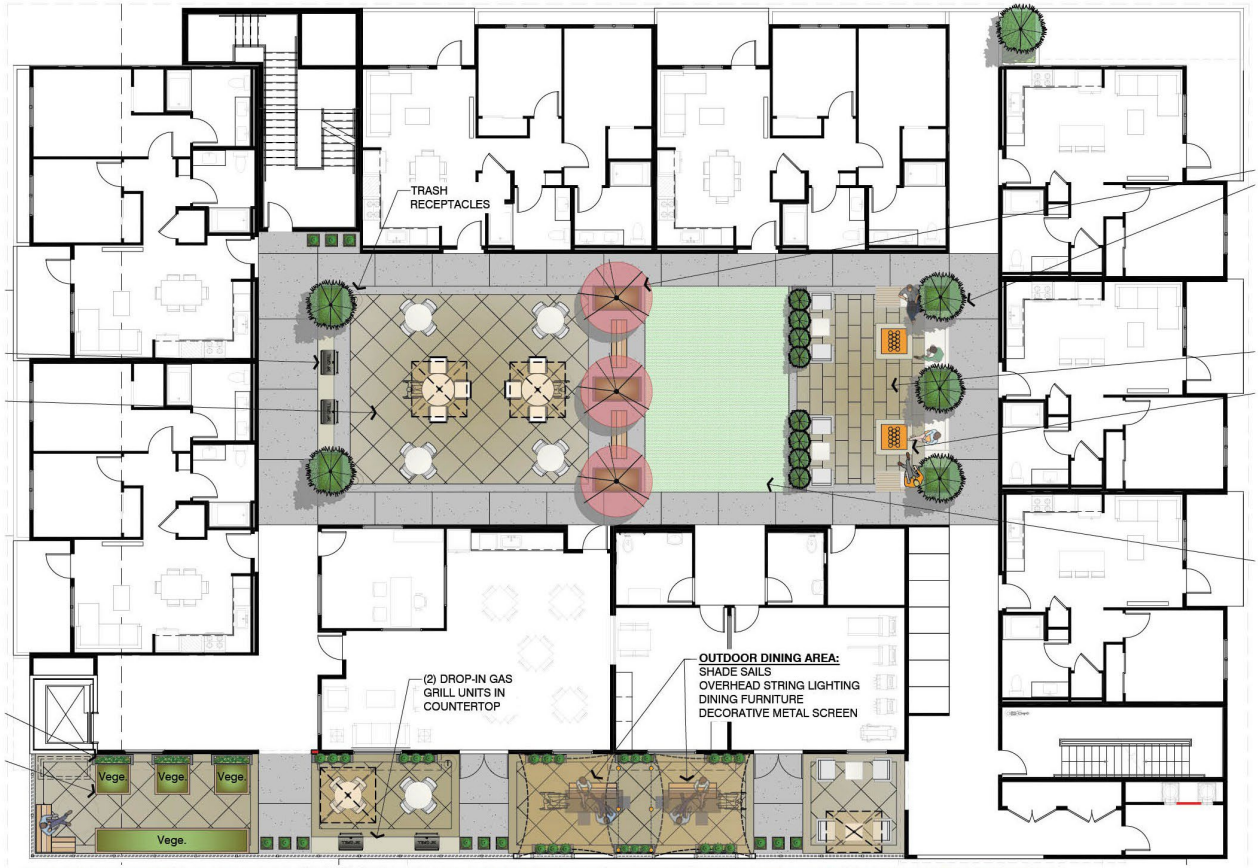
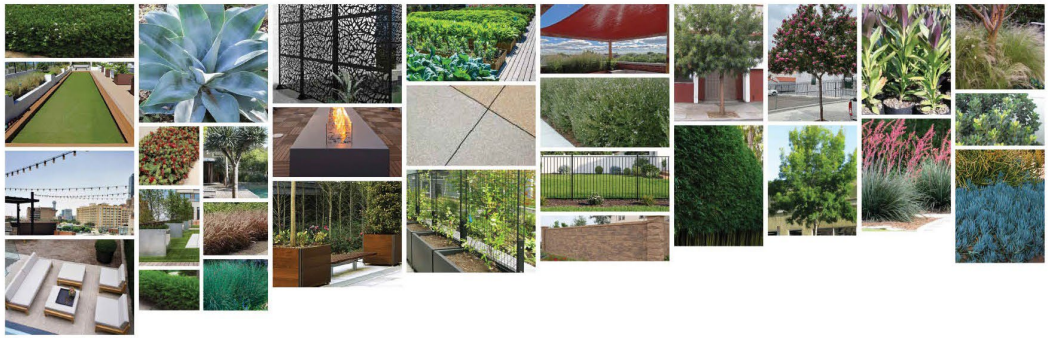


Figure 10: Conceptual Podium Level Landscape Plan





CONCEPT PLANT SCHEDULE

GROUND LEVEL TREES
Cassia leptophylla / Gold Medallion Tree 15 Gal, M
Chilopsis linearis / Desert Willow 24" Box, VL
Fraxinus angustifolia oxycarpa 'Raywood' / Raywood Ash 24" Box, M
Searsia lancea / African Sumac 24" Box, L

STREET TREE
Installed in Tree Grates in ROW at 30' Max. On Center Spacing. Species per Chapman Specific Plan
Cassia leptophylla / Gold Medallion Tree 15 Gal, M

PODIUM TREES
Arbutus x 'Marina' / Marina Strawberry Tree Multi-Trunk 36" Box, M
Chilopsis linearis 'Monhews' / Timeless Beauty® Desert Willow 15 Gal., VL
Olea europaea 'Fruitless' / Fruitless Olive 15 Gal, L

COLUMNAR FRONTAGE TREE
Pyrus calleryana 'Capital' / Capital Callery Pear 24" Box, M
Zelkova serrata 'Musashino' / Musashino Japanese Zelkova 24" Box, L

PERIMETER EVERGREEN SCREEN TREE
Fraxinus angustifolia oxycarpa 'Raywood' / Raywood Ash 24" Box, M
Tristania conferta / Brisbane Box 15 Gal., L

HEDGE SCREEN
Dodonaea viscosa / Hopseed Bush 15 Gal., L
Ligustrum japonicum 'Texanum' / Texas Japanese Privet 15 Gal., L
Westringia fruticosa 'Wynabbie Gem' / Wynabbie Gem Coast Rosemary 5 Gal., L

VINES
Ficus repens / Creeping Fig 5 Gal.
Trachelospermum jasminoides / Chinese Star Jasmine 5 Gal.

GROUND LEVEL
Agave attenuata / Foxtail Agave 15 Gal., L
Callistemon viminalis 'Little John' / Little John Weeping Bottlebrush 1 Gal., L
Hesperaloe parviflora / Red Yucca 1 Gal., VL
Muhlenbergia rigens / Deer Grass 1 Gal., L
Pennisetum x advena 'Rubrum' / Red Fountain Grass 1 Gal., L
Pittosporum crassifolium 'Compactum' / Dwarf Karo Pittosporum 5 Gal., M
Pittosporum tenuifolium 'Silver Sheen' / Silver Sheen Tawhiwhi 5 Gal., M
Senecio serpens / Blue Chalksticks 1 Gal., L
Stipa tenuissima / Mexican Feather Grass 1 Gal., L
Westringia fruticosa 'Morning Light' / Morning Light Coast Rosemary 1 Gal., L
Westringia x 'Wynyabbie Gem' / Wynyabbie Gem Coast Rosemary 1 Gal., L
Agave x 'Blue Glow' / Blue Glow Agave 5 Gal., L

PODIUM LEVEL
Dietes bicolor / Fortnight Lily 5 Gal., L
Cordyline australis / Grass Palm 5 Gal., L
Echeveria x 'Afterglow' / Afterglow Echeveria 1 Gal., L
Feijoa sellowiana / Pineapple Guava 5 Gal., L
Hesperaloe parviflora / Red Yucca 1 Gal., L
Kalanchoe beharensis / Felt Plant 15 Gal., L
Pittosporum tenuifolium 'Silver Sheen' / Silver Sheen Tawhiwhi 15 Gal., M
Strelitzia juncea / Narrow-leafed Bird of Paradise 1 Gal., L

N

4.0 CLASS 32 INFILL EXEMPTION REQUIREMENTS

Article 19 of the California Environmental Quality Act (CEQA Guidelines Sections 15300 to 15333), includes a list of classes of projects that have been determined to not have a significant effect on the environment and as a result, are exempt from review under CEQA.

Class 32 Infill Exemption
One class of projects exempt from CEQA review includes projects that are specified as urban infill development. CEQA Guidelines Section 15332 defines the Class 32 Infill Exemption as a project that meets the following five requirements:

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

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

c) The project site has no 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.

Exceptions
In addition to meeting the requirements listed above, the CEQA Guidelines Section 15300.2 provides specific instances where exceptions apply to a project that would otherwise meet the requirements for an exemption. These exceptions are:

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

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

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

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

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

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

5.0 PROPOSED PROJECT CEQA EXEMPTION

The analysis below evaluates whether the Project qualifies for an exemption under CEQA Guidelines Section 15332 (i.e., Class 32). Additionally, the analysis evaluates whether any exceptions to qualifying for the categorical exemption, as identified in CEQA Guidelines Section 15300.2, apply.

a. Criterion Section 15332(a): General Plan and Zoning Consistency: *The Project is consistent with the applicable General Plan designation and all applicable General Plan policies as well as with applicable zoning designation and regulations.*

The Project site has a City of Garden Grove General Plan land use designation of Medium Density Residential (MDR) and a zoning designation of R-3 (Multiple-Family Residential), which both allow residential development at a range from 21.1 to 32.0 dwelling units per acre.[1] Based on the 0.54 gross acre site, the base permitted density is 18 dwelling units. As a result of including 16 percent of the base 18 dwelling units as very-low-income affordable units and 12 percent as moderate-income affordable units, the Project would be entitled to a stacked density bonus of 50 percent for the very-low-income affordable units and 38.75 percent for the moderate-income units. To this end, the proposed Project includes three units restricted for very-low-income households and three units restricted for moderate-income households. Thus, six (6) out of the 34 proposed residential units would be restricted income units.

State Density Bonus Law (Government Code Section 65915(f)(2)) states that a housing development is eligible for up to a 50 percent density bonus if 15 percent of the base units allowed under the zoning are reserved for very-low income households. In addition, State Density Bonus Law (Government Code Section 65915(v)) states that a housing development is eligible for up to an additional 38.75 percent density bonus if 12 percent of the base units allowed under the zoning are reserved for moderate-income households. Because out of the 34 proposed units three (3) would be restricted for very-low income households and three (3) would be restricted for moderate-income households, the resulting Project density of 68 units per net acre would be within the allowable density with application of the density bonuses.

Density bonus housing developments are also eligible for development incentives/concessions (per Government Code Section 65915(d)), waivers or reductions of development standards (per Government Code Section 65915(e)), and reduced parking standards. As a result of providing 16 percent very-low income dwelling units and 12 percent moderate-income units, the Project would be entitled to four (4) incentives/concessions, plus the waiver or reduction of development standards that would physically preclude the Project as proposed.

Table 4 shows the Project's consistency with the Medium Density Residential (MDR) land use and R-3 (Multiple-Family Residential) zoning development standards (GGMC 9.12.040). As shown, with application of the allowable density bonuses and development concessions and waivers, the proposed Project would meet all of the applicable land use and zoning development standards (*Wollmer v City of Berkeley* (2009) 179 Cal.App.4th 933, 944). Therefore, the Project would be consistent with the applicable regulations and meet the criteria of CEQA Guidelines Section 15332(a).

[1] See Garden Grove Land Use Element, Table 2-2.

Table 4: Consistency with Applicable Land Use and Zoning Development Standards

Development Feature	General Plan or Zoning Requirement	Proposed Project Consistency
Density	21.1 to 32.0 dwelling units per acre	**Consistent.** With application of a density bonus of 50 percent for 16% of the units reserved for very-low Income households and a density bonus of 38.75 percent with 12% of the units reserved for moderate-income households the Project density of 68 units per net acre would be within the allowable density.
Front Setback	20 ft. to 1st & 2nd Flr. 25 ft. to 3rd Flr.	**Consistent.** The proposed building would have a front yard setback at the 1st and 2nd floors to 6 feet, and a front stepback at the 3rd through 5th floor to 6 feet, which would be allowable with a density bonus waiver per Government Code Section 65915(e).
Side Setback Interior	10 ft. to 1st & 2nd Flr. 15 ft. to 3rd Flr.	**Consistent.** The proposed building would have a side setback at the 1st and 2nd floors to 10 feet, and a stepback at the 3rd through 5th floor to 10 feet, which would be allowable with a density bonus waiver per Government Code Section 65915(e).
Rear Setback	10 ft. to 1st & 2nd Flr. 15 ft. to 3rd Flr.	**Consistent.** The proposed building would have a rear setback at the 1st and 2nd floors to 10 feet, and a rear stepback at the 3rd through 5th floor to 10 feet, which would be allowable with a density bonus waiver per Government Code Section 65915(e).
Maximum Building Height	35 feet	**Consistent.** With application of a concession for density bonus housing per Government Code Section 65915(d), the maximum building height of 65 feet to top of parapet (55-feet 6-inches to the roofline) would be allowable and not result in a conflict.
Maximum Number of Stories	3 Stories	**Consistent.** The Project would be 5-stories in height, which would be allowable with a density bonus concession per Government Code Section 65915(d).
Maximum Lot Coverage	50%	**Consistent.** The proposed building would have a footprint of 11,904 SF on the approximately 23,494 gross SF Project site. Thus, the building would have a maximum lot coverage of 54.5%. Other improvements would add an additional

Development Feature	General Plan or Zoning Requirement	Proposed Project Consistency
		16.5% lot coverage. The total 71% lot coverage would be allowable with a density bonus concession per Government Code Section 65915(d).
Minimum Lot Size	7,200 SF	**Consistent.** The Project site is approximately 23,494 SF and exceeds the minimum lot size of 7,200 SF. Thus, the Project is consistent with this requirement.
Unit Size	Minimum unit size of 750 SF for one-bedroom units and 900 SF for two-bedroom units	**Consistent.** The Project proposes 656 SF one-bedroom units, which would be allowable with a density bonus waiver per Government Code Section 65915(e). The two-bedroom units would be 935 SF and exceed the required minimum.
Open Space	Combined usable private and common open space for the entire development shall equal a minimum of 300 SF per unit	**Consistent.** The Project proposes 315 SF of combined open space per unit, which exceeds the minimum requirement.
Minimum Total Square Feet for Active Recreation Area	900 SF	**Consistent.** The Project proposes 1,782 SF of active recreation, which exceeds the minimum requirement.
Undergrounding of the existing power lines along Coast Street	GGMC Section 9.48.030 undergrounding of existing power lines	**Consistent.** The Project would not underground the existing power lines along Coast Street pursuant to a concession (Government Code Section 65915(d)).

As described in Section 3.4, *General Plan Land Use and Zoning* of this document, the Land Use Element of the General Plan designates the Project site as Medium Density Residential (MDR). The Medium Density Residential (MDR) designation is intended for the development of mainly multi-family residential neighborhoods that:

- Provide a variety of housing types
- Provide access to schools, parks, and other community services
- Provide a high-quality architectural design that preserves privacy
- Provide common spaces, recreation areas and services convenient to residents
- Provide an excellent environment for family life
- Preserve residential property values"

The Project would revitalize the Project site that is was previously improved with a commercial building that is currently vacant. The building was used by a church as a school, pre-school, and location for meetings. The Project would provide one- and two-bedroom dwelling units in proximity to schools and other community services with high-quality architectural design. The Project includes common open space and recreational amenities that would be in close proximity to retail commercial and services. The Project would encourage revitalization as the Project would increase residential property valuation in the Project vicinity.

The Project is also consistent with applicable General Plan Land Use Element and Housing Element goals and policies as detailed below.

Goal LU-1: The City of Garden Grove is a well-planned community with sufficient land uses and intensities to meets the needs of anticipated growth and achieve the community's vision.

Policy LU-1.1: Identify appropriate locations for residential and non-residential development to accommodate growth through the year 2030 on the Land Use Diagram (Exhibit LU-3).

Consistent: The Project would include residential development consistent with the Medium Density Residential (MDR) designation and with a density bonus pursuant to State Density Bonus Law.

Policy LU-1.2: Encourage modern residences in areas designated as Mixed Use. Mixed-use housing should minimize impacts on designated single-family neighborhoods.

Consistent: The Project is located just south of Garden Grove Boulevard; a primary arterial road lined with various commercial retail establishments and shopping centers. The site is adjacent to commercial retail uses and multi-family residential; none of which includes single-family homes. The Project is within a mixed-use neighborhood and would provide modern residences. The Project would not impact single-family neighborhoods.

Policy LU-1.3: Support the production of housing citywide that is affordable to lower-and moderate-income households consistent with the policies and targets set forth in the Housing Element.

Consistent: The Project, in addition to market rate units, also includes three (3) very-low-income units and three (3)moderate-income dwelling units, supporting the production of housing that is affordable to those households. The 2021-2029 Regional Housing Needs Assessment (as detailed in the Housing Element) identifies that the City is obligated to accommodate 4,166 very low income units and 8,999 above moderate-income units. The Project would assist the City in achieving its RHNA targets, as outlined in the Housing Element.

Policy LU-1.11: Promote future patterns of urban development and land use that reduce infrastructure construction costs and make better use of existing and planned public facilities.

Consistent: The residential development on Coast Street just south of Garden Grove Boulevard on a previously developed site constitutes infill development that would reduce infrastructure construction costs. Utility infrastructure already exists in the area, including stormwater, water, electricity, gas, cable, sewer, etc. As such, the Project would assist in reducing infrastructure construction costs and make use of existing and planned public facilities.

Goal LU-2: Stable, well-maintained residential neighborhoods in Garden Grove

Policy LU-2.1: Protect residential areas from the effects of potentially incompatible uses. Where new commercial or industrial development is allowed adjacent to residentially zoned districts, maintain standards

for circulation, noise, setbacks, buffer areas, landscaping, and architecture which ensure compatibility between the uses.

Consistent: The Project constitutes residential development in a residential zone and would not constitute industrial or commercial development, and there would be no threat to the protection of residential areas from potentially incompatible uses. The Project would include walls, setbacks, and landscaping, as well as architectural detailing to ensure compatibility with surrounding uses.

Policy LU-2.2: Strive to provide a diverse mix of housing types, along with uniformly high standards of residential property maintenance to preserve residents' real estate values and their high quality of life.

Consistent: The Project would provide high-quality new multi-family development with a mix of unit types for a variety of household sizes, and income levels. Further, the Project would provide adequate open space, new landscaping, and a variety of amenities that would preserve and enhance real estate values and a high quality of life.

Goal LU-3: Multi-Family Developments: Higher-density residential development along major thoroughfares and in areas well served by public transit, retail and service businesses, public services, and public gathering places.

Consistent: The Project would add residential units to an underutilized area near Garden Grove and Beach Boulevards. This housing is conveniently located near a variety of retail commercial uses that would support residential needs.

Policy LU-3.2: Support development of multi-family housing that provides a diversity of densities, types, and prices that meet the needs of all household income levels.

Consistent: The Project provides a mix of unit types (1-bedroom units, 2-bedroom units) that allow for a diversity in household types all within one building. In addition, three (3) dwelling units are designated very low-income-units and three (3) are designated as moderate-income, which allow for a diversity of incomes within one building.

Policy LU-3.3: Encourage developers to build housing projects at or maximum allowable densities.

Consistent: The Project provides 34 units, which isthe maximum allowable density, entitled by the State's Density Bonus Law while providing affordable housing to very-low-income and moderate-income families.

Goal LU-4: Land Use Compatibility: Uses compatible with one another.

Policy LU-4.1: Locate higher-density residential uses within proximity of commercial uses to encourage pedestrian traffic, and to provide a consumer base for commercial uses.

Consistent: The proposed Project would provide a higher-density residential use located just south of Garden Grove Boulevard, and just easterly of Beach Boulevard that is within walking distance to a variety of nearby stores, restaurants, and job sites. The residents of the site would provide a permanent customer base for nearby businesses.

Policy LU-4.4: Avoid intrusion of non-residential uses incompatible with established residential neighborhoods.

Consistent: The Project would develop new residences and does not involve new non-residential uses and is consistent with this policy in that it does not result in intrusion of non-residential uses incompatible with established residential neighborhoods.

Goal H-2: Affordable Housing: Housing supply to accommodate housing needs at all affordability levels.

Policy H-2.1: Expanding Affordable Housing. Preserve and expand the City's supply of affordable rental and ownership housing for lower-income households.

Consistent: The proposed Project would increase the supply of affordable housing for lower income households, as it includes three (3) dwelling units for very-low-income households and three (3) dwelling units for moderate-income households.

Goal H-3: Adequate Housing Sites: A range of available housing types, densities, and affordability levels to meet diverse community needs.

Policy H-3.6: Housing Near Transit. Encourage transit-oriented development consisting of higher residential densities, public gathering places, streetscape amenities, and commercial and entertainment uses within walking distance of planned rail stations and high-frequency bus stops.

Consistent: The Project would provide new higher density residential just south of Garden Grove Boulevard, a major thoroughfare with high frequency bus service. OCTA provides Route 56 bus service along Garden Grove Boulevard. Nearby Beach Boulevard, less than 0.25-mile walking distance, also has OCTA Route 29 bus service. The adjacency of commercial businesses also encourages walkability.

Policy H-3.7: Infill Housing. Encourage infill housing development that is compatible in character with established residential neighborhoods.

Consistent: The proposed Project consists of infill housing that is compatible in character with the established residential neighborhoods. There are existing multi-family dwelling units immediately to the south side of Emerson Avenue, as well as other multi-family residential uses in the surrounding neighborhood. The Project is compatible with and does not conflict with the multi-family residential uses in the area.

b. Criterion Section 15332(b): Project Location, Size, and Context: *The proposed development occurs within City limits on a Project site of no more than five acres substantially surrounded by urban uses.*

The Project is within the City limits of the City of Garden Grove, on an approximately 0.54-acre site. As shown in Figure 3 and detailed in Section 2.4, the site is surrounded by urban uses. Roadways are located to the west and south of the site, that are adjacent to parking lot and multi-family residential uses. Areas to the north and east of the site are developed with commercial uses. As the Project site is located within City limits, less than five acres and surrounded by urban uses, it meets the criteria of CEQA Guidelines Section 15332(b).

c. Criterion Section 15332(c): Endangered, Rare, or Threatened Species: *The Project site was determined to have no value as habitat for endangered, rare, or threatened species.*

The 0.54-acre Project site is developed with a vacant 3,252 square foot building, a parking area, driveway connection to Coast Street, and limited ornamental landscaping. The site is bound by existing walls along the north, east, and south sides of the site, and a sidewalk along Coast Street. The entire Project site has been disturbed by previous development and does not contain any sensitive habitat, endangered, rare, or threatened species or habitat that could support sensitive species. The Project site is located within an urban area. There are no California Department of Fish and Wildlife (CDFW), United States Army Corps of Engineers (USACE), or Regional Water Quality Control Board (RWQCB) jurisdictional waters within the Project site boundaries; and that the site does not contain any wetlands or vernal pools. Thus, no aquatic, riparian, or wetland related resources would be impacted by the proposed Project.

In addition, as a standard condition of approval, the Applicant is required to comply with Sections 3503, 3503.5, and 3513 of the California Fish and Game Code and the Migratory Bird Treaty Act (MBTA). Compliance with the California Fish and Game Code and MBTA would ensure that impacts to nesting birds and raptors, which may use vegetation including existing scattered non-native trees on or near the Project site for nesting during construction would not occur.

The proposed Project site has no value as habitat for endangered, rare, or threatened species and meets the criteria of CEQA Guidelines Section 15332(c).

d. Criterion Section 15332(d): Significant Effects: *Approval of the Project would not result in any significant effects relating to traffic, noise, air quality, or water quality.*

TRAFFIC

(a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?

Construction

The Circulation Element of the General Plan does not address construction. The *City of Garden Grove Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment* similarly does not address construction. Construction activities associated with the Project would generate vehicular trips from construction workers traveling to and from the Project site and delivery and hauling of construction supplies to, and debris and recyclable solid waste from, the Project site. The CalEEMod modeling completed for the Project (Appendix D) shows that the building construction phase would generate the most vehicular trips, with a total of 49 worker and 7 vendor trips per day. As shown in Table 2, *Construction Schedule*, CalEEMod defaults estimate that building construction would occur over 100 working days. Should all of the workers and vendors arrive and leave the site during the AM and PM peak hours, it would result in 28 trips per peak hour over those 100 work days of maximum construction activity.

The construction related trips would generally travel from SR-22 and the Beach Boulevard interchange, which provides direct access to Garden Grove Boulevard that intersects with Coast Street approximately 0.15-mile to the east. Direct access from the freeway and arterial streets to the site would provide for efficient construction trips on existing roadway facilities. Impacts would be less than significant.

Operation

Roadway Facilities. The Circulation Element provides the following roadway related goal and policies that are applicable to the Project:

Goal CIR-1: A transportation system that maximizes freedom of movement and maintains a balance between mobility, safety, cost efficiency of maintenance, and the quality of the city's environment.

Policy CIR-4.1: Strive to achieve a balance of land uses whereby residential, commercial, and public land uses are proportionally balanced.

Policy CIR-4.2: Strive to reduce the number of miles traveled by residents to their places of employment.

As shown below, with the minimal number of Project trips during peak hour and daily, direct access from the freeway and arterial streets to the site would provide for efficient operational trips on existing roadway facilities. Further, the Project would widen the existing alley from 20 feet to 25 feet for enhanced Fire Department access, thereby maintaining a balance among mobility, safety, cost efficiency of maintenance, and the quality of the City's environment. In addition, the Project provides for a balance of land uses by providing housing in an area with commercial, office, and service uses. Likewise, the Project supports a reduction in miles traveled by providing residences in areas with employment. Thus, the Project is consistent with the roadway goal and policies, as further detailed below.

The Project proposes the removal of the existing 3,252 square foot building and redevelopment of the site with 34 multi-family residences. A Project trip generation was prepared using trip rates from the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 11th Edition (2021) for Multi- Family Housing Low-Rise (ITE Land Use Code 220). As shown in Table T-1, the proposed 34 residential units are forecast to generate 229 daily vehicle trips, 13 a.m. and 17 p.m. peak hour vehicle trips.

Table T-1: Project Trip Generation

				AM Peak Hour			PM Peak Hour		
Land Use	**Units**	**Daily**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Project Trip Rate								
Multifamily Housing (Low-Rise)[1]	DU	6.74	0.10	0.30	0.40	0.32	0.19	0.51
Proposed Project Trip Generation								
Multifamily Housing (Low-Rise) [1] 34	DU	229	3	10	13	11	6	17
Total Trip Generation		**229**	**3**	**10**	**13**	**11**	**6**	**17**

[1] Trip Generation & Vehicle Mix Source: Institute of Transportation Engineers (ITE), *Trip Generation Manual*, Eleventh Edition (2021). Source: *LOS Analysis Screening Analysis*, Appendix A.

Direct access from the freeway and arterial streets to the site would provide for efficient operational trips on existing roadway facilities. Further, the City's development review and permitting process would ensure that would not have the potential to result in any conflicts with a program, plan, ordinance, or policy addressing the circulation system. Impacts would be less than significant.

Pedestrian Facilities. The Circulation Element of the General Plan provides the following goal and policy that is applicable to the Project regarding pedestrian facilities:

Goal CIR-9: Improved aesthetic quality and maintenance of arterial highways and local roadways.

Policy CIR-5.4: Provide appropriate pedestrian access throughout the City of Garden Grove.

The Project would provide a sidewalk fronting the Project site along Coast Street. Direct pedestrian access would be provided, as well as landscaping to enhance the aesthetic quality in front of the Project site.

Sidewalks currently exist on both sides of Coast Street in front of the Project site and along Garden Grove Boulevard. The proposed Project would provide for pedestrian circulation by constructing new onsite sidewalks and pathways that would provide pedestrian access to the onsite open space areas and connect to the existing offsite sidewalks along Coast Street. The Project would provide onsite pedestrian circulation to facilitate use of the existing offsite sidewalks; and therefore, potential impacts related to pedestrian facilities or a conflict with any program, plan, ordinance, or policy related to provision of pedestrian facilities would not occur.

Bicycle Facilities. The Circulation of the General Plan provides the following goal and policy that is applicable to the Project regarding bicycle facilities:

Goal CIR-6: A safe, appealing, and comprehensive bicycle network provides additional recreational opportunities for Garden Grove residents and employees.

Policy CIR-6.3: Encourage existing major traffic generators, and new major traffic generators to incorporate facilities, such as bicycle racks and showers, into the development.

While there is no existing bicycle lane located along either Coast Street or Garden Grove Boulevard, the Project does not involve changes to the existing bicycle lanes. However, it includes installation of bicycle racks for use to encourage bicycle transportation. As a result, the Project would not result in conflict related to bicycle circulation or policies related to bicycle facilities.

Transit Service. The Circulation of the General Plan provides the following goal and policy that is applicable to the Project regarding transit service:

Goal CIR-5: Increased awareness and use of alternate forms of transportation generated in, and traveling through, the City of Garden Grove.

Policy CIR-5.1: Promote the use of public transit.

Given the Project's convenient location near high-quality transit, the Project would further increase awareness and use of alternate forms of transportation in the City. Transit service within the City is provided by the Orange County Transportation Authority (OCTA). Bus Route 56 provides service along Garden Grove Boulevard, Bus Route 29 provides services along Beach Boulevard, and OC Bus Rapid Route 529 provides services along Beach Boulevard between the Goldenwest Transportation Center and the Fullerton Park and Ride Metro Station. The existing bus services would provide efficient transportation to and from the site for residents and visitors and has the potential to reduce vehicle miles traveled. In addition, because the Project is located along existing bus routes and within an existing mixed-use area the Project is consistent with providing new residential in areas served by transit, which is consistent with regionwide policies related to addressing the circulation system. Overall, impacts related to transit services would not occur as a result of the implementation of the proposed Project.

(b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?

CEQA Guidelines Section 15064.3 - Determining the Significance of Transportation Impacts, provides lead agencies with the discretion to choose the most appropriate methodology and thresholds for evaluating VMT. The City of Garden Grove Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service

Assessment provides screening thresholds to identify projects that would be presumed to have a less than significant impact on VMT, which include being within a Transit Priority Area, being within a low traffic analysis zone (TAZ), or being a local-serving project.

A VMT Screening Analysis for the Project was prepared and is included as Appendix B, and the Project's consistency with these screening thresholds is detailed below.

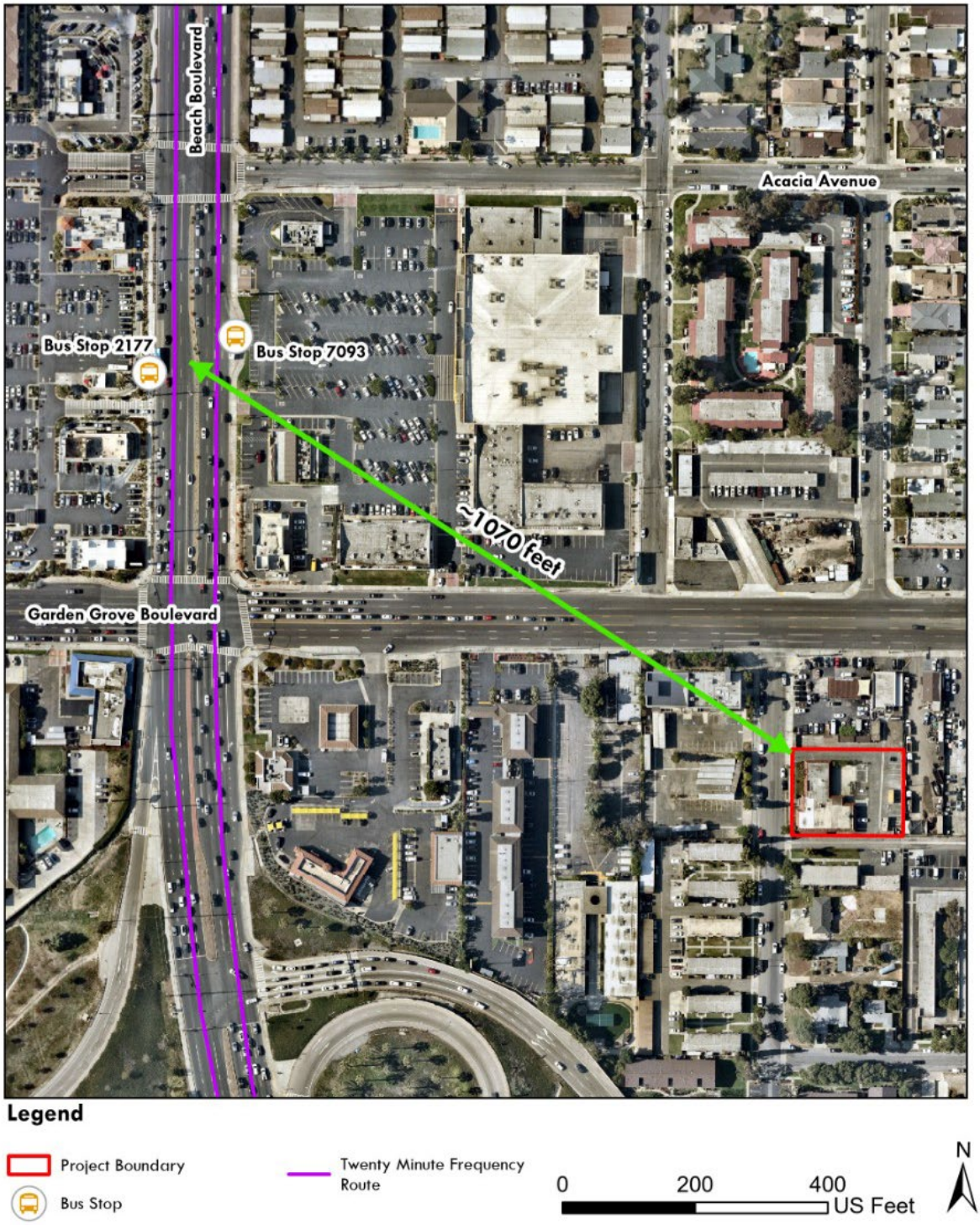
Transit Priority Area. The City's VMT screening thresholds identify that projects in a Transit Priority Area (TPA), which are locations within 0.5 mile of an existing major transit stop (an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods) or an existing stop along a high-quality transit corridor would have a less than significant impact on VMT. However, the City guidelines state that the project may not meet the screening threshold if the following project or location specific criteria are not met:

- Has a Floor Area Ratio (FAR) of less than 0.75;
- Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking);
- Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Metropolitan Planning Organization); or
- Replaces affordable residential units with a smaller number of moderate or high-income residential units.

The Project site is located approximately 1,070 feet (0.2 miles) from Bus Stops IDs 7093 and 2177, which are served by Orange County Transportation Authority (OCTA) Routes 29 and 529. These routes operate at 20-minute or better headways during weekday peak periods (6:00–9:00 a.m. and 3:00–7:00 p.m.). Based on the service frequency and proximity to transit, the Project site is located within a Transit Priority Area (TPA), as shown in Figure T-1. The proposed building would have a total net floor area of 42,594 SF on the approximately 23,494 SF Project site, which would result in a FAR of 1.81 that would exceed 0.75. With the lower parking ratios of State Density Bonus Law applied, the proposed Project does not include excess parking, as it includes a total of 45 onsite parking spaces for 34 residential units, which is the minimum required per State Density Bonus Government Code Section 65915(p)(4).

The proposed Project is consistent with the SCAG Connect SoCal 2024 Regional Transportation Plan/Sustainable Communities Strategy that provides for infill and redevelopment of higher density residential uses within mixed-use areas that are served by transit (Connect SoCAL 2024 pages 116-117). Connect SoCal 2024 Policy 32 promotes the growth of origins and destinations, with a focus on future housing and population growth, in areas with existing and planned urban infrastructure that includes transit and utilities. The Project is consistent with this policy as it provides new housing and population in an urban area with infrastructure, transit, and utilities. Connect SoCal 2024 Policy 36 encourages housing development in transit-supportive and walkable areas (such as the Project area, which is walkable to retail commercial uses and bus service) to create more interconnected and resilient communities. Connect SoCal 2024 Policy 42 promotes 15-minute communities as places with a mix of complementary land uses and accessible mobility options where residents can either access their most basic, day-to-day needs within a 15-minute walk, bike ride or roll from their home or as places that result in fewer and shorter trips because of the proximity of complementary land uses, which is consistent with the complementary residential and commercial uses in the Project vicinity. Residents at the

Figure T-1: Transit Priority Area Screening



Project site would be within a 15-minute walk or bike ride to restaurants, retail, services and other complementary uses that would provide for fewer and shorter trips. In addition, the Project provides affordable residential units on a site that was previously not used for affordable housing. Therefore, the Project meets the Transit Priority Area screening criteria, and impacts would be less than significant.

Low VMT Traffic Analysis Zone. The City's VMT screening thresholds identify that projects in a low VMT TAZ would have a less than significant impact on VMT. Per the City of Garden Grove Traffic Impact Analysis Guidelines for VMT and Level of Service Assessment, projects located in Zone 1 areas are identified as areas that have a low VMT. Thus, projects within these areas can be presumed not to have a significant VMT impact and can be screened from VMT analysis.

As shown in Figure T-2 *Low VMT Generating Traffic Analysis Zones*, the Project site is located in Zone 1 that has been identified as having a VMT that is lower than the VMT threshold. Thus, the Project meets the low TAZ screening criteria, and impacts would be less than significant.

Local Serving Projects. The City's VMT screening thresholds identify that "local-serving retail development tends to shorten trips and reduce VMT." The screening thresholds specify that retail development includes stores smaller than 50,000 square feet, such as gas stations, banks, restaurants, and shopping centers. The proposed Project is a residential development and would not qualify as locally serving. Therefore, Screening Criteria 3 is not met.

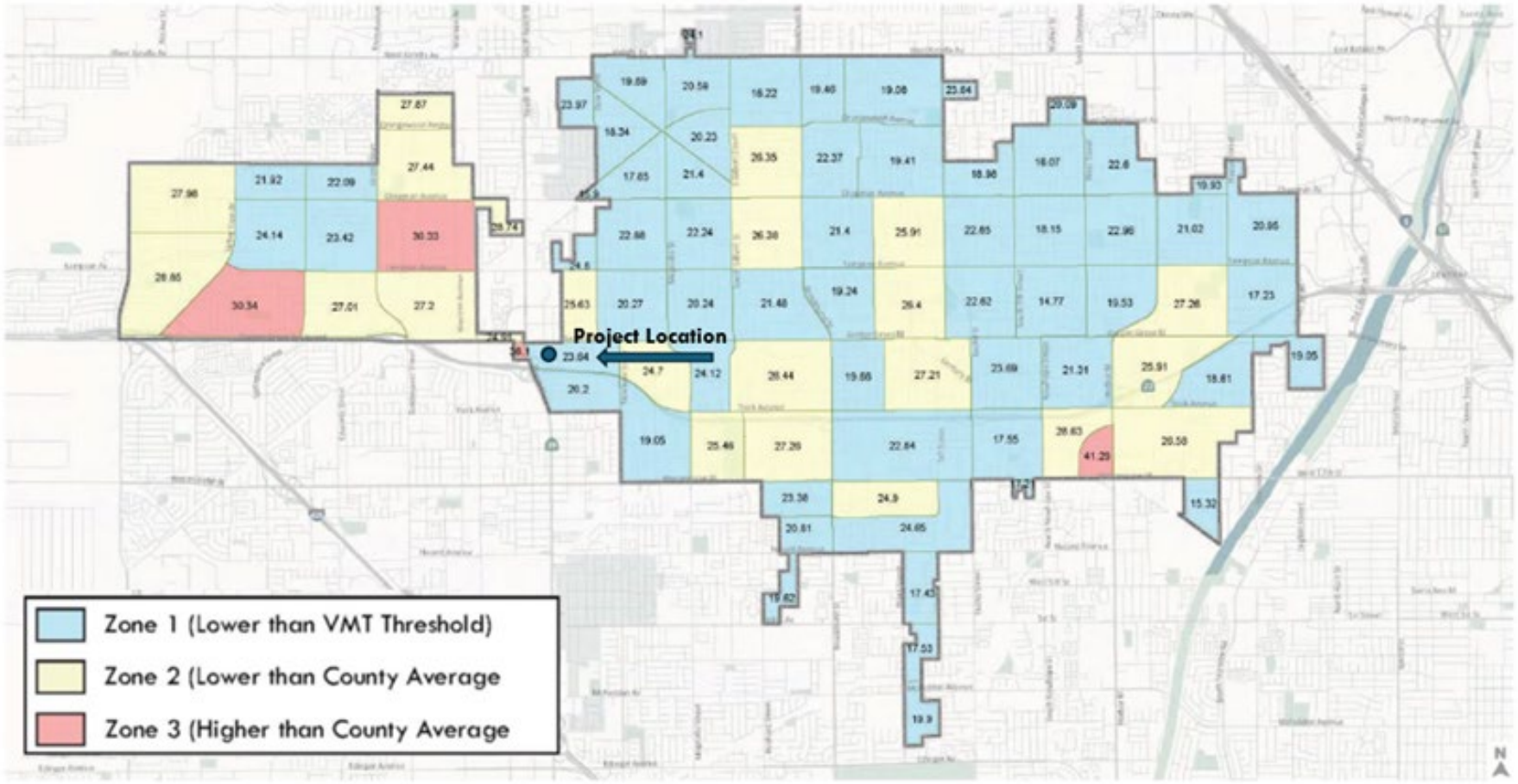
Overall, because the Project is located both within a Transit Priority Area and within a low VMT TAZ, it meets the City's VMT screening criteria, and the Project would result in a less than significant impact related to VMT.

(c) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The Project includes development of residences, open space, recreation, and circulation and parking. The Project includes only residential uses and does not include any incompatible uses, such as farm equipment.

The proposed Project site would be accessed from Coast Street through a 30-foot-wide driveway and by a 25-foot-wide alley on the south side of the proposed building. Onsite vehicular circulation would be provided by a drive isle that would be a minimum of 25 feet in width, which is consistent with City circulation safety design standards. Pedestrian circulation would be provided by an onsite sidewalk that would link the proposed residential areas and the existing offsite sidewalk along Coast Street. The Project would not increase any hazards related to a design feature. The City's construction permitting process includes review of project plans to ensure that no potentially hazardous transportation design features would be introduced by the Project. For example, the onsite circulation plan has been reviewed and approved by OCFA to ensure fire engine accessibility and turn around area is provided to the fire code standards. As a result, impacts related to vehicular circulation design features would not occur.

Figure T-2: Low VMT Generating Traffic Analysis Zone



Orange County Average VMT/SP: 29.01

(d) Result in inadequate emergency access?

Construction

The proposed construction activities, including equipment and supply staging and storage, would occur within the Project site, and therefore would not require roadway lane closures that could restrict access of emergency vehicles to the Project site or adjacent areas. The installation of new driveways and connections to existing infrastructure systems that would be implemented during construction of the proposed Project would not require closure of Coast Street. Any temporary lane closures needed for utility connections or driveway access construction would be implemented consistent with the recommendations of the California Joint Utility Traffic Control Manual (Caltrans 2014), as incorporated into a Traffic Management Plan for the Project that the City requires for receipt of construction permits. The Traffic Management Plan would include designated haul routes, temporary traffic control devices, travel time restrictions, and other elements determined through the construction review and permitting process by the City's Public Works Division that would ensure that substantial traffic queuing along Coast Street would not occur, and that all construction equipment would be staged on site. Thus, implementation of the Project through the City's permitting process would ensure existing regulations are adhered to and that potential construction related emergency access impacts would not occur.

Operation

Operation of the Project would also not result in inadequate emergency access. The Project driveway and internal access would be required through the City's permitting procedures to meet the City's design standards and provides adequate turning space for passenger cars, fire trucks, and delivery trucks. The Project is also required to provide fire suppression facilities that meet OCFA and City requirements. The Project provides a 25-foot-wide alley on the south side of the proposed building for OCFA fire access. Also, measures that the Project provides per the Orange County Fire Authority Master Plan for Residential Development include a red curb fire lane; fire lane entrance sign; fire lane no parking sign; installation of building address with six inch minimum lettering; pedestrian gate with knox box device; fire rated interior exit stairway with roof access; exterior level courtyard open to the sky; installation of wet standpipe; installation of sprinklers; and ground ladder access to level three units and above. The City would review the development plans as part of the permitting procedures to ensure adequate emergency access pursuant to the requirements in Section 503 of the California Fire Code (Title 24, California Code of Regulations, Part 9), included in GGMC Chapter 18.04 and as amended in Chapter 18.16. As a result, impacts related to inadequate emergency access would not occur.

The proposed Project would not result in any significant effects relating to traffic; therefore, the proposed Project meets the traffic related criteria of CEQA Guidelines Section 15332(d).

NOISE

A Noise Impact Analysis (Appendix C) was prepared for the proposed Project to assess the project's potential noise and vibration related impacts. The following analysis incorporates information from the study.

Noise Terminology

- **Leq:** The equivalent sound level, which is used to describe noise over a specified period of time, typically 1-hour, in terms of a single numerical value. The Leq of a time-varying signal and that of a steady signal are the same if they deliver the same acoustic energy over a given time. The Leq may also be referred to as the average sound level.
- **Lmax:** The instantaneous maximum noise level experienced during a given period of time.

- **Lmin:** The instantaneous minimum noise level experienced during a given period of time.
- **CNEL:** The Community Noise Equivalent Level, which, similar to the Ldn, is the average A-weighted noise level during a 24-hour day that is obtained after an addition of 5 dBA to measured noise levels between the hours of 7:00 pm to 10:00 pm and after an addition of 10 dBA to noise levels between the hours of 10:00 pm to 7:00 am to account for noise sensitivity in the evening and nighttime, respectively.
- **Ambient Noise:** The "ambient noise level" is the background noise level associated with a given environment at a specified time and is usually a composite of sound from many sources from many directions.

Noise Regulations

State Law
An interior CNEL of 45 dB is mandated by the State of California Noise Insulation Standards (CCR, Title 24, Part 6, Section T25-28) for residential dwellings and hotel and motel rooms. Conventional construction practices, with closed windows and fresh air supply systems or air conditioning normally suffice.

City of Garden Grove General Plan Noise Element
The City's General Plan Noise Element includes a compatibility matrix (Table 7-1) to determine if new land uses are compatible with the existing noise environment. The table identifies noise environments that are less than 60 dBA CNEL to be normally compatible with low density and single-family residential uses; and noise environments that are less than 65 dBA CNEL to be normally compatible with multiple family development, such as the proposed Project. Specific Noise Element Goals and Policies are listed and analyzed later in this section.

Garden Grove Municipal Code
GGMC Section 8.47.040 outlines the City's exterior noise limits as it relates to stationary noise sources. The residential limits are listed below:

- Residential Uses: 55 dBA between 7:00 a.m. and 10:00 p.m.
  50 dBA between 10:00 p.m. and 7:00 a.m.

GGMC Section 8.47.050(C) states that the following criteria be used whenever the ambient noise level exceeds the City's standards:

1. The noise standard for a cumulative period of more than 30 minutes in any hour;
2. The noise standard plus five (5) dB(A) for a cumulative period of more than 15 minutes in any hour;
3. The noise standard plus 10 dB(A) for a cumulative period of more than five minutes in any hour;
4. The noise standard plus 15 dB(A) for a cumulative period of more than one minute in any hour; or
5. The noise standard plus 20 dB(A) for any period of time.

GGMC Section 8.47.060(d) Construction of Buildings and Projects, states that it is unlawful for any person within a residential area, or within a radius of 500 feet therefrom, to operate equipment or perform any outside construction or repair work on buildings, structures, or projects, or to operate any pile driver, power shovel, pneumatic hammer, derrick, power hoist, or any other construction type device between the hour of 10:00 p.m. of one day and 7:00 a.m. of the next day in such a manner that a person of normal sensitiveness, as determined utilizing the criteria established in GGMC Section 8.47.050(b), is caused discomfort or annoyance unless such operations are of an emergency nature.

Should the City's noise ordinance be amended, subject to vested rights applicable to the Project pursuant to SB 330, the proposed Project would be required to comply with the revised regulations that would be ensured by the City through the development review and permitting process.

Federal Transit Administration

The FTA *Transit Noise and Vibration Impact Assessment* (2018) provides construction noise criteria to determine if the project would create a substantial temporary noise increase to the nearby sensitive receptors. The Manual provides different criteria options and states that project construction noise criteria should account for the existing noise environment, the absolute noise levels during construction activities, the duration of the construction, and the adjacent land use. Based on the FTA criteria for a detailed construction assessment, the residential threshold of 80 dBA Leq during the daytime and 70 dBA Leq during the nighttime is applied.

The FTA *Transit Noise and Vibration Impact Assessment* also provides thresholds for increases in ambient noise from vehicular traffic based on increases to ambient noise. An impact would occur if existing noise levels at noise-sensitive land uses (e.g. residential, etc.) are less than 60 dBA Ldn and the project creates an increase of 3 dBA or greater project-related noise level increase; or if existing noise levels range from 60 to 65 dBA Ldn and the project creates 2 dBA or greater noise level increase. Noise level increase of 1 dBA or less would not result in an impact.

The FTA *Transit Noise and Vibration Impact Assessment* guidelines are also used as a screening tool for assessing the potential for adverse vibration effects. The FTA Manual details that a vibration level of up to 0.20 in/sec in PPV is considered safe for non-engineered timber and masonry buildings and would not result in any construction vibration damage. Engineered concrete and masonry buildings are considered safe up to a vibration level of 0.30 in/sec PPV, and reinforced buildings are considered safe up to a vibration level of 0.50 in/sec PPV. To be conservative, the 0.20 in/sec PPV threshold has been used to evaluate potential vibration impacts at the nearest structures to the site. The FTA Manual also provides criteria for human annoyance from vibration. Human annoyance occurs when construction vibration rises significantly above the threshold of human perception for extended periods of time, which the FTA considers to be approximately 75 VdB (velocity decibels).

Sensitive Receivers

Noise sensitive receivers are defined as locations where people reside or where the presence of unwanted sound could otherwise adversely affect the use of the land, including: residences, schools, hospitals, churches, libraries, and recreation areas. The closest noise sensitive receptors to the Project site are the existing residences that are approximately 48 to 50 feet south of the Project site boundary, as shown on Figure N-1.

Existing Ambient Noise Levels

To document existing ambient noise levels at existing sensitive receptors in the Project area, three 15-minute daytime noise measurements were taken on August 28, 2024 and one long-term 24-hour noise measurement was taken from August 28, 2024, to August 29, 2024. Figure N-1 shows the noise measurement locations and Table N-1 identifies that existing noise levels are 60.0 dBA CNEL and 62.7 dBA CNEL. The dominant noise source is vehicle traffic associated with the SR-22 freeway and Garden Grove Boulevard.

Table N-1: Existing Ambient Noise Measurement Summary (dBA)

Site No.	Site Description	Average (dBA L_{eq})	Maximum (dBA L_{max})	(dBA $L_{eq\ 1\text{-}hour}$/Time)		Average (dBA CNEL)
				Minimum	Maximum	
1	Located near the southeast corner of the Project site, approximately 30 feet north of the public alley centerline and 20 feet west of the east property line.	56.8	85.4	42.9 2:54 a.m.	61.1 6:27 p.m.	60.0
2	Located on the north property line fence, approximately 50 feet east of Coast Street centerline.	59.0	90.1	45.4 2:42 a.m.	63.0 10:25 a.m.	62.7

Source: Noise Impact Analysis, Appendix C.

(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?

Construction

Noise generated by construction equipment would include a combination of trucks, power tools, concrete mixers, and portable generators that when combined can reach high noise levels. Construction is expected to occur in the following stages that would not overlap: demolition, site preparation, grading, building construction, architectural coating, paving. Noise levels generated by heavy construction equipment can range from approximately 77 dBA to 90 dBA when measured at 50 feet, as shown on Table N-2.

The GGMC Section 8.47.060(d) allows construction noise to exceed the City noise standards provided that construction activities occur between specific days and hours within 500 feet of a residential area. The proposed Project's construction activities would occur pursuant to these regulations, as conditioned through the permitting process. The GGMC does not include construction related noise level standards; therefore, the FTA construction noise criteria thresholds are used.

Figure N-1: Noise Measurement Locations

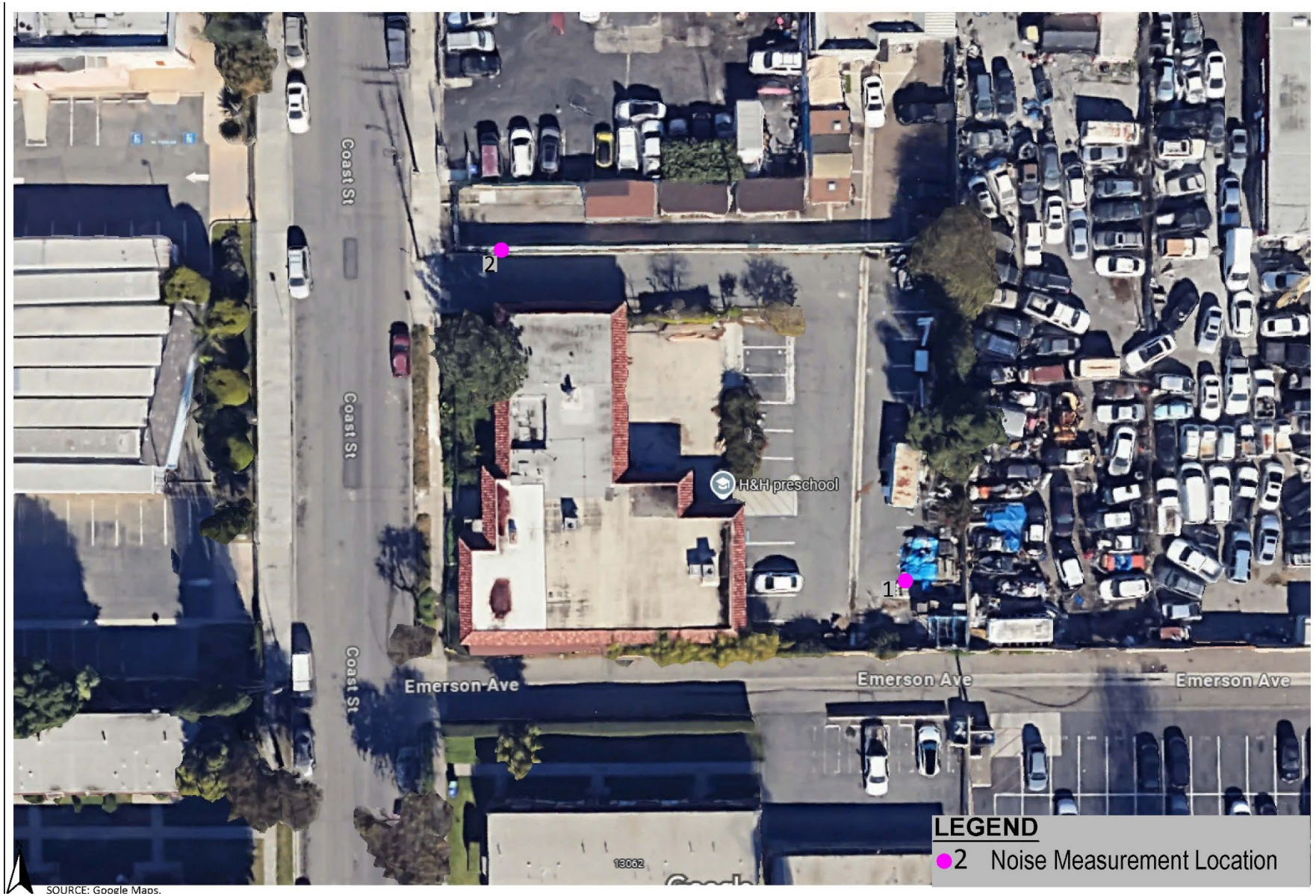


Table N-2: Construction Reference Noise Levels

Equipment	Number of Equipment	Acoustical Use Factor[1] (percent)	Spec 721.560 Lmax at 50 feet[2] (dBA, slow[3])	Actual Measured Lmax at 50 feet[4] (dBA, slow[3])
Demolition				
Concrete/Industrial Saw	1	20	90	90
Rubber Tired Dozer	1	40	85	82
Front End Loader	1	40	80	79
Tractor	1	40	84	N/A
Site Preparation				
Grader	1	40	85	83
Tractor	1	40	84	N/A
Grading				
Grader	1	40	85	83
Rubber Tired Dozer	1	40	85	82
Tractor	2	40	84	N/A
Building Construction				
Crane	1	16	85	81
Forklift (Gradall)	1	40	85	83
Generator	1	50	82	81
Tractor	1	40	84	N/A
Welder	3	40	73	74
Paving				
Cement and Mortar Mixer	1	40	85	79
Paver	1	50	85	77
Rollers	1	20	85	80
Tractor	1	40	84	N/A
Architectural Coating				
Air Compressor	1	40	80	78

Source: Noise Impact Analysis, Appendix C.
Notes:
[1] Acoustical use factor is the percentage of time each piece of equipment is operational during a typical workday.
[2] Spec 721.560 is the equipment noise level utilized by the RCNM program.
[3] The "slow" response averages sound levels over 1-second increments. A "fast" response averages sound levels over 0.125-second increments.
[4] Actual Measured is the average noise level measured of each piece of equipment during the Central Artery/Tunnel project in Boston, Massachusetts primarily during the 1990s.

The construction noise from the proposed Project would occur over a 6-month period (per CalEEMod default estimates) and would be temporary in nature as the operation of each piece of construction equipment would not be constant throughout the construction day, and equipment would be turned off when not in use. During operation of construction equipment, power levels vary between one or two minutes of full power operation followed by three or four minutes at lower power settings which results in a range of noise levels.

For each phase of construction, the construction equipment was analyzed based on being placed in the middle of the Project site, per the FTA Manual for a General Assessment, and is based on the rationale that mobile equipment would likely move around the entire Project site in a typical workday. As such, the middle of Project

site would provide the acoustical average noise level created over a typical workday. Also, the two nosiest pieces of equipment were evaluated for each construction phase, as recommended by the FTA Manual.

As shown on Table N-3, construction noise at the closest residences would range from 66 to 77 dBA Leq, which would not exceed the 80 dBA Leq threshold during the daytime for residential uses. Thus, impacts would be less than significant. The analyzed phases of construction would occur sequentially; however, it should be noted that due to the logarithmic properties of the addition of two distinct noise sources, the most that the noise may be increased if two construction phases occurred concurrently (which is not proposed or anticipated) would be an additional 3 dB above the higher construction phase noise (Appendix C). As such, the worst-case noise level if two construction phases occurring simultaneously, which is not reasonably foreseeable as it is not proposed or part of typical construction operations, would be 80 dBA Leq at the closest sensitive receptor, which would not exceed the FTA construction noise standard of 80 dBA. Therefore, construction noise impacts would be less than significant.

Table N-3: Project Construction Noise Levels at Nearest Sensitive Receivers

	Construction Noise Level (dBA Leq) at:
Construction Phase	**Closest Homes to South**
Demolition	77
Site Preparation	76
Grading	76
Building Construction	75
Paving	73
Painting	66
FTA Construction Noise Threshold	**80**
Exceed Threshold?	**No**

Source: Noise Impact Analysis, Appendix C.

Operation Noise Impacts

Traffic Noise. As shown in Table T-1, the proposed 34 residential units are forecast to generate 229 daily vehicle trips, 13 a.m. and 17 p.m. peak hour vehicle trips. According to the City's Focused General Plan Update and Zoning Amendments Draft EIR, Garden Grove Boulevard, west of Dale Street had 26,158 daily trips in the year 2020, with operation of the existing onsite building. Not including the reduction in vehicles from removal of the existing onsite building, the proposed Project would contribute up to 0.9 percent of the daily trips on Garden Grove Boulevard. In order for project-generated vehicular traffic to increase the noise level on any of the nearby roadways by 3 dB (the human threshold of perception), the daily trips would have to double, or by 1.5 dB, the daily trips would have to increase by 50 percent. As such, the proposed Project's roadway noise impacts would be less than significant.

Onsite Noise. The Noise Impact Study modeled the onsite noise that would be generated by operation of the Project, including noise from vehicle parking and loading areas, and air conditioning units. A majority of vehicular parking would be located in a parking garage on the ground level of the residential structure. An additional nine vehicle parking spaces would be accessed off the alley on the south side of the proposed building. Parking lots generate noise from vehicle engines, car doors being slammed, people talking, and various similar activities that average approximately 52.1 dBA at 5 feet. However, the proposed parking is mostly located within the parking garage and adjacent to a proposed 6-foot-high CMU wall that would shield

noise; thus, the parking lot noise at the closest residence would be 23 dBA (as shown on Table N-4), which would not exceed the City's daytime residential noise standard of 55 dBA or nighttime residential noise standard of 50 dBA. Therefore, the proposed parking areas would not result in noise impacts to existing offsite sensitive receptors.

The typical residential air conditioning systems (such as the 2.5-ton Carrier Model No: CA15NA03-0-A and a 3 ton Carrier Model No: CA15NA036-0-A) produce a noise level of 73 dBA at one meter. Noise modeling was conducted including the noise reduction provided by the proposed 6-foot-high CMU wall on the north property line, 4-foot-high wall on the perimeter of the second-floor common open space area, and 3.5-foot-high parapet wall on the roof, to determine the noise from air conditioning units at the closest residences. As shown in Table N-4, the air conditioning noise levels at the residences adjacent to the south of the site could reach 26 dBA, which would not exceed the City's daytime residential noise standard of 55 dBA or nighttime residential noise standard of 50 dBA. Therefore, the proposed air conditioning units would not result in noise impacts to existing offsite sensitive receptors.

Table N-4 shows that the proposed Project's worst-case operational noise from the simultaneous operation of all noise sources on the Project site would create a noise level of 27 dBA at the residences to the south side of the Project site. The worst-case operational noise level of 27 dBA would be below both the City's daytime residential noise standard of 55 dBA and nighttime residential noise standard of 50 dBA. In addition, it is below the existing ambient noise levels of 60 dBA, would not increase ambient noise levels, and would not be heard above existing ambient noise at existing sensitive receptors. Therefore, the onsite operational noise impacts would be less than significant.

Table N-4: Project Operational Noise Levels At Nearest Sensitive Noise Receptors

Noise Source	Homes to the South
Air Conditioning Compressor Units[1]	26
Parking Lot[2]	17
Combined Noise Level	**27**
City Noise Standard[3] (Day/Night)	55/50
Exceed Standard (Day/Night)?	**No/No**

Source: Noise Impact Analysis, Appendix C.

In addition, the Noise Element includes the following goal and policies, which are related to the Project. As detailed below, the Project is consistent with the Noise Element goal and policies:

Goal N-1: Noise considerations must be incorporated into land use planning decisions.

Consistent: Noise considerations have been incorporated into the Project as the Project would be consistent with adjacent residential uses and would not result in an impact on nearby uses, as detailed previously.

Policy N-1.3: Require noise reduction techniques in site planning, architectural design, and construction, where noise reduction is necessary consistent with the standards in Tables 7-1 and 7-2 (refer to Table 2 and Table 3, Garden Grove Noise Ordinance Standards, respectively), Title 24 of the California Code of Regulations, and Section 8.47 of the Municipal Code.

Consistent: As detailed previously in Tables N-3 and N-4 the Project would be consistent with the City's noise standards. Title 24 and municipal code requirements would be ensured through the City's development permitting process.

Policy N-1.4: Ensure acceptable noise levels are maintained near schools, hospitals, convalescent homes, churches, and other noise sensitive areas.

Consistent: As detailed previously in Tables N-3 and N-4 the Project would be consistent with the City's noise standards and would result in acceptable noise levels near noise sensitive uses.

Policy N-IMP-1B: Require that new commercial, industrial, any redevelopment projects, or any proposed development near existing residential land use demonstrate compliance with the City's Noise Ordinance prior to approval of the project.

Consistent: As detailed previously in Tables N-3 and N-4 the Project would be consistent with the City's Noise Ordinance.

Policy N-IMP-1D: Require construction activity to comply with the limits established in the City's Noise Ordinance.

Consistent: As detailed previously, the construction limits established in the City's Noise Ordinance, as adopted at the time of construction permitting, would be ensured through the City's development permitting process.

Policy N-IMP-1E: Require buffers or appropriate mitigation of potential noise sources on noise sensitive areas.

Consistent: As detailed previously in Tables N-3 and N-4 the Project would be consistent with the City's noise standards and would not result in noise impacts on noise sensitive areas. Therefore, noise buffers and mitigation are not required.

Policy N-IMP-1K: Enforce the Noise Ordinance to ensure that stationary noise and noise emanating from construction activities, private development, and/or special events are minimized.

Consistent: As detailed previously in Tables N-3 and N-4 the Project would be consistent with the City's noise standards. In addition, Title 24 and municipal code requirements would be ensured through the City's development permitting process.

(b) Generation of excessive groundborne vibration or groundborne noise levels?

Construction Vibration. Construction activities for development of the Project would include excavation and grading, which have the potential to generate low levels of groundborne vibration. People residing in close proximity to the construction could be exposed to the generation of excessive groundborne vibration or groundborne noise levels related to construction activities. The results from vibration can range from no perceptible effects at the lowest vibration levels, to low rumbling sounds and perceptible vibrations at moderate levels, to slight structural damage at the highest levels.

The City does not have adopted thresholds related to vibration. However, the FTA *Transit Noise and Vibration Impact Assessment* provides numeric thresholds for vibration impacts for building damage and human annoyance. The threshold for vibrations related to building damage is 0.20 PPV for non-engineered timber and masonry buildings and the threshold for human annoyance is 75 Vdb.

As shown in Table N-5, loaded trucks generate 0.076 in/sec PPV, jackhammers generate 0.035 PPV, and operation of a small bulldozer generates 0.003 PPV at a distance of 25 feet. Groundborne vibration associated with this equipment drops off as the equipment moves away. It should be noted that these vibration levels are reference levels and may vary slightly depending upon soil type and specific usage of each piece of equipment.

Table N-5: Construction Equipment Vibration Source Levels

Equipment	PPV at 25 ft, in/sec	Approximate Vdb at 25 ft
Loaded Trucks	0.076	86
Jackhammer	0.035	79
Small Bulldozer	0.003	58

Source: Noise Impact Analysis, Appendix C.

The construction equipment and usage for the Project is detailed previously in Table 3, *Construction Schedule*, The primary source of vibration during construction of the proposed Project as listed in Table 3 would be from the operation of a small rubber tired bulldozer. From Table N-5 above a small bulldozer would create a vibration level of 0.003 inch per second PPV (or 58 Vdb) at 25 feet. Based on typical propagation rates identified by the FTA, the vibration level at the nearest off-site residences (48 feet to 50 feet to the south of the Project site boundary) would be 0.001 inch per second PPV (or 52 Vdb), which is below the 0.20 inch per second PPV threshold for damage to non-engineered timber and masonry buildings and below the human annoyance threshold of 75 VdB. In addition, the heavy construction equipment would be used for a limited time during the construction period, as detailed in Table 3. As shown in the Noise Impact Analysis (Appendix C), and as described in the Project Description, no vibratory rollers would be used for construction of the Project. Therefore, construction-related vibration impacts would be less than significant.

Operation

Operation of the proposed residences would include heavy trucks for residents moving in and out of the units and garbage trucks for solid waste disposal. Truck vibration levels are dependent on vehicle characteristics, load, speed, and pavement conditions. However, as shown on Table N-7, vibration levels from loaded trucks generate 0.076 inch per second PPV. Truck movements on site would be travelling at very low speed, so it is expected that truck vibration at nearby sensitive receptors would be less than 0.076 inch per second PPV, which is less than the structure damage threshold of 0.5 inch per second PPV threshold and the human annoyance threshold of 0.24 inch per second PPV. Therefore, operational vibration impacts would be less than significant.

(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?

The Project site is not located within an airport land use plan or within 2 miles of an airport. The closest air facility is the Los Alamitos Joint Forces Training Base, located approximately 3.19 miles northwest of the Project site. The closest public airport to the project site is John Wayne Airport, which is located over 9 miles to the southeast of the Project site. In addition, the Fullerton Municipal Airport is located over 6 miles to the north of the site. Therefore, the Project would not result in excessive noise levels related to airports, and no impacts would occur.

Overall, the proposed Project would not result in any significant effects relating to noise or vibration; therefore, the proposed Project meets the noise related criteria of CEQA Guidelines Section 15332(d).

AIR QUALITY

This section is based on the Air Quality Impact Analysis prepared for the proposed Project that is provided in Appendix D. The Project's construction and operational emissions were calculated using the California Emissions Estimator Model (CalEEMod) Version 2022.1.1.20 pursuant to the South Coast Air Quality Management District (SCAQMD) methodology criteria.

(a) Conflict with or obstruct implementation of the applicable air quality plan?

The Project site is located in the South Coast Air Basin, which is under the jurisdictional boundaries of the SCAQMD. The SCAQMD and Southern California Association of Governments (SCAG) are responsible for preparing the Air Quality Management Plan (AQMP), which addresses federal and state Clean Air Act (CAA) requirements. The AQMP details goals, policies, and programs for improving air quality in the Basin. In preparation of the AQMP, SCAQMD and SCAG use land use designations contained in General Plan documents to forecast, inventory, and allocate regional emissions from land use and development-related sources.

As described in Chapter 12, Section 12.2 and Section 12.3 of the SCAQMD's CEQA Air Quality Handbook (1993), for purposes of analyzing consistency with the AQMP, if a project would have a development density and vehicle trip generation that is substantially greater than what was anticipated in the General Plan, then the project would conflict with the AQMP. On the other hand, if a project's density is consistent with the General Plan, its emissions would be consistent with the assumptions in the AQMP, and the project would not conflict with the AQMP. In addition, the SCAQMD considers projects consistent with the AQMP if the project would not result in an increase in the frequency or severity of existing air quality violations or cause a new violation.

The Project site has a General Plan land use designation of Medium Density Residential (MDR) that allows residential development at a range from 21.1 to 32.0 dwelling units per acre. However, the proposed Project includes three units restricted for very-low income households that provide a 50 percent (50%) density bonus, and three units restricted for moderate-income households. that provides an additional 38.75 percent (38.75%) density bonus that would result in a density of 68 units per net acre. Thus, the proposed Project would be within the allowable density with application of the density bonus, which would provide for housing as required by the City's Regional Housing Needs Allocation (RHNA) that allocated 19,168 new housing units for the 2021-2029 planning period.[2] The California Department of Finance estimated that the City had a vacancy rate of 2.5% in 2024[3] and as of 2024, 639 new permits have been issued toward meeting the RHNA target of 19,168 new housing units.[6] Thus, the 34 residential units provided by the Project (including three very-low-income affordable units and three moderate-income affordable units) would be within housing growth projections, and the Project would not conflict with the AQMP.

Additionally, as detailed previously and shown on Figure T-1, the Project site is located within a TPA, which are areas within 0.5-mile of a transit stop or a transit corridor with 20-minute or less service frequency during peak commute hours. The provision of higher density housing within TPAs is consistent with the AQMP objective of providing infill/high density housing near transit to support alternative modes of transportation that reduce vehicular emissions.

[2] City of Garden Grove Housing Element. Accessed: https://ggcity.org/housing-element

[3] California, Department of Finance, E-5 Population and Housing Estimates for Cities, Counties and the State — January 1, 2021-2024, May 2024. Accessed: https://dof.ca.gov/forecasting/demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2024/

Further, as described in the analysis below, emissions generated by construction and operation of the proposed Project would not exceed thresholds. Thus, the Project would not result in an increase in the frequency or severity of existing air quality violations or cause a new violation, and no impacts would occur.

(b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard)?

Construction Regional Emissions. Construction activities associated with the proposed Project would generate pollutant emissions from the following construction activities: demolition, site preparation, grading, building construction, paving, and architectural coating. The volume of emissions generated on a daily basis would vary, depending on the intensity and types of construction activities occurring. Construction activities would generate emissions from onsite construction equipment, haul of soils, export and import of construction materials, and construction worker vehicle trips to and from the Project site during the 6 months of construction (as estimated per the CalEEMod default construction timeline).

It is mandatory for all construction projects to comply with several SCAQMD Rules, including Rule 403 for controlling fugitive dust, PM_{10}, and $PM_{2.5}$ emissions from construction activities. Rule 403 requirements include, but are not limited to, applying water in sufficient quantities to prevent the generation of visible dust plumes, applying soil binders to uncovered areas, reestablishing ground cover as quickly as possible, utilizing a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the proposed Project site, covering all trucks hauling soil with a fabric cover and maintaining a freeboard height of 12-inches, and maintaining effective cover over exposed areas. Compliance with Rule 403 was accounted for in the construction emissions modeling and is ensured through the City's development permitting process. In addition, implementation of SCAQMD Rule 1113 that governs the VOC content in architectural coating, paint, thinners, and solvents, would be required and is also ensured through the City's development permitting process.

As shown in Table AQ-1, CalEEMod modeling results detail that construction emissions generated by the proposed Project would not exceed SCAQMD regional thresholds. Therefore, construction activities would result in a less than significant impact.

Table AQ-1: Regional Construction Emissions Summary

Construction Activity	Maximum Daily Emissions (pounds/day)					
	ROG	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Demolition	1.4	14.2	14.3	<0.1	1.8	0.7
Site Preparation	0.7	5.6	6.4	<0.1	0.7	0.4
Grading	1.7	16.0	14.6	<0.1	3.1	1.7
Building Construction	0.9	7.6	10.8	<0.1	0.8	0.4
Paving	0.7	5.3	7.1	<0.1	0.5	0.3
Architectural Coating	40.3	1.2	1.8	<0.1	0.1	0.1
Maximum Daily Emissions	**40.3**	**16.0**	**14.6**	**<0.1**	**3.1**	**1.7**
SCAQMD Significance Thresholds	75	100	550	150	150	55
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Air Quality Impact Analysis, Appendix D

Operational Emissions. Implementation of the Project would result in long-term regional emissions of criteria air pollutants and ozone precursors associated with area sources, such as natural gas and electricity

consumption, landscaping, application of architectural coatings, and consumer products. However, operational vehicular emissions would generate a majority of the emissions generated from the Project.

Operational emissions associated with the proposed Project were modeled using CalEEMod and are presented in Table AQ-2. As shown, the proposed Project would result in long-term regional emissions of the criteria pollutants that would be below the SCAQMD's applicable thresholds. This is a conservative analysis as no credit was taken for operation of the existing building on the site. Therefore, the Project's operational emissions would not exceed the NAAQS and CAAQS, would not result in a cumulatively considerable net increase of any criteria pollutant impacts, and would be less than significant.

Table AQ-2: Summary of Regional Operational Emissions

Operational Activity	Maximum Daily Emissions (pounds/day)					
	ROG	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Mobile	0.7	0.5	5.4	<0.1	1.3	0.3
Area	1.7	<0.1	2.6	<0.1	<0.1	<0.1
Energy	<0.1	0.1	<0.1	<0.1	<0.1	<0.1
Total Operational Emissions	**2.4**	**0.6**	**8.0**	**<0.1**	**1.3**	**0.3**
SCAQMD Significance Thresholds	55	55	550	150	150	55
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Source: Air Quality Impact Analysis, Appendix D

(c) Expose sensitive receptors to substantial pollutant concentrations?

Local Emissions. The SCAQMD recommends the evaluation of localized NO_x, CO, PM_{10}, and $PM_{2.5}$ construction-related impacts to sensitive receptors in the immediate vicinity of the Project site. Such an evaluation is referred to as a localized significance threshold (LST) analysis. The impacts were analyzed pursuant to the SCAQMD's Final Localized Significance Threshold Methodology. According to the LST Methodology, off-site mobile emissions from the Project should not be included in the emissions compared to the LSTs. SCAQMD has developed LSTs that represent the maximum emissions from a project that are not expected to cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standards, and thus would not cause or contribute to localized air quality impacts. LSTs are developed based on the ambient concentrations of NOx, CO, PM_{10}, and $PM_{2.5}$ pollutants for each of the 38 source receptor areas (SRAs) in the SCAB. The Project site is located in SRA 17, Central Orange County.

Sensitive receptors include uses such as residences, schools, playgrounds, childcare centers, and athletic facilities. The nearest sensitive receptors to the Project site are the residences located approximately 14.63 to 15.24 meters (48-50 feet) south of the Project site.

Construction LST. The localized thresholds from the mass rate look-up tables in SCAQMD's Final Localized Significance Threshold Methodology document, were developed for use on projects that are less than or equal to 5-acres in size or have a disturbance of less than or equal to 5 acres daily and were used to evaluate LSTs. The maximum number of acres disturbed on the peak day of construction was calculated from the CalEEMod model construction equipment list, which identifies that crawler tractors, graders, and rubber-tired dozers disturb 0.5-acre in an 8-hour day and scrapers disturb 1.0-acre in an 8-hour day. It was determined that the Project's construction activities could disturb the entire 0.54 site in one day.

As shown in Table AQ-3, with implementation of SCAQMD Rules 403 and 1113, the maximum daily construction emissions from the proposed Project would not exceed the applicable SCAQMD LST thresholds. Therefore, impacts would be less than significant.

Table AQ-3: Localized Construction Emissions

Construction Activity	Maximum Daily Regional Emissions (pounds/day)			
	NO_x	CO	PM_{10}	$PM_{2.5}$
Demolition	12.8	13.2	1.4	0.6
Site Preparation	5.6	6.1	0.6	0.4
Grading	14.7	13.6	2.7	1.6
Building Construction	7.3	9.0	0.3	0.3
Paving	5.2	6.3	0.2	0.2
Architectural Coating	1.2	1.5	<0.1	<0.1
Maximum Daily Emissions	**14.7**	**13.6**	**2.7**	**1.6**
SCAQMD Significance Thresholds	81	485	4	3
Threshold Exceeded?	**No**	**No**	**No**	**No**

Source: Air Quality Impact Analysis, Appendix D

Operational LST. According to the SCAQMD LST methodology, LSTs apply to project stationary mobile sources (SCAQMD, 2008a). Projects that involve mobile sources that spend long periods queuing and idling at a site, such as transfer facilities or warehousing and distribution buildings, have the potential to exceed the operational localized significance thresholds.

The proposed Project would operate 34 residential units, which do not involve vehicles idling or queueing for long periods. Therefore, due to the lack of significant stationary source emissions, impacts related to operational localized significance thresholds would be less than significant.

Overall, the proposed Project would not result in any significant effects relating to air quality; therefore, the proposed Project meets the air quality related criteria of CEQA Guidelines Section 15332(d).

Construction Health Risks. A Construction Health Risk Assessment (HRA) (Appendix E) was also prepared for the Project to determine if toxic air contaminants (TACs) from diesel particulate matter (DPM) from construction equipment and vehicles would have the potential to impact surrounding sensitive receptors. The predominant sources of DPM emissions resulting from construction is from heavy-duty diesel trucks that travel to, from, and within the Project site each day, as well as the off-road construction equipment. Operation of the proposed residences does not involve substantial use of heavy-duty diesel trucks or other sources of DPM emissions. Any operational DPM emissions from the Project would be less than those generated during construction, which are evaluated below.

The significance thresholds recommended by the SCAQMD include:

- Cancer Risk: ten persons per million population as the maximum acceptable incremental cancer risk due to exposure to TACs
- Non-Cancer Hazard Index (HI): 1.0

The Construction HRA identified DPM emissions from construction activities and vehicle and truck trips and completed dispersion modeling to determine both cancer and non-cancer health risks. As shown on Table AQ-

4, the estimated maximum cancer risk for construction is 1.39 in one million for the maximum impacted sensitive/residential receptors. The estimated maximum cancer risk for worker receptors during construction would be 0.14 in one million.

Table AQ-4: Summary of Proposed Project Construction Health Risk

Receptor	Cancer Risk (per million)		Exceeds Significance Threshold?
	Maximum Lifetime Proposed Project Risk	Significance Threshold	
Maximum Impacted Sensitive Receptor – Infant to Adult (30 years)	1.39	10	No
Maximum Impacted Sensitive Receptor – Adult	0.05	10	No
Maximum Impacted Worker Receptor	0.14	10	No
Receptor	**Chronic Non-Cancer Hazard Index**		**Exceeds Significance Threshold?**
	Maximum Lifetime Proposed Project Risk	**Significance Threshold**	
Maximum Impacted Sensitive Receptor – Infant to Adult (30 years)	<0.01	1	No
Maximum Impacted Sensitive Receptor – Adult	<0.01	1	No
Maximum Impacted Worker Receptor	0.02	1	No

Source: Construction HRA, Appendix E.

Thus, the maximum cancer risk from construction of the proposed Project would not exceed the SCAQMD cancer health risk significance threshold of 10 in one million. In addition, the Project's maximum estimated non-cancer health risk is 0.02, for the maximum impacted worker receptor, which is below the significance threshold of 1.0. Thus, the Project impact related to both cancer and non-cancer health risks would be less than significant.

(d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

The proposed Project would not emit other emissions, such as those generating objectionable odors, that would affect a substantial number of people. The threshold for odor is identified by SCAQMD Rule 402, Nuisance, which states:

> *A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals*.

The type of facilities that are considered to result in other emissions, such as objectionable odors, include wastewater treatments plants, compost facilities, landfills, solid waste transfer stations, fiberglass manufacturing facilities, paint/coating operations (e.g., auto body shops), dairy farms, petroleum refineries, asphalt batch plants, chemical manufacturing, and food manufacturing facilities.

The proposed Project would implement residential development that does not involve the types of uses that would emit objectionable odors affecting a substantial number of people. In addition, odors generated by the Project are required to be in compliance with SCAQMD Rule 402, which would prevent nuisance odors.

During construction, emissions from construction equipment, architectural coatings, and paving activities may generate odors. However, these odors would be temporary, intermittent in nature, and would not affect a substantial number of people. Any potential noxious odors would be confined to the immediate vicinity of the construction equipment. Also, the short-term construction-related odors would cease upon the drying or hardening of the odor-producing materials. Therefore, impacts associated with other emissions, such as odors, would not adversely affect a substantial number of people.

WATER QUALITY

(a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

The Project site is located within the Anaheim Bay-Huntington Harbor Watershed, which includes 80-square miles and all or part of 11 cities. The City of Garden Grove is underlain by the Elsinore Groundwater Basin, which covers 270 square miles in Orange County. The City is within the jurisdiction of the Santa Ana Regional Water Quality Control Board (RWQCB), which sets water quality standards for all ground and surface waters within its region. Water quality standards are defined under the Clean Water Act (CWA) to include both the beneficial uses of specific water bodies and the levels of water quality that must be met and maintained to protect those uses (water quality objectives). Water quality standards for all ground and surface waters overseen by the RWQCB are documented in its Basin Plan, and the regulatory program of the RWQCB is designed to minimize and control discharges to surface and groundwater, largely through permitting, such that water quality standards are effectively attained.

Construction. Implementation of the proposed Project includes demolition of the existing building, pavement, and infrastructure, site preparation, grading, excavation, construction of the new building, and infrastructure improvements. Demolition of existing structures, grading, stockpiling of materials, excavation, construction of new structures, and landscaping activities would expose and loosen sediment and building materials, which would have the potential to mix with stormwater and urban runoff and degrade surface and receiving water quality.

Additionally, construction generally requires the use of heavy equipment and construction-related materials and chemicals, such as concrete, cement, asphalt, fuels, oils, antifreeze, transmission fluid, grease, solvents, and paints. In the absence of proper controls, these potentially harmful materials could be accidentally spilled or improperly disposed of during construction activities and could wash into and pollute surface waters or groundwater, resulting in a significant impact to water quality. However, Section 6.40.050 of the GGMC states that all new development and significant redevelopment within the City shall be undertaken in accordance with the County Drainage Area Management Plan (DAMP), including any conditions and requirements established related to the reduction or elimination of pollutants in storm water runoff from the Project site, which are verified prior to the issuance of a grading permit and/or building permit by the City.

The DAMP requires construction sites to implement BMPs that address control of construction related pollutants discharges, including erosion/sediment control, onsite hazardous materials, and waste management (DAMP Section 8.0). Additionally, the Statewide NPDES Permit for General Construction Activity requires implementation of a SWPPP, by a Qualified SWPPP Developer. The SWPPP is required to be consistent with the County DAMP; address site-specific conditions related to construction; identify the sources of sediment and

other pollutants that may affect the quality of storm water discharges during construction; and implement erosion control and sediment control BMPs to reduce or eliminate sediment, pollutants adhering to sediment, and other non-sediment pollutants in water discharges during construction. Typical erosion control methods that are designed to minimize potential pollutants entering stormwater during construction include:

- Perimeter gravel bags or silt fences to prevent offsite transport of sediment;
- Storm drain inlet protection (filter fabric gravel bags and straw wattles), with gravel bag check dams within paved roadways;
- Regular sprinkling of exposed soils to control dust during construction and soil binders for forecasted wind storms;
- Specifications for construction waste handling and disposal;
- Contained equipment wash-out and vehicle maintenance areas;
- Erosion control measures including soil binders, hydro mulch, geotextiles, and hydro seeding of disturbed areas ahead of forecasted storms;
- Construction of stabilized construction entry/exits to prevent trucks from tracking sediment on City roadways;
- Construction timing to minimize soil exposure to storm events; and
- Training of subcontractors on general site housekeeping.

Adherence to a City approved SWPPP, which would be verified prior to the issuance of a demolition and/or grading permit would ensure that potential water quality degradation associated with construction activities would be minimized, and impacts would be less than significant.

Operations. The proposed Project includes operation of new residential uses on the Project site. Potential pollutants associated with the proposed uses include various chemicals from cleaners, nutrients from fertilizer, pesticides and sediment from landscaping, trash and debris, and oil and grease from vehicles. If these pollutants discharge into surface waters, it could result in degradation of water quality.

However, operation of the proposed Project would be required to comply with the requirements of the County DAMP and would be required to implement a Water Quality Management Plan (WQMP) that includes Low Impact Development (LID) features and BMPs to limit the potential for pollutants to enter surface water, such as storm water runoff. The Preliminary WQMP has been completed and is included as Appendix F. The purpose of a WQMP is to reduce discharge of pollutants by reducing or eliminating sources of pollutants, capture pollutants, and manage site runoff volumes and flow rates through application of appropriate LID features and BMPs. The WQMP is required to include implementation of non-structural, structural, source control and treatment control BMPs that have been designed to protect water quality.

The Project would install drainage features to convey runoff to a bioretention system that would be installed on the site, which has been designed to capture, infiltrate, and treat flows from the 85th percentile storm as required by the DAMP. The additional types of BMPs that would be implemented as part of the project WQMP are listed in Table WQ-1.

Table WQ-1: Types of BMPs Incorporated into the Project WQMP

Type of BMP	Description of BMPs
LID Site Design	Optimize the site layout: The site has been designed so that runoff from impervious surfaces would flow to either landscaped areas or an underground bioretention basin for filtration, treatment, and infiltration.
	Use pervious surfaces: Landscaping is incorporated into the project design to increase the amount of pervious area and onsite retention of stormflows.
Source Control	Storm Drain Stenciling: All inlets/catch basins would be stenciled with the words "Only Rain Down the Storm Drain," or equivalent message.
	Design and construct trash and waste storage areas to reduce pollution introduction.
	Need for future indoor & structural pest control: The building would be designed to avoid openings that would encourage entry of pests.
	Landscape/outdoor pesticide use: Landscape plans would accomplish all of the following: • Design landscaping to minimize irrigation and runoff, to promote surface infiltration where appropriate, and to minimize the use of fertilizers and pesticides that can contribute to storm water pollution. • Consider using pest-resistant plants, especially adjacent to hardscape. • To ensure successful establishment, select plants appropriate to site soils, slopes, climate, sun, wind, rain, land use, air movement, ecological consistency, and plant interactions.
	Roofing, gutters, and trim: The architectural design would avoid roofing, gutters, and trim made of copper or other unprotected metals that may leach into runoff.
	Sidewalks and parking lots: Sidewalks and parking lots shall be swept regularly to prevent the accumulation of litter and debris. Debris from pressure washing would be collected to prevent entry into the storm drain system. Wash water containing any cleaning agent or degreaser would be collected and discharged to the sanitary sewer and not discharged to a storm drain.
Treatment Control	Biofiltration Systems: The underground bioretention basin system proposed for the Project would detain runoff and filter it prior to discharge.

As described previously, a WQMP is required to be approved prior to the issuance of a building or grading permit. The Project's WQMP would be reviewed and approved by the City to ensure it complies with the DAMP regulations. In addition, the City's permitting process would ensure that all LID features in the WQMP would be implemented with the project. Overall, implementation of the WQMP pursuant to the existing regulations would ensure that operation of the proposed Project would not violate any water quality standards, waste discharge requirements, or otherwise degrade water quality; and impacts would be less than significant.

(b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

In the existing condition, storm flows drain across the site to Coast Street and the alley to the south of the site. The Project site does not currently provide for groundwater recharge and is fully developed and not used for groundwater recharge. The Project would redevelop the site, and as detailed in the WQMP (Appendix F), the impervious areas onsite would be reduced from 92.16 percent impervious to 86 percent impervious; a reduction of 6.16 percent. The proposed Project would have 14 percent (14%) pervious landscaped open spaces. As detailed in the Preliminary Hydrology and Hydraulic Study (Appendix G) the runoff volume would be reduced from 2.17 cubic feet per second (CFS) to 1.58 cfs in a 100-year storm condition. Unlike the existing conditions, storm water would be conveyed to a biofiltration area that would collect, treat, and slowly discharge storm water. The biofiltration system has been designed to treat and infiltrate flows, as detailed in the WQMP. Therefore, the Project would not substantially deplete groundwater supplies or interfere substantially with

groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level.

In addition, groundwater within the Project region is managed by the Orange County Water District (OCWD). To ensure the Basin is not overdrawn, OCWD monitors water levels and recharges the Basin with local and imported water. Continued management of the groundwater basin by OCWD ensures that substantial depletion of groundwater supplies would not occur. Likewise, the Project would not impede OCWD management of the groundwater basin. Thus, impacts related to the groundwater recharge and sustainable groundwater management of the basin would not occur.

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

i) result in substantial erosion or siltation on- or off-site;

No streams, creeks, or rivers exist on or adjacent to the Project site. Construction of the proposed Project would require excavation and grading activities that would expose and loosen building materials and sediment, which has the potential to mix with storm water runoff and result in erosion or siltation offsite. However, the Project site does not include any slopes, which reduces the erosion potential. Also, the NPDES Construction General Permit and Orange County DAMP require preparation and implementation of a SWPPP by a Qualified SWPPP Developer for the proposed construction activities. The SWPPP is required to address site-specific conditions related to potential sources of sedimentation and erosion and would list the required BMPs that are necessary to reduce or eliminate the potential of erosion or alteration of a drainage pattern during construction activities.

In addition, a Qualified SWPPP Practitioner (QSP) is required to ensure compliance with the SWPPP through regular monitoring and visual inspections during construction activities. The SWPPP would be amended and BMPs revised, as determined necessary through field inspections, in order to protect against substantial soil erosion, the loss of topsoil, or alteration of the drainage pattern. Compliance with the Construction General Permit and a SWPPP prepared by a QSD and implemented by a QSP would prevent construction-related impacts related to potential alteration of a drainage pattern or erosion from development activities. With implementation of the NPDES Permit for General Construction Activity, including a SWPPP with BMPs, that would be verified by the City during the permitting approval process, impacts related to alteration of an existing drainage pattern during construction that could result in substantial erosion or siltation, and potential impacts would be less than significant.

During operation of the Project, the WQMP (Appendix F) would be implemented, which is detailed in previous Water Quality response (a). The impervious areas would not be subject to erosion and the pervious areas would be landscaped with groundcovers that would inhibit erosion. Also, the proposed Project would maintain the existing drainage pattern. In the existing condition, storm flows drain to Coast Street and the alley to the south of the site. With implementation of the Project, storm water runoff would be conveyed to landscape areas and to a biofiltration area that would filter and treat flows. the proposed landscaping and drainage system would reduce the potential of onsite soils being eroded, siltation, flooding, and discharge of pollutants compared to the existing condition.

ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;

As detailed in the previous response, for Project construction, the NPDES Construction General Permit and Orange County DAMP require preparation and implementation of a SWPPP including BMPs to protect against alteration of the drainage pattern that could result in flooding. Compliance with the Construction General Permit and a SWPPP prepared by a QSD and implemented by a QSP would prevent construction-related impacts to increases of surface runoff that could result in flooding. The required SWPPP with BMPs would be verified by the City during the permitting approval process, and potential impacts would be less than significant.

During operation of the Project, the WQMP (Appendix F) would be implemented. As detailed previously, the Project would reduce impervious area on the site by 14 percent. The impervious areas would not be subject to erosion and the pervious areas would be landscaped with groundcovers that would inhibit erosion. Also, the proposed Project would maintain the existing drainage pattern. In the existing condition, storm flows drain to Coast Street and the alley to the south of the site. With implementation of the Project, storm water runoff would be conveyed to landscape areas and to a biofiltration area that would filter and treat flows. As shown in Table WQ-2, the Project runoff conditions for a 100-year storm would decrease by 0.59 cfs from predevelopment conditions with the proposed drainage system, and the Project would not result in exceedance of the capacity of the existing stormwater drainage system. As such, the Project would not increase surface runoff that could result in flooding.

Table WQ-2: 100-Year Storm Water Flow Comparison

	Existing Condition	Proposed Condition
Peak Flow	2.17 cfs	1.58 cfs

Source: Preliminary Hydrology and Hydraulic Study, Appendix G

Additionally, as part of the permitting approval process, the proposed drainage and water quality design and engineering plans would be reviewed by the City to ensure that the site-specific design limits the potential for increased runoff that could result in flooding. Thus, significant impacts would not occur.

iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;

As detailed in the previous response, Project construction requires preparation and implementation of a SWPPP including BMPs, pursuant to the Orange County DAMP, to protect against alteration of the drainage pattern that could result in flooding or additional sources of polluted runoff. Compliance with the Construction General Permit and a SWPPP prepared by a QSD and implemented by a QSP would prevent construction-related impacts to drainage and polluted runoff. The required SWPPP with BMPs would be verified by the City during the permitting approval process; thus, potential impacts would be less than significant.

During operation of the Project, the WQMP (Appendix F) would be implemented. As detailed previously, the Project would reduce impervious area on the site by 14 percent and runoff conditions for a 100-year storm would decrease by 0.59 cfs. The Project would convey storm water runoff to landscape areas and a biofiltration system that would filter and treat flows. With the proposed drainage system, and the Project would not result in exceedance of the capacity of the existing stormwater drainage system and would not result in substantial additional sources of polluted runoff.

iv) impede or redirect flood flows?

As detailed in the previous response, for Project construction, the NPDES Construction General Permit and Orange County DAMP require preparation and implementation of a SWPPP including BMPs to protect against alteration of the drainage pattern that could impede or redirect flood flows. The required SWPPP with BMPs

would be verified by the City during the permitting approval process to ensure that impeding or redirecting drainage flows would not occur.

As described previously, the proposed project would reduce impervious area by 14 percent and decrease 100-year storm flows by 0.59 cfs. With implementation of the Project, storm water runoff would be conveyed to landscape areas and to a biofiltration area that would filter and treat flows that would infiltrate, The Project would not impede or redirect flood flows.

(d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM) 06059C0138J, the Project site is not located within a flood zone. A 100-year flood hazard area is an area in which a flood event has a one percent probability of occurring in any given year. The FEMA FIRM for the Project site and vicinity shows that the site is within a 0.2 percent annual chance of flood hazard and is identified as "Zone X." Therefore, the site is not within a 100-year flood zone. In addition, the Project site does not contain any bodies of water and is not located in the vicinity of any bodies of water that could result in flooding on the Project site. The Project site is located over 6 miles from the Pacific Ocean and due to its location, is not at risk of inundation from tsunami. Likewise, the Project site is not located near any water retention facilities or water bodies that could result in seiche. For this reason, the Project site is not at risk of inundation from seiche waves. Therefore, the proposed Project would not risk the release of pollutants from inundation from seiche, tsunami, or from being within a flood zone.

(e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

As detailed previously, the use of BMPs during construction implemented as part of a SWPPP as required by the NPDES Construction General Permit that would be verified during the City's construction permitting process, would serve to ensure that potential Project impacts related to construction activities would be less than significant. Thus, construction of the Project would not conflict or obstruct implementation of a water quality control plan.

Also, new development projects are required to implement a WQMP that would comply with the Orange County DAMP. The WQMP and applicable BMPs are verified as part of the City's permitting approval process, and construction plans would be required to demonstrate compliance with these regulations. Therefore, operation of the Project would not conflict with or obstruct a water quality control plan.

In addition, as explained previously, groundwater within the Project region is managed by OCWD. To ensure the Basin is not overdrawn, OCWD monitors water levels and recharges the Basin with local and imported water. Continued management of the groundwater basin by OCWD ensures that substantial depletion of groundwater supplies would not occur. The Project is an infill and redevelopment project that is located within a developed area and would not impede the OCWD management of the groundwater basin. The Project would redevelop the site, and as detailed in the WQMP (Appendix F), the impervious areas onsite would be reduced from 92.16 percent impervious to 86 percent impervious; a reduction of 6.16 percent. The proposed Project would have 14 percent (14%) pervious landscaped open spaces. The Project includes a detention basin that would filter and treat flows that would be slowly discharged, which would not conflict with sustainable groundwater management. Thus, impacts related to a water quality control plan or sustainable groundwater management plan would not occur.

Overall, the proposed Project would not result in any significant effects relating to water quality; therefore, the proposed Project meets the water quality related criteria of CEQA Guidelines Section 15332(d).

e. Criterion Section 15332(e): Utilities: The site is located in an urbanized and developed area and is developed and adequately served by all required utilities and public services. The utilities necessary to construct and operate the proposed Project (water, wastewater, electric, natural gas, landfill capacity) and public services (fire, police, and schools) would be adequately provided by existing utility and service systems as detailed below.

Water Utility: The proposed Project would connect to existing utility service lines surrounding the Project site. The proposed Project would install onsite 6-inch water lines that would connect to the existing 8-inch water line in Coast Street. The impacts related to installation of the new water lines are included in the analysis herein, such as within the construction traffic, construction air quality, and construction noise analysis.

The City's 2020 Urban Water Management Plan (UWMP) projects that between 2020 and 2045, the population of the City will increase by 4.8 percent and the City's water supply portfolio will increase as needed to meet water needs. The 2020 UWMP projections include The City's RHNA allocation for 2021 - 2029 of 19,168 units. The 2020 UWMP shows that the City's water demand in 2020 was 21,979 acre-feet yearly (AFY) and is projected to increase to 22,792 AFY by 2045. This is an increase of 813 AFY and assumes continued provision of water to existing developed land uses, such as the existing building on the Project site.

The Project would develop the site with 34 residential units, which would house approximately 118 residents, based on the 2024 California Department of Finance data that the City has an average of 3.47 persons per household. The 118 new onsite residents would result in a water demand of approximately 16,756 gallons per day (18.8 AFY) using the 2020 UWMP baseline water use rate of 142 Gallons Per Capita per Day (GPCD), which is a conservative assumption as the 2020 UWMP states that the City used 93 GPCD in 2020. This represents 2.3 percent of the City's anticipated increase in water demand between 2020 and 2030, not including the reduction of water from removal of the existing building (the City's 2020 UWMP anticipates water demand from the existing use of the site based on the year 2020 Commercial land use designation of the site that allowed a FAR of 0.5 on the 0.54-acre site [which is 11,761.2 square feet of commercial uses]). In addition, the Project would implement a number of water conservation measures as required by Cal/Green and Title 24 requirements, such as use of water efficient plumbing fixtures, appliances, and irrigation systems, and routing runoff to landscape areas. Therefore, the City has sufficient water supplies available to serve the Project. The water demand needed for the Project would be accommodated by the existing 8-inch water line in the Coast Street right-of-way, which would not require expansion to serve the Project.

Sewer Utility: The proposed Project would install 6-inch sewer lines on the site that would connect to the existing 8-inch sewer lines in Coast Street, which has adequate capacity to serve the new residences on the site. The impacts related to installation of the new sewer lines are included in the analysis herein, such as within the construction traffic, construction air quality, and construction noise analysis.

The proposed residences would generate new wastewater, which would be conveyed through existing sewer facilities to OCSD's wastewater treatment plant No. 1 in Fountain Valley that has a capacity of 320 million gallons per day (MGD). In 2023-24, the estimated average daily flow received at the wastewater treatment plant No. 1 was 124 MGD. Thus, the plant has an additional capacity of 196 MGD (OCSD 2024).

As detailed previously, the Project is anticipated to generate a water demand of 16,756 gallons per day, some of which would be used for landscaping and other uses and would not enter the sewer system. However,

assuming the maximum water from the Project becomes wastewater, the 16,756 gallons per day would be accommodated by the OCSD's excess capacity. Therefore, the Project would be adequately served by the existing wastewater system.

Electric and Natural Gas: The proposed Project would install onsite electrical and natural gas lines that would connect to existing infrastructure within Coast Street. The impacts related to installation of the new electric and natural gas lines are included in the analysis herein, such as within the construction traffic, construction air quality, and construction noise analysis. The existing electric and gas utilities would be able adequately serve the Project. All service confirmations would be confirmed by the City prior to issuance of occupancy permits.

Landfills: In 2019 (the most recent data available), most of the solid waste from the City, which was disposed of in landfills, went to either the Olinda Alpha Sanitary Landfill or the Frank Bowerman Sanitary Landfill (Calrecycle 2024).

The Olinda Alpha Sanitary Landfill is permitted to accept 8,000 tons per day of solid waste and is permitted to operate through 2036. In September 2024 the maximum tonnage accepted was 7,240 tons, which is 760 tons less than the allowable tonnage. The Frank Bowerman Sanitary Landfill is permitted to accept 11,500 tons per day of solid waste and is permitted to operate through 2053. In September 2024, the landfill had a maximum tonnage of 10,295; thus, having an average daily additional capacity of 1,205 tons per day (Calrecycle SWIS 2024).

Construction. Project construction would generate solid waste for landfill disposal in the form of demolition debris from the removal of the existing building, pavement, and infrastructure that would be removed from the site. Construction waste in the form of packaging, used construction materials, and remnant materials would also be generated by construction of the proposed Project. Demolition activities would generate the most construction debris. Based on the CalEEMod User Guide Appendix C: Emission Calculation Details for CalEEMod generation factors, the Project would generate approximately 149.6 tons of debris over a 10-day hauling period. This would result in an average of 14.96 tons of solid waste demolition debris per day for 10 days. However, the California Green Building Standards Code requires demolition and construction activities to recycle or reuse a minimum of 65 percent of the nonhazardous construction and demolition waste. Thus, the demolition and construction solid waste that would be disposed of at the landfill would be approximately 35 percent of the waste generated. Therefore, demolition activities, which would generate the most solid waste would generate approximately 5.24 tons of solid waste per day for 10 days.

As described above, the Olinda Alpha Sanitary Landfill has an average daily additional capacity of 760 tons per day and the Frank Bowerman Sanitary Landfill has an average daily additional capacity of 1,205 tons per day (Calrecycle 2024), which is sufficient permitted capacity to accommodate the additional 5.24 tons of demolition waste per day for approximately 10 days that would result from the Project. The GGMC Section 18.60.040, *Minimum Construction and Demolition Waste Diversion Requirements*, requires construction plans and specifications to implement reuse, recycling, and/or diversion of the minimum percentage amount of designated recyclable and reusable materials as set forth by the CALGreen (Part 11 of Title 24, California Code of Regulations). Thus, the Project would be adequately served by the existing landfills and construction impacts related to landfill capacity would be less than significant.

Operation. The CalEEMod modeling for the Project (included in Appendix D), shows that the Project would generate 25.1 tons of solid waste per year, which would be 0.48 tons per week. However, based on the current recycling requirements, which require diversion of 75 percent of solid waste away from landfills, the Project would result in 0.12 tons (240 pounds) of solid waste per week being disposed of in landfills. As described

above, the Olinda Alpha Sanitary Landfill has an average daily additional capacity of 760 tons per day and the Frank Bowerman Sanitary Landfill has an average daily additional capacity of 1,205 tons per day (Calrecycle 2024), which is sufficient permitted capacity to accommodate the additional solid waste disposal needs that would result from the project. In addition, trash collection services would be arranged prior to the issuance of building permits.

Fire Services: There are seven City owned fire stations within the City that are staffed by the Orange County Fire Authority (OCFA). The OCFA response times for engines to arrive on scene after an emergency has been called are between 5 to 7 minutes. The closest Fire Station is 1.4 mile from the Project site, and there are two fire stations located within three miles of the site. The City's fire stations are listed below with the distance from the Project site:

- Fire Station 80, located at 14162 Forsyth Lane, which is 2.8 miles from the Project site.
- Fire Station 81, located at 11261 Acacia Parkway, which is 3.9 miles from the Project site.
- Fire Station 82, located at 11805 Gilbert Street, which is 3.1 miles from the Project site.
- Fire Station 83, located at 12132 Trask Avenue, which is 4.3 miles from the Project site
- Fire Station 84, located at 12191 Valley View Street, which is 3.6 miles from the Project site
- Fire Station 85, located at 12751 Western Avenue, which is 1.4 miles from the Project site
- Fire Station 86, located at 12232 West Street, which is 5.1 miles from the Project site.

The proposed Project would remove the existing building and develop a building with 34 residences on the site. The building would include new fire prevention infrastructure pursuant to current code requirements. The City has adopted the California Fire Code (Title 24, Part 9 of the California Code of Regulations) in GGMC Section 18.16.04, which regulates new structures related to safety provisions, emergency planning, fire-resistant construction, fire protection systems, and appropriate emergency access throughout the site. The Project's adherence to the existing fire code requirements would be verified as part of the City's regular permitting process.

As the site is within an area that is currently served by Fire Station 85 that is 1.4 miles from the site and is another City fire station within three miles of the site, OCFA would be able to continue to provide fire services to the Project site and surrounding area from the existing fire stations. Additionally, the Project would be constructed pursuant to existing California Fire Code regulations that would be verified during the City's permitting process. Also, the proposed Project would result in a limited number of residents on the site. The 118 residents at full capacity would be a maximum increase of 0.07% of the City's population of 171,024 (CA Dept of Finance 2024). The new construction and limited increase in population within three miles of two fire stations would be adequately served by the existing fire services, and no expansion of fire services facilities would be required.

Police Services: The Garden Grove Police Department provides police services to the Project area. The Police Department headquarters is located at City Hall, which is approximately 3.8 miles from the Project site. The City has 183 sworn officers and 71 non-sworn Police Department employees (GG 24-25), which equates to 0.93 sworn officer per 1,000 residents.

Construction. Crime and safety issues during project construction may include theft of building materials and construction equipment, malicious mischief, graffiti, and vandalism, which can result in the need for police services. However, the site would have security fencing during construction activities, and onsite materials would be either locked or kept in secure locations and would be limited based on the materials needed during

each phase of construction, which would reduce these concerns during the approximately 6-month construction period, and the existing City police services are anticipated to continue to adequately serve the area.

Operation. Redevelopment of the Project site would result in approximately 118 residents onsite, which would be a maximum increase of 0.06% of the City's population. Based on the City's existing ratio of 0.93 sworn officer per 1,000 residents, the 118 residents at full capacity would result in the need for 11 percent of a new officer, which would not require expansion of the existing police facilities. During operation, the Project is anticipated to generate a typical range of police service calls, such as vehicle break-ins, residential thefts and disturbances, and vandalism. Security concerns would be addressed by providing low-intensity security lighting. Also, pursuant to the City's existing permitting process, the Police Department would review the Project's site plans to ensure that design measures are incorporated appropriately to provide a safe environment, and no new police facilities are required.

Due to the redevelopment nature of the Project site that is within an area that is already served, the increase would not be significant when compared to the current demand levels. Law enforcement personnel are anticipated to be able to respond in a timely manner to emergency calls from the Project site and the Project would be adequately served by police services.

School Services: The Project site is in the Westminster School District that provides K-8 public school services. The following schools identified by the Westminster School District website school locator would serve the site:

- Meairs Elementary School, at 8441 Trask Avenue, Garden Grove
- Warner Middle School, at 14171 Newland Street, Westminster

High School services are provided by the Huntington Beach Union High School District. The School District website school locator identified that the Westminster High School located at 14325 Goldenwest Street Westminster would serve the site.

Development of the Project would generate a new student population on the Project site, who would generally (unless homeschooled or attending a private school) attend one of the three schools listed above. This would generate additional students to be served at local public schools. However, the need for additional school facilities is addressed through compliance with school impact fee assessment SB 50 (Chapter 407 of Statutes of 1998). SB 50 sets forth a state school facilities construction program, in which school districts (including the Westminster School District and the Huntington Beach Union High School District) collect fees at the time of issuance of building permits for development projects. The existing development impact fee for both school districts is $5.17 per square foot for all new residential development. In addition, pursuant to Government Code Section 65995 payment of the school impact fees provides full and complete mitigation of school impacts. As a result, impacts related to school facilities from the increase in students related to the Project would be less than significant with the Government Code required fee payments, and the Project would be adequately served by school services.

Utilities Conclusion

Given the Project size and its location within an area that is currently served by utilities and the information provided above, the Project would be adequately served by all required utilities and public services. Therefore, the proposed Project meets the criteria of CEQA Guidelines Section 15332(e).

5.1 EXCEPTIONS FOR EXEMPTIONS

In addition to investigating the applicability of CEQA Guidelines Section 15332 (Class 32), this CEQA document also assesses whether any of the exceptions to qualifying for the Class 32 categorical exemption for an Infill Project are present.(CEQA Guidelines Section 15300.2)

a. Criterion 15300.2(a): Location: Classes 3, 4, 5, 6, and 11 are qualified by consideration of where the project is to be located – a project that is ordinarily insignificant in its impact on the environment may in a particularly sensitive environment be significant. Therefore, these classes are considered to apply all instances, except where the project may impact on an environmental resource of hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies.

The Project does not qualify for an exemption under Classes 3, 4, 5, 6 or 11, which are related to other types of projects such as small facilities, minor alterations of land or land use limitations, information collection, and regulatory agency actions.

The Project is located within an urban area, and as detailed previously, is not located within a sensitive environment. In addition, the Project would not result in any impacts on an environmental resource of hazardous or critical concern, as described throughout this Exemption Checklist document. Therefore, the exception under criterion 15300.2(a) is not applicable.

b. Criterion 15300.2(b): Cumulative Impact: *All exemptions for these classes are inapplicable when the cumulative impact of successive projects of the same type in the same place, over time is significant.*

The proposed Project would redevelop a site that is disturbed, has been long developed, and is already served by utilities, public services, and transportation infrastructure. Any construction effects would be temporary, confined to the Project vicinity, and based on compliance with existing applicable regulatory requirements, such as Air Quality Management District Rules and Regional Water Quality Control Board (RWQCB) regulations that are implemented and verified through the City's development permitting process, impacts would be less than significant.

As explained previously, the Project would generate a limited number of vehicular traffic trips that do not exceed the City's screening threshold. The site is located within a Transit Priority Area and a SCAQMD High Quality Transit Area, and low VMT area; and thus, potential impacts related to transportation would be less than cumulatively considerable. Similarly, the noise analysis shows the limited construction noise and vibration that would be generated over the six-month construction period that would occur within the GGMC Section 8.47.060(d) allowable construction hours as adopted at the time of construction permitting, subject to SB 330 vested rights for the Project; and that even with two distinct construction noise sources (such as those that could occur from cumulative construction noise) thresholds would not be exceeded at the closest noise sensitive receptors, and no significant cumulative impact would occur. Additionally, the Garden Grove Focused General Plan Update and Zoning Amendments Environmental Impact Report (EIR) addressed "anticipated changes to the demographic, economic and environmental conditions in Garden Grove through the year 2040."[4] The changes analyzed included a 20,242 dwelling unit and 63,818 person population increase in the City.[5] As stated in the EIR, "Individual construction projects would be spread throughout the City; however, no two projects would likely occur in close proximity contemporaneously. In addition, construction equipment would

[4] EIR, 2-1.
[5] *Id.* at 3-15.

be spread throughout a work area and may not operate concurrently in the same area of the work site at the same time."[6] The EIR found that with compliance with General Plan policies and City Municipal Code requirements, the construction noise impact of General Plan build out would be less than significant. Thus, cumulative construction noise impacts would be less than significant.

Also, the operational noise and vibration that would be generated by the Project would not be cumulatively considerable. The 13 a.m. and 17 p.m. peak hour vehicle trips generated by the Project (do not include the reduction of trips from removal of the existing onsite use) would equate to 3.5 trips per minute within the p.m. peak hour would not generate noise that could be cumulatively considerable. Further, as show previously in Table N-4, the worst case operational noise would generate 27 dBA at the closest receptor, which is far below the existing ambient noise levels of 60.0 and 62.7 dBA (detailed in Table N-1). The Project's much lower operational noise volume would not be heard above the existing ambient noise; and therefore, would result in a less than significant cumulative noise impact.

The SCAQMD's CEQA air quality methodology provides that projects that result in daily emissions that exceed any of the thresholds would have both an individually (project-level) and cumulatively significant air quality impact. As evaluated previously in Tables AQ-1 through AQ-3, the proposed Project would not exceed the SCAQMD's applicable thresholds. Therefore, the Project's operational emissions would not exceed the NAAQS and CAAQS, would not result in a cumulatively considerable net increase of any criteria pollutant impacts. Also, as detailed in Table AQ-4, construction related health risks were far below the threshold for both cancer and non-cancer health risks and would have a limited ability to be cumulatively considerable. Further, there are no cumulative projects within 1,000-foot radius of the Project that would substantially generate TACs during the Project's six-month construction period. Thus, the Project would have a less than significant cumulative impact.

The Project would develop the site consistent with the City's land use plan and would implement the City's General Plan, which assumes that "Densities above the maximum-stated densities may be permitted pursuant to the State Density Bonus law" (General Plan Land Use Element Page 2-25). Likewise, the City's Housing Element anticipates the redevelopment of R-3 zoned site for higher density residential and application of density bonuses, which is consistent with the proposed Project. Further, as detailed herein, the proposed Project would not result in any potentially significant impacts that have the potential to cumulatively combine. No potential cumulative impacts would result from the Project. Therefore, the exception under CEQA Guidelines Section 15300.2 (b) does not apply to the Project.

c. Criterion 15300.2(c): Significant Effects: 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.*

There are no known unusual circumstances that are applicable to the Project, and which may result in a significant effect on the environment. The proposed Project consists of the redevelopment of the site that was previously used for office and educational uses within a developed area within a developed area that contains other multi-family residential uses and that is served by utilities and multiple forms of transportation. There is nothing unusual about the Project site or the proposed Project. The Project site would be consistent with the City's General Plan land use and the Zoning Code requirements with implementation of density bonus concessions and waivers. Implementation of the proposed Project would not introduce a new activity to the area that could result in a significant effect on the environment. Therefore, the exception under CEQA

[6] *Id.* at 4.10-28.

Guidelines Section 15300.2(c) does not apply to the Project. Additionally, the Project does not have any significant impacts.

d. Criterion 15300.2(d): Scenic Highways: *A categorical exemption shall not be used for a project which may result in damage to scenic resources, including but not limited to, trees, historic buildings, rock outcroppings, or similar resources, within a highway officially designated as a state scenic highway. This does not apply to improvements which are required as mitigation by an adopted negative declaration or certified EIR.*

The California Department of Transportation's (Caltrans) Landscape Architecture Program administers the Scenic Highway Program contained in the Streets and Highways Code, Sections 260–263. State Highways are classified as either Officially Listed or Eligible. There are no officially designated state scenic highways in the City or in vicinity of the Project (Caltrans 2023). The closest State-designated scenic highway is a portion of State Route 91 (SR-91), which is located approximately 15 miles northeast of the Project site. Therefore, the proposed Project does not have the potential to damage resources within a State-designated scenic highway. Therefore, the exception under CEQA Guidelines Section 15300.2(d) does not apply to the Project.

e. Criterion 15300.2(e): 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.*

A Phase I Environmental Site Assessment (Appendix H) was prepared for the Project site that included a search of government databases that did not identify the Project site on any list of hazardous material sites. In addition, a survey of the site was completed, which did not identify any hazardous materials or evidence of previous release of hazardous materials on the site.

The Project site is a vacant undeveloped site that does not contain any identified hazardous waste. A review of the California Department of Toxic Substances Control EnviroStor databaseshows that the Project site and adjacent areas do not contain hazardous waste sites and are not on any list complied pursuant to Section 65962.5 of the Government Code. In addition, the Phase I Environmental Site Assessment conducted a search to identify if there are any hazardous material uses in the Project vicinity that could adversely affect the Project site, which did not identify an impact to the site. Therefore, the proposed Project would not be located on a list of hazardous waste site, and the exception under CEQA Guidelines Section 15300.2(e) does not apply to the Project.

f. Criterion 15300.2(f): Historical Resources: *A categorical exemption shall not be used for a project which may cause a substantial adverse change in the significance of a historical resources.*

CEQA defines a historical resource as something that meets one or more of the following criteria: (1) listed in, or determined eligible for listing in, the California Register of Historical Resources; (2) listed in a local register of historical resources as defined in Public Resources Code (PRC) Section 5020.1(k); (3) identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); or (4) determined to be a historical resource by a project's Lead Agency (PRC Section 21084.1 and CEQA Guidelines Section 15064.5[a]).

The California Register defines a "historical resource" as a resource that meets one or more of the following criteria: (1) associated with events that have made a significant contribution to the broad patterns or local or regional history of the cultural heritage of California or the United States; (2) associated with the lives of persons important to local, California, or national history; (3) embodies the distinctive characteristics of a type, period, region, or method of construction or represents the work of a master or possesses high artistic values; or (4)

has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California, or the nation.

The Phase I Environmental Site Assessment (Appendix G) evaluated the historic records searches for the Project site, which showed that the site was vacant land, prior to being occupied by two sheds and/or residential-type buildings during the 1940s. The site appeared to be vacant land again in aerial photographs from the years 1953 and 1963.

The existing building could be seen in an aerial view of the site from the year 1972. The site appeared to have remained generally unchanged in more-recent aerial photographs. Telephone directories evaluated as part of the Phase I Environmental Site Assessment (Appendix H) showed the site had been occupied by a private party and a staffing business in 1970, and a series of banks from 1975 through 1990. The site was occupied by a church-based school operated by the Gospel First Korean Baptist Foundation from the mid-1990s through 2023.

Record searches identify that there have been various uses of the existing building over the years; however, none is identified as being associated with events that have made a significant contribution to history. Likewise, the Project site is not strongly associated with the development of the region or with the founding of the City. Therefore, the site is not strongly associated with events that have made a significant contribution to the broad patterns of national or state history or with significant persons from the past.

The onsite building is of common design from the period in which it was constructed, and consists of brick walls, a pitched tile roof, and wrought iron fencing and window bars, with rooftop mechanical equipment that does not yield information important to history of prehistory. As a result, the building is not eligible for listing in the National Register of Historic Places (NR) or California Register of Historic Resources (CR) at any level, or for local designation. As such, the existing building onsite does not meet the CEQA criteria for a historic resource and the Project would not result in impacts to historic resources. The exception under CEQA Guidelines Section 15300.2(e) does not apply to the Project.

Additionally, the Project site is located adjacent to modern commercial, residential, and church buildings, that have not been identified as historic or are strongly associated with events that have made a significant contribution to the broad patterns of national or state history or with significant persons from the past. The adjacent areas do not contain historic resources or yield information important to history of prehistory. As a result, the Project would not result in impacts to historic resources; and this exception under CEQA Guidelines Section 15300.2(e) does not apply to the Project.

Conclusion

On the basis of the evidence provided above, the Project is eligible for a Class 32 Categorical Exemption in accordance with Section 15332, Infill Development Projects, of the CEQA Guidelines. Because the proposed Project meets the criteria for categorically exempt infill development projects listed in CEQA Guidelines Section 15332 and it would not have a significant effect on the environment, this analysis finds that a Notice of Exemption may be prepared for the Project.

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Westminster School District Website: https://www.wsdk8.us/

Appendix A: LOS Screening Analysis

E | P | D SOLUTIONS, INC

WHERE EXPERIENCE AND PASSION MEET

To:	City of Garden Grove
From:	Maryam Javanmardi, Chad Karns, EPD Solutions Inc
Date:	5/28/2025
Site:	Coast Street, Garden Grove-EPD#24-073
Subject:	Level of Service (LOS) Screening Analysis

This technical memorandum provides an evaluation of the proposed residential project (the Project) located at 13040 Coast Street in the southwestern portion of the City of Garden Grove. The site is located along the east side of Coast Street, just south of the intersection with Garden Grove Boulevard. Regional access to the site is provided by State Route 22 (SR-22) and the Beach Boulevard interchange, which provides direct access to Garden Grove Boulevard that intersects Coast Street approximately 0.15 miles to the east.

The purpose of this analysis is to determine if a Traffic Impact Analysis (TIA) would be required for the Project.

The 0.54-acre Project site is currently developed with a vacant 3,252 square foot building that was constructed in 1967 and previously used by the Gospel First Korean Baptist Church, located across Coast Street from the Project site (on the corner of Coast Street and Garden Grove Boulevard), has relocated. The Project site building previously was used by the church as a school, pre-school, and location for meetings.

The Project proposes to remove the existing building and related improvements and infrastructure and redevelop the site with 34 new residential units for rent within one building. The building will have one level of parking and four levels of one- and two-bedroom residences. The Project also includes a community room, onsite landscaped areas, and a private deck. The parking area will be accessed from a proposed driveway along Coast Street. The Project results in a density of 67.88 units per net acre, which is within the allowable density with application of density bonuses for provision of three Very-Low Income Affordable Units and three Moderate Income Affordable Units.

The Project site plan is shown in Figure 1. This memo evaluates the Project using the City of Garden Grove Traffic Impact Analysis (TIA) Guidelines for Vehicles Miles Traveled and Level of Service Assessment (May 2020).

Project Trip Generation

The Project trip generation was prepared using trip rates from the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 11th Edition (2021). The proposed use was analyzed using Multifamily Housing (Low-Rise) (ITE Land Use Code 220). Table 1 presents the trip generation estimate for the Project. As shown in Table 1, the Project is anticipated to generate 229 daily vehicle trips, 13 AM and 17 PM peak hour vehicle trips.

Level of Service Screening

As detailed in the 'Introduction' Section (page 8) of the City's TIA Guidelines for Vehicles Miles Traveled and Level of Service Assessment, a TIA that includes a Level of Service (LOS) analysis is not required for projects

that generate less than 50 vehicle trips during either the AM or PM peak hour. As shown in Table 1, the project is anticipated to generate 13 AM peak hour trips and 17 PM peak hour trips. Therefore, the proposed project would not generate 50 or more vehicle trips during the peak hour. A TIA that includes an LOS analysis is not required.

TIA Screening Results

The Project was evaluated using the City's TIA Guidelines for Level of Service Assessment to determine if the project would require a TIA LOS analysis (for non-CEQA purposes). The Project generates 229 daily vehicle trips, 13 AM and 17 PM peak hour vehicle trips, which is less than the 50 peak hour trip screening threshold. Therefore, the Project would not result in a 50 peak hour increase in trips from the site and does not require preparation of a TIA LOS analysis.

Figure 1: Project Site Plan

PROJECT SUMMARY

PROJECT SITE INFORMATION

APN#	ADDRESS	ZONING	LAND USE	NET LOT AREA (SF)	NET LOT AREA (ACRE)	GROSS LOT AREA (SF)	GROSS LOT AREA (ACRE)
097-011-03	13040 COAST STREET, GARDEN GROVE	R-3	MEDIUM DENSITY RESIDENTIAL	21,829.0 SF	.50 ACRES	23,508 SF	.54 ACRES

PROJECT CONSTRUCTION TYPE: 513-R FULLY SPRINKLERED 4 STORY TYPE V-A OVER 1 STORY TYPE I (PARKING / R-2 RESIDENTIAL) - 5 STORY TOTAL

	REQUIRED SETBACK	REQUIRED STEPBACKS			PROPOSED SETBACK	PROPOSED STEPBACKS	NOTES
	1ST AND 2ND FLOOR	3RD FLOOR	4TH FLOOR	5TH FLOOR	1ST & 2ND FLOOR	3RD TO 5TH FLOOR	G.G.M.C. 9.12.040.020 General Development Standards
FRONT	20'-0" MIN.	23'-0" MIN.	23'-0" MIN.	23'-0" MIN.	6'-0"	6'-0"	WAIVER REQUESTED
SIDE	10'-0" MIN.	15'-0" MIN.	15'-0" MIN.	15'-0" MIN.	10'-0"	10'-0"	WAIVER REQUESTED
STREET SIDE (ALLEY)	10'-0" MIN.	15'-0" MIN.	15'-0" MIN.	15'-0" MIN.	10'-0"	15'-0"	
REAR	10'-0" MIN.	15'-0" MIN.	15'-0" MIN.	15'-0" MIN.	10'-0"	10'-0"	WAIVER REQUESTED

DENSITY

32 DU/AC	18 DU	BASE DENSITY (32 DU/AC) =	18 DU	G.G.M.C. 9.12.040.020 General Development Standards
88.75% DENSITY INCREASE WITH STATE DENSITY LAW		67 DU / NET AC =	34 DU	
		TOTAL (64 DU/AC) =	34 DU	DENSITY BONUS / STACKED DENSITY

FLOOR AREA RATIO: 1.81

FLOOR AREA: TOTAL NET FLOOR AREA = 42,594 SF

BUILDING HEIGHT

3 STORY / 35'-0" ALLOWED	5 STORY / 55'-6" TOP OF ROOF STRUCTURE		G.G.M.C. 9.12.040.020 General Development Standards

LOT COVERAGE

LOT COVERAGE AREA	BUILDING FOOTPRINT =	11,904.0 SF	54.5%	G.G.M.C. 9.12.040.020 General Development Standards
	PODIUM LEVEL HARDSCAPE AREA =	3,257 SF	15.0%	
	PODIUM LEVEL LANDSCAPED AREA =	338 SF	1.5%	
	OPEN DRIVE WAY =	2,042 SF	9.4%	
	GROUND LEVEL HARDSCAPE AREA =	2,073 SF	9.5%	
	GROUND LEVEL LANDSCAPE AREA =	2,215 SF	10.1%	
	TOTAL =	21,829.0 SF		
BUILDING LOT COVERAGE (60% MAX.)	TOTAL LOT COVERAGE AREA =	15,499.0 SF	71%	CONCESSION REQUESTED
FRONT SETBACK COVERAGE (50% MAX.)	HARDSCAPE AREA ALONG FRONT SETBACK	337 SF /780 SF	43%	
TOTAL LANDSCAPE / OUTDOOR AREA	PODIUM LEVEL LANDSCAPED AREA =	338 SF	2%	12% MINIMUM LANDSCAPE AREA REQUIRED
	GROUND LEVEL LANDSCAPE AREA =	2,215 SF	10%	

UNIT SUMMARY

PLAN	DESCRIPTION		QUANTITY	REQUIRED MIN. AREA		PROPOSED MIN. AREA	AREA SUBTOTAL	DECK	TOTAL DECK
UNIT A	1 BEDROOM / 1 BATH FLAT		12 UNITS	750 SF	WAIVER	656 SF	7,872 SF	95 SF (270 SF UNIT #207)	1,398 SF
UNIT B	2 BEDROOM / 2 BATH FLAT		22 UNITS	900 SF		935 SF	20,570 SF	95 SF	2,090 SF
PROJECT UNIT TOTAL			34 UNITS				28,442 SF		3,488 SF

PARKING SUMMARY — CALCULATED PER CA STATE DENSITY BONUS LAW

REQUIRED			PROVIDED		PARKING BREAK DOWN
MINIMUM REQUIRED					STANDARD = 11 SPACES
1 BR UNIT	1.0 SPACE PER UNIT	12 SPACES	GARAGE ACCESS PARKING SPACES=	36 SPACES	* TANDEM = 11 SPACES
2 BR UNIT	1.5 SPACES PER UNIT	33 SPACES	TUCK-UNDER PARKING SPACES =	9 SPACES	STANDARD EV READY = 12 SPACES
					STANDARD EV CAPABLE = 5 SPACES
					STANDARD EV EQUIPPED= 2 SPACES
					HC EV EQUIPPED = 1 SPACES
					HC ACCESSIBLE = 3 SPACES
TOTAL =		45 SPACES	TOTAL =	45 SPACES	TOTAL = 45 SPACES

* TANDEM PARKING PROPOSED PER STATE DENSITY BONUS CAL GOV CODE SECTION 65915 (p) (4)

BUILDING SUMMARY

	RESIDENTIAL / COMM. ROOM	DECK	CIRCULATIONS / LOBBY	MECHANICAL / VERTICAL CIRCULATION / GARAGE	NET BUILDING FLOOR AREA	TOTAL GROSS BUILDING FLOOR AREA
LEVEL 1			496 SF	14,892 SF	496 SF	15,388 SF
LEVEL 2	7,490 SF	665 SF	2,181 SF	1,048 SF	10,316 SF	11,364 SF
LEVEL 3	7,578 SF	855 SF	2,181 SF	921 SF	10,584 SF	11,315 SF
LEVEL 4	7,578 SF	855 SF	2,181 SF	921 SF	10,584 SF	11,315 SF
LEVEL 5	7,578 SF	855 SF	2,181 SF	921 SF	10,584 SF	11,315 SF
TOTAL	30,224 SF	3,230 SF	9,140 SF	18,703 SF	42,594 SF	61,297 SF
GARAGE				14,892 SF		

OPEN SPACE / AMMENITY SUMMARY

	REQUIRED G.G.M.U. 9.12.040.050 J Multi-Family Residential		PROPOSED	
COMMON OPEN SPACE	* 1,706 SF MIN. OUTDOOR ACTIVE OPEN SPACE REQUIRED WITH		GROUND LEVEL PASSIVE = 2,264 SF	
	4 BBQ AREA WITH SEATING, COMMUNITY GARDEN AT 68 SF, INDOOR GYM AT 250 SF		PODIUM ACTIVE / PASSIVE OPEN AREA (400 SF ACTIVE YOGA LAWN) = 3,201 SF	
	CLUBHOUSE WITH KITCHEN AT 400 SF AND BUSINESS CENTER WITH 5 STATIONS		COMMUNITY ROOM / INDOOR RECREATIONAL AREA = 1,782 SF	
	205 SF COMMON OPEN SPACE / UNIT =	6,970 SF	SUB-TOTAL = 7,247 SF	
PRIVATE OPEN SPACE				
	95 SF MIN. PRIVATE OPEN SPACE / UNIT =	3,230 SF	PRIVATE DECK = 3,488 SF	
TOTAL OPEN SPACE	300 SF COMBINED OPEN SPACE / UNIT TOTAL =	10,200 SF	TOTAL = 10,735 SF	

STORAGE — G.G.M.C. 9.12.040.050 E. Special Requirements

120 CF PER UNIT OF STORAGE SPACE (34 UNITS)	34 STORAGE SPACES AT 120 CF MIN. PROVIDED AT EVERY RESIDENTIAL FLOORS

BICYCLE SUMMARY — G.G.M.U. 9.18.140.040 (E)

	REQUIRED		PROVIDED	
BICYCLE SPACE	1 SPACE PER 10 REQUIRED PARKING SPACES (34 SPACES/10) =		BICYCLE RACK LOCATED IN GARAGE =	5 SPACES
	BICYCLE SPACE REQUIRED	5 SPACES	TOTAL PROVIDED BICYCLE SPACE =	5 SPACES

AERIAL MAP — SCALE: N.T.S.

SHEET INDEX

ARCHITECTURAL
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- SD-0.2 PROJECT INFORMATION
- SD-0.3 PROJECT NOTE
- SD-1.1 SITE PLAN
- SD-1.2 SIGHT DISTANCE DIAGRAM
- SD-1.3 LOT COVERAGE DIAGRAM
- SD-1.4 CODE ANALYSIS
- SD-2.1 GROUND LEVEL BUILDING PLAN
- SD-2.2 2ND (PODIUM) LEVEL BUILDING PLAN
- SD-2.3 3RD LEVEL BUILDING PLAN
- SD-2.4 4TH LEVEL BUILDING PLAN
- SD-2.5 5TH LEVEL BUILDING PLAN
- SD-2.6 ROOF PLAN
- SD-3.1 BUILDING SECTIONS
- SD-3.2 BUILDING ELEVATIONS
- SD-3.3 BUILDING ELEVATIONS
- SD-4.1 UNIT PLANS
- SD-4.2 CONCEPTUAL OPEN SPACE PLAN
- SD-4.3 OPEN SPACE DIAGRAM
- SD-5.1 MATERIAL BOARD

CIVIL
- PRELIM GRADING PLAN
- PRELIM DETAILS
- TOPOGRAPHIC SURVEY

LANDSCAPE
- L1.0 GROUND LEVEL LANDSCAPE
- L1.1 PODIUM LEVEL LANDSCAPE

FIRE
- F-1 PRELIMINARY FIRE ACCESS PLAN

REQUESTED INCENTIVES AND WAIVERS

CONCESSIONS / WAIVERS
- BUILDING HEIGHT GREATER THAN 35'-0"
- BUILDING STORIES GREATER THAN 3
- LOT COVERAGE MORE THAN 59%
- FRONT YARD SETBACK REDUCTION
- FRONT YARD STEP BACK REDUCTIONS
- SIDE YARD STEP BACK REDUCTIONS (NORTH)
- REAR YARD STEP BACK REDUCTIONS
- REDUCE MINIMUM AREA FOR 1 BEDROOM UNITS

PROPOSED UNITS
- 3 VERY LOW INCOME UNITS
- 3 MODERATE INCOME UNITS
- 28 MARKET RATE UNITS

COAST STREET APARTMENTS
APPLICANT:

13040 COAST ST., GARDEN GROVE, CA. 92844

PROJECT INFORMATION

BSB DESIGN
970 West 190th Street Suite 250
Torrance, CA 90502
t.310.217.8885 f.310.217.9425

May 14, 2025

SD-0.2

BSB DESIGN

Table 1: Project Trip Generation

				AM Peak Hour			PM Peak Hour		
Land Use		**Units**	**Daily**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Project Trip Rate									
Multifamily Housing (Low-Rise)[1]		DU	6.74	0.10	0.30	0.40	0.32	0.19	0.51
Proposed Project Trip Generation									
Multifamily Housing (Low-Rise) [1]	34	DU	229	3	10	13	11	6	17
Total Trip Generation			229	3	10	13	11	6	17

DU = Dwelling Unit

[1] Trip rates from the Institute of Transportation Engineers, *Trip Generation,11th Edition, 2021* . Land Use Code 220- Multifamily Housing (Low-Rise).

Appendix B: Vehicle Miles Traveled Screening Analysis

E | P | D SOLUTIONS, INC

WHERE EXPERIENCE AND PASSION MEET

To:	City of Garden Grove
From:	Maryam Javanmardi, Alex J. Garber, EPD Solutions Inc
Date:	9/4/2025
Site:	Coast Street, Garden Grove-EPD#24-073
Subject:	Vehicles Miles Traveled (VMT) Screening Analysis for 13040 Coast Street Apartments Project, EPD Project Number 24-073

This technical memorandum provides an evaluation of the proposed residential project (the Project) located at 13040 Coast Street in the southwestern portion of the City of Garden Grove. The site is located along the east side of Coast Street, just south of the intersection with Garden Grove Boulevard. Regional access to the site is provided by State Route 22 (SR-22) and the Beach Boulevard interchange, which provides direct access to Garden Grove Boulevard that intersects Coast Street approximately 0.15 miles to the east.

The purpose of this analysis is to determine if an in-depth Vehicles Miles Traveled Analysis (VMT) would be required for the Project, or whether it screens out per the City's VMT Guidelines.

The Project site encompasses 0.54 total acre and is comprised of a single parcel identified as Assessor Parcel Number (APNs) 097-011-03. The Project applicant is proposing to demolish the existing 3,252 square foot (SF) one story building previously used by a church and redevelop the site with a five story multi-family residential building inclusive of 34 dwelling units. The five-story building would have a gross floor area of 61,297 square feet (SF). The building would have a footprint of 11,904 SF and a maximum height of 65 feet, with the top of the roof at 55-feet 6-inches. Development of the site would also include landscaping, utility connections, paving of sidewalks, parking areas and drive aisles. For the purpose of this analysis, credit will not be taken from the existing use, to yield a conservative analysis. The proposed Project site is shown in Figure 1, *Project Details*, included at the end of this document.

This memo evaluates the Project using the City of Garden Grove Traffic Impact Analysis (TIA) Guidelines for Vehicles Miles Traveled and Level of Service Assessment (May 2020).

Project Trip Generation

The Project trip generation was prepared using trip rates from the Institute of Transportation Engineers (ITE) *Trip Generation Manual*, 11th Edition (2021). The proposed use was analyzed using Multifamily Housing (Low-Rise) (ITE Land Use Code 220). Table 1 presents the trip generation estimate for the Project. As shown in Table 1, the Project is anticipated to generate 229 daily vehicle trips, 13 AM and 17 PM peak hour vehicle trips.

Table 1: Project Trip Generation

				AM Peak Hour			PM Peak Hour		
Land Use		**Units**	**Daily**	**In**	**Out**	**Total**	**In**	**Out**	**Total**
Project Trip Rate									
Multifamily Housing (Low-Rise)[1]		DU	6.74	0.10	0.30	0.40	0.32	0.19	0.51
Proposed Project Trip Generation									
Multifamily Housing (Low-Rise) [1]	34	DU	229	3	10	13	11	6	17
Total Trip Generation			229	3	10	13	11	6	17

DU = Dwelling Unit

[1] Trip rates from the Institute of Transportation Engineers, *Trip Generation,11th Edition, 2021* . Land Use Code 220- Multifamily Housing (Low-Rise).

Vehicle Miles Traveled Screening

Senate Bill (SB) 743 was signed by Governor Brown in 2013 and required the Governor's Office of Planning and Research (OPR) to amend the CEQA Guidelines to provide an alternative to LOS for evaluating Transportation impacts, aiming to promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks and a diversity of land uses. In response, Section 15064.3 - Determining the Significance of Transportation Impacts, was added to the CEQA Guidelines which states that VMT is the most appropriate measure of transportation impacts and shall apply statewide beginning on July 1, 2020.

The City's TIA Guidelines 'CEQA Assessment - VMT Analysis' Section provides VMT screening thresholds to identify projects that would be considered to have a less-than significant impact on VMT and therefore could be screened from further analysis. If a project meets one of the following criteria, then the VMT impact of the project would be considered less-than significant and no further analysis of VMT would be required:

1. Transit Priority Area (TPA) Screening.
2. Low VMT Area Screening.
3. Project Type Screening.

The applicability of each criterion to the project is discussed below.

Screening Criteria 1 - Transit Priority Area Screening (TPA)[1]: According to the City's Guidelines, projects located in a TPA may be presumed to have a less than significant impact. The City guidelines also state that a project may not meet the screening threshold if the following project or location specific criteria are not met:

- Has a Floor Area Ratio (FAR) of less than 0.75;
- Includes more parking for use by residents, customers, or employees of the project than required by the jurisdiction (if the jurisdiction requires the project to supply parking);
- Is inconsistent with the applicable Sustainable Communities Strategy (as determined by the lead agency, with input from the Metropolitan Planning Organization); or
- Replaces affordable residential units with a smaller number of moderate or high-income residential units.

The Project site is located approximately 1,070 feet (0.2 miles) from Bus Stops ID 7093 and 2177, which are served by Orange County Transportation Authority (OCTA) Routes 29 and 529. These routes operate at 20-minute or better headways during weekday peak periods (6:00–9:00 a.m. and 3:00–7:00 p.m.). Based on the service frequency and proximity to transit, the Project site is within a TPA, as illustrated in Figure 2. For reference, the OCTA Twenty Minute Frequency Route Corridors map is included as an attachment.

The proposed building would have a net total floor area of 42,594 SF on the approximately 23,494 SF Project site, which would result in a FAR of 1.81, which exceeds the 0.75 threshold. The proposed Project does not include excess parking beyond what is required, as it includes a total of 45 onsite parking spaces

[1] A TPA is defined as a half-mile area around an existing major transit stop or an existing stop along a high-quality transit corridor per the definitions below:

AB 2553 - The bill would define a major transit stop for these purposes to mean a site containing an existing rail or bus rapid transit station, a ferry terminal served by either a bus or rail transit service, the intersection of 2 or more major bus routes with a frequency of service interval of 20 minutes or less during the morning and afternoon peak commute periods, or other major transit stops that are included in the applicable regional transportation plan.

for 34 residential units, which is the minimum required per State Density Bonus Government Code Section 65915(p)(4).

The Project is consistent with the SCAG Connect SoCal 2024 Regional Transportation Plan/Sustainable Communities Strategy that provides for infill and redevelopment of higher density residential uses within mixed-use areas that are served by transit (Connect SoCAL 2024 pages 116-117). Connect SoCal 2024 Policy 32 promotes the growth of origins and destinations, with a focus on future housing and population growth, in areas with existing and planned urban infrastructure that includes transit and utilities. The Project is consistent with this policy as it provides new housing and population in an urban area with infrastructure, transit, and utilities. Connect SoCal 2024 Policy 36 encourages housing development in transit-supportive and walkable areas (such as the Project area which is walkable to retail commercial uses and bus service) to create more interconnected and resilient communities. Connect SoCal 2024 Policy 42 promotes 15-minute communities as places with a mix of complementary land uses and accessible mobility options where residents can either access their most basic, day-to-day needs within a 15-minute walk, bike ride, or roll from their home or as places that result in fewer and shorter trips because of the proximity of complementary land uses, which is consistent with the complementary residential and commercial uses in the Project vicinity. Residents at the Project site would be within a 15-minute walk or bike ride to restaurants, retail, services and other complementary uses that would provide for fewer and shorter trips.

In addition, the Project provides affordable residential units on a site that was not previously used for affordable housing. Therefore, the Project meets the Transit Priority Area screening criteria, and impacts would be less than significant.

Screening Criteria 2 - Low VMT Area Screening: The City of Garden Grove Traffic Impact Analysis Guidelines for VMT and Level of Service Assessment use the Orange County Traffic Analysis Model (OCTAM) travel demand forecasting to determine if the Project is located in a low VMT generating area. Per these guidelines, projects located in Zone 1 areas can be presumed not to have a significant VMT impact and can be screened from VMT analysis.

As identified in Exhibit 4.14-5 of the Focused General Plan Update and Zoning Amendments Draft EIR (Included as Figure 3), the Project site is located within Zone 1, which has been identified as a low VMT area. The proposed residential use is not expected to substantially increase vehicle trip rates or lengths due to its consistency with existing land uses and the surrounding built environment. This conclusion is supported by the SCAG Connect SoCal 2024 Regional Transportation Plan/Sustainable Communities Strategy, which promotes higher-density residential development in transit-served, walkable urban areas, encouraging shorter and fewer vehicle trips through access to local services and transit. Based on this, the Project can be presumed to have a less than significant VMT impact and qualifies for screening under Screening Criteria 2.

Screening Criteria 3 – Project Type Screening: According to the City's Guidelines, projects which propose local serving retail (retail projects less than 50,000 square feet) or other local serving uses would have a less than significant impact on VMT. The types of projects considered local serving include K-12 schools, day care centers, local parks, student housing projects and community institutions such as libraries, fire stations, etc. The proposed Project is a residential development and would not qualify as locally serving. Therefore, Screening Criteria 3 is not met.

Summary

The Project was evaluated using the City's TIA Guidelines thresholds to determine if a VMT analysis is required. The Project site is located within a TPA and meets Screening Criteria 1. Additionally, as the site is located in a low VMT generating area (Zone 1), and the Project meets Screening Criteria 2. Therefore, the Project meets the City's VMT screening criteria and is presumed to have a less-than-significant VMT impact.

Figure 1: Project Details

PROJECT SUMMARY

PROJECT SITE INFORMATION

APN#	ADDRESS	ZONING	LAND USE	NET LOT AREA (SF)	NET LOT AREA (ACRE)	GROSS LOT AREA (SF)	GROSS LOT AREA (ACRE)
097-011-03	13040 COAST STREET, GARDEN GROVE	R-3	MEDIUM DENSITY RESIDENTIAL	21,829.0 SF	.50 ACRES	23,508 SF	.54 ACRES

PROJECT CONSTRUCTION TYPE — S13-R FULLY SPRINKLERED 4 STORY TYPE V-A OVER 1 STORY TYPE I (PARKING / R-2 RESIDENTIAL) - 5 STORY TOTAL

	REQUIRED SETBACK	REQUIRED STEPBACKS			PROPOSED SETBACK	PROPOSED STEPBACKS	NOTES
	1ST AND 2ND FLOOR	3RD FLOOR	4TH FLOOR	5TH FLOOR	1ST & 2ND FLOOR	3RD TO 5TH FLOOR	G.G.M.C. 9.12.040.020 General Development Standards
FRONT	20'-0" MIN.	20'-0" MIN.	20'-0" MIN.	20'-0" MIN.	6'-0"	6'-0"	WAIVER REQUESTED
SIDE	10'-0" MIN.	15'-0" MIN.	15'-0" MIN.	15'-0" MIN.	10'-0"	10'-0"	WAIVER REQUESTED
STREET SIDE (ALLEY)	10'-0" MIN.	10'-0" MIN.	10'-0" MIN.	10'-0" MIN.	10'-0"	10'-0"	
REAR	10'-0" MIN.	15'-0" MIN.	15'-0" MIN.	15'-0" MIN.	10'-0"	10'-0"	WAIVER REQUESTED

DENSITY

32 DU/AC	16 DU	BASE DENSITY (32 DU/AC) =	16 DU	G.G.M.C. 9.12.040.020 General Development Standards
88.75% DENSITY INCREASE WITH STATE DENSITY LAW		67 DU / NET AC =	34 DU	
		TOTAL (64 DU/AC) =	34 DU	DENSITY BONUS / STACKED DENSITY

FLOOR AREA RATIO

		1.81	

FLOOR AREA

TOTAL NET FLOOR AREA =		42,594 SF	

BUILDING HEIGHT

3 STORY / 35'-0" ALLOWED	5 STORY / 55'-6" TOP OF ROOF STRUCTURE	G.G.M.C. 9.12.040.020 General Development Standards

LOT COVERAGE

LOT COVERAGE AREA	BUILDING FOOTPRINT =	11,904.0 SF	54.5%	G.G.M.C. 9.12.040.020 General Development Standards
	PODIUM LEVEL HARDSCAPE AREA =	3,257 SF	15.0%	
	PODIUM LEVEL LANDSCAPED AREA =	338 SF	1.5%	
	OPEN DRIVE WAY =	2,042 SF	9.4%	
	GROUND LEVEL HARDSCAPE AREA =	2,073 SF	9.5%	
	GROUND LEVEL LANDSCAPE AREA =	2,215 SF	10.1%	
	TOTAL =	21,829.0 SF		
BUILDING LOT COVERAGE (60% MAX.)	TOTAL LOT COVERAGE AREA =	15,499.0 SF	71%	CONCESSION REQUESTED
FRONT SETBACK COVERAGE (50% MAX.)	HARDSCAPE AREA ALONG FRONT SETBACK	337 SF / 780 SF	43%	
TOTAL LANDSCAPE / OUTDOOR AREA	PODIUM LEVEL LANDSCAPED AREA =	338 SF	2%	15% MINIMUM LANDSCAPE AREA REQUIRED
	GROUND LEVEL LANDSCAPE AREA =	2,215 SF	10%	

UNIT SUMMARY

PLAN	DESCRIPTION	QUANTITY	REQUIRED MIN. AREA		PROPOSED MIN. AREA	AREA SUBTOTAL	DECK	TOTAL DECK
UNIT A	1 BEDROOM / 1 BATH FLAT	12 UNITS	750 SF	WAIVER	656 SF	7,872 SF	95 SF (270 SF UNIT #207)	1,398 SF
UNIT B	2 BEDROOM / 2 BATH FLAT	22 UNITS	900 SF		935 SF	20,570 SF	95 SF	2,090 SF
PROJECT UNIT TOTAL		34 UNITS				28,442 SF		3,488 SF

PARKING SUMMARY — CALCULATED PER CA STATE DENSITY BONUS LAW

REQUIRED			PROVIDED		PARKING BREAK DOWN
MINIMUM REQUIRED					STANDARD = 11 SPACES
1 BR UNIT	1.0 SPACE PER UNIT	12 SPACES	GARAGE ACCESS PARKING SPACES*	36 SPACES	* TANDEM = 11 SPACES
2 BR UNIT	1.5 SPACES PER UNIT	33 SPACES	TUCK UNDER PARKING SPACES =	9 SPACES	STANDARD EV READY = 12 SPACES
					STANDARD EV CAPABLE = 5 SPACES
					STANDARD EV EQUIPPED= 2 SPACES
					HC EV EQUIPPED = 1 SPACES
					HC ACCESSIBLE = 3 SPACES
TOTAL =	45 SPACES		TOTAL =	45 SPACES	TOTAL = 45 SPACES

* TANDEM PARKING PROPOSED PER STATE DENSITY BONUS CAL GOV CODE SECTION 65915 (p) (4)

BUILDING SUMMARY

	RESIDENTIAL / COMM. ROOM	DECK	CIRCULATIONS / LOBBY	MECHANICAL / VERTICAL CIRCULATION / GARAGE	NET BUILDING FLOOR AREA	TOTAL GROSS BUILDING FLOOR AREA
LEVEL 1			496 SF	14,892 SF	496 SF	15,388 SF
LEVEL 2	7,490 SF	865 SF	2,161 SF	1,048 SF	10,318 SF	11,364 SF
LEVEL 3	7,578 SF	855 SF	2,161 SF	921 SF	10,594 SF	11,515 SF
LEVEL 4	7,578 SF	855 SF	2,161 SF	921 SF	10,594 SF	11,515 SF
LEVEL 5	7,578 SF	855 SF	2,161 SF	921 SF	10,594 SF	11,515 SF
TOTAL	30,224 SF	3,230 SF	9,140 SF	18,703 SF	42,594 SF	61,297 SF
GARAGE				14,892 SF		

OPEN SPACE / AMMENITY SUMMARY

	REQUIRED	PROPOSED
	G.G.M.U. 9.12.040.090 J Multi-Family Residential	
COMMON OPEN SPACE	* 1,706 SF MIN. OUTDOOR ACTIVE OPEN SPACE REQUIRED WITH	GROUND LEVEL PASSIVE = 2,264 SF
	4 BBQ AREA WITH SEATING, COMMUNITY GARDEN AT 66 SF, INDOOR GYM AT 250 SF	PODIUM ACTIVE / PASSIVE OPEN AREA (400 SF ACTIVE YOGA LAWN) = 3,201 SF
	CLUBHOUSE WITH KITCHEN AT 406 SF AND BUSINESS CENTER WITH 5 STATIONS	COMMUNITY ROOM / INDOOR RECREATIONAL AREA = 1,782 SF
	205 SF COMMON OPEN SPACE / UNIT = 6,970 SF	SUB-TOTAL = 7,247 SF
PRIVATE OPEN SPACE		
	95 SF MIN. PRIVATE OPEN SPACE / UNIT = 3,230 SF	PRIVATE DECK = 3,488 SF
TOTAL OPEN SPACE	300 SF COMBINED OPEN SPACE / UNIT TOTAL = 10,200 SF	TOTAL = 10,735 SF

STORAGE — G.G.M.C. 9.12.040.050 E. Special Requirements

120 CF PER UNIT OF STORAGE SPACE (34 UNITS)	34 STORAGE SPACES AT 120 CF MIN. PROVIDED AT EVERY RESIDENTIAL FLOORS

BICYCLE SUMMARY — G.G.M.U. 9.18.140.040 (E)

	REQUIRED	PROVIDED	
BICYCLE SPACE	1 SPACE PER 10 REQUIRED PARKING SPACES (34 SPACES/10) =	BICYCLE RACK LOCATED IN GARAGE =	5 SPACES
	BICYCLE SPACE REQUIRED 5 SPACES	TOTAL PROVIDED BICYCLE SPACE =	5 SPACES

AERIAL MAP — SCALE: N.T.S.

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ARCHITECTURAL
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SD-0.2 PROJECT INFORMATION
SD-0.3 PROJECT NOTE

SD-1.1 SITE PLAN
SD-1.2 SIGHT DISTANCE DIAGRAM
SD-1.3 LOT COVERAGE DIAGRAM
SD-1.4 CODE ANALYSIS

SD-2.1 GROUND LEVEL BUILDING PLAN
SD-2.2 2ND (PODIUM) LEVEL BUILDING PLAN
SD-2.3 3RD LEVEL BUILDING PLAN
SD-2.4 4TH LEVEL BUILDING PLAN
SD-2.5 5TH LEVEL BUILDING PLAN
SD-2.6 ROOF PLAN

SD-3.1 BUILDING SECTIONS
SD-3.2 BUILDING ELEVATIONS
SD-3.3 BUILDING ELEVATIONS

SD-4.1 UNIT PLANS
SD-4.2 CONCEPTUAL OPEN SPACE PLAN
SD-4.3 OPEN SPACE DIAGRAM
SD-5.1 MATERIAL BOARD

CIVIL
PRELIM GRADING PLAN
PRELIM DETAILS
TOPOGRAPHIC SURVEY

LANDSCAPE
L1.0 GROUND LEVEL LANDSCAPE
L1.1 PODIUM LEVEL LANDSCAPE

FIRE
F-1 PRELIMINARY FIRE ACCESS PLAN

REQUESTED INCENTIVES AND WAIVERS

CONCESSIONS / WAIVERS
- BUILDING HEIGHT GREATER THAN 35'-0"
- BUILDING STORIES GREATER THAN 3
- LOT COVERAGE MORE THAN 50%
- FRONT YARD SETBACK REDUCTION
- FRONT YARD STEP BACK REDUCTIONS
- SIDE YARD STEP BACK REDUCTIONS (NORTH)
- REAR YARD STEP BACK REDUCTIONS
- REDUCE MINIMUM AREA FOR 1 BEDROOM UNITS

PROPOSED UNITS
- 3 VERY LOW INCOME UNITS
- 3 MODERATE INCOME UNITS
- 28 MARKET RATE UNITS

COAST STREET APARTMENTS
APPLICANT:

13040 COAST ST., GARDEN GROVE, CA. 92844

PROJECT INFORMATION

BSB DESIGN
970 West 190th Street Suite 250
Torrance, CA 90502
t 310. 217. 8885 f 310. 217. 0425

May 14, 2025
SD-0.2

BSB DESIGN

Figure 2: TPA Area Screening

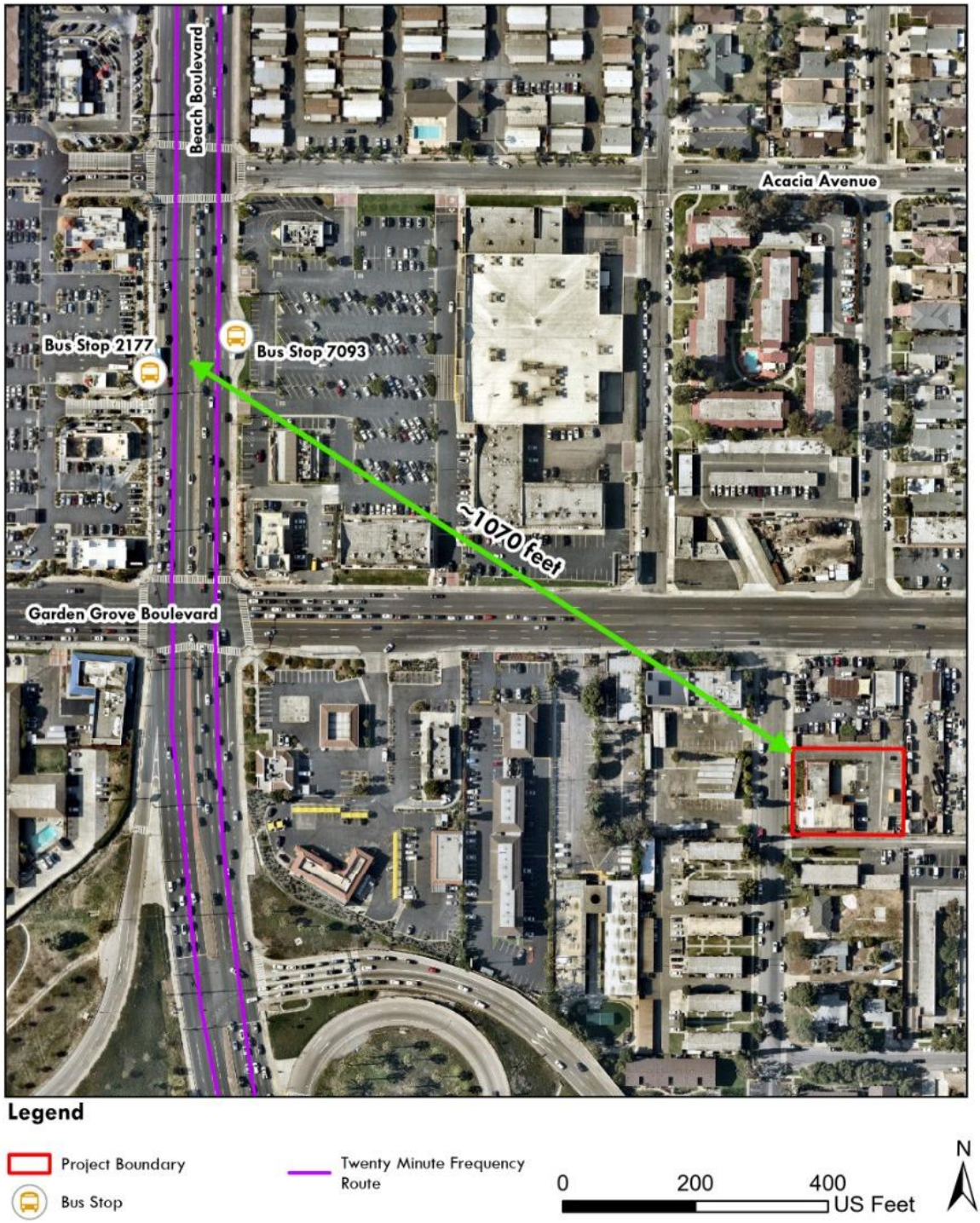
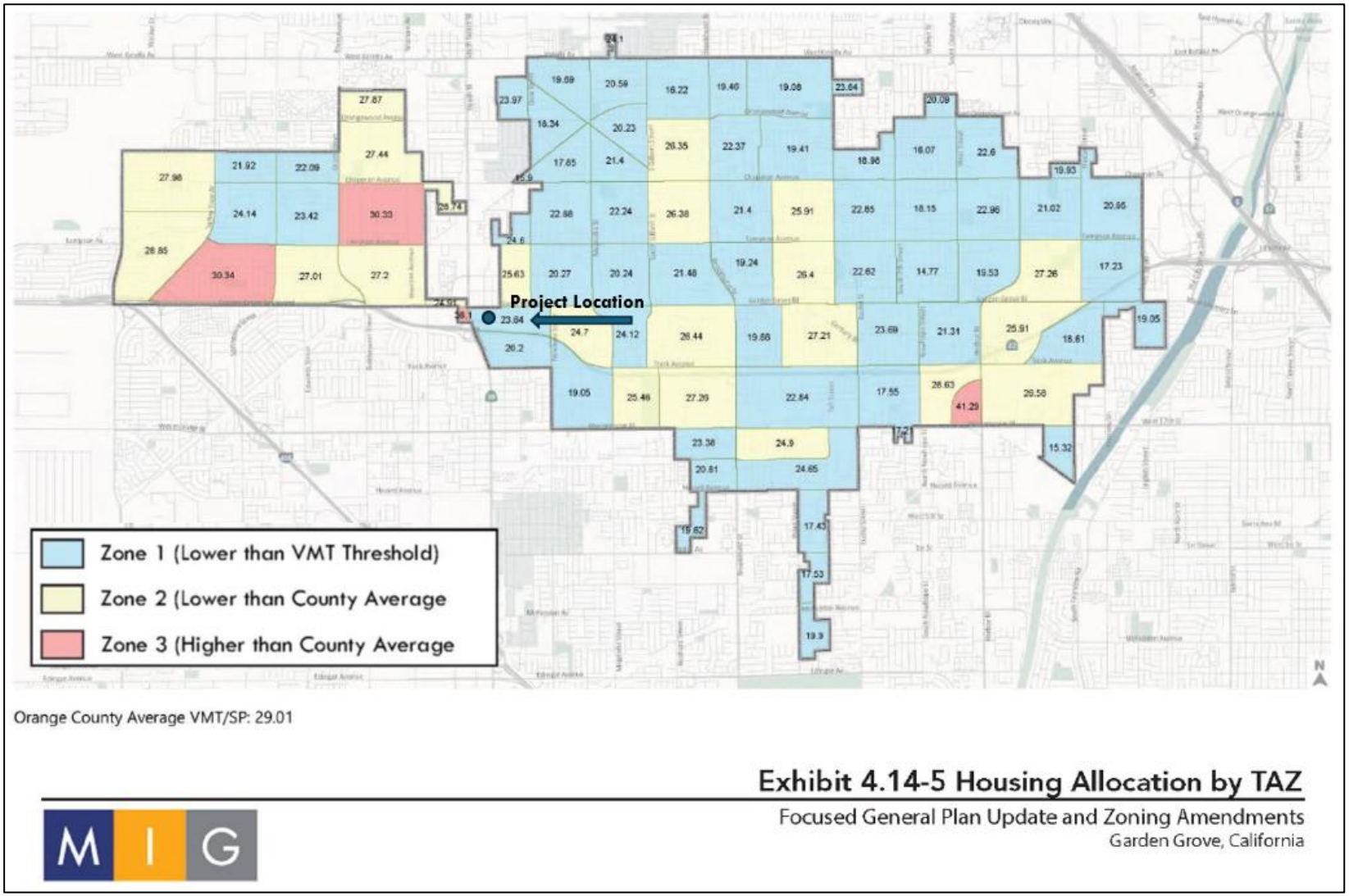
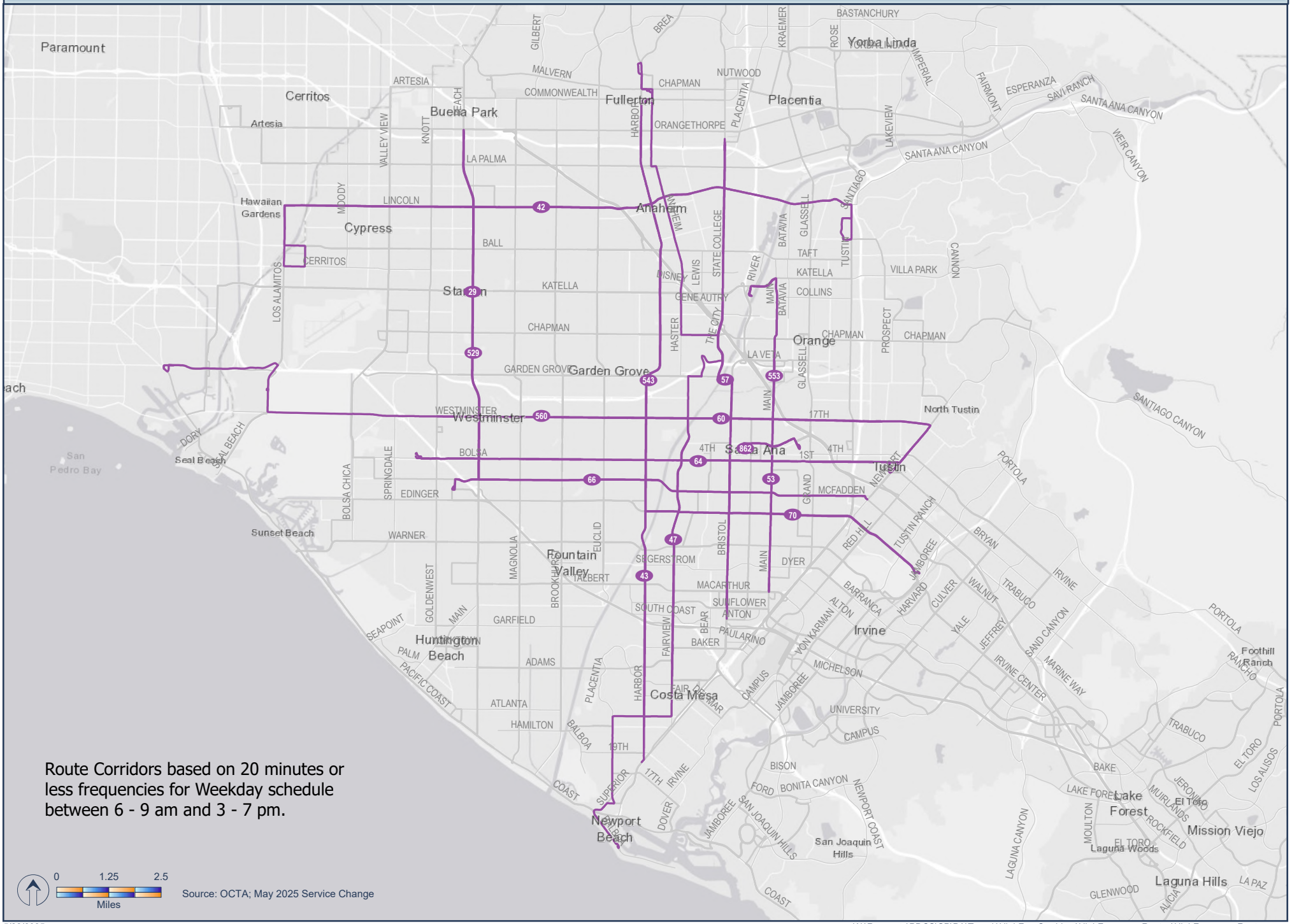


Figure 3: Low VMT Area Screening



Attachment- OCTA Twenty Minute Frequency Route Corridors

Twenty Minute Frequency Route Corridors



Route Corridors based on 20 minutes or less frequencies for Weekday schedule between 6 - 9 am and 3 - 7 pm.

Appendix C: Noise Impact Analysis

NOISE IMPACT ANALYSIS

13040 COAST STREET APARTMENTS PROJECT

CITY OF GARDEN GROVE

Lead Agency:

City of Garden Grove
11222 Acacia Parkway
Garden Grove, CA 92840

Prepared by:

Vista Environmental
1021 Didrickson Way
Laguna Beach, CA 92651
949 510 5355
Greg Tonkovich, INCE

Project No. 24044

August 7, 2025

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ACRONYMS AND ABBREVIATIONS

ANSI	American National Standards Institute
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
City	City of Garden Grove
cmu	concrete masonry unit
CNEL	Community Noise Equivalent Level
dB	Decibel
dBA	A-weighted decibels
DOT	Department of Transportation
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
EPA	Environmental Protection Agency
Hz	Hertz
Ldn	Day-night average noise level
Leq	Equivalent sound level
Lmax	Maximum noise level
OSHA	Occupational Safety and Health Administration
PPV	Peak particle velocity
RMS	Root mean square
SEL	Single Event Level or Sound Exposure Level
STC	Sound Transmission Class
VdB	Vibration velocity level in decibels

1.0 INTRODUCTION

1.1 Purpose of Analysis and Study Objectives

This Noise Impact Analysis has been prepared to determine the potential noise impacts associated with the proposed 13040 Coast Street Apartments project (proposed project). The following is provided in this report:

- A description of the study area and the proposed project;
- Information regarding the fundamentals of noise;
- Information regarding the fundamentals of vibration;
- A description of the local noise guidelines and standards;
- An evaluation of the current noise environment;
- An analysis of the potential short-term construction-related noise and vibration impacts from the proposed project; and
- An analysis of long-term operations-related noise and vibration impacts from the proposed project.

1.2 Site Location and Study Area

The project site is located at 13040 Coast Street in the southwestern portion of the City of Garden Grove (City). The approximately 0.54-acre project site is currently developed with a 3,252 square foot building that was previously used as a preschool, school, a meeting location for a church, and a surface parking lot. The project site is bounded by commercial uses to the north and east, a public alley and residential apartments to the south, and Coast Street followed by residences and a parking lot to the west. The project study area is shown in Figure 1.

Sensitive Receptors in Project Vicinity

The nearest sensitive receptors to the project site are a row of 5 attached homes located 48 to 50 feet south of the project site. The nearest school is Earnest O Lawrence Elementary School that is located approximately 0.4 mile north of the project site.

1.3 Proposed Project Description

The proposed project would consist of the demolition of the existing 3,252 square foot one story building previously used by a church and development of a five-story apartment building with 34 new residential units on the top four floors, and the ground level will be utilized as a parking area with vehicle access on the west and south sides of the structure. The five-story building would have a gross floor area of 61,297 square feet. The building would have a footprint of 11,904 SF and a maximum height of 65 feet, with the top of the roof at 55-feet 6-inches. Development of the site would also include landscaping, utility connections, paving of sidewalks, parking areas and drive aisles. All of the air conditioning condensing units will be located near the center of the roof on top of a vibration isolation pad. The Project includes the removal of the existing walls along the north and east sides of the site that would be replaced with 8-foot-high concrete masonry unit (CMU) walls. The first 20 feet from the eastern property line would be a 3-foot-high tubular steel fence. The proposed site plan is shown in Figure 2.

1.4 Executive Summary

Standard Noise Regulatory Conditions

The proposed project will be required to comply with the following regulatory conditions from the City and State of California (State).

City of Garden Grove Noise Regulations

The following lists the noise and vibration regulations from the *Garden Grove, California Municipal Code,* December, 2022.

- Section 8.47.040 – Operational Noise Levels; and
- Section 8.47.060(D) – Construction Noise Limits.

State of California Noise Regulations

The following lists the State of California noise regulations that are applicable, but not limited to the proposed project.

- California Vehicle Code Section 27200-27207 – On Road Vehicle Noise Limits
- California Vehicle Code Section 38365-38350 – Off-Road Vehicle Noise Limits

Summary of Analysis Results

The following is a summary of the proposed project's impacts with regard to the State CEQA Guidelines noise checklist questions.

Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Less than significant impact.

Generation of excessive groundborne vibration or groundborne noise levels?

Less than significant impact.

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?

Less than significant impact.

Mitigation Measures for the Proposed Project

This analysis found that the Project would result in less than significant impacts. No mitigation measures are required for the proposed project with respect to noise and vibration impacts.

SOURCE: Google Maps.

VISTA ENVIRONMENTAL

Figure 1
Project Location Map

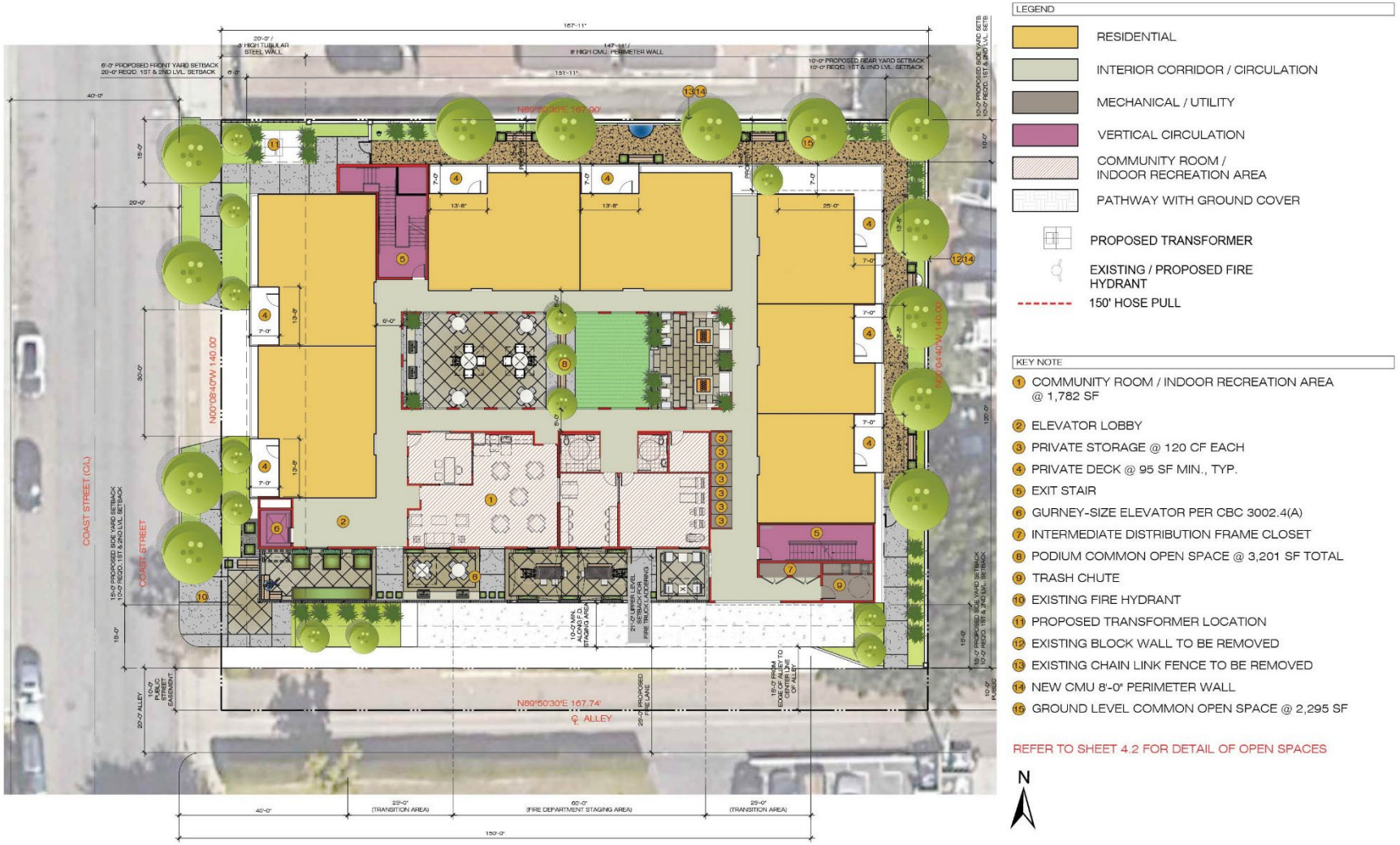


Figure 2
Proposed Site Plan

2.0 NOISE FUNDAMENTALS

Noise is 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. Sound is produced by the vibration of sound pressure waves in the air. Sound pressure levels are used to measure the intensity of sound and are described in terms of decibels. The decibel (dB) is a logarithmic unit which expresses the ratio of the sound pressure level being measured to a standard reference level. A-weighted decibels (dBA) approximate the subjective response of the human ear to a 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.

2.1 Noise Descriptors

Noise 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 (Leq) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. The worst-hour traffic Leq is the noise metric used by California Department of Transportation (Caltrans) for all traffic noise impact analyses.

The Day-Night Average Level (Ldn) is the weighted average of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The time of day corrections require the addition of ten decibels to sound levels at night between 10 p.m. and 7 a.m. While the Community Noise Equivalent Level (CNEL) is similar to the Ldn, except that it has another addition of 4.77 decibels to sound levels during the evening hours between 7 p.m. and 10 p.m. These additions are made to the sound levels at these time periods because during the evening and nighttime hours, when compared to daytime hours, there is a decrease in the ambient noise levels, which creates an increased sensitivity to sounds. For this reason the sound appears louder in the evening and nighttime hours and is weighted accordingly. The City of Garden Grove relies on the CNEL noise standard to assess transportation-related impacts on noise sensitive land uses.

2.2 Tone Noise

A pure tone noise is a noise produced at a single frequency and laboratory tests have shown that humans are more perceptible to changes in noise levels of a pure tone. For a noise source to contain a “pure tone,” there must be a significantly higher A-weighted sound energy in a given frequency band than in the neighboring bands, thereby causing the noise source to “stand out” against other noise sources. A pure tone occurs if the sound pressure level in the one-third octave band with the tone exceeds the average of the sound pressure levels of the two contiguous one-third octave bands by:

- 5 dB for center frequencies of 500 hertz (Hz) and above
- 8 dB for center frequencies between 160 and 400 Hz
- 15 dB for center frequencies of 125 Hz or less

2.3 Noise Propagation

From the noise source to the receiver, noise changes both in level and frequency spectrum. The most obvious is the decrease in level of noise as the distance from the source increases. The manner in which the noise level reduces with distance depends on whether the source is a point or line source as well as ground absorption, atmospheric effects and refraction, and shielding by natural and manmade features.

Sound from point sources, such as air conditioning condensers, radiate uniformly outward as it travels away from the source in a spherical pattern. The noise drop-off rate associated with this geometric spreading is 6 dBA per each doubling of the distance (dBA/DD) between source and receiver. Transportation noise sources such as roadways are typically analyzed as line sources, since at any given moment the receiver may be impacted by noise from multiple vehicles at various locations along the roadway. Because of the geometry of a line source, the noise drop-off rate associated with the geometric spreading of a line source is 3 dBA/DD.

2.4 Ground Absorption

The sound drop-off rate is highly dependent on the conditions of the land between the noise source and receiver. To account for this ground-effect attenuation (absorption), two types of site conditions are commonly used in traffic noise models, soft-site and hard-site conditions. Soft-site conditions account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation. For point sources, a drop-off rate of 7.5 dBA/DD is typically observed over soft ground with landscaping, as compared with a 6.0 dBA/DD drop-off rate over hard ground such as asphalt, concrete, stone and very hard packed earth. For line sources a 4.5 dBA/DD is typically observed for soft-site conditions compared to the 3.0 dBA/DD drop-off rate for hard-site conditions. Caltrans research has shown that the use of soft-site conditions is more appropriate for the application of the Federal Highway Administration (FHWA) traffic noise prediction model used in this analysis.

3.0 GROUND-BORNE VIBRATION FUNDAMENTALS

Ground-borne vibrations consist of rapidly fluctuating motions within the ground that have an average motion of zero. The effects of ground-borne vibrations typically only cause a nuisance to people, but at extreme vibration levels damage to buildings may occur. Although ground-borne vibration can be felt outdoors, it is typically only an annoyance to people indoors where the associated effects of the shaking of a building can be notable. Ground-borne noise is an effect of ground-borne vibration and only exists indoors, since it is produced from noise radiated from the motion of the walls and floors of a room and may also consist of the rattling of windows or dishes on shelves.

3.1 Vibration Descriptors

There are several different methods that are used to quantify vibration amplitude such as the maximum instantaneous peak in the vibrations velocity, which is known as the peak particle velocity (PPV) or the root mean square (rms) amplitude of the vibration velocity. Due to the typically small amplitudes of vibrations, vibration velocity is often expressed in decibels and is denoted as (L_v) and is based on the rms velocity amplitude. A commonly used abbreviation is "VdB", which in this text, is when L_v is based on the reference quantity of 1 micro inch per second.

3.2 Vibration Perception

Typically, developed areas are continuously affected by vibration velocities of 50 VdB or lower. These continuous vibrations are not noticeable to humans whose threshold of perception is around 65 VdB. Off-site sources that may produce perceptible vibrations are usually caused by construction equipment, steel-wheeled trains, and traffic on rough roads, while smooth roads rarely produce perceptible ground-borne noise or vibration.

3.3 Vibration Propagation

The propagation of ground-borne vibration is not as simple to model as airborne noise. This is due to the fact that noise in the air travels through a relatively uniform medium, while ground-borne vibrations travel through the earth which may contain significant geological differences. There are three main types of vibration propagation; surface, compression, and shear waves. Surface waves, or Rayleigh waves, travel along the ground's surface. These waves carry most of their energy along an expanding circular wave front, similar to ripples produced by throwing a rock into a pool of water. P-waves, or compression waves, are body waves that carry their energy along an expanding spherical wave front. The particle motion in these waves is longitudinal (i.e., in a "push-pull" fashion). P-waves are analogous to airborne sound waves. S-waves, or shear waves, are also body waves that carry energy along an expanding spherical wave front. However, unlike P-waves, the particle motion is transverse or "side-to-side and perpendicular to the direction of propagation."

As vibration waves propagate from a source, the vibration energy decreases in a logarithmic nature and the vibration levels typically decrease by 6 VdB per doubling of the distance from the vibration source. As stated above, this drop-off rate can vary greatly depending on the soil but has been shown to be effective enough for screening purposes, in order to identify potential vibration impacts that may need to be studied through actual field tests.

4.0 REGULATORY SETTING

The project site is located in the City of Garden Grove. Noise regulations are addressed by various federal, state, and local government agencies. The agencies responsible for regulating noise are discussed below.

4.1 Federal Regulations

The adverse impact of noise was officially recognized by the federal government in the Noise Control Act of 1972, which serves three purposes:

- Promulgating noise emission standards for interstate commerce
- Assisting state and local abatement efforts
- Promoting noise education and research

The Federal Office of Noise Abatement and Control (ONAC) was initially tasked with implementing the Noise Control Act. However, the ONAC has since been eliminated, leaving the development of federal noise policies and programs to other federal agencies and interagency committees. For example, the Occupational Safety and Health Administration (OSHA) agency prohibits exposure of workers to excessive sound levels. The Department of Transportation (DOT) assumed a significant role in noise control through its various operating agencies. The Federal Aviation Administration (FAA) regulates noise of aircraft and airports. Surface transportation system noise is regulated by a host of agencies, including the Federal Transit Administration (FTA), which regulates transit noise, while freeways that are part of the interstate highway system are regulated by the Federal Highway Administration (FHWA). Finally, the federal government actively advocates that local jurisdictions use their land use regulatory authority to arrange new development in such a way that "noise sensitive" uses are either prohibited from being sited adjacent to a highway or, alternately that the developments are planned and constructed in such a manner that potential noise impacts are minimized.

The *Transit Noise and Vibration Impact Assessment Manual* (FTA Manual), prepared by the FTA, September 2018, is a guidance document for analyzing potential noise impacts. The FTA standards are based on extensive studies by the FTA and other governmental agencies on the human effects and reaction to noise and a summary of the FTA findings are provided below in Table A.

Table A – FTA Project Effects on Cumulative Noise Exposure

Existing Noise Exposure (dBA Leq or Ldn)	Allowable Noise Impact Exposure dBA Leq or Ldn		
	Project Only	Combined	Noise Exposure Increase
45	51	52	+7
50	53	55	+5
55	55	58	+3
60	57	62	+2
65	60	66	+1
70	64	71	+1
75	65	75	0

Source: Federal Transit Administration, 2018.

The FTA also provides guidance on construction noise and recommends developing construction noise criteria on a project-specific basis that utilizes local noise ordinances if possible. However, most local noise ordinances, including the City of Garden Grove Municipal Code, only limit the time of day when construction activities may occur and for the times when construction activities are allowed, no construction noise level limits are provided. The FTA construction noise criteria has been utilized in this analysis to determine whether the proposed project would cause any significant short-term construction impacts. The FTA standards are based on extensive studies by the FTA and other governmental agencies on the effects of noise. A summary of the FTA findings for a detailed construction noise assessment is provided below in Table B.

Table B – FTA Detailed Assessment Construction Noise Criteria

Land Use	Day (dBA $Leq_{(1\text{-hour})}$)	Night (dBA $Leq_{(1\text{-hour})}$)
Residential	80	70
Commercial	85	85
Industrial	90	90

Source: Federal Transit Administration, 2018.

4.2 State Regulations

Noise Standards

California Department of Health Services Office of Noise Control

Established in 1973, the California Department of Health Services Office of Noise Control (ONC) was instrumental in developing regularity tools to control and abate noise for use by local agencies. One significant model is the "Land Use Compatibility for Community Noise Environments Matrix," which allows the local jurisdiction to clearly delineate compatibility of sensitive uses with various incremental levels of noise.

California Noise Insulation Standards

Title 24, Chapter 1, Article 4 of the California Administrative Code (California Noise Insulation Standards) requires noise insulation in new hotels, motels, apartment houses, and dwellings (other than single-family detached housing) that provides an annual average noise level of no more than 45 dBA CNEL. When such structures are located within a 60-dBA CNEL (or greater) noise contour, an acoustical analysis is required to ensure that interior levels do not exceed the 45-dBA CNEL annual threshold. In addition, Title 21, Chapter 6, Article 1 of the California Administrative Code requires that all habitable rooms, hospitals, convalescent homes, and places of worship shall have an interior CNEL of 45 dB or less due to aircraft noise.

Government Code Section 65302

Government Code Section 65302 mandates that the legislative body of each county and city in California adopt a noise element as part of its comprehensive general plan. The local noise element must recognize the land use compatibility guidelines published by the State Department of Health Services. The guidelines rank noise land use compatibility in terms of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable.

California Vehicle Code Section 27200-27207 – On-Road Vehicle Noise

California Vehicle Code Section 27200-27207 provides noise limits for vehicles operated in California. For vehicles over 10,000 pounds noise is limited to 88 dB for vehicles manufactured before 1973, 86 dB for vehicles manufactured before 1975, 83 dB for vehicles manufactured before 1988, and 80 dB for vehicles manufactured after 1987. All measurements are based at 50 feet from the vehicle.

California Vehicle Section 38365-38380 – Off-Road Vehicle Noise

California Vehicle Code Section 38365-38380 provides noise limits for off-highway motor vehicles operated in California. 92 dBA for vehicles manufactured before 1973, 88 dBA for vehicles manufactured before 1975, 86 dBA for vehicles manufactured before 1986, and 82 dBA for vehicles manufactured after December 31, 1985. All measurements are based at 50 feet from the vehicle.

Vibration Standards

Title 14 of the California Administrative Code Section 15000 requires that all state and local agencies implement the California Environmental Quality Act (CEQA) Guidelines, which requires the analysis of exposure of persons to excessive groundborne vibration. However, no statute has been adopted by the state that quantifies the level at which excessive groundborne vibration occurs.

The City's Municipal Code does not include specific criteria for assessing vibration impacts associated with structural damage. Therefore, for the purpose of determining the significance of vibration impacts experienced at sensitive uses surrounding the project site, the guidelines within the FTA Manual (2018) have been used to determine the Project's potential vibration impacts.

The FTA Manual states that a vibration level of up to 0.20 in/sec in PPV is considered safe for non-engineered timber and masonry buildings and would not result in any construction vibration damage. Engineered concrete and masonry buildings are considered safe up to a vibration level of 0.30 in/sec PPV, and reinforced buildings are considered safe up to a vibration level of 0.50 in/sec PPV. To be conservative, the 0.20 in/sec PPV threshold has been used to evaluate potential vibration impacts at the nearest structures to the site.

The FTA Manual also provides criteria for human annoyance from vibration. Human annoyance occurs when construction vibration rises significantly above the threshold of human perception for extended periods of time, which the FTA considers to be approximately 75 VdB (velocity decibels).

4.3 Local Regulations

The City of Garden Grove General Plan and Municipal Code establishes the following applicable policies related to noise and vibration.

City of Garden Grove General Plan

The City of Garden Grove has developed its own land use compatibility standards based on recommended parameters from the California Governor's Office of Planning and Research that rate compatibility. Using the State's land use compatibility guidelines, the City has established the City's Land Use Compatibility standards that are presented in Table C.

Table C – City of Garden Grove Noise and Land Use Compatibility Matrix

Land Use Category	Community Noise Exposure (Ldn or CNEL, dBA)			
	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential – Low Density, Single-Family, Duplex, Mobile Homes	50 – 60	55 – 70	70 – 75	75 – 85
Residential – Multiple Family	50 – 65	60 – 70	70 – 75	70 – 85
Transient Lodging – Motel, Hotels	50 -65	60 – 70	70 – 80	80 - 85
Schools, Libraries, Churches, Hospitals, Nursing Homes	50 – 70	60 – 70	70 – 80	80 – 85
Auditoriums, Concert Halls, Amphitheaters	NA	50 – 70	NA	65 – 85
Sports Arenas, Outdoor Spectator Sports	NA	50 – 75	NA	70 – 85
Playgrounds, Neighborhood Parks	50 – 70	NA	67.5 – 75	72.5 – 85
Golf Courses, Riding Stables, Water Recreation, Cemeteries	50 – 70	67.5 – 77.5	75 – 85	NA
Office Buildings, Business Commercial and Professional	50 – 70	67.5 – 77.5	75 – 85	NA
Industrial, Manufacturing, Utilities, Agriculture	50 – 75	70 – 80	75 – 85	NA

Notes:
NA: Not Applicable.
Normally Acceptable – Specified land use is satisfactory, based upon the assumption that any buildings involved are of normal conventional construction, without any special noise insulation requirements.
Conditionally Acceptable – New construction or development should be undertaken only after a detailed analysis of the noise reduction requirements is made and needed noise insulation features included in the design. Conventional construction, but with closed windows and fresh air supply systems or air conditioning, will normally suffice.
Normally Unacceptable – New construction or development should be discouraged. If new construction or development does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features
Source: City of Garden Grove General Plan Table 7-1.

The City's Noise Ordinance establishes the following daytime and nighttime noise standards that are defined in Table 7-2 of the General Plan and reprinted below in Table D.

Table D – City of Garden Grove Noise Ordinance Standards

Land Use Designation		Ambient Base Noise Level	Time of Day
Sensitive Uses	Residential Use	55 dBA	7:00 AM – 10:00 PM
		50 dBA	10:00 PM – 7:00 AM
Conditionally Sensitive Uses	Institutional Use	65 dBA	Any Time
	Office-Professional Use	65 dBA	Any Time
	Hotels and Motels	65 dBA	Any Time
Non-Sensitive Uses	Commercial Uses	70 dBA	Any Time
	Commercial/Industrial Uses within 150 feet of Residential Uses	65 dBA	7:00 AM – 10:00 PM
		50 dBA	10:00 PM – 7:00 AM
	Industrial Uses	70 dBA	Any Time

Source: City of Garden Grove General Plan Table 7-2.

Applicable goals and policies from the Noise Element of the General Plan are as follows:

Goal N-1: Noise considerations must be incorporated into land use planning decisions.

N-1 Policies

Policy N-1.1. Require all new residential construction in areas with an exterior noise level greater than 55 dBA to include sound attenuation measures.

Policy N-1.2. Incorporate a noise assessment study into the environmental review process, when needed for a specific project for the purposes of identifying potential noise impacts and noise abatement procedures.

Policy N-1.3. Require noise reduction techniques in site planning, architectural design, and construction, where noise reduction is necessary consistent with the standards in Tables 7-1 and 7-2, Title 24 of the California Code of Regulations, and Section 8.47 of the Municipal Code.

Policy N-1.4 Ensure acceptable noise levels are maintained near schools, hospitals, convalescent homes, churches and other noise sensitive areas.

Goal N-2: Maximized efficiency in noise abatement efforts through clear and effective policies and ordinances.

Policy N-2.2. Fully integrate noise considerations into land use planning decisions to prevent new noise/land use conflicts.

Policy N-2.3 Incorporate noise reduction features for items such as but not limited to parking and loading areas, ingress/egress point, and refuse collection areas, during site planning to mitigate anticipated noise impacts on affected noise sensitive land uses.

City of Garden Grove Municipal Code

The City of Garden Grove Municipal Code establishes the following applicable standards related to noise.

8.47.040 Ambient Base Noise Levels

The ambient base noise levels contained in the following chart (see Table D above) shall be utilized as the basis for determining noise levels in excess of those allowed by this chapter unless the actual measured ambient noise level occurring at the same time as the noise under review is being investigated exceeds the ambient base noise level contained in the chart. When the actual measured ambient noise level exceeds the ambient base noise level, the actual measured ambient noise level shall be utilized as the basis for determining whether or not the subject noise exceeds the level allowed by this section. In situations where two adjoining properties exist within two different use designations, the most restrictive ambient base noise level will apply. This section permits any noise level that does not exceed either the ambient base noise level or the actual measured noise level by 5 dB(A), as measured at the property line of the noise generation property.

8.47.060 Special Noise Sources

D. Construction of Buildings and Projects. It shall be unlawful for any person within a residential area, or within a radius of 500 feet therefrom, to operate equipment or perform any outside construction or repair work on buildings, structures, or projects, or to operate any pile driver, power shovel, pneumatic hammer, derrick, power hoist, or any other construction type device between the hours of 10:00 p.m. of one day and 7:00 a.m. of the next day in such a manner that

a person of normal sensitiveness, as determined utilizing the criteria established in Section 8.47.050(B), is caused discomfort or annoyance unless such operations are of an emergency nature.

5.0 EXISTING NOISE CONDITIONS

To determine the existing noise levels, noise measurements have been taken in the vicinity of the project site. The field survey noted that noise within the proposed project area is generally characterized by vehicle traffic on Garden Grove Boulevard that is as near as 150 feet north of the project site and State Route 22 (SR-22) that is as near as 600 feet south of the project site. It should be noted that there is a sound wall on the north side of SR-22 and there are several rows of apartments between the freeway and project site, which limits the freeway noise at the project site. The following describes the measurement procedures, measurement locations, noise measurement results, and the modeling of the existing noise environment.

5.1 Noise Measurement Equipment

The noise measurements were taken using two Extech Model 407780 Type 2 integrating sound level meters programmed in "slow" mode to record the sound pressure level at 3-second intervals for approximately 24 hours in "A" weighted form. In addition, the L_{eq} averaged over the entire measuring time and L_{max} were recorded. The sound level meters and microphones were mounted approximately four to six feet above the ground and were equipped with a windscreen. The sound level meters were calibrated before and after the monitoring using an Extech calibrator, Model 407766. The noise level measurement equipment meets American National Standards Institute specifications for sound level meters (S1.4-1983 identified in Chapter 19.68.020.AA).

Noise Measurement Locations

The noise monitoring locations were selected in order to obtain noise levels in the vicinity of the project site. Descriptions of the noise monitoring sites are provided below in Table E and are shown in Figure 4. Appendix A includes a photo index of the study area and noise level measurement locations.

Noise Measurement Timing and Climate

The noise measurements were recorded between 11:12 a.m. on Wednesday, August 28, 2024 and 11:17 a.m. on Thursday, August 29, 2024. At the start of the noise measurements, the sky was clear (no clouds), the temperature was 77 degrees Fahrenheit, the humidity was 57 percent, barometric pressure was 29.88 inches of mercury, and the wind was blowing around two miles per hour. Overnight, the temperature dropped to 63 degrees Fahrenheit and the humidity peaked at 86 percent. At the conclusion of the noise measurements, the sky was clear, the temperature was 76 degrees Fahrenheit, the humidity was 55 percent, barometric pressure was 29.89 inches of mercury, and the wind was blowing around two miles per hour.

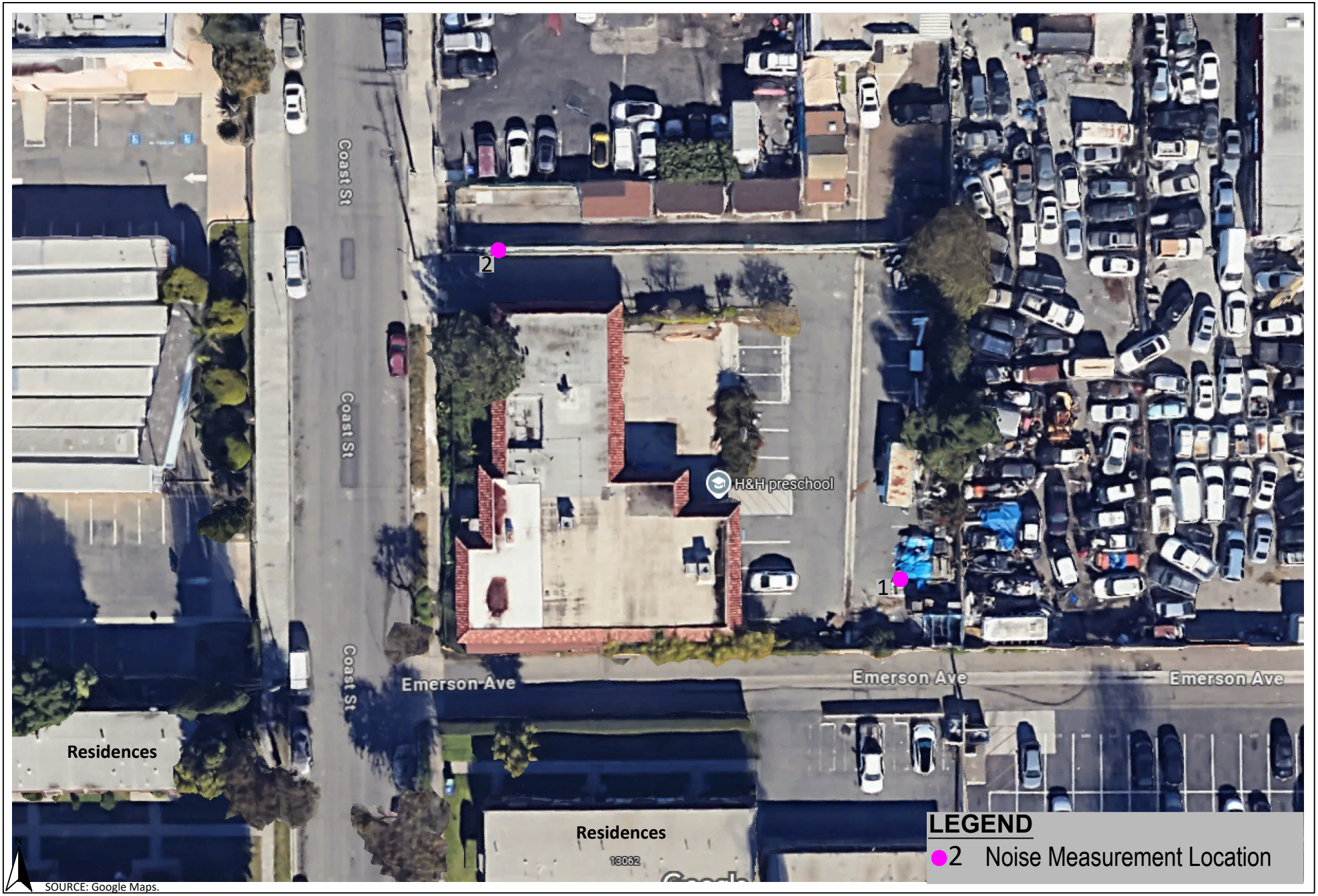
5.2 Noise Measurement Results

The results of the noise level measurements are presented in Table E. The measured sound pressure levels in dBA have been used to calculate the minimum and maximum L_{eq} averaged over 1-hour intervals. Table E also shows the L_{eq}, L_{max}, and CNEL, based on the entire measurement time. The CNEL was calculated through use of Equation 2-23 from *Technical Noise Supplement to the Traffic Noise Analysis Protocol* (TeNS), prepared by Caltrans, September 2013. The noise monitoring data printouts are included in Appendix B. Figure 5 shows a graph of the 24-hour noise measurements.

Table E – Existing (Ambient) Noise Measurement Results

Site No.	Site Description	Average (dBA L_{eq})	Maximum (dBA L_{max})	(dBA $L_{eq\ 1\text{-}hour}$/Time) Minimum	(dBA $L_{eq\ 1\text{-}hour}$/Time) Maximum	Average (dBA CNEL)
1	Located near the southeast corner of the project site, approximately 30 feet north of The public alley centerline and 20 feet west of the east property line.	56.8	85.4	42.9 2:54 a.m.	61.1 6:27 p.m.	60.0
2	Located on the north property line fence, approximately 50 feet east of Coast Street centerline.	59.0	90.1	45.4 2:42 a.m.	63.0 10:25 a.m.	62.7

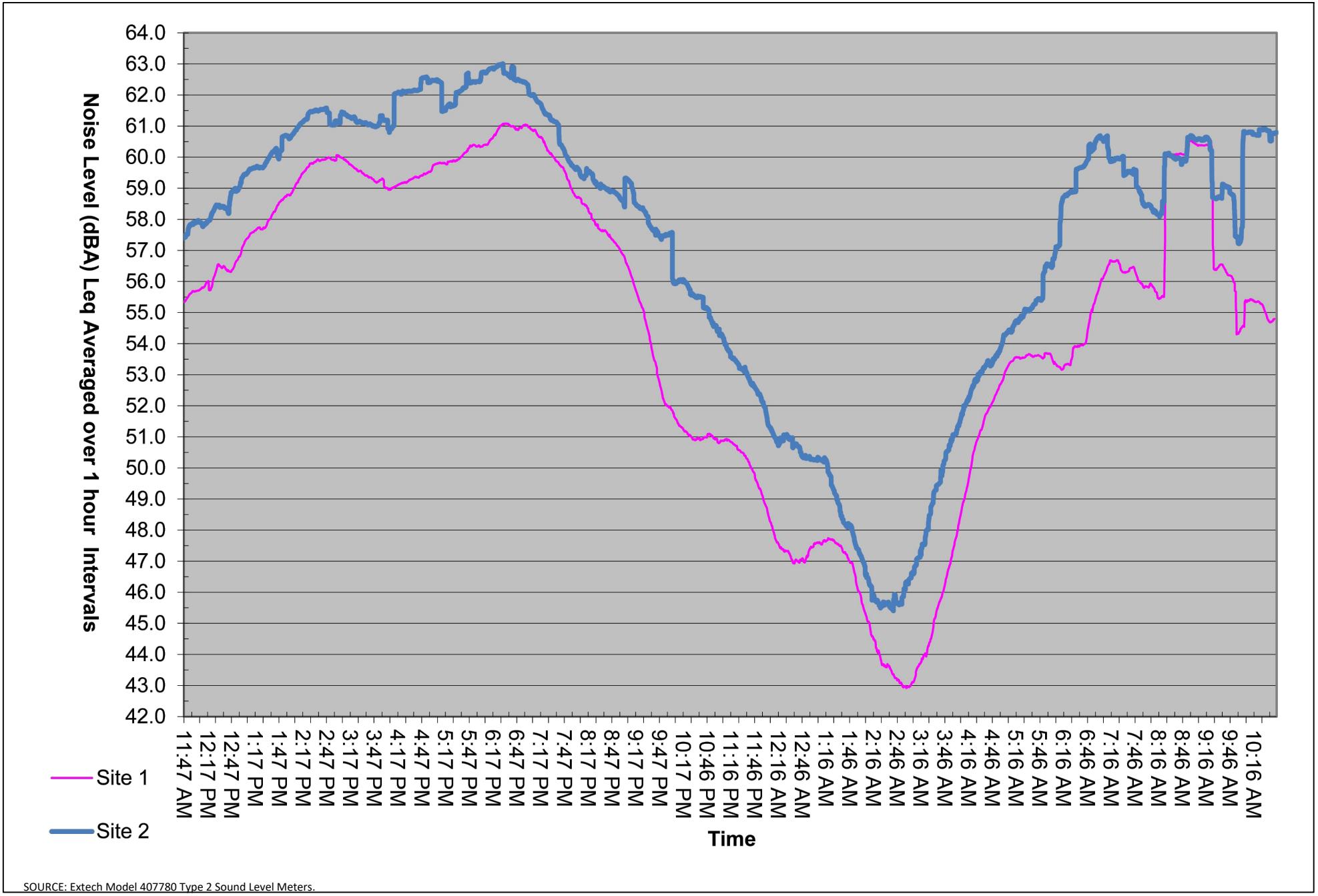
Source: Noise measurements were taken with two Extech Model 407780 Type 2 sound level meters from Wednesday, August 28, 2024 to Thursday, August 29, 2024.



SOURCE: Google Maps.

VISTA ENVIRONMENTAL

Figure 3
Field Noise Monitoring Locations



SOURCE: Extech Model 407780 Type 2 Sound Level Meters.

VISTA ENVIRONMENTAL

Figure 4
Field Noise Measurements Graph

6.0 MODELING PARAMETERS AND ASSUMPTIONS

6.1 Construction Noise

The noise impacts from construction of the proposed project have been analyzed through use of the FHWA's Roadway Construction Noise Model (RCNM). The FHWA compiled noise measurement data regarding the noise generating characteristics of several different types of construction equipment used during the Central Artery/Tunnel project in Boston. Table F below provides a list of the construction equipment anticipated to be used for each phase of construction that was obtained from the *Air Quality Impact Analysis for 13040 Coast Street Apartments Project* (Air Quality Analysis), prepared by EPD Solutions, Inc., 2025.

Table F – Construction Equipment Noise Emissions and Usage Factors

Equipment Description	Number of Equipment	Acoustical Use Factor[1] (percent)	Spec 721.560 Lmax at 50 feet[2] (dBA, slow[3])	Actual Measured Lmax at 50 feet[4] (dBA, slow[3])
Demolition				
Concrete/Industrial Saw	1	20	90	90
Rubber Tired Dozer	1	40	85	82
Front End Loader	1	40	80	79
Tractor	1	40	84	N/A
Site Preparation				
Grader	1	40	85	83
Tractor	1	40	84	N/A
Grading				
Grader	1	40	85	83
Rubber Tired Dozer	1	40	85	82
Tractor	1	40	84	N/A
Building Construction				
Crane	1	16	85	81
Forklift (Gradall)	1	40	85	83
Generator	1	50	82	81
Tractor	1	40	84	N/A
Welder	3	40	73	74
Paving				
Cement and Mortar Mixers	4	40	85	79
Paver	1	50	85	77
Rollers	1	20	85	80
Tractor	1	40	84	N/A
Architectural Coating				
Air Compressor	1	40	80	78

Notes:
[1] Acoustical use factor is the percentage of time each piece of equipment is operational during a typical workday.
[2] Spec 721.560 is the equipment noise level utilized by the RCNM program.
[3] The "slow" response averages sound levels over 1-second increments. A "fast" response averages sound levels over 0.125-second increments.
[4] Actual Measured is the average noise level measured of each piece of equipment during the Central Artery/Tunnel project in Boston, Massachusetts primarily during the 1990s.
Source: Federal Highway Administration, 2006.

Table F shows the associated measured noise emissions for each piece of equipment from the RCNM model and measured percentage of typical equipment use per day. Construction noise impacts to the nearby sensitive receptors have been calculated according to the equipment noise levels and usage factors listed in Table F and through use of the RCNM. For each phase of construction, the two noisiest pieces of construction equipment were analyzed based on being placed in the middle of the project site. This is the methodology provided in the FTA Manual is based on the rationale that mobile equipment would likely move around the entire project site in a typical workday. As such, the middle of project site would provide the acoustical average noise level created over a typical workday. The comparison of the two noisiest pieces of equipment for each phase of construction over an hour assumes that the two pieces of equipment operate continuously for an hour; which provides a more conservative analysis than the 8-hour average noise volume that is weighted based on the percentage of time each piece of equipment operates under full power, as typically determined by the FTA Detailed Assessment. As detailed in Table F, the equipment use percentage varies from 16 percent to 50 percent. The higher noise volume from the two noisiest pieces of equipment over an hour was compared to the lower noise level threshold of 80 dBA to provide a conservative analysis of potential noise impacts from construction.

The FTA Transit Noise and Vibration Assessment Manual describes that although it includes noise assessment criteria, it is not the purpose of the manual to specify standardized assessment of potential construction noise impacts, and that criteria must be developed on a project-specific basis. Therefore, this conservative methodology is appropriate for application to the proposed project. The RCNM model printouts are provided in Appendix C.

6.2 Vibration

Construction activity can result in varying degrees of ground vibration, depending on the equipment used on the site. Operation of construction equipment causes ground vibrations that spread through the ground and diminish in strength with distance. Buildings in the vicinity of the construction site respond to these vibrations with varying results ranging from no perceptible effects at the low levels to damage at the highest levels. Table G gives approximate vibration levels for particular construction activities. The data in Table G applies to a wide range of soil conditions.

Table G – Vibration Source Levels for Construction Equipment

Equipment	Peak Particle Velocity (inches/second)	Approximate Vibration Level (L_v) at 25 feet
Loaded trucks	0.076	86
Jackhammer	0.035	79
Small bulldozer	0.003	58

Source: Federal Transit Administration, 2018.

The construction-related vibration impacts have been calculated through the vibration levels shown above in Table G and through typical vibration propagation rates. The equipment assumptions were based on the equipment lists provided above in Table F.

7.0 IMPACT ANALYSIS

7.1 CEQA Thresholds of Significance

Consistent with the California Environmental Quality Act (CEQA) and the State CEQA Guidelines, a significant impact related to noise would occur if a proposed project is determined to result in:

- Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies;
- Generation of excessive groundborne vibration or groundborne noise levels; or
- For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels.

7.2 Generation of Noise Levels in Excess of Standards

The proposed project would not generate 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. The following section calculates the potential noise emissions associated with the temporary construction activities and long-term operations of the proposed project and compares the noise levels to the City standards.

Construction-Related Noise

The construction activities for the proposed project are anticipated to include the demolition of the existing structure and surface parking lot, site preparation and grading of the 0.54-acre project site, building construction of a five-story apartment building complex, paving of the onsite driveways, parking areas, sidewalks and hardscapes, and application of architectural coatings. Noise impacts from construction activities associated with the proposed project would be a function of the noise generated by construction equipment, equipment location, sensitivity of nearby land uses, and the timing and duration of the construction activities. The nearest sensitive receptors to the project site are the row of 5 attached residences located approximately 48 to 50 feet south of the project site.

All construction activities associated with the proposed project would occur during the allowable hours for construction activities as detailed in Section 8.47.060(D) of the City's Municipal Code. Because the City's ordinance does not include construction noise standards, the FTA construction noise criteria thresholds listed above in Section 4.1 have been utilized. For these purposes a significant construction noise impact would occur if construction noise exceeds 80 dBA Leq during the Day (defined as 7 a.m. to 10 p.m.) at any of the nearby sensitive receptors.

Construction noise impacts to the closest sensitive receptors along the row of 5 attached residences to the south of the site have been calculated through use of the RCNM and the parameters and assumptions detailed in Section 6.1 of this report including Table F – Construction Equipment Noise Emissions and Usage Factors. Table H that shows the anticipated construction equipment per phase. The results are shown below in Table H and the RCNM printouts are provided in Appendix C.

Table H – Construction Noise Levels at the Nearby Sensitive Receptors

Construction Phase	Construction Noise Level (dBA Leq) at: Homes to South[1]
Demolition	77
Site Preparation	76
Grading	76
Building Construction	75
Paving	73
Painting	66
FTA Construction Noise Threshold[3]	**80**
Exceed Threshold?	**No**

[1] The homes to the south are located as near as 120 feet from the center of the project site.
[2] Obtained from Table B, above.
Source: RCNM, Federal Highway Administration, 2006 (see Section 6.1 above for detailed description of modeling assumptions)

Table H shows that the greatest noise impacts would occur during the demolition construction phase, with noise levels as high as 77 dBA Leq at the homes to the south. The analyzed phases of construction would occur sequentially, however it should be noted that due to the logarithmic properties of addition of two distinct noise sources, the most that the noise may be increased if two construction phases occurred concurrently (which is not proposed or anticipated) would be an additional 3 dB above the higher construction phase noise. As such, the worst-case noise level that may occur with two construction phases occurring simultaneously (which is not proposed, anticipated, or reasonably forseeable) would be 80 dBA Leq at the homes to the south. Table H also shows that none of the construction phases (or from two phases occurring simultaneously) would exceed the FTA construction noise standard of 80 dBA for residential uses. Therefore, with adherence to allowable construction times provided in 8.47.060(D) of the Municipal Code, the construction activities for the proposed project would not create a substantial temporary increase in ambient noise levels that are in excess of applicable noise standards. Impacts would be less than significant.

Operational-Related Noise

The proposed project would consist of development of a five-story apartment building with 34 new residential units on the top four floors and the ground level will be utilized as a parking area. Potential noise impacts associated with the operations of the proposed project would be from project-generated vehicular traffic on the nearby roadways and from onsite noise sources to the nearby sensitive receptors. The noise impacts created from project generated vehicular traffic on the nearby roadways and from onsite noise sources to the nearby homes have been analyzed separately below.

Roadway Vehicular Noise Impact to Nearby Sensitive Receptors

Vehicle noise is a combination of the noise produced by the engine, exhaust and tires. The level of traffic noise depends on three primary factors (1) the volume of traffic, (2) the speed of traffic, and (3) the number of trucks in the flow of traffic. The proposed project does not propose any uses that would require a substantial number of truck trips and the proposed project would not alter the speed limit on any existing roadway so the proposed project's potential offsite noise impacts have been focused on the noise impacts associated with the change of volume of traffic that would occur with development of the proposed project.

According to the *Coast Street, Garden Grove Level of Service (LOS) Screening Analysis*, prepared by EPD Solutions, Inc., 2025, the long-term operation of the proposed project would generate 229 daily vehicle trips. According to the *City of Garden Grove Focused General Plan Update and Zoning Amendments Draft Environmental Impact Report,* August 18, 2021, Garden Grove Boulevard, west of Dale Street had 26,158 daily trips in the year 2020. The proposed project would contribute up to 0.9 percent of the daily trips on Garden Grove Boulevard. In order for project-generated vehicular traffic to increase the noise level on any of the nearby roadways by 3 dB[1], the ADT would have to double, or by 1.5 dB, the ADT would have to increase by 50 percent. As such, the proposed project's roadway noise impacts would be negligible and would not result in a quantitative increase in roadway noise levels. Therefore, operational roadway noise impacts to the nearby sensitive receptors would be less than significant.

Onsite Noise Impacts

The operation of the proposed project may create an increase in onsite noise levels from noise created from the proposed second floor common open space area that will have open space amenities for residents, such as barbeques, fitness equipment, yoga area; and from the 2,264 square feet of ground level open space. However, human generated noise sources that include common outdoor areas and recreation would not be significant. Governor Newsom signed AB 1307 into law in September 2023, which provided that "the effects of noise generated by project occupants and their guests on human beings is not a significant effect on the environment for residential projects for purposes of CEQA."

Other onsite noise sources include rooftop air conditioner condenser units and the ground floor parking lot areas. Section 8.47.040 of the City's Municipal Code limits noise created on the project site to the nearby sensitive receptors to 55 dBA between 7:00 a.m. and 10:00 p.m. and 50 dBA between 10:00 p.m. and 7:00 a.m.

For the parking lot area, a reference noise measurement was taken at the edge of the parking area for a multi-family residential complex in the City of Rancho Cucamonga and the noise measurement printouts are provided in Appendix D. The air conditioning equipment will be located near the center of the roof on top of a vibration isolation pad. The project applicant has stated that no specific air conditioning systems have been identified for the project, but would likely be units similar to the 2.5-ton Carrier Model No: CA15NA03-0-A. According to the Carrier Product Data sheet (see Appendix D), the 2.5-ton model produces a noise level of 73 dBA. The use of the above air conditioning model is the best information available at this time.

In order to account for the noise reduction provided by the proposed 6-foot high wall on the north property line, 4-foot high wall on the perimeter of the second floor common open space area, and proposed 3.5 foot high parapet wall on the roof, the wall attenuation equations from the *Technical Noise Supplement to the Traffic Noise Analysis Protocol* (TeNS), prepared by Caltrans, September 2013, were utilized and the noise calculation spreadsheet along with the reference noise measurements are provided in Appendix D. Table I shows the anticipated noise level from each source at the closest homes to the south of the project site, which are the closest sensitive receivers to the project site and compares the calculated noise levels to the City noise standards.

[1] In a normal noise environment, it is generally accepted that the average healthy ear can barely perceive a noise level change of 3 dBA. A 3 dB increase is typically referred to as the threshold of perception (Caltrans, 2013)

Table I – Project Onsite Operational Noise Levels at Nearby Homes

Noise Source	Operational Noise Levels (dBA Leq) at: Homes to South
Common Open Space Area[1]	8
Air Conditioning Compressor Units[2]	26
Parking Lot[3]	17
Combined Noise Level	27
City Noise Standard[4] (Day/Night)	55/50
Exceed Standard (Day/Night)?	No/No

Notes:
[1] Common open space area is based on a reference noise measurement of 45.7 dBA at 10 feet.
[2] Air conditioning based on a 2.5 ton compressor unit (Carrier Model CA15NA036-0-A) that produces a noise level of 73 dBA at 1 meter.
[3] Parking lot is based on a reference noise measurement of 52.1 dBA at 5 feet.
[4] From Section 8.47.040 of the City's Municipal Code.

Table I shows that the proposed project's worst-case operational noise from the simultaneous operation of all noise sources on the project site would create a noise level of 27 dBA at the apartments on the south side of the project site. The worst-case operational noise level of 27 dBA would be less than both the City's residential noise standards of 55 dBA between 7 a.m. and 10 p.m. and 50 dBA between 10 p.m. and 7 a.m. In addition, it is below the existing ambient noise levels of 60 dBA and would not increase ambient noise or be heard above existing ambient noise. Therefore, the onsite operational noise impacts would be less than significant.

Level of Significance

Less than significant impact.

7.3 Generation of Excessive Groundborne Vibration

The proposed project would not expose persons to or generation of excessive groundborne vibration or groundborne noise levels. The following section analyzes the potential vibration impacts associated with the construction and operations of the proposed project.

Construction-Related Vibration Impacts

The construction activities for the proposed project are anticipated to include demolition of the existing structure and surface parking lot, site preparation and grading of the 0.54-acre project site, building construction of a five-story apartment building complex, paving of the onsite driveways, parking areas, sidewalks and hardscapes, and application of architectural coatings. Vibration impacts from construction activities associated with the proposed project would typically be created from the operation of heavy off-road equipment. The nearest sensitive receptors are the row of 5 attached residences located 48-50 feet south of the project site.

FTA guidance that is detailed above in Section 4.2, defines the threshold for building damage to non-engineered timber and masonry buildings to 0.20 in/sec PPV and the threshold for distinctly perceptible human annoyance of 75 VdB.

The primary source of vibration during construction would be from the operation of a small bulldozer[2], since the project site is too small to utilize a large bulldozer. From Table G above a small bulldozer would create a vibration level of 0.003 inch per second PPV (or 58 VdB) at 25 feet. Based on typical propagation rates, the vibration level at the nearest offsite homes (48 to 50 feet to the south) would be 0.001 inch per second PPV (or 52 VdB). The vibration level at the nearest offsite buildings/homes would be below both the 0.20 inch per second PPV threshold for damage to structures and the human annoyance threshold of 75 VdB. Therefore, construction-related vibration impacts would be less than significant.

Operations-Related Vibration Impacts

The proposed project would consist of the development of a five-story apartment building with 34 new residential units. Operation of the proposed residences would include heavy trucks for residents moving in and out of the units and garbage trucks for solid waste disposal. Truck vibration levels are dependent on vehicle characteristics, load, speed, and pavement conditions. Truck movements on site would be travelling at very low speed, so it is expected that truck vibration at nearby sensitive receptors would be less than 0.076 inch per second PPV, which is less than the structure damage threshold of 0.5 inch per second PPV threshold and the human annoyance threshold of 0.24 inch per second PPV. Therefore, a less than significant vibration impact is anticipated from operation of the proposed project.

Level of Significance

Less than significant impact.

7.4 Aircraft Noise

The proposed project would not expose people residing or working in the project area to excessive noise levels from aircraft. The nearest airport is Joint Forces Training Base Los Alamitos, located approximately 3.2 miles west of the project site. The project site is located outside of the 60 dBA CNEL noise contours of this airport. Impacts would be less than significant.

Level of Significance

Less than significant impact.

[2] A small dozer is defined as under 105 horsepower and include CAT Models D1, D2, and D3 dozers (obtained from: https://www.cat.com/en_US/products/new/equipment/dozers/small-dozers.html

8.0 REFERENCES

California Department of Transportation (Caltrans), *Technical Noise Supplement to the Traffic Noise Analytics Protocol*, September 2013.

California Department of Transportation, *Transportation and Construction Vibration Guidance Manual*, April 2020.

City of Garden Grove, *City of Garden Grove Focused General Plan Update and Zoning Amendments Draft Environmental Impact Report*, August 18, 2021.

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EPD Solutions, Inc., *Coast Street, Garden Grove Level of Service (LOS) Screening Analysis*, 2025.

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Federal Transit Administration, *Transit Noise and Vibration Impact Assessment,* May 2006.

U.S. Department of Transportation, *FHWA Roadway Construction Noise Model User's Guide,* January, 2006.

U.S. Department of Transportation, *Highway Traffic Noise: Analysis and Abatement Guidance,* December, 2011.

APPENDIX A

Field Noise Measurements Photo Index

Noise Measurement Site 1 - looking north

Noise Measurement Site 1 - looking northeast

Noise Measurement Site 1 - looking east

Noise Measurement Site 1 - looking southeast

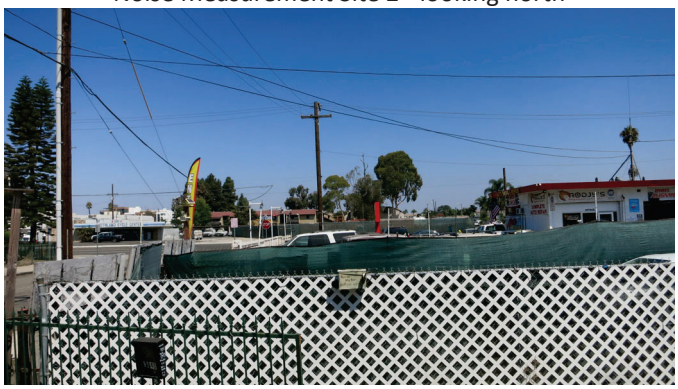
Noise Measurement Site 1 - looking south

Noise Measurement Site 1 - looking southwest

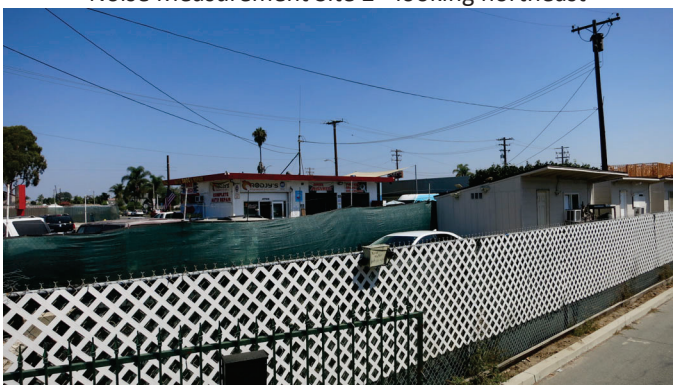
Noise Measurement Site 1 - looking west

Noise Measurement Site 1 - looking northwest

Noise Measurement Site 2 - looking north

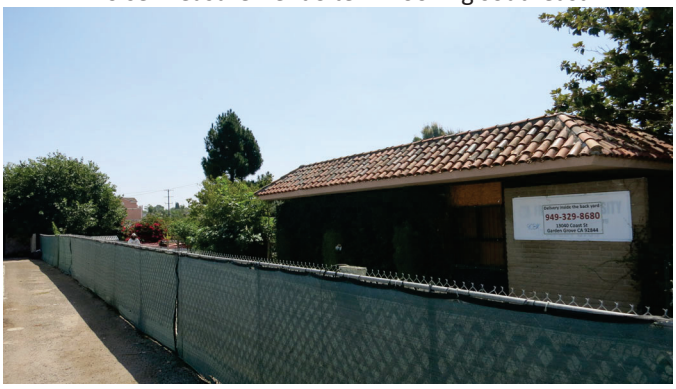


Noise Measurement Site 2 - looking northeast

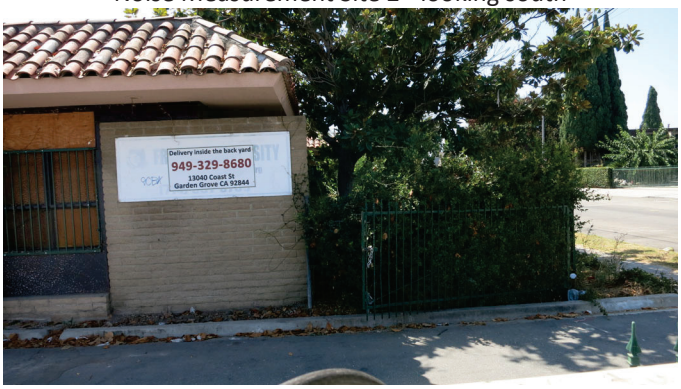


Noise Measurement Site 2 - looking east

Noise Measurement Site 2 - looking southeast



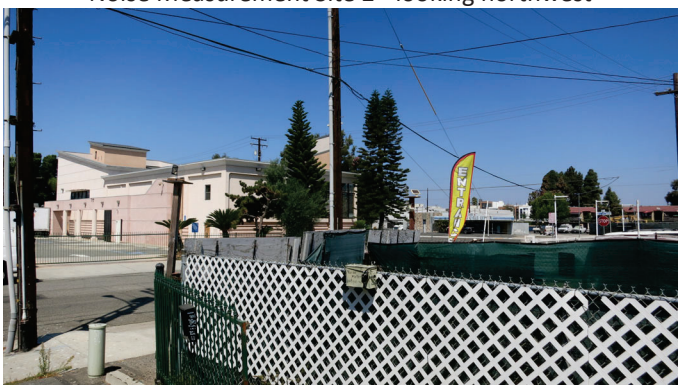
Noise Measurement Site 2 - looking south



Noise Measurement Site 2 - looking southwest

Noise Measurement Site 2 - looking west

Noise Measurement Site 2 - looking northwest



APPENDIX B

Field Noise Measurements Printouts

Site 1 - Near Southeast Corner of Project Site

August 28, 2024 11:12:17 AM Leq Daytime = 58.4
Sampling Time = 1 sec Freq Weighting=A Leq Nighttime = 50.5
Record Num = 86403 CNEL(24hr)= 60.0
Leq = 56.8 Ldn(24hr)= 59.3
Min = 35.2 Min Leq hr at 2:54 AM 42.9
Max = 85.4 Max Leq hr at 6:27 PM 61.1

Site 1 - Near Southeast Corner of Project Site

SPL	Time	Leq (1 hour Avg.)	Ldn	CNEL
51.8	11:12:17		51.8	51.8
55.1	11:12:18		55.1	55.1
62.1	11:12:19		62.1	62.1
65.1	11:12:20		65.1	65.1
52.7	11:12:21		52.7	52.7
65.1	11:12:22		65.1	65.1
67.2	11:12:23		67.2	67.2
62.9	11:12:24		62.9	62.9
62.8	11:12:25		62.8	62.8
72.3	11:12:26		72.3	72.3
54.6	11:12:27		54.6	54.6
70.9	11:12:28		70.9	70.9
50.2	11:12:29		50.2	50.2
51.2	11:12:30		51.2	51.2
50.4	11:12:31		50.4	50.4
59.6	11:12:32		59.6	59.6
56.3	11:12:33		56.3	56.3
57.5	11:12:34		57.5	57.5
51.5	11:12:35		51.5	51.5
51.2	11:12:36		51.2	51.2
52.6	11:12:37		52.6	52.6
72.2	11:12:38		72.2	72.2
58.5	11:12:39		58.5	58.5
69.1	11:12:40		69.1	69.1
58.4	11:12:41		58.4	58.4
56.4	11:12:42		56.4	56.4
57.0	11:12:43		57.0	57.0
53.2	11:12:44		53.2	53.2
57.8	11:12:45		57.8	57.8
61.4	11:12:46		61.4	61.4
63.8	11:12:47		63.8	63.8
54.6	11:12:48		54.6	54.6
54.6	11:12:49		54.6	54.6
53.0	11:12:50		53.0	53.0
56.9	11:12:51		56.9	56.9
62.8	11:12:52		62.8	62.8
55.1	11:12:53		55.1	55.1
65.0	11:12:54		65.0	65.0
60.8	11:12:55		60.8	60.8
63.2	11:12:56		63.2	63.2
56.2	11:12:57		56.2	56.2
60.1	11:12:58		60.1	60.1
65.5	11:12:59		65.5	65.5
63.0	11:13:00		63.0	63.0
57.5	11:13:01		57.5	57.5
68.9	11:13:02		68.9	68.9
59.4	11:13:03		59.4	59.4
57.2	11:13:04		57.2	57.2
64.5	11:13:05		64.5	64.5
65.8	11:13:06		65.8	65.8
57.8	11:13:07		57.8	57.8
62.1	11:13:08		62.1	62.1
58.1	11:13:09		58.1	58.1
60.3	11:13:10		60.3	60.3
57.9	11:13:11		57.9	57.9
63.2	11:13:12		63.2	63.2
57.6	11:13:13		57.6	57.6
53.4	11:13:14		53.4	53.4
51.7	11:13:15		51.7	51.7
52.1	11:13:16		52.1	52.1
57.6	11:13:17		57.6	57.6
53.4	11:13:18		53.4	53.4
53.5	11:13:19		53.5	53.5
53.1	11:13:20		53.1	53.1
58.2	11:13:21		58.2	58.2
53.0	11:13:22		53.0	53.0
53.7	11:13:23		53.7	53.7
53.0	11:13:24		53.0	53.0
52.7	11:13:25		52.7	52.7
52.2	11:13:26		52.2	52.2
57.7	11:13:27		57.7	57.7
73.9	11:13:28		73.9	73.9
57.1	11:13:29		57.1	57.1
63.1	11:13:30		63.1	63.1
59.8	11:13:31		59.8	59.8
57.5	11:13:32		57.5	57.5
61.5	11:13:33		61.5	61.5
54.0	11:13:34		54.0	54.0
55.4	11:13:35		55.4	55.4
53.9	11:13:36		53.9	53.9
55.4	11:13:37		55.4	55.4
52.9	11:13:38		52.9	52.9
52.9	11:13:39		52.9	52.9
53.2	11:13:40		53.2	53.2
53.0	11:13:41		53.0	53.0
53.4	11:13:42		53.4	53.4
53.3	11:13:43		53.3	53.3
52.8	11:13:44		52.8	52.8
52.6	11:13:45		52.6	52.6
52.6	11:13:46		52.6	52.6
53.5	11:13:47		53.5	53.5
56.0	11:13:48		56.0	56.0
60.5	11:13:49		60.5	60.5
52.6	11:13:50		52.6	52.6
52.3	11:13:51		52.3	52.3
52.2	11:13:52		52.2	52.2
52.1	11:13:53		52.1	52.1
52.4	11:13:54		52.4	52.4
52.5	11:13:55		52.5	52.5
52.1	11:13:56		52.1	52.1
51.8	11:13:57		51.8	51.8
52.5	11:13:58		52.5	52.5
52.6	11:13:59		52.6	52.6
52.1	11:14:00		52.1	52.1
51.7	11:14:01		51.7	51.7
51.8	11:14:02		51.8	51.8
51.4	11:14:03		51.4	51.4
51.4	11:14:04		51.4	51.4
51.4	11:14:05		51.4	51.4
51.5	11:14:06		51.5	51.5
51.6	11:14:07		51.6	51.6
51.7	11:14:08		51.7	51.7
52.2	11:14:09		52.2	52.2
52.2	11:14:10		52.2	52.2
51.7	11:14:11		51.7	51.7
51.8	11:14:12		51.8	51.8
52.0	11:14:13		52.0	52.0
51.3	11:14:14		51.3	51.3
54.1	11:14:15		54.1	54.1
51.2	11:14:16		51.2	51.2
53.1	11:14:17		53.1	53.1
51.9	11:14:18		51.9	51.9
51.5	11:14:19		51.5	51.5
51.9	11:14:20		51.9	51.9
52.1	11:14:21		52.1	52.1
52.1	11:14:22		52.1	52.1
52.9	11:14:23		52.9	52.9
52.7	11:14:24		52.7	52.7
53.1	11:14:25		53.1	53.1
54.0	11:14:26		54.0	54.0
56.0	11:14:27		56.0	56.0
54.5	11:14:28		54.5	54.5
54.0	11:14:29		54.0	54.0
53.6	11:14:30		53.6	53.6
53.5	11:14:31		53.5	53.5
54.1	11:14:32		54.1	54.1
54.2	11:14:33		54.2	54.2
55.4	11:14:34		55.4	55.4
56.3	11:14:35		56.3	56.3
56.9	11:14:36		56.9	56.9
55.3	11:14:37		55.3	55.3
53.8	11:14:38		53.8	53.8
53.9	11:14:39		53.9	53.9
54.0	11:14:40		54.0	54.0
53.7	11:14:41		53.7	53.7
54.0	11:14:42		54.0	54.0
53.8	11:14:43		53.8	53.8
53.6	11:14:44		53.6	53.6
54.2	11:14:45		54.2	54.2
54.5	11:14:46		54.5	54.5
54.8	11:14:47		54.8	54.8
54.7	11:14:48		54.7	54.7
54.4	11:14:49		54.4	54.4
53.8	11:14:50		53.8	53.8
54.0	11:14:51		54.0	54.0
54.0	11:14:52		54.0	54.0
53.8	11:14:53		53.8	53.8
54.9	11:14:54		54.9	54.9
55.7	11:14:55		55.7	55.7
53.5	11:14:56		53.5	53.5
53.1	11:14:57		53.1	53.1
52.6	11:14:58		52.6	52.6
52.4	11:14:59		52.4	52.4
51.7	11:15:00		51.7	51.7
52.1	11:15:01		52.1	52.1
52.3	11:15:02		52.3	52.3
53.1	11:15:03		53.1	53.1
52.4	11:15:04		52.4	52.4
52.7	11:15:05		52.7	52.7
52.6	11:15:06		52.6	52.6

Site 2 - Near Northwest Corner of Project Site

August 28, 2024 11:17:21 AM Leq Daytime = 60.5
Sampling Time = 1 sec Freq Weighting=A Leq Nighttime = 53.8
Record Num = 86403 CNEL(24hr)= 62.7
Leq = 59.0 Ldn(24hr)= 62.1
Min = 37.8 Min Leq hr at 2:42 AM 45.4
Max = 90.1 Max Leq hr at 10:25 AM 63.0

Site 2 - Near Northwest Corner of Project Site

SPL	Time	Leq (1 hour Avg.)	Ldn	CNEL
54.6	11:17:21		54.6	54.6
54.4	11:17:22		54.4	54.4
58.9	11:17:23		58.9	58.9
55.1	11:17:24		55.1	55.1
54.7	11:17:25		54.7	54.7
68.9	11:17:26		68.9	68.9
71.2	11:17:27		71.2	71.2
65.8	11:17:28		65.8	65.8
53.6	11:17:29		53.6	53.6
52.0	11:17:30		52.0	52.0
57.3	11:17:31		57.3	57.3
54.0	11:17:32		54.0	54.0
51.7	11:17:33		51.7	51.7
51.4	11:17:34		51.4	51.4
62.1	11:17:35		62.1	62.1
52.0	11:17:36		52.0	52.0
60.6	11:17:37		60.6	60.6
57.2	11:17:38		57.2	57.2
59.6	11:17:39		59.6	59.6
61.3	11:17:40		61.3	61.3
59.9	11:17:41		59.9	59.9
60.2	11:17:42		60.2	60.2
60.2	11:17:43		60.2	60.2
63.4	11:17:44		63.4	63.4
63.1	11:17:45		63.1	63.1
53.7	11:17:46		53.7	53.7
51.3	11:17:47		51.3	51.3
55.0	11:17:48		55.0	55.0
70.9	11:17:49		70.9	70.9
61.7	11:17:50		61.7	61.7
58.0	11:17:51		58.0	58.0
51.7	11:17:52		51.7	51.7
50.9	11:17:53		50.9	50.9
59.1	11:17:54		59.1	59.1
51.0	11:17:55		51.0	51.0
51.8	11:17:56		51.8	51.8
52.3	11:17:57		52.3	52.3
55.4	11:17:58		55.4	55.4
56.1	11:17:59		56.1	56.1
60.0	11:18:00		60.0	60.0
56.2	11:18:01		56.2	56.2
58.3	11:18:02		58.3	58.3
57.9	11:18:03		57.9	57.9
54.5	11:18:04		54.5	54.5
55.9	11:18:05		55.9	55.9
57.9	11:18:06		57.9	57.9
60.8	11:18:07		60.8	60.8
56.0	11:18:08		56.0	56.0
55.8	11:18:09		55.8	55.8
68.7	11:18:10		68.7	68.7
56.8	11:18:11		56.8	56.8
58.8	11:18:12		58.8	58.8
55.4	11:18:13		55.4	55.4
56.1	11:18:14		56.1	56.1
56.1	11:18:15		56.1	56.1
56.4	11:18:16		56.4	56.4
59.4	11:18:17		59.4	59.4
61.2	11:18:18		61.2	61.2
59.3	11:18:19		59.3	59.3
58.1	11:18:20		58.1	58.1
58.2	11:18:21		58.2	58.2
55.6	11:18:22		55.6	55.6
58.8	11:18:23		58.8	58.8
53.7	11:18:24		53.7	53.7
53.1	11:18:25		53.1	53.1
53.7	11:18:26		53.7	53.7
57.7	11:18:27		57.7	57.7
57.6	11:18:28		57.6	57.6
65.2	11:18:29		65.2	65.2
60.6	11:18:30		60.6	60.6
56.1	11:18:31		56.1	56.1
55.5	11:18:32		55.5	55.5
55.4	11:18:33		55.4	55.4
54.6	11:18:34		54.6	54.6
53.3	11:18:35		53.3	53.3
53.6	11:18:36		53.6	53.6
54.3	11:18:37		54.3	54.3
53.8	11:18:38		53.8	53.8
53.3	11:18:39		53.3	53.3
53.4	11:18:40		53.4	53.4
53.9	11:18:41		53.9	53.9
54.3	11:18:42		54.3	54.3
58.1	11:18:43		58.1	58.1
56.4	11:18:44		56.4	56.4
55.4	11:18:45		55.4	55.4
56.6	11:18:46		56.6	56.6
55.3	11:18:47		55.3	55.3
53.9	11:18:48		53.9	53.9
53.2	11:18:49		53.2	53.2
54.0	11:18:50		54.0	54.0
55.1	11:18:51		55.1	55.1
54.8	11:18:52		54.8	54.8
54.5	11:18:53		54.5	54.5
55.0	11:18:54		55.0	55.0
54.4	11:18:55		54.4	54.4
53.7	11:18:56		53.7	53.7
55.5	11:18:57		55.5	55.5
56.6	11:18:58		56.6	56.6
54.2	11:18:59		54.2	54.2
53.3	11:19:00		53.3	53.3
53.2	11:19:01		53.2	53.2
54.1	11:19:02		54.1	54.1
53.9	11:19:03		53.9	53.9
52.8	11:19:04		52.8	52.8
53.8	11:19:05		53.8	53.8
54.1	11:19:06		54.1	54.1
53.2	11:19:07		53.2	53.2
53.2	11:19:08		53.2	53.2
53.6	11:19:09		53.6	53.6
53.5	11:19:10		53.5	53.5
53.7	11:19:11		53.7	53.7
54.0	11:19:12		54.0	54.0
54.5	11:19:13		54.5	54.5
54.9	11:19:14		54.9	54.9
54.9	11:19:15		54.9	54.9
55.6	11:19:16		55.6	55.6
55.1	11:19:17		55.1	55.1
54.8	11:19:18		54.8	54.8
55.2	11:19:19		55.2	55.2
55.6	11:19:20		55.6	55.6
55.9	11:19:21		55.9	55.9
57.1	11:19:22		57.1	57.1
56.7	11:19:23		56.7	56.7
59.3	11:19:24		59.3	59.3
60.3	11:19:25		60.3	60.3
58.5	11:19:26		58.5	58.5
58.9	11:19:27		58.9	58.9
59.6	11:19:28		59.6	59.6
63.1	11:19:29		63.1	63.1
61.3	11:19:30		61.3	61.3
59.0	11:19:31		59.0	59.0
59.3	11:19:32		59.3	59.3
60.0	11:19:33		60.0	60.0
60.0	11:19:34		60.0	60.0
63.3	11:19:35		63.3	63.3
63.0	11:19:36		63.0	63.0
61.9	11:19:37		61.9	61.9
59.2	11:19:38		59.2	59.2
55.3	11:19:39		55.3	55.3
58.8	11:19:40		58.8	58.8
61.5	11:19:41		61.5	61.5
65.4	11:19:42		65.4	65.4
62.4	11:19:43		62.4	62.4
55.7	11:19:44		55.7	55.7
59.0	11:19:45		59.0	59.0
57.6	11:19:46		57.6	57.6
53.7	11:19:47		53.7	53.7
52.9	11:19:48		52.9	52.9
52.4	11:19:49		52.4	52.4
52.7	11:19:50		52.7	52.7
53.0	11:19:51		53.0	53.0
52.2	11:19:52		52.2	52.2
52.4	11:19:53		52.4	52.4
52.6	11:19:54		52.6	52.6
52.8	11:19:55		52.8	52.8
52.5	11:19:56		52.5	52.5
52.6	11:19:57		52.6	52.6
52.3	11:19:58		52.3	52.3
52.6	11:19:59		52.6	52.6
52.4	11:20:00		52.4	52.4
52.3	11:20:01		52.3	52.3
52.5	11:20:02		52.5	52.5
52.3	11:20:03		52.3	52.3
53.5	11:20:04		53.5	53.5
52.8	11:20:05		52.8	52.8
53.2	11:20:06		53.2	53.2
53.0	11:20:07		53.0	53.0
53.0	11:20:08		53.0	53.0
53.7	11:20:09		53.7	53.7
53.9	11:20:10		53.9	53.9

Site 1 - Near Southeast Corner of Project Site

SPL	Time	Leq (1 hour Avg.)	Ldn	CNEL
52.9	11:15:07		52.9	52.9
52.2	11:15:08		52.2	52.2
53.4	11:15:09		53.4	53.4
53.2	11:15:10		53.2	53.2
52.5	11:15:11		52.5	52.5
52.8	11:15:12		52.8	52.8
52.3	11:15:13		52.3	52.3
52.7	11:15:14		52.7	52.7
53.3	11:15:15		53.3	53.3
52.6	11:15:16		52.6	52.6
53.0	11:15:17		53.0	53.0
53.1	11:15:18		53.1	53.1
54.0	11:15:19		54.0	54.0
53.0	11:15:20		53.0	53.0
52.9	11:15:21		52.9	52.9
54.2	11:15:22		54.2	54.2
53.6	11:15:23		53.6	53.6
53.7	11:15:24		53.7	53.7
54.2	11:15:25		54.2	54.2
54.0	11:15:26		54.0	54.0
53.6	11:15:27		53.6	53.6
53.6	11:15:28		53.6	53.6
54.0	11:15:29		54.0	54.0
54.0	11:15:30		54.0	54.0
54.0	11:15:31		54.0	54.0
53.6	11:15:32		53.6	53.6
55.1	11:15:33		55.1	55.1
53.2	11:15:34		53.2	53.2
54.1	11:15:35		54.1	54.1
54.6	11:15:36		54.6	54.6
54.8	11:15:37		54.8	54.8
54.5	11:15:38		54.5	54.5
54.7	11:15:39		54.7	54.7
54.5	11:15:40		54.5	54.5
53.8	11:15:41		53.8	53.8
53.9	11:15:42		53.9	53.9
53.4	11:15:43		53.4	53.4
53.4	11:15:44		53.4	53.4
53.0	11:15:45		53.0	53.0
52.9	11:15:46		52.9	52.9
52.5	11:15:47		52.5	52.5
52.5	11:15:48		52.5	52.5
52.9	11:15:49		52.9	52.9
52.4	11:15:50		52.4	52.4
52.4	11:15:51		52.4	52.4
52.4	11:15:52		52.4	52.4
52.1	11:15:53		52.1	52.1
53.5	11:15:54		53.5	53.5
52.5	11:15:55		52.5	52.5
52.7	11:15:56		52.7	52.7
52.8	11:15:57		52.8	52.8
52.6	11:15:58		52.6	52.6
52.9	11:15:59		52.9	52.9
52.7	11:16:00		52.7	52.7
53.4	11:16:01		53.4	53.4
53.5	11:16:02		53.5	53.5
53.8	11:16:03		53.8	53.8
53.3	11:16:04		53.3	53.3
53.6	11:16:05		53.6	53.6
54.5	11:16:06		54.5	54.5
54.6	11:16:07		54.6	54.6
54.2	11:16:08		54.2	54.2
54.0	11:16:09		54.0	54.0
53.7	11:16:10		53.7	53.7
54.0	11:16:11		54.0	54.0
53.8	11:16:12		53.8	53.8
53.6	11:16:13		53.6	53.6
53.6	11:16:14		53.6	53.6
53.6	11:16:15		53.6	53.6
52.7	11:16:16		52.7	52.7
53.1	11:16:17		53.1	53.1
53.8	11:16:18		53.8	53.8
54.5	11:16:19		54.5	54.5
53.3	11:16:20		53.3	53.3
53.5	11:16:21		53.5	53.5
53.8	11:16:22		53.8	53.8
54.0	11:16:23		54.0	54.0
55.3	11:16:24		55.3	55.3
55.3	11:16:25		55.3	55.3
54.4	11:16:26		54.4	54.4
53.3	11:16:27		53.3	53.3
53.1	11:16:28		53.1	53.1
52.7	11:16:29		52.7	52.7
53.8	11:16:30		53.8	53.8
54.3	11:16:31		54.3	54.3
54.2	11:16:32		54.2	54.2
53.8	11:16:33		53.8	53.8
54.1	11:16:34		54.1	54.1
53.9	11:16:35		53.9	53.9
53.9	11:16:36		53.9	53.9
53.7	11:16:37		53.7	53.7
54.4	11:16:38		54.4	54.4
54.3	11:16:39		54.3	54.3
54.2	11:16:40		54.2	54.2
54.6	11:16:41		54.6	54.6
54.3	11:16:42		54.3	54.3
53.9	11:16:43		53.9	53.9
53.8	11:16:44		53.8	53.8
53.3	11:16:45		53.3	53.3
53.0	11:16:46		53.0	53.0
52.8	11:16:47		52.8	52.8
53.0	11:16:48		53.0	53.0
53.1	11:16:49		53.1	53.1
53.1	11:16:50		53.1	53.1
53.3	11:16:51		53.3	53.3
53.1	11:16:52		53.1	53.1
53.0	11:16:53		53.0	53.0
53.4	11:16:54		53.4	53.4
53.4	11:16:55		53.4	53.4
53.1	11:16:56		53.1	53.1
52.8	11:16:57		52.8	52.8
52.9	11:16:58		52.9	52.9
52.8	11:16:59		52.8	52.8
52.2	11:17:00		52.2	52.2
53.1	11:17:01		53.1	53.1
54.7	11:17:02		54.7	54.7
53.5	11:17:03		53.5	53.5
53.5	11:17:04		53.5	53.5
53.0	11:17:05		53.0	53.0
52.9	11:17:06		52.9	52.9
54.5	11:17:07		54.5	54.5
53.6	11:17:08		53.6	53.6
53.4	11:17:09		53.4	53.4
53.5	11:17:10		53.5	53.5
55.1	11:17:11		55.1	55.1
53.8	11:17:12		53.8	53.8
53.9	11:17:13		53.9	53.9
53.3	11:17:14		53.3	53.3
53.5	11:17:15		53.5	53.5
53.3	11:17:16		53.3	53.3
53.4	11:17:17		53.4	53.4
53.4	11:17:18		53.4	53.4
53.3	11:17:19		53.3	53.3
53.0	11:17:20		53.0	53.0
52.8	11:17:21		52.8	52.8
53.1	11:17:22		53.1	53.1
52.5	11:17:23		52.5	52.5
52.8	11:17:24		52.8	52.8
52.5	11:17:25		52.5	52.5
52.9	11:17:26		52.9	52.9
53.1	11:17:27		53.1	53.1
53.0	11:17:28		53.0	53.0
53.1	11:17:29		53.1	53.1
53.6	11:17:30		53.6	53.6
54.1	11:17:31		54.1	54.1
54.8	11:17:32		54.8	54.8
56.4	11:17:33		56.4	56.4
55.8	11:17:34		55.8	55.8
53.2	11:17:35		53.2	53.2
53.3	11:17:36		53.3	53.3
53.8	11:17:37		53.8	53.8
54.1	11:17:38		54.1	54.1
54.1	11:17:39		54.1	54.1
56.5	11:17:40		56.5	56.5
56.4	11:17:41		56.4	56.4
56.3	11:17:42		56.3	56.3
59.5	11:17:43		59.5	59.5
58.3	11:17:44		58.3	58.3
54.3	11:17:45		54.3	54.3
53.8	11:17:46		53.8	53.8
53.7	11:17:47		53.7	53.7
54.3	11:17:48		54.3	54.3
54.1	11:17:49		54.1	54.1
53.4	11:17:50		53.4	53.4
53.5	11:17:51		53.5	53.5
53.4	11:17:52		53.4	53.4
53.3	11:17:53		53.3	53.3
53.3	11:17:54		53.3	53.3
57.2	11:17:55		57.2	57.2
57.2	11:17:56		57.2	57.2
54.7	11:17:57		54.7	54.7
53.5	11:17:58		53.5	53.5
53.2	11:17:59		53.2	53.2
54.1	11:18:00		54.1	54.1
53.9	11:18:01		53.9	53.9
54.0	11:18:02		54.0	54.0
53.4	11:18:03		53.4	53.4
53.5	11:18:04		53.5	53.5
53.4	11:18:05		53.4	53.4
53.2	11:18:06		53.2	53.2
53.3	11:18:07		53.3	53.3
53.2	11:18:08		53.2	53.2

Site 2 - Near Northwest Corner of Project Site

SPL	Time	Leq (1 hour Avg.)	Ldn	CNEL
54.1	11:20:11		54.1	54.1
55.3	11:20:12		55.3	55.3
54.6	11:20:13		54.6	54.6
54.9	11:20:14		54.9	54.9
54.5	11:20:15		54.5	54.5
53.9	11:20:16		53.9	53.9
53.9	11:20:17		53.9	53.9
53.9	11:20:18		53.9	53.9
53.5	11:20:19		53.5	53.5
54.4	11:20:20		54.4	54.4
53.9	11:20:21		53.9	53.9
53.3	11:20:22		53.3	53.3
53.5	11:20:23		53.5	53.5
54.2	11:20:24		54.2	54.2
54.7	11:20:25		54.7	54.7
54.0	11:20:26		54.0	54.0
53.5	11:20:27		53.5	53.5
53.7	11:20:28		53.7	53.7
53.8	11:20:29		53.8	53.8
53.6	11:20:30		53.6	53.6
53.0	11:20:31		53.0	53.0
53.4	11:20:32		53.4	53.4
54.3	11:20:33		54.3	54.3
55.3	11:20:34		55.3	55.3
54.3	11:20:35		54.3	54.3
58.1	11:20:36		58.1	58.1
57.8	11:20:37		57.8	57.8
57.3	11:20:38		57.3	57.3
58.7	11:20:39		58.7	58.7
60.3	11:20:40		60.3	60.3
62.3	11:20:41		62.3	62.3
60.8	11:20:42		60.8	60.8
59.7	11:20:43		59.7	59.7
58.8	11:20:44		58.8	58.8
57.1	11:20:45		57.1	57.1
56.0	11:20:46		56.0	56.0
55.0	11:20:47		55.0	55.0
55.0	11:20:48		55.0	55.0
54.7	11:20:49		54.7	54.7
53.6	11:20:50		53.6	53.6
54.0	11:20:51		54.0	54.0
54.0	11:20:52		54.0	54.0
55.4	11:20:53		55.4	55.4
57.3	11:20:54		57.3	57.3
57.3	11:20:55		57.3	57.3
56.6	11:20:56		56.6	56.6
56.3	11:20:57		56.3	56.3
55.1	11:20:58		55.1	55.1
55.5	11:20:59		55.5	55.5
55.3	11:21:00		55.3	55.3
55.2	11:21:01		55.2	55.2
55.4	11:21:02		55.4	55.4
54.7	11:21:03		54.7	54.7
54.3	11:21:04		54.3	54.3
56.4	11:21:05		56.4	56.4
54.7	11:21:06		54.7	54.7
54.5	11:21:07		54.5	54.5
54.9	11:21:08		54.9	54.9
54.8	11:21:09		54.8	54.8
53.9	11:21:10		53.9	53.9
53.9	11:21:11		53.9	53.9
53.8	11:21:12		53.8	53.8
54.4	11:21:13		54.4	54.4
54.5	11:21:14		54.5	54.5
54.9	11:21:15		54.9	54.9
55.5	11:21:16		55.5	55.5
56.1	11:21:17		56.1	56.1
57.2	11:21:18		57.2	57.2
56.2	11:21:19		56.2	56.2
55.1	11:21:20		55.1	55.1
55.7	11:21:21		55.7	55.7
56.2	11:21:22		56.2	56.2
55.4	11:21:23		55.4	55.4
55.6	11:21:24		55.6	55.6
55.4	11:21:25		55.4	55.4
54.8	11:21:26		54.8	54.8
55.1	11:21:27		55.1	55.1
55.4	11:21:28		55.4	55.4
55.9	11:21:29		55.9	55.9
57.2	11:21:30		57.2	57.2
55.6	11:21:31		55.6	55.6
55.1	11:21:32		55.1	55.1
58.0	11:21:33		58.0	58.0
55.0	11:21:34		55.0	55.0
54.5	11:21:35		54.5	54.5
54.1	11:21:36		54.1	54.1
54.1	11:21:37		54.1	54.1
54.4	11:21:38		54.4	54.4
53.8	11:21:39		53.8	53.8
53.8	11:21:40		53.8	53.8
53.8	11:21:41		53.8	53.8
53.5	11:21:42		53.5	53.5
55.7	11:21:43		55.7	55.7
58.0	11:21:44		58.0	58.0
57.9	11:21:45		57.9	57.9
59.3	11:21:46		59.3	59.3
60.8	11:21:47		60.8	60.8
63.5	11:21:48		63.5	63.5
62.7	11:21:49		62.7	62.7
58.9	11:21:50		58.9	58.9
55.5	11:21:51		55.5	55.5
53.9	11:21:52		53.9	53.9
52.2	11:21:53		52.2	52.2
51.5	11:21:54		51.5	51.5
51.0	11:21:55		51.0	51.0
51.2	11:21:56		51.2	51.2
52.0	11:21:57		52.0	52.0
53.0	11:21:58		53.0	53.0
52.8	11:21:59		52.8	52.8
52.8	11:22:00		52.8	52.8
54.0	11:22:01		54.0	54.0
52.9	11:22:02		52.9	52.9
52.6	11:22:03		52.6	52.6
52.0	11:22:04		52.0	52.0
51.5	11:22:05		51.5	51.5
51.4	11:22:06		51.4	51.4
51.4	11:22:07		51.4	51.4
51.4	11:22:08		51.4	51.4
51.9	11:22:09		51.9	51.9
51.7	11:22:10		51.7	51.7
52.0	11:22:11		52.0	52.0
52.1	11:22:12		52.1	52.1
52.9	11:22:13		52.9	52.9
53.9	11:22:14		53.9	53.9
54.2	11:22:15		54.2	54.2
55.4	11:22:16		55.4	55.4
55.9	11:22:17		55.9	55.9
58.5	11:22:18		58.5	58.5
60.2	11:22:19		60.2	60.2
61.3	11:22:20		61.3	61.3
59.3	11:22:21		59.3	59.3
59.3	11:22:22		59.3	59.3
60.1	11:22:23		60.1	60.1
65.0	11:22:24		65.0	65.0
63.4	11:22:25		63.4	63.4
58.2	11:22:26		58.2	58.2
55.5	11:22:27		55.5	55.5
53.2	11:22:28		53.2	53.2
51.6	11:22:29		51.6	51.6
51.6	11:22:30		51.6	51.6
51.8	11:22:31		51.8	51.8
51.4	11:22:32		51.4	51.4
51.6	11:22:33		51.6	51.6
51.4	11:22:34		51.4	51.4
51.4	11:22:35		51.4	51.4
51.6	11:22:36		51.6	51.6
52.5	11:22:37		52.5	52.5
55.3	11:22:38		55.3	55.3
55.0	11:22:39		55.0	55.0
53.9	11:22:40		53.9	53.9
53.2	11:22:41		53.2	53.2
53.4	11:22:42		53.4	53.4
56.3	11:22:43		56.3	56.3
60.2	11:22:44		60.2	60.2
62.8	11:22:45		62.8	62.8
67.2	11:22:46		67.2	67.2
65.2	11:22:47		65.2	65.2
58.5	11:22:48		58.5	58.5
55.7	11:22:49		55.7	55.7
54.8	11:22:50		54.8	54.8
55.1	11:22:51		55.1	55.1
55.8	11:22:52		55.8	55.8
54.1	11:22:53		54.1	54.1
53.0	11:22:54		53.0	53.0
52.2	11:22:55		52.2	52.2
52.2	11:22:56		52.2	52.2
52.8	11:22:57		52.8	52.8
52.8	11:22:58		52.8	52.8
53.5	11:22:59		53.5	53.5
54.9	11:23:00		54.9	54.9
54.9	11:23:01		54.9	54.9
54.0	11:23:02		54.0	54.0
54.2	11:23:03		54.2	54.2
54.2	11:23:04		54.2	54.2
54.8	11:23:05		54.8	54.8
54.0	11:23:06		54.0	54.0
51.9	11:23:07		51.9	51.9
51.1	11:23:08		51.1	51.1
52.4	11:23:09		52.4	52.4
54.2	11:23:10		54.2	54.2
52.9	11:23:11		52.9	52.9
53.1	11:23:12		53.1	53.1

Site 1 - Near Southeast Corner of Project Site

SPL	Time	Leq (1 hour Avg.)	Ldn	CNEL
53.5	11:18:09		53.5	53.5
53.3	11:18:10		53.3	53.3
53.2	11:18:11		53.2	53.2
53.1	11:18:12		53.1	53.1
53.5	11:18:13		53.5	53.5
53.7	11:18:14		53.7	53.7
52.8	11:18:15		52.8	52.8
52.0	11:18:16		52.0	52.0
52.0	11:18:17		52.0	52.0
52.5	11:18:18		52.5	52.5
52.3	11:18:19		52.3	52.3
52.0	11:18:20		52.0	52.0
53.0	11:18:21		53.0	53.0
54.6	11:18:22		54.6	54.6
54.0	11:18:23		54.0	54.0
53.4	11:18:24		53.4	53.4
54.2	11:18:25		54.2	54.2
52.2	11:18:26		52.2	52.2
51.4	11:18:27		51.4	51.4
51.9	11:18:28		51.9	51.9
52.5	11:18:29		52.5	52.5
51.0	11:18:30		51.0	51.0
51.1	11:18:31		51.1	51.1
51.1	11:18:32		51.1	51.1
51.9	11:18:33		51.9	51.9
52.0	11:18:34		52.0	52.0
53.5	11:18:35		53.5	53.5
54.6	11:18:36		54.6	54.6
52.4	11:18:37		52.4	52.4
51.8	11:18:38		51.8	51.8
51.7	11:18:39		51.7	51.7
52.6	11:18:40		52.6	52.6
52.1	11:18:41		52.1	52.1
52.0	11:18:42		52.0	52.0
51.8	11:18:43		51.8	51.8
51.7	11:18:44		51.7	51.7
51.6	11:18:45		51.6	51.6
52.4	11:18:46		52.4	52.4
52.9	11:18:47		52.9	52.9
52.5	11:18:48		52.5	52.5
52.8	11:18:49		52.8	52.8
52.3	11:18:50		52.3	52.3
52.3	11:18:51		52.3	52.3
52.2	11:18:52		52.2	52.2
51.7	11:18:53		51.7	51.7
51.6	11:18:54		51.6	51.6
51.4	11:18:55		51.4	51.4
51.7	11:18:56		51.7	51.7
51.9	11:18:57		51.9	51.9
52.4	11:18:58		52.4	52.4
52.3	11:18:59		52.3	52.3
51.7	11:19:00		51.7	51.7
51.5	11:19:01		51.5	51.5
50.9	11:19:02		50.9	50.9
51.7	11:19:03		51.7	51.7
52.8	11:19:04		52.8	52.8
52.2	11:19:05		52.2	52.2
52.4	11:19:06		52.4	52.4
52.9	11:19:07		52.9	52.9
54.1	11:19:08		54.1	54.1
54.9	11:19:09		54.9	54.9
54.4	11:19:10		54.4	54.4
52.2	11:19:11		52.2	52.2
54.7	11:19:12		54.7	54.7
53.8	11:19:13		53.8	53.8
55.5	11:19:14		55.5	55.5
54.6	11:19:15		54.6	54.6
51.5	11:19:16		51.5	51.5
52.6	11:19:17		52.6	52.6
53.6	11:19:18		53.6	53.6
52.1	11:19:19		52.1	52.1
51.0	11:19:20		51.0	51.0
51.8	11:19:21		51.8	51.8
51.4	11:19:22		51.4	51.4
52.3	11:19:23		52.3	52.3
52.8	11:19:24		52.8	52.8
52.1	11:19:25		52.1	52.1
52.1	11:19:26		52.1	52.1
51.8	11:19:27		51.8	51.8
52.2	11:19:28		52.2	52.2
51.6	11:19:29		51.6	51.6
51.8	11:19:30		51.8	51.8
51.8	11:19:31		51.8	51.8
52.1	11:19:32		52.1	52.1
51.7	11:19:33		51.7	51.7
51.1	11:19:34		51.1	51.1
51.2	11:19:35		51.2	51.2
51.4	11:19:36		51.4	51.4
51.8	11:19:37		51.8	51.8
52.1	11:19:38		52.1	52.1
52.7	11:19:39		52.7	52.7
52.3	11:19:40		52.3	52.3
52.6	11:19:41		52.6	52.6
54.2	11:19:42		54.2	54.2
52.9	11:19:43		52.9	52.9
52.5	11:19:44		52.5	52.5
52.2	11:19:45		52.2	52.2
53.0	11:19:46		53.0	53.0
54.5	11:19:47		54.5	54.5
53.7	11:19:48		53.7	53.7
52.9	11:19:49		52.9	52.9
52.3	11:19:50		52.3	52.3
52.3	11:19:51		52.3	52.3
52.6	11:19:52		52.6	52.6
52.9	11:19:53		52.9	52.9
51.7	11:19:54		51.7	51.7
51.8	11:19:55		51.8	51.8
55.8	11:19:56		55.8	55.8
53.5	11:19:57		53.5	53.5
52.3	11:19:58		52.3	52.3
51.1	11:19:59		51.1	51.1
51.4	11:20:00		51.4	51.4
54.5	11:20:01		54.5	54.5
53.0	11:20:02		53.0	53.0
51.0	11:20:03		51.0	51.0
51.5	11:20:04		51.5	51.5
51.9	11:20:05		51.9	51.9
53.2	11:20:06		53.2	53.2
51.3	11:20:07		51.3	51.3
51.8	11:20:08		51.8	51.8
52.2	11:20:09		52.2	52.2
53.0	11:20:10		53.0	53.0
52.7	11:20:11		52.7	52.7
51.9	11:20:12		51.9	51.9
52.2	11:20:13		52.2	52.2
51.8	11:20:14		51.8	51.8
53.2	11:20:15		53.2	53.2
53.3	11:20:16		53.3	53.3
53.1	11:20:17		53.1	53.1
52.3	11:20:18		52.3	52.3
53.0	11:20:19		53.0	53.0
52.8	11:20:20		52.8	52.8
52.3	11:20:21		52.3	52.3
52.3	11:20:22		52.3	52.3
52.8	11:20:23		52.8	52.8
52.7	11:20:24		52.7	52.7
53.7	11:20:25		53.7	53.7
52.7	11:20:26		52.7	52.7
52.7	11:20:27		52.7	52.7
53.0	11:20:28		53.0	53.0
52.5	11:20:29		52.5	52.5
51.9	11:20:30		51.9	51.9
51.6	11:20:31		51.6	51.6
51.8	11:20:32		51.8	51.8
51.8	11:20:33		51.8	51.8
52.6	11:20:34		52.6	52.6
51.6	11:20:35		51.6	51.6
51.9	11:20:36		51.9	51.9
53.0	11:20:37		53.0	53.0
53.4	11:20:38		53.4	53.4
52.0	11:20:39		52.0	52.0
52.5	11:20:40		52.5	52.5
52.6	11:20:41		52.6	52.6
52.9	11:20:42		52.9	52.9
52.8	11:20:43		52.8	52.8
52.3	11:20:44		52.3	52.3
53.1	11:20:45		53.1	53.1
53.4	11:20:46		53.4	53.4
53.5	11:20:47		53.5	53.5
53.7	11:20:48		53.7	53.7
55.8	11:20:49		55.8	55.8
55.9	11:20:50		55.9	55.9
55.3	11:20:51		55.3	55.3
55.0	11:20:52		55.0	55.0
55.0	11:20:53		55.0	55.0
55.5	11:20:54		55.5	55.5
55.3	11:20:55		55.3	55.3
54.5	11:20:56		54.5	54.5
54.1	11:20:57		54.1	54.1
54.7	11:20:58		54.7	54.7
55.7	11:20:59		55.7	55.7
56.0	11:21:00		56.0	56.0
56.7	11:21:01		56.7	56.7
56.5	11:21:02		56.5	56.5
56.7	11:21:03		56.7	56.7
56.1	11:21:04		56.1	56.1
55.0	11:21:05		55.0	55.0
53.9	11:21:06		53.9	53.9
53.7	11:21:07		53.7	53.7
52.7	11:21:08		52.7	52.7
52.7	11:21:09		52.7	52.7
52.7	11:21:10		52.7	52.7
52.8	11:21:11		52.8	52.8
52.7	11:21:12		52.7	52.7
51.6	11:21:13		51.6	51.6
52.1	11:21:14		52.1	52.1
52.5	11:21:15		52.5	52.5
52.4	11:21:16		52.4	52.4
52.1	11:21:17		52.1	52.1

Site 2 - Near Northwest Corner of Project Site

SPL	Time	Leq (1 hour Avg.)	Ldn	CNEL
54.0	11:23:13		54.0	54.0
55.0	11:23:14		55.0	55.0
54.1	11:23:15		54.1	54.1
53.2	11:23:16		53.2	53.2
55.4	11:23:17		55.4	55.4
54.9	11:23:18		54.9	54.9
54.1	11:23:19		54.1	54.1
52.3	11:23:20		52.3	52.3
51.6	11:23:21		51.6	51.6
52.5	11:23:22		52.5	52.5
56.8	11:23:23		56.8	56.8
57.1	11:23:24		57.1	57.1
56.5	11:23:25		56.5	56.5
53.4	11:23:26		53.4	53.4
53.8	11:23:27		53.8	53.8
53.5	11:23:28		53.5	53.5
58.9	11:23:29		58.9	58.9
58.0	11:23:30		58.0	58.0
57.1	11:23:31		57.1	57.1
54.3	11:23:32		54.3	54.3
53.2	11:23:33		53.2	53.2
53.2	11:23:34		53.2	53.2
53.1	11:23:35		53.1	53.1
52.3	11:23:36		52.3	52.3
54.2	11:23:37		54.2	54.2
53.8	11:23:38		53.8	53.8
54.1	11:23:39		54.1	54.1
52.7	11:23:40		52.7	52.7
51.9	11:23:41		51.9	51.9
51.5	11:23:42		51.5	51.5
51.0	11:23:43		51.0	51.0
50.6	11:23:44		50.6	50.6
49.9	11:23:45		49.9	49.9
50.1	11:23:46		50.1	50.1
51.8	11:23:47		51.8	51.8
52.4	11:23:48		52.4	52.4
52.6	11:23:49		52.6	52.6
55.8	11:23:50		55.8	55.8
57.6	11:23:51		57.6	57.6
57.0	11:23:52		57.0	57.0
57.9	11:23:53		57.9	57.9
58.3	11:23:54		58.3	58.3
56.4	11:23:55		56.4	56.4
57.0	11:23:56		57.0	57.0
57.2	11:23:57		57.2	57.2
56.2	11:23:58		56.2	56.2
57.6	11:23:59		57.6	57.6
58.8	11:24:00		58.8	58.8
56.1	11:24:01		56.1	56.1
56.3	11:24:02		56.3	56.3
55.7	11:24:03		55.7	55.7
55.0	11:24:04		55.0	55.0
54.0	11:24:05		54.0	54.0
53.5	11:24:06		53.5	53.5
54.2	11:24:07		54.2	54.2
54.5	11:24:08		54.5	54.5
54.1	11:24:09		54.1	54.1
52.8	11:24:10		52.8	52.8
54.3	11:24:11		54.3	54.3
53.4	11:24:12		53.4	53.4
52.8	11:24:13		52.8	52.8
52.8	11:24:14		52.8	52.8
55.0	11:24:15		55.0	55.0
58.2	11:24:16		58.2	58.2
61.4	11:24:17		61.4	61.4
64.5	11:24:18		64.5	64.5
65.6	11:24:19		65.6	65.6
59.3	11:24:20		59.3	59.3
55.4	11:24:21		55.4	55.4
53.0	11:24:22		53.0	53.0
53.0	11:24:23		53.0	53.0
52.1	11:24:24		52.1	52.1
51.4	11:24:25		51.4	51.4
51.4	11:24:26		51.4	51.4
51.7	11:24:27		51.7	51.7
53.3	11:24:28		53.3	53.3
54.6	11:24:29		54.6	54.6
55.8	11:24:30		55.8	55.8
56.7	11:24:31		56.7	56.7
56.2	11:24:32		56.2	56.2
56.5	11:24:33		56.5	56.5
54.3	11:24:34		54.3	54.3
53.4	11:24:35		53.4	53.4
53.4	11:24:36		53.4	53.4
53.5	11:24:37		53.5	53.5
53.9	11:24:38		53.9	53.9
54.0	11:24:39		54.0	54.0
53.6	11:24:40		53.6	53.6
53.7	11:24:41		53.7	53.7
54.2	11:24:42		54.2	54.2
54.8	11:24:43		54.8	54.8
55.5	11:24:44		55.5	55.5
55.3	11:24:45		55.3	55.3
54.9	11:24:46		54.9	54.9
54.9	11:24:47		54.9	54.9
54.4	11:24:48		54.4	54.4
54.8	11:24:49		54.8	54.8
55.2	11:24:50		55.2	55.2
57.5	11:24:51		57.5	57.5
54.2	11:24:52		54.2	54.2
53.4	11:24:53		53.4	53.4
54.0	11:24:54		54.0	54.0
54.4	11:24:55		54.4	54.4
54.3	11:24:56		54.3	54.3
58.6	11:24:57		58.6	58.6
58.8	11:24:58		58.8	58.8
56.9	11:24:59		56.9	56.9
55.8	11:25:00		55.8	55.8
54.8	11:25:01		54.8	54.8
55.5	11:25:02		55.5	55.5
54.9	11:25:03		54.9	54.9
54.0	11:25:04		54.0	54.0
54.2	11:25:05		54.2	54.2
54.9	11:25:06		54.9	54.9
54.5	11:25:07		54.5	54.5
55.4	11:25:08		55.4	55.4
56.9	11:25:09		56.9	56.9
57.1	11:25:10		57.1	57.1
56.4	11:25:11		56.4	56.4
54.9	11:25:12		54.9	54.9
55.0	11:25:13		55.0	55.0
54.0	11:25:14		54.0	54.0
54.1	11:25:15		54.1	54.1
54.7	11:25:16		54.7	54.7
55.2	11:25:17		55.2	55.2
54.4	11:25:18		54.4	54.4
53.5	11:25:19		53.5	53.5
54.0	11:25:20		54.0	54.0
54.5	11:25:21		54.5	54.5
55.3	11:25:22		55.3	55.3
54.5	11:25:23		54.5	54.5
55.2	11:25:24		55.2	55.2
54.4	11:25:25		54.4	54.4
54.8	11:25:26		54.8	54.8
53.7	11:25:27		53.7	53.7
54.6	11:25:28		54.6	54.6
54.6	11:25:29		54.6	54.6
54.4	11:25:30		54.4	54.4
53.6	11:25:31		53.6	53.6
52.9	11:25:32		52.9	52.9
52.8	11:25:33		52.8	52.8
52.5	11:25:34		52.5	52.5
52.9	11:25:35		52.9	52.9
52.8	11:25:36		52.8	52.8
53.0	11:25:37		53.0	53.0
53.3	11:25:38		53.3	53.3
53.7	11:25:39		53.7	53.7
54.6	11:25:40		54.6	54.6
56.0	11:25:41		56.0	56.0
57.8	11:25:42		57.8	57.8
56.3	11:25:43		56.3	56.3
55.9	11:25:44		55.9	55.9
56.2	11:25:45		56.2	56.2
53.9	11:25:46		53.9	53.9
53.4	11:25:47		53.4	53.4
53.3	11:25:48		53.3	53.3
53.0	11:25:49		53.0	53.0
53.0	11:25:50		53.0	53.0
53.3	11:25:51		53.3	53.3
53.1	11:25:52		53.1	53.1
53.4	11:25:53		53.4	53.4
53.2	11:25:54		53.2	53.2
53.3	11:25:55		53.3	53.3
53.6	11:25:56		53.6	53.6
54.6	11:25:57		54.6	54.6
54.2	11:25:58		54.2	54.2
54.8	11:25:59		54.8	54.8
54.5	11:26:00		54.5	54.5
55.3	11:26:01		55.3	55.3
56.1	11:26:02		56.1	56.1
55.3	11:26:03		55.3	55.3
54.1	11:26:04		54.1	54.1
53.5	11:26:05		53.5	53.5
53.4	11:26:06		53.4	53.4
53.2	11:26:07		53.2	53.2
52.8	11:26:08		52.8	52.8
53.0	11:26:09		53.0	53.0
53.8	11:26:10		53.8	53.8
55.7	11:26:11		55.7	55.7
55.4	11:26:12		55.4	55.4
55.1	11:26:13		55.1	55.1
55.8	11:26:14		55.8	55.8
55.4	11:26:15		55.4	55.4
52.9	11:26:16		52.9	52.9
53.1	11:26:17		53.1	53.1
53.7	11:26:18		53.7	53.7
54.5	11:26:19		54.5	54.5
55.0	11:26:20		55.0	55.0
55.6	11:26:21		55.6	55.6

Site 1 - Near Southeast Corner of Project Site

SPL	Time	Leq (1 hour Avg.)	Ldn	CNEL
52.3	11:21:18		52.3	52.3
50.8	11:21:19		50.8	50.8
51.6	11:21:20		51.6	51.6
51.5	11:21:21		51.5	51.5
50.8	11:21:22		50.8	50.8
50.9	11:21:23		50.9	50.9
55.0	11:21:24		55.0	55.0
51.7	11:21:25		51.7	51.7
50.8	11:21:26		50.8	50.8
50.4	11:21:27		50.4	50.4
51.2	11:21:28		51.2	51.2
50.8	11:21:29		50.8	50.8
51.8	11:21:30		51.8	51.8
52.8	11:21:31		52.8	52.8
53.4	11:21:32		53.4	53.4
51.6	11:21:33		51.6	51.6
51.8	11:21:34		51.8	51.8
51.7	11:21:35		51.7	51.7
51.6	11:21:36		51.6	51.6
51.6	11:21:37		51.6	51.6
51.6	11:21:38		51.6	51.6
51.7	11:21:39		51.7	51.7
52.1	11:21:40		52.1	52.1
52.5	11:21:41		52.5	52.5
53.1	11:21:42		53.1	53.1
51.7	11:21:43		51.7	51.7
51.5	11:21:44		51.5	51.5
53.1	11:21:45		53.1	53.1
53.0	11:21:46		53.0	53.0
52.4	11:21:47		52.4	52.4
53.0	11:21:48		53.0	53.0
52.2	11:21:49		52.2	52.2
52.4	11:21:50		52.4	52.4
53.9	11:21:51		53.9	53.9
52.0	11:21:52		52.0	52.0
52.7	11:21:53		52.7	52.7
52.7	11:21:54		52.7	52.7
52.2	11:21:55		52.2	52.2
52.5	11:21:56		52.5	52.5
54.2	11:21:57		54.2	54.2
52.0	11:21:58		52.0	52.0
51.3	11:21:59		51.3	51.3
51.4	11:22:00		51.4	51.4
51.1	11:22:01		51.1	51.1
50.8	11:22:02		50.8	50.8
50.6	11:22:03		50.6	50.6
52.5	11:22:04		52.5	52.5
51.6	11:22:05		51.6	51.6
50.6	11:22:06		50.6	50.6
50.7	11:22:07		50.7	50.7
53.1	11:22:08		53.1	53.1
52.3	11:22:09		52.3	52.3
51.5	11:22:10		51.5	51.5
51.6	11:22:11		51.6	51.6
51.9	11:22:12		51.9	51.9
51.7	11:22:13		51.7	51.7
52.1	11:22:14		52.1	52.1
51.4	11:22:15		51.4	51.4
53.6	11:22:16		53.6	53.6
51.6	11:22:17		51.6	51.6
51.7	11:22:18		51.7	51.7
51.2	11:22:19		51.2	51.2
51.1	11:22:20		51.1	51.1
51.0	11:22:21		51.0	51.0
51.1	11:22:22		51.1	51.1
51.6	11:22:23		51.6	51.6
51.4	11:22:24		51.4	51.4
51.2	11:22:25		51.2	51.2
51.6	11:22:26		51.6	51.6
52.8	11:22:27		52.8	52.8
51.5	11:22:28		51.5	51.5
51.7	11:22:29		51.7	51.7
51.7	11:22:30		51.7	51.7
51.6	11:22:31		51.6	51.6
52.1	11:22:32		52.1	52.1
54.3	11:22:33		54.3	54.3
51.0	11:22:34		51.0	51.0
54.9	11:22:35		54.9	54.9
51.0	11:22:36		51.0	51.0
56.3	11:22:37		56.3	56.3
51.1	11:22:38		51.1	51.1
50.3	11:22:39		50.3	50.3
50.0	11:22:40		50.0	50.0
50.3	11:22:41		50.3	50.3
50.4	11:22:42		50.4	50.4
50.7	11:22:43		50.7	50.7
52.5	11:22:44		52.5	52.5
52.0	11:22:45		52.0	52.0
53.3	11:22:46		53.3	53.3
50.6	11:22:47		50.6	50.6
50.3	11:22:48		50.3	50.3
50.6	11:22:49		50.6	50.6
51.2	11:22:50		51.2	51.2
51.0	11:22:51		51.0	51.0
50.8	11:22:52		50.8	50.8
50.9	11:22:53		50.9	50.9
50.6	11:22:54		50.6	50.6
50.3	11:22:55		50.3	50.3
51.8	11:22:56		51.8	51.8
52.3	11:22:57		52.3	52.3
51.8	11:22:58		51.8	51.8
51.8	11:22:59		51.8	51.8
52.0	11:23:00		52.0	52.0
53.2	11:23:01		53.2	53.2
51.6	11:23:02		51.6	51.6
52.1	11:23:03		52.1	52.1
52.4	11:23:04		52.4	52.4
52.0	11:23:05		52.0	52.0
52.8	11:23:06		52.8	52.8
52.4	11:23:07		52.4	52.4
51.6	11:23:08		51.6	51.6
51.6	11:23:09		51.6	51.6
51.5	11:23:10		51.5	51.5
51.0	11:23:11		51.0	51.0
51.6	11:23:12		51.6	51.6
51.4	11:23:13		51.4	51.4
51.2	11:23:14		51.2	51.2
51.2	11:23:15		51.2	51.2
50.9	11:23:16		50.9	50.9
50.9	11:23:17		50.9	50.9
51.1	11:23:18		51.1	51.1
51.3	11:23:19		51.3	51.3
51.4	11:23:20		51.4	51.4
51.7	11:23:21		51.7	51.7
51.1	11:23:22		51.1	51.1
51.2	11:23:23		51.2	51.2
52.1	11:23:24		52.1	52.1
51.2	11:23:25		51.2	51.2
52.0	11:23:26		52.0	52.0
51.8	11:23:27		51.8	51.8
52.2	11:23:28		52.2	52.2
51.8	11:23:29		51.8	51.8
51.5	11:23:30		51.5	51.5
51.7	11:23:31		51.7	51.7
51.7	11:23:32		51.7	51.7
52.1	11:23:33		52.1	52.1
52.3	11:23:34		52.3	52.3
51.9	11:23:35		51.9	51.9
52.7	11:23:36		52.7	52.7
52.3	11:23:37		52.3	52.3
53.0	11:23:38		53.0	53.0
53.4	11:23:39		53.4	53.4
52.2	11:23:40		52.2	52.2
52.6	11:23:41		52.6	52.6
52.4	11:23:42		52.4	52.4
52.3	11:23:43		52.3	52.3
52.6	11:23:44		52.6	52.6
52.9	11:23:45		52.9	52.9
52.4	11:23:46		52.4	52.4
52.2	11:23:47		52.2	52.2
52.7	11:23:48		52.7	52.7
52.5	11:23:49		52.5	52.5
52.2	11:23:50		52.2	52.2
51.6	11:23:51		51.6	51.6
51.7	11:23:52		51.7	51.7
52.3	11:23:53		52.3	52.3
52.5	11:23:54		52.5	52.5
52.3	11:23:55		52.3	52.3
52.6	11:23:56		52.6	52.6
52.3	11:23:57		52.3	52.3
52.1	11:23:58		52.1	52.1
51.9	11:23:59		51.9	51.9
52.4	11:24:00		52.4	52.4
52.9	11:24:01		52.9	52.9
53.0	11:24:02		53.0	53.0
53.3	11:24:03		53.3	53.3
53.5	11:24:04		53.5	53.5
53.3	11:24:05		53.3	53.3
53.0	11:24:06		53.0	53.0
53.1	11:24:07		53.1	53.1
53.2	11:24:08		53.2	53.2
53.1	11:24:09		53.1	53.1
52.9	11:24:10		52.9	52.9
53.7	11:24:11		53.7	53.7
53.6	11:24:12		53.6	53.6
53.6	11:24:13		53.6	53.6
54.1	11:24:14		54.1	54.1
53.3	11:24:15		53.3	53.3
53.1	11:24:16		53.1	53.1
53.5	11:24:17		53.5	53.5
53.9	11:24:18		53.9	53.9
54.1	11:24:19		54.1	54.1
54.0	11:24:20		54.0	54.0
52.9	11:24:21		52.9	52.9
52.6	11:24:22		52.6	52.6
53.5	11:24:23		53.5	53.5
54.0	11:24:24		54.0	54.0
54.0	11:24:25		54.0	54.0
53.4	11:24:26		53.4	53.4
54.0	11:24:27		54.0	54.0
54.9	11:24:28		54.9	54.9
54.8	11:24:29		54.8	54.8
53.8	11:24:30		53.8	53.8
54.2	11:24:31		54.2	54.2
53.8	11:24:32		53.8	53.8
53.9	11:24:33		53.9	53.9
54.0	11:24:34		54.0	54.0
54.2	11:24:35		54.2	54.2
54.2	11:24:36		54.2	54.2
54.3	11:24:37		54.3	54.3
54.9	11:24:38		54.9	54.9
54.5	11:24:39		54.5	54.5
54.5	11:24:40		54.5	54.5
53.9	11:24:41		53.9	53.9
54.6	11:24:42		54.6	54.6
55.6	11:24:43		55.6	55.6

Site 2 - Near Northwest Corner of Project Site

SPL	Time	Leq (1 hour Avg.)	Ldn	CNEL
58.1	11:26:22		58.1	58.1
60.4	11:26:23		60.4	60.4
57.2	11:26:24		57.2	57.2
55.8	11:26:25		55.8	55.8
54.9	11:26:26		54.9	54.9
54.0	11:26:27		54.0	54.0
55.8	11:26:28		55.8	55.8
56.6	11:26:29		56.6	56.6
54.5	11:26:30		54.5	54.5
53.9	11:26:31		53.9	53.9
54.6	11:26:32		54.6	54.6
54.4	11:26:33		54.4	54.4
54.0	11:26:34		54.0	54.0
54.3	11:26:35		54.3	54.3
54.2	11:26:36		54.2	54.2
53.9	11:26:37		53.9	53.9
53.7	11:26:38		53.7	53.7
53.5	11:26:39		53.5	53.5
53.9	11:26:40		53.9	53.9
53.7	11:26:41		53.7	53.7
53.7	11:26:42		53.7	53.7
54.1	11:26:43		54.1	54.1
55.1	11:26:44		55.1	55.1
57.2	11:26:45		57.2	57.2
58.3	11:26:46		58.3	58.3
61.9	11:26:47		61.9	61.9
60.9	11:26:48		60.9	60.9
57.8	11:26:49		57.8	57.8
54.6	11:26:50		54.6	54.6
53.4	11:26:51		53.4	53.4
53.1	11:26:52		53.1	53.1
54.4	11:26:53		54.4	54.4
55.5	11:26:54		55.5	55.5
57.5	11:26:55		57.5	57.5
58.3	11:26:56		58.3	58.3
57.8	11:26:57		57.8	57.8
55.9	11:26:58		55.9	55.9
54.3	11:26:59		54.3	54.3
53.6	11:27:00		53.6	53.6
53.3	11:27:01		53.3	53.3
53.2	11:27:02		53.2	53.2
53.2	11:27:03		53.2	53.2
53.4	11:27:04		53.4	53.4
52.9	11:27:05		52.9	52.9
53.5	11:27:06		53.5	53.5
53.9	11:27:07		53.9	53.9
55.3	11:27:08		55.3	55.3
54.8	11:27:09		54.8	54.8
55.3	11:27:10		55.3	55.3
57.8	11:27:11		57.8	57.8
59.3	11:27:12		59.3	59.3
63.3	11:27:13		63.3	63.3
65.8	11:27:14		65.8	65.8
65.5	11:27:15		65.5	65.5
61.9	11:27:16		61.9	61.9
60.0	11:27:17		60.0	60.0
59.0	11:27:18		59.0	59.0
58.2	11:27:19		58.2	58.2
57.2	11:27:20		57.2	57.2
56.5	11:27:21		56.5	56.5
57.7	11:27:22		57.7	57.7
57.1	11:27:23		57.1	57.1
59.3	11:27:24		59.3	59.3
60.1	11:27:25		60.1	60.1
56.9	11:27:26		56.9	56.9
55.0	11:27:27		55.0	55.0
56.3	11:27:28		56.3	56.3
56.2	11:27:29		56.2	56.2
56.2	11:27:30		56.2	56.2
54.7	11:27:31		54.7	54.7
54.6	11:27:32		54.6	54.6
55.4	11:27:33		55.4	55.4
57.6	11:27:34		57.6	57.6
55.5	11:27:35		55.5	55.5
53.9	11:27:36		53.9	53.9
54.0	11:27:37		54.0	54.0
53.8	11:27:38		53.8	53.8
53.2	11:27:39		53.2	53.2
53.8	11:27:40		53.8	53.8
55.8	11:27:41		55.8	55.8
56.1	11:27:42		56.1	56.1
55.4	11:27:43		55.4	55.4
54.2	11:27:44		54.2	54.2
53.2	11:27:45		53.2	53.2
53.3	11:27:46		53.3	53.3
54.8	11:27:47		54.8	54.8
57.9	11:27:48		57.9	57.9
58.0	11:27:49		58.0	58.0
57.1	11:27:50		57.1	57.1
56.6	11:27:51		56.6	56.6
54.2	11:27:52		54.2	54.2
54.4	11:27:53		54.4	54.4
55.0	11:27:54		55.0	55.0
56.5	11:27:55		56.5	56.5
58.4	11:27:56		58.4	58.4
58.1	11:27:57		58.1	58.1
56.4	11:27:58		56.4	56.4
55.1	11:27:59		55.1	55.1
55.1	11:28:00		55.1	55.1
55.0	11:28:01		55.0	55.0
56.1	11:28:02		56.1	56.1
55.1	11:28:03		55.1	55.1
54.5	11:28:04		54.5	54.5
54.5	11:28:05		54.5	54.5
53.9	11:28:06		53.9	53.9
54.3	11:28:07		54.3	54.3
53.8	11:28:08		53.8	53.8
53.4	11:28:09		53.4	53.4
53.2	11:28:10		53.2	53.2
52.9	11:28:11		52.9	52.9
53.1	11:28:12		53.1	53.1
52.7	11:28:13		52.7	52.7
52.5	11:28:14		52.5	52.5
52.3	11:28:15		52.3	52.3
52.7	11:28:16		52.7	52.7
53.9	11:28:17		53.9	53.9
53.6	11:28:18		53.6	53.6
53.7	11:28:19		53.7	53.7
55.1	11:28:20		55.1	55.1
57.0	11:28:21		57.0	57.0
59.1	11:28:22		59.1	59.1
59.5	11:28:23		59.5	59.5
63.2	11:28:24		63.2	63.2
59.1	11:28:25		59.1	59.1
56.2	11:28:26		56.2	56.2
54.1	11:28:27		54.1	54.1
52.5	11:28:28		52.5	52.5
52.5	11:28:29		52.5	52.5
52.8	11:28:30		52.8	52.8
51.9	11:28:31		51.9	51.9
52.0	11:28:32		52.0	52.0
52.7	11:28:33		52.7	52.7
53.3	11:28:34		53.3	53.3
54.4	11:28:35		54.4	54.4
56.8	11:28:36		56.8	56.8
61.5	11:28:37		61.5	61.5
60.3	11:28:38		60.3	60.3
57.3	11:28:39		57.3	57.3
54.8	11:28:40		54.8	54.8
54.3	11:28:41		54.3	54.3
54.0	11:28:42		54.0	54.0
54.2	11:28:43		54.2	54.2
57.2	11:28:44		57.2	57.2
57.7	11:28:45		57.7	57.7
60.5	11:28:46		60.5	60.5
54.8	11:28:47		54.8	54.8
55.0	11:28:48		55.0	55.0
55.5	11:28:49		55.5	55.5
55.1	11:28:50		55.1	55.1
55.3	11:28:51		55.3	55.3
54.9	11:28:52		54.9	54.9
54.8	11:28:53		54.8	54.8
54.7	11:28:54		54.7	54.7
54.5	11:28:55		54.5	54.5
54.4	11:28:56		54.4	54.4
54.9	11:28:57		54.9	54.9
55.4	11:28:58		55.4	55.4
54.8	11:28:59		54.8	54.8
55.4	11:29:00		55.4	55.4
55.1	11:29:01		55.1	55.1
54.1	11:29:02		54.1	54.1
53.8	11:29:03		53.8	53.8
54.9	11:29:04		54.9	54.9
53.9	11:29:05		53.9	53.9
53.8	11:29:06		53.8	53.8
54.8	11:29:07		54.8	54.8
54.9	11:29:08		54.9	54.9
54.1	11:29:09		54.1	54.1
53.3	11:29:10		53.3	53.3
52.8	11:29:11		52.8	52.8
52.4	11:29:12		52.4	52.4
53.3	11:29:13		53.3	53.3
54.4	11:29:14		54.4	54.4
55.5	11:29:15		55.5	55.5
57.3	11:29:16		57.3	57.3
61.2	11:29:17		61.2	61.2
63.6	11:29:18		63.6	63.6
64.5	11:29:19		64.5	64.5
60.3	11:29:20		60.3	60.3
60.2	11:29:21		60.2	60.2
57.7	11:29:22		57.7	57.7
55.7	11:29:23		55.7	55.7
53.8	11:29:24		53.8	53.8
53.3	11:29:25		53.3	53.3
54.4	11:29:26		54.4	54.4
54.1	11:29:27		54.1	54.1
53.7	11:29:28		53.7	53.7
53.9	11:29:29		53.9	53.9
53.2	11:29:30		53.2	53.2
53.4	11:29:31		53.4	53.4
53.2	11:29:32		53.2	53.2
52.9	11:29:33		52.9	52.9
52.7	11:29:34		52.7	52.7
54.1	11:29:35		54.1	54.1
55.8	11:29:36		55.8	55.8
56.8	11:29:37		56.8	56.8
62.2	11:29:38		62.2	62.2
64.0	11:29:39		64.0	64.0
62.4	11:29:40		62.4	62.4
59.5	11:29:41		59.5	59.5
58.4	11:29:42		58.4	58.4
55.8	11:29:43		55.8	55.8
55.6	11:29:44		55.6	55.6
55.8	11:29:45		55.8	55.8
55.7	11:29:46		55.7	55.7
55.4	11:29:47		55.4	55.4

Site 1 - Near Southeast Corner of Project Site

SPL	Time	Leq (1 hour Avg.)	Ldn	CNEL
54.8	11:24:44		54.8	54.8
54.5	11:24:45		54.5	54.5
53.9	11:24:46		53.9	53.9
53.5	11:24:47		53.5	53.5
53.4	11:24:48		53.4	53.4
54.3	11:24:49		54.3	54.3
54.2	11:24:50		54.2	54.2
54.2	11:24:51		54.2	54.2
53.5	11:24:52		53.5	53.5
52.4	11:24:53		52.4	52.4
53.0	11:24:54		53.0	53.0
53.4	11:24:55		53.4	53.4
53.5	11:24:56		53.5	53.5
52.5	11:24:57		52.5	52.5
52.5	11:24:58		52.5	52.5
53.0	11:24:59		53.0	53.0
54.4	11:25:00		54.4	54.4
53.9	11:25:01		53.9	53.9
52.4	11:25:02		52.4	52.4
53.3	11:25:03		53.3	53.3
53.5	11:25:04		53.5	53.5
53.2	11:25:05		53.2	53.2
53.1	11:25:06		53.1	53.1
52.6	11:25:07		52.6	52.6
52.5	11:25:08		52.5	52.5
52.7	11:25:09		52.7	52.7
53.0	11:25:10		53.0	53.0
53.1	11:25:11		53.1	53.1
53.6	11:25:12		53.6	53.6
53.2	11:25:13		53.2	53.2
53.6	11:25:14		53.6	53.6
52.8	11:25:15		52.8	52.8
52.1	11:25:16		52.1	52.1
54.9	11:25:17		54.9	54.9
53.6	11:25:18		53.6	53.6
52.4	11:25:19		52.4	52.4
52.8	11:25:20		52.8	52.8
51.9	11:25:21		51.9	51.9
52.2	11:25:22		52.2	52.2
54.0	11:25:23		54.0	54.0
52.9	11:25:24		52.9	52.9
53.4	11:25:25		53.4	53.4
54.1	11:25:26		54.1	54.1
53.7	11:25:27		53.7	53.7
54.9	11:25:28		54.9	54.9
55.1	11:25:29		55.1	55.1
54.6	11:25:30		54.6	54.6
53.4	11:25:31		53.4	53.4
52.9	11:25:32		52.9	52.9
54.6	11:25:33		54.6	54.6
53.8	11:25:34		53.8	53.8
53.7	11:25:35		53.7	53.7
54.4	11:25:36		54.4	54.4
53.2	11:25:37		53.2	53.2
53.6	11:25:38		53.6	53.6
53.6	11:25:39		53.6	53.6
53.1	11:25:40		53.1	53.1
52.9	11:25:41		52.9	52.9
52.4	11:25:42		52.4	52.4
52.2	11:25:43		52.2	52.2
52.8	11:25:44		52.8	52.8
52.2	11:25:45		52.2	52.2
52.4	11:25:46		52.4	52.4
52.5	11:25:47		52.5	52.5
52.5	11:25:48		52.5	52.5
52.3	11:25:49		52.3	52.3
52.4	11:25:50		52.4	52.4
52.7	11:25:51		52.7	52.7
53.1	11:25:52		53.1	53.1
52.9	11:25:53		52.9	52.9
53.3	11:25:54		53.3	53.3
53.0	11:25:55		53.0	53.0
52.7	11:25:56		52.7	52.7
53.3	11:25:57		53.3	53.3
54.8	11:25:58		54.8	54.8
53.5	11:25:59		53.5	53.5
53.5	11:26:00		53.5	53.5
53.7	11:26:01		53.7	53.7
54.3	11:26:02		54.3	54.3
54.4	11:26:03		54.4	54.4
54.8	11:26:04		54.8	54.8
54.4	11:26:05		54.4	54.4
54.9	11:26:06		54.9	54.9
55.1	11:26:07		55.1	55.1
55.3	11:26:08		55.3	55.3
55.5	11:26:09		55.5	55.5
54.4	11:26:10		54.4	54.4
54.8	11:26:11		54.8	54.8
54.4	11:26:12		54.4	54.4
54.6	11:26:13		54.6	54.6
54.3	11:26:14		54.3	54.3
54.3	11:26:15		54.3	54.3
54.4	11:26:16		54.4	54.4
56.2	11:26:17		56.2	56.2
55.1	11:26:18		55.1	55.1
55.2	11:26:19		55.2	55.2
54.6	11:26:20		54.6	54.6
53.8	11:26:21		53.8	53.8
53.7	11:26:22		53.7	53.7
54.4	11:26:23		54.4	54.4
54.3	11:26:24		54.3	54.3
53.9	11:26:25		53.9	53.9
54.1	11:26:26		54.1	54.1
53.7	11:26:27		53.7	53.7
53.7	11:26:28		53.7	53.7
54.2	11:26:29		54.2	54.2
54.1	11:26:30		54.1	54.1
54.0	11:26:31		54.0	54.0
54.8	11:26:32		54.8	54.8
54.1	11:26:33		54.1	54.1
54.4	11:26:34		54.4	54.4
54.1	11:26:35		54.1	54.1
54.5	11:26:36		54.5	54.5
53.9	11:26:37		53.9	53.9
53.8	11:26:38		53.8	53.8
54.4	11:26:39		54.4	54.4
54.1	11:26:40		54.1	54.1
53.7	11:26:41		53.7	53.7
54.5	11:26:42		54.5	54.5
54.4	11:26:43		54.4	54.4
53.9	11:26:44		53.9	53.9
54.3	11:26:45		54.3	54.3
54.4	11:26:46		54.4	54.4
54.0	11:26:47		54.0	54.0
54.2	11:26:48		54.2	54.2
56.3	11:26:49		56.3	56.3
55.2	11:26:50		55.2	55.2
54.2	11:26:51		54.2	54.2
54.2	11:26:52		54.2	54.2
54.2	11:26:53		54.2	54.2
54.9	11:26:54		54.9	54.9
54.0	11:26:55		54.0	54.0
53.4	11:26:56		53.4	53.4
54.3	11:26:57		54.3	54.3
54.6	11:26:58		54.6	54.6
54.5	11:26:59		54.5	54.5
54.7	11:27:00		54.7	54.7
54.9	11:27:01		54.9	54.9
55.2	11:27:02		55.2	55.2
55.1	11:27:03		55.1	55.1
53.7	11:27:04		53.7	53.7
54.2	11:27:05		54.2	54.2
54.2	11:27:06		54.2	54.2
54.1	11:27:07		54.1	54.1
53.7	11:27:08		53.7	53.7
54.1	11:27:09		54.1	54.1
54.0	11:27:10		54.0	54.0
53.9	11:27:11		53.9	53.9
54.0	11:27:12		54.0	54.0
54.0	11:27:13		54.0	54.0
53.7	11:27:14		53.7	53.7
53.1	11:27:15		53.1	53.1
52.9	11:27:16		52.9	52.9
53.0	11:27:17		53.0	53.0
52.4	11:27:18		52.4	52.4
52.5	11:27:19		52.5	52.5
53.3	11:27:20		53.3	53.3
53.0	11:27:21		53.0	53.0
53.5	11:27:22		53.5	53.5
53.6	11:27:23		53.6	53.6
53.0	11:27:24		53.0	53.0
52.5	11:27:25		52.5	52.5
52.5	11:27:26		52.5	52.5
52.7	11:27:27		52.7	52.7
52.9	11:27:28		52.9	52.9
53.2	11:27:29		53.2	53.2
54.1	11:27:30		54.1	54.1
55.8	11:27:31		55.8	55.8
55.4	11:27:32		55.4	55.4
55.2	11:27:33		55.2	55.2
54.4	11:27:34		54.4	54.4
54.5	11:27:35		54.5	54.5
57.7	11:27:36		57.7	57.7
58.5	11:27:37		58.5	58.5

Site 2 - Near Northwest Corner of Project Site

SPL	Time	Leq (1 hour Avg.)	Ldn	CNEL
55.0	11:29:48		55.0	55.0
54.3	11:29:49		54.3	54.3
53.9	11:29:50		53.9	53.9
54.6	11:29:51		54.6	54.6
53.9	11:29:52		53.9	53.9
53.8	11:29:53		53.8	53.8
54.5	11:29:54		54.5	54.5
54.5	11:29:55		54.5	54.5
54.0	11:29:56		54.0	54.0
53.2	11:29:57		53.2	53.2
55.5	11:29:58		55.5	55.5
56.1	11:29:59		56.1	56.1
54.5	11:30:00		54.5	54.5
53.4	11:30:01		53.4	53.4
52.5	11:30:02		52.5	52.5
53.1	11:30:03		53.1	53.1
53.3	11:30:04		53.3	53.3
54.8	11:30:05		54.8	54.8
56.6	11:30:06		56.6	56.6
57.5	11:30:07		57.5	57.5
56.9	11:30:08		56.9	56.9
56.3	11:30:09		56.3	56.3
55.7	11:30:10		55.7	55.7
54.1	11:30:11		54.1	54.1
53.5	11:30:12		53.5	53.5
53.4	11:30:13		53.4	53.4
53.6	11:30:14		53.6	53.6
53.4	11:30:15		53.4	53.4
54.1	11:30:16		54.1	54.1
54.9	11:30:17		54.9	54.9
56.2	11:30:18		56.2	56.2
57.2	11:30:19		57.2	57.2
60.1	11:30:20		60.1	60.1
62.1	11:30:21		62.1	62.1
64.0	11:30:22		64.0	64.0
59.2	11:30:23		59.2	59.2
59.3	11:30:24		59.3	59.3
57.5	11:30:25		57.5	57.5
56.2	11:30:26		56.2	56.2
54.8	11:30:27		54.8	54.8
53.1	11:30:28		53.1	53.1
52.3	11:30:29		52.3	52.3
52.4	11:30:30		52.4	52.4
51.7	11:30:31		51.7	51.7
52.1	11:30:32		52.1	52.1
51.2	11:30:33		51.2	51.2
51.5	11:30:34		51.5	51.5
51.7	11:30:35		51.7	51.7
51.7	11:30:36		51.7	51.7
52.1	11:30:37		52.1	52.1
52.4	11:30:38		52.4	52.4
51.7	11:30:39		51.7	51.7
51.5	11:30:40		51.5	51.5
51.8	11:30:41		51.8	51.8
52.0	11:30:42		52.0	52.0
51.8	11:30:43		51.8	51.8
52.4	11:30:44		52.4	52.4
52.0	11:30:45		52.0	52.0
52.5	11:30:46		52.5	52.5
51.7	11:30:47		51.7	51.7
51.9	11:30:48		51.9	51.9
51.8	11:30:49		51.8	51.8
52.0	11:30:50		52.0	52.0
52.5	11:30:51		52.5	52.5
52.5	11:30:52		52.5	52.5
52.1	11:30:53		52.1	52.1
52.9	11:30:54		52.9	52.9
53.0	11:30:55		53.0	53.0
53.3	11:30:56		53.3	53.3
53.0	11:30:57		53.0	53.0
52.9	11:30:58		52.9	52.9
53.0	11:30:59		53.0	53.0
53.1	11:31:00		53.1	53.1
54.5	11:31:01		54.5	54.5
53.3	11:31:02		53.3	53.3
53.5	11:31:03		53.5	53.5
54.3	11:31:04		54.3	54.3
54.7	11:31:05		54.7	54.7
54.4	11:31:06		54.4	54.4
54.1	11:31:07		54.1	54.1
55.4	11:31:08		55.4	55.4
55.6	11:31:09		55.6	55.6
55.1	11:31:10		55.1	55.1
55.8	11:31:11		55.8	55.8
55.3	11:31:12		55.3	55.3
55.1	11:31:13		55.1	55.1
55.2	11:31:14		55.2	55.2
53.5	11:31:15		53.5	53.5
53.7	11:31:16		53.7	53.7
54.1	11:31:17		54.1	54.1
54.3	11:31:18		54.3	54.3
53.7	11:31:19		53.7	53.7
53.4	11:31:20		53.4	53.4
53.2	11:31:21		53.2	53.2
53.3	11:31:22		53.3	53.3
54.6	11:31:23		54.6	54.6
54.8	11:31:24		54.8	54.8
54.3	11:31:25		54.3	54.3
54.7	11:31:26		54.7	54.7
56.4	11:31:27		56.4	56.4
56.3	11:31:28		56.3	56.3
55.4	11:31:29		55.4	55.4
56.5	11:31:30		56.5	56.5
58.8	11:31:31		58.8	58.8
61.1	11:31:32		61.1	61.1
62.4	11:31:33		62.4	62.4
58.8	11:31:34		58.8	58.8
58.4	11:31:35		58.4	58.4
58.0	11:31:36		58.0	58.0
60.4	11:31:37		60.4	60.4
59.0	11:31:38		59.0	59.0
57.0	11:31:39		57.0	57.0
58.3	11:31:40		58.3	58.3
57.2	11:31:41		57.2	57.2
56.2	11:31:42		56.2	56.2
55.0	11:31:43		55.0	55.0
55.6	11:31:44		55.6	55.6
54.3	11:31:45		54.3	54.3
55.1	11:31:46		55.1	55.1
55.8	11:31:47		55.8	55.8
56.4	11:31:48		56.4	56.4
57.4	11:31:49		57.4	57.4
55.8	11:31:50		55.8	55.8
55.5	11:31:51		55.5	55.5
55.1	11:31:52		55.1	55.1
55.6	11:31:53		55.6	55.6
56.9	11:31:54		56.9	56.9
55.4	11:31:55		55.4	55.4
54.6	11:31:56		54.6	54.6
55.8	11:31:57		55.8	55.8
55.7	11:31:58		55.7	55.7
54.6	11:31:59		54.6	54.6
54.7	11:32:00		54.7	54.7
54.8	11:32:01		54.8	54.8
54.5	11:32:02		54.5	54.5
54.0	11:32:03		54.0	54.0
53.5	11:32:04		53.5	53.5
53.4	11:32:05		53.4	53.4
53.9	11:32:06		53.9	53.9
54.4	11:32:07		54.4	54.4
53.8	11:32:08		53.8	53.8
54.1	11:32:09		54.1	54.1
54.3	11:32:10		54.3	54.3
53.9	11:32:11		53.9	53.9
54.0	11:32:12		54.0	54.0
54.0	11:32:13		54.0	54.0
54.6	11:32:14		54.6	54.6
54.0	11:32:15		54.0	54.0
54.4	11:32:16		54.4	54.4
54.0	11:32:17		54.0	54.0
53.6	11:32:18		53.6	53.6
52.6	11:32:19		52.6	52.6
54.4	11:32:20		54.4	54.4
55.1	11:32:21		55.1	55.1
54.5	11:32:22		54.5	54.5
54.7	11:32:23		54.7	54.7
53.6	11:32:24		53.6	53.6
53.8	11:32:25		53.8	53.8
54.5	11:32:26		54.5	54.5
54.6	11:32:27		54.6	54.6
56.1	11:32:28		56.1	56.1
60.3	11:32:29		60.3	60.3
61.9	11:32:30		61.9	61.9
61.8	11:32:31		61.8	61.8
62.3	11:32:32		62.3	62.3
63.6	11:32:33		63.6	63.6
60.7	11:32:34		60.7	60.7
58.5	11:32:35		58.5	58.5
57.5	11:32:36		57.5	57.5
56.1	11:32:37		56.1	56.1
56.2	11:32:38		56.2	56.2
58.1	11:32:39		58.1	58.1
61.2	11:32:40		61.2	61.2
62.3	11:32:41		62.3	62.3

Site 1 - Near Southeast Corner of Project Site

SPL	Time	Leq (1 hour Avg.)	Ldn	CNEL
58.4	11:27:38		58.4	58.4
61.4	11:27:39		61.4	61.4
58.4	11:27:40		58.4	58.4
53.4	11:27:41		53.4	53.4
52.9	11:27:42		52.9	52.9
52.2	11:27:43		52.2	52.2
52.7	11:27:44		52.7	52.7
52.8	11:27:45		52.8	52.8
52.8	11:27:46		52.8	52.8
53.1	11:27:47		53.1	53.1
53.2	11:27:48		53.2	53.2
56.7	11:27:49		56.7	56.7
54.0	11:27:50		54.0	54.0
52.3	11:27:51		52.3	52.3
57.1	11:27:52		57.1	57.1
59.7	11:27:53		59.7	59.7
52.7	11:27:54		52.7	52.7
52.7	11:27:55		52.7	52.7
53.1	11:27:56		53.1	53.1
56.5	11:27:57		56.5	56.5
52.6	11:27:58		52.6	52.6
55.7	11:27:59		55.7	55.7
52.7	11:28:00		52.7	52.7
54.4	11:28:01		54.4	54.4
54.0	11:28:02		54.0	54.0
55.4	11:28:03		55.4	55.4
54.1	11:28:04		54.1	54.1
54.5	11:28:05		54.5	54.5
55.0	11:28:06		55.0	55.0
53.4	11:28:07		53.4	53.4
54.2	11:28:08		54.2	54.2
54.6	11:28:09		54.6	54.6
56.0	11:28:10		56.0	56.0
55.0	11:28:11		55.0	55.0
54.9	11:28:12		54.9	54.9
55.1	11:28:13		55.1	55.1
55.6	11:28:14		55.6	55.6
55.6	11:28:15		55.6	55.6
56.5	11:28:16		56.5	56.5
57.1	11:28:17		57.1	57.1
56.6	11:28:18		56.6	56.6
55.5	11:28:19		55.5	55.5
55.6	11:28:20		55.6	55.6
55.3	11:28:21		55.3	55.3
56.4	11:28:22		56.4	56.4
56.3	11:28:23		56.3	56.3
54.9	11:28:24		54.9	54.9
54.0	11:28:25		54.0	54.0
54.8	11:28:26		54.8	54.8
54.9	11:28:27		54.9	54.9
55.4	11:28:28		55.4	55.4
54.8	11:28:29		54.8	54.8
54.5	11:28:30		54.5	54.5
54.4	11:28:31		54.4	54.4
55.0	11:28:32		55.0	55.0
54.7	11:28:33		54.7	54.7
54.6	11:28:34		54.6	54.6
54.8	11:28:35		54.8	54.8
56.0	11:28:36		56.0	56.0
55.1	11:28:37		55.1	55.1
55.4	11:28:38		55.4	55.4
55.1	11:28:39		55.1	55.1
54.9	11:28:40		54.9	54.9
54.6	11:28:41		54.6	54.6
54.7	11:28:42		54.7	54.7
55.3	11:28:43		55.3	55.3
55.9	11:28:44		55.9	55.9
55.4	11:28:45		55.4	55.4
55.4	11:28:46		55.4	55.4
55.3	11:28:47		55.3	55.3
55.0	11:28:48		55.0	55.0
54.5	11:28:49		54.5	54.5
54.0	11:28:50		54.0	54.0
54.1	11:28:51		54.1	54.1
53.9	11:28:52		53.9	53.9
54.2	11:28:53		54.2	54.2
54.3	11:28:54		54.3	54.3
53.7	11:28:55		53.7	53.7
54.3	11:28:56		54.3	54.3
54.2	11:28:57		54.2	54.2
54.9	11:28:58		54.9	54.9
54.2	11:28:59		54.2	54.2
53.2	11:29:00		53.2	53.2
53.3	11:29:01		53.3	53.3
53.2	11:29:02		53.2	53.2
56.8	11:29:03		56.8	56.8
54.5	11:29:04		54.5	54.5
53.7	11:29:05		53.7	53.7
52.5	11:29:06		52.5	52.5
52.8	11:29:07		52.8	52.8
54.2	11:29:08		54.2	54.2
55.5	11:29:09		55.5	55.5
55.0	11:29:10		55.0	55.0
54.7	11:29:11		54.7	54.7
54.5	11:29:12		54.5	54.5
54.4	11:29:13		54.4	54.4
54.5	11:29:14		54.5	54.5
54.0	11:29:15		54.0	54.0
53.3	11:29:16		53.3	53.3
53.9	11:29:17		53.9	53.9
54.6	11:29:18		54.6	54.6
54.4	11:29:19		54.4	54.4
53.7	11:29:20		53.7	53.7
53.9	11:29:21		53.9	53.9
53.6	11:29:22		53.6	53.6
53.1	11:29:23		53.1	53.1
53.4	11:29:24		53.4	53.4
53.3	11:29:25		53.3	53.3
53.8	11:29:26		53.8	53.8
53.5	11:29:27		53.5	53.5
53.5	11:29:28		53.5	53.5
53.6	11:29:29		53.6	53.6
53.4	11:29:30		53.4	53.4
53.2	11:29:31		53.2	53.2
52.9	11:29:32		52.9	52.9
52.6	11:29:33		52.6	52.6
54.0	11:29:34		54.0	54.0
53.6	11:29:35		53.6	53.6
53.1	11:29:36		53.1	53.1
54.1	11:29:37		54.1	54.1
53.8	11:29:38		53.8	53.8
53.3	11:29:39		53.3	53.3
52.8	11:29:40		52.8	52.8
52.5	11:29:41		52.5	52.5
52.9	11:29:42		52.9	52.9
52.5	11:29:43		52.5	52.5
52.1	11:29:44		52.1	52.1
52.3	11:29:45		52.3	52.3
52.7	11:29:46		52.7	52.7
53.4	11:29:47		53.4	53.4
54.1	11:29:48		54.1	54.1
54.3	11:29:49		54.3	54.3
55.2	11:29:50		55.2	55.2
54.2	11:29:51		54.2	54.2
53.8	11:29:52		53.8	53.8
53.5	11:29:53		53.5	53.5
53.0	11:29:54		53.0	53.0
52.2	11:29:55		52.2	52.2
52.3	11:29:56		52.3	52.3
53.1	11:29:57		53.1	53.1
53.1	11:29:58		53.1	53.1
53.2	11:29:59		53.2	53.2
52.8	11:30:00		52.8	52.8
52.6	11:30:01		52.6	52.6
52.5	11:30:02		52.5	52.5
52.8	11:30:03		52.8	52.8
54.3	11:30:04		54.3	54.3
52.2	11:30:05		52.2	52.2
53.0	11:30:06		53.0	53.0
53.5	11:30:07		53.5	53.5
53.5	11:30:08		53.5	53.5
54.3	11:30:09		54.3	54.3
55.0	11:30:10		55.0	55.0
53.2	11:30:11		53.2	53.2
54.3	11:30:12		54.3	54.3
54.5	11:30:13		54.5	54.5
54.4	11:30:14		54.4	54.4
53.7	11:30:15		53.7	53.7
53.7	11:30:16		53.7	53.7
52.1	11:30:17		52.1	52.1
52.1	11:30:18		52.1	52.1
52.1	11:30:19		52.1	52.1

Site 2 - Near Northwest Corner of Project Site

SPL	Time	Leq (1 hour Avg.)	Ldn	CNEL
61.9	11:32:42		61.9	61.9
59.8	11:32:43		59.8	59.8
57.9	11:32:44		57.9	57.9
58.0	11:32:45		58.0	58.0
58.5	11:32:46		58.5	58.5
61.0	11:32:47		61.0	61.0
58.6	11:32:48		58.6	58.6
57.2	11:32:49		57.2	57.2
55.0	11:32:50		55.0	55.0
54.9	11:32:51		54.9	54.9
55.3	11:32:52		55.3	55.3
55.9	11:32:53		55.9	55.9
57.1	11:32:54		57.1	57.1
59.7	11:32:55		59.7	59.7
62.3	11:32:56		62.3	62.3
60.3	11:32:57		60.3	60.3
58.4	11:32:58		58.4	58.4
58.4	11:32:59		58.4	58.4
59.8	11:33:00		59.8	59.8
57.1	11:33:01		57.1	57.1
56.8	11:33:02		56.8	56.8
56.5	11:33:03		56.5	56.5
55.8	11:33:04		55.8	55.8
56.9	11:33:05		56.9	56.9
55.5	11:33:06		55.5	55.5
54.3	11:33:07		54.3	54.3
54.3	11:33:08		54.3	54.3
54.2	11:33:09		54.2	54.2
53.0	11:33:10		53.0	53.0
53.1	11:33:11		53.1	53.1
54.2	11:33:12		54.2	54.2
54.5	11:33:13		54.5	54.5
54.0	11:33:14		54.0	54.0
54.1	11:33:15		54.1	54.1
54.7	11:33:16		54.7	54.7
54.5	11:33:17		54.5	54.5
54.4	11:33:18		54.4	54.4
53.5	11:33:19		53.5	53.5
53.3	11:33:20		53.3	53.3
53.5	11:33:21		53.5	53.5
53.3	11:33:22		53.3	53.3
53.3	11:33:23		53.3	53.3
53.0	11:33:24		53.0	53.0
52.8	11:33:25		52.8	52.8
53.2	11:33:26		53.2	53.2
53.4	11:33:27		53.4	53.4
53.2	11:33:28		53.2	53.2
52.8	11:33:29		52.8	52.8
52.7	11:33:30		52.7	52.7
52.8	11:33:31		52.8	52.8
53.2	11:33:32		53.2	53.2
52.2	11:33:33		52.2	52.2
53.7	11:33:34		53.7	53.7
54.3	11:33:35		54.3	54.3
54.8	11:33:36		54.8	54.8
54.5	11:33:37		54.5	54.5
54.5	11:33:38		54.5	54.5
53.3	11:33:39		53.3	53.3
52.8	11:33:40		52.8	52.8
52.7	11:33:41		52.7	52.7
52.5	11:33:42		52.5	52.5
54.0	11:33:43		54.0	54.0
56.9	11:33:44		56.9	56.9
54.1	11:33:45		54.1	54.1
53.4	11:33:46		53.4	53.4
54.7	11:33:47		54.7	54.7
55.4	11:33:48		55.4	55.4
53.6	11:33:49		53.6	53.6
52.4	11:33:50		52.4	52.4
52.8	11:33:51		52.8	52.8
52.0	11:33:52		52.0	52.0
51.8	11:33:53		51.8	51.8
52.1	11:33:54		52.1	52.1
56.0	11:33:55		56.0	56.0
56.8	11:33:56		56.8	56.8
56.2	11:33:57		56.2	56.2
55.8	11:33:58		55.8	55.8
55.0	11:33:59		55.0	55.0
54.8	11:34:00		54.8	54.8
53.2	11:34:01		53.2	53.2
52.5	11:34:02		52.5	52.5
53.5	11:34:03		53.5	53.5
53.2	11:34:04		53.2	53.2
52.4	11:34:05		52.4	52.4
51.7	11:34:06		51.7	51.7
52.0	11:34:07		52.0	52.0
53.8	11:34:08		53.8	53.8
53.7	11:34:09		53.7	53.7
52.9	11:34:10		52.9	52.9
53.4	11:34:11		53.4	53.4
52.4	11:34:12		52.4	52.4
52.5	11:34:13		52.5	52.5
52.8	11:34:14		52.8	52.8
52.5	11:34:15		52.5	52.5
52.2	11:34:16		52.2	52.2
53.1	11:34:17		53.1	53.1
52.7	11:34:18		52.7	52.7
52.6	11:34:19		52.6	52.6
52.8	11:34:20		52.8	52.8
53.1	11:34:21		53.1	53.1
53.7	11:34:22		53.7	53.7
54.8	11:34:23		54.8	54.8
54.6	11:34:24		54.6	54.6
54.5	11:34:25		54.5	54.5
54.0	11:34:26		54.0	54.0
54.5	11:34:27		54.5	54.5
54.9	11:34:28		54.9	54.9
55.8	11:34:29		55.8	55.8
57.1	11:34:30		57.1	57.1
58.1	11:34:31		58.1	58.1
60.2	11:34:32		60.2	60.2
58.7	11:34:33		58.7	58.7
57.1	11:34:34		57.1	57.1
56.4	11:34:35		56.4	56.4
56.2	11:34:36		56.2	56.2
55.7	11:34:37		55.7	55.7
55.6	11:34:38		55.6	55.6
55.6	11:34:39		55.6	55.6
55.2	11:34:40		55.2	55.2
55.5	11:34:41		55.5	55.5
55.3	11:34:42		55.3	55.3
55.3	11:34:43		55.3	55.3
57.5	11:34:44		57.5	57.5
59.7	11:34:45		59.7	59.7
61.8	11:34:46		61.8	61.8
62.1	11:34:47		62.1	62.1
59.7	11:34:48		59.7	59.7
59.3	11:34:49		59.3	59.3
56.4	11:34:50		56.4	56.4
54.7	11:34:51		54.7	54.7
53.9	11:34:52		53.9	53.9
53.2	11:34:53		53.2	53.2
53.6	11:34:54		53.6	53.6
53.8	11:34:55		53.8	53.8
53.3	11:34:56		53.3	53.3
53.6	11:34:57		53.6	53.6
53.8	11:34:58		53.8	53.8
53.7	11:34:59		53.7	53.7
53.9	11:35:00		53.9	53.9
53.8	11:35:01		53.8	53.8
53.8	11:35:02		53.8	53.8
54.8	11:35:03		54.8	54.8
55.4	11:35:04		55.4	55.4
56.4	11:35:05		56.4	56.4
56.5	11:35:06		56.5	56.5
57.7	11:35:07		57.7	57.7
57.7	11:35:08		57.7	57.7
58.8	11:35:09		58.8	58.8
57.0	11:35:10		57.0	57.0
55.4	11:35:11		55.4	55.4
53.6	11:35:12		53.6	53.6
54.0	11:35:13		54.0	54.0
53.9	11:35:14		53.9	53.9
55.6	11:35:15		55.6	55.6
56.9	11:35:16		56.9	56.9
58.9	11:35:17		58.9	58.9
61.9	11:35:18		61.9	61.9
64.5	11:35:19		64.5	64.5
60.8	11:35:20		60.8	60.8
58.3	11:35:21		58.3	58.3
55.9	11:35:22		55.9	55.9
54.2	11:35:23		54.2	54.2

Site 1 - Near Southeast Corner of Project Site					Site 2 - Near Northwest Corner of Project Site				
SPL	Time	Leq (1 hour Avg.)	Ldn	CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn	CNEL
51.8	11:30:20		51.8	51.8	53.9	11:35:24		53.9	53.9
51.5	11:30:21		51.5	51.5	54.2	11:35:25		54.2	54.2
51.9	11:30:22		51.9	51.9	55.1	11:35:26		55.1	55.1
52.0	11:30:23		52.0	52.0	55.2	11:35:27		55.2	55.2
54.2	11:30:24		54.2	54.2	54.1	11:35:28		54.1	54.1
52.2	11:30:25		52.2	52.2	54.0	11:35:29		54.0	54.0
52.4	11:30:26		52.4	52.4	54.2	11:35:30		54.2	54.2
52.4	11:30:27		52.4	52.4	54.5	11:35:31		54.5	54.5
53.4	11:30:28		53.4	53.4	55.8	11:35:32		55.8	55.8
53.3	11:30:29		53.3	53.3	54.8	11:35:33		54.8	54.8
52.7	11:30:30		52.7	52.7	54.1	11:35:34		54.1	54.1
52.5	11:30:31		52.5	52.5	54.0	11:35:35		54.0	54.0
52.7	11:30:32		52.7	52.7	53.8	11:35:36		53.8	53.8
52.8	11:30:33		52.8	52.8	54.0	11:35:37		54.0	54.0
53.0	11:30:34		53.0	53.0	54.4	11:35:38		54.4	54.4
53.2	11:30:35		53.2	53.2	54.7	11:35:39		54.7	54.7
53.9	11:30:36		53.9	53.9	54.9	11:35:40		54.9	54.9
53.4	11:30:37		53.4	53.4	56.0	11:35:41		56.0	56.0
53.1	11:30:38		53.1	53.1	54.7	11:35:42		54.7	54.7
53.7	11:30:39		53.7	53.7	54.7	11:35:43		54.7	54.7
55.9	11:30:40		55.9	55.9	54.9	11:35:44		54.9	54.9
57.0	11:30:41		57.0	57.0	55.2	11:35:45		55.2	55.2
56.8	11:30:42		56.8	56.8	54.5	11:35:46		54.5	54.5
57.2	11:30:43		57.2	57.2	54.3	11:35:47		54.3	54.3
57.4	11:30:44		57.4	57.4	54.6	11:35:48		54.6	54.6
57.2	11:30:45		57.2	57.2	54.1	11:35:49		54.1	54.1
56.4	11:30:46		56.4	56.4	54.9	11:35:50		54.9	54.9
56.9	11:30:47		56.9	56.9	55.9	11:35:51		55.9	55.9
56.4	11:30:48		56.4	56.4	55.7	11:35:52		55.7	55.7
56.6	11:30:49		56.6	56.6	54.8	11:35:53		54.8	54.8
56.7	11:30:50		56.7	56.7	54.6	11:35:54		54.6	54.6
56.0	11:30:51		56.0	56.0	54.6	11:35:55		54.6	54.6
55.4	11:30:52		55.4	55.4	54.1	11:35:56		54.1	54.1
55.1	11:30:53		55.1	55.1	53.7	11:35:57		53.7	53.7
55.7	11:30:54		55.7	55.7	53.1	11:35:58		53.1	53.1
56.0	11:30:55		56.0	56.0	53.1	11:35:59		53.1	53.1
55.3	11:30:56		55.3	55.3	53.4	11:36:00		53.4	53.4
54.9	11:30:57		54.9	54.9	52.4	11:36:01		52.4	52.4
54.6	11:30:58		54.6	54.6	55.2	11:36:02		55.2	55.2
54.1	11:30:59		54.1	54.1	54.9	11:36:03		54.9	54.9
55.4	11:31:00		55.4	55.4	54.4	11:36:04		54.4	54.4
55.9	11:31:01		55.9	55.9	55.8	11:36:05		55.8	55.8
55.6	11:31:02		55.6	55.6	57.9	11:36:06		57.9	57.9
55.0	11:31:03		55.0	55.0	61.9	11:36:07		61.9	61.9
57.1	11:31:04		57.1	57.1	62.4	11:36:08		62.4	62.4
57.2	11:31:05		57.2	57.2	65.5	11:36:09		65.5	65.5
57.8	11:31:06		57.8	57.8	60.9	11:36:10		60.9	60.9
56.1	11:31:07		56.1	56.1	55.9	11:36:11		55.9	55.9
58.3	11:31:08		58.3	58.3	54.8	11:36:12		54.8	54.8
55.3	11:31:09		55.3	55.3	54.2	11:36:13		54.2	54.2
56.9	11:31:10		56.9	56.9	52.6	11:36:14		52.6	52.6
54.3	11:31:11		54.3	54.3	52.5	11:36:15		52.5	52.5
54.7	11:31:12		54.7	54.7	52.6	11:36:16		52.6	52.6
55.0	11:31:13		55.0	55.0	52.6	11:36:17		52.6	52.6
54.7	11:31:14		54.7	54.7	52.7	11:36:18		52.7	52.7
53.4	11:31:15		53.4	53.4	52.7	11:36:19		52.7	52.7
54.2	11:31:16		54.2	54.2	53.3	11:36:20		53.3	53.3
54.2	11:31:17		54.2	54.2	54.6	11:36:21		54.6	54.6
53.9	11:31:18		53.9	53.9	56.3	11:36:22		56.3	56.3
53.7	11:31:19		53.7	53.7	58.2	11:36:23		58.2	58.2
54.0	11:31:20		54.0	54.0	59.8	11:36:24		59.8	59.8
54.0	11:31:21		54.0	54.0	59.5	11:36:25		59.5	59.5
54.4	11:31:22		54.4	54.4	59.1	11:36:26		59.1	59.1
53.7	11:31:23		53.7	53.7	56.1	11:36:27		56.1	56.1
52.1	11:31:24		52.1	52.1	54.7	11:36:28		54.7	54.7
52.3	11:31:25		52.3	52.3	53.4	11:36:29		53.4	53.4
52.0	11:31:26		52.0	52.0	52.7	11:36:30		52.7	52.7
53.4	11:31:27		53.4	53.4	52.8	11:36:31		52.8	52.8
53.4	11:31:28		53.4	53.4	52.0	11:36:32		52.0	52.0
52.8	11:31:29		52.8	52.8	52.0	11:36:33		52.0	52.0
53.1	11:31:30		53.1	53.1	52.7	11:36:34		52.7	52.7
53.3	11:31:31		53.3	53.3	52.1	11:36:35		52.1	52.1
55.1	11:31:32		55.1	55.1	51.7	11:36:36		51.7	51.7
54.4	11:31:33		54.4	54.4	52.1	11:36:37		52.1	52.1
55.5	11:31:34		55.5	55.5	52.3	11:36:38		52.3	52.3
54.0	11:31:35		54.0	54.0	51.3	11:36:39		51.3	51.3
53.8	11:31:36		53.8	53.8	51.8	11:36:40		51.8	51.8
53.1	11:31:37		53.1	53.1	52.1	11:36:41		52.1	52.1
53.6	11:31:38		53.6	53.6	52.0	11:36:42		52.0	52.0
53.7	11:31:39		53.7	53.7	52.4	11:36:43		52.4	52.4
53.0	11:31:40		53.0	53.0	51.2	11:36:44		51.2	51.2
53.4	11:31:41		53.4	53.4	51.7	11:36:45		51.7	51.7
53.4	11:31:42		53.4	53.4	51.6	11:36:46		51.6	51.6
53.8	11:31:43		53.8	53.8	52.0	11:36:47		52.0	52.0
53.5	11:31:44		53.5	53.5	52.4	11:36:48		52.4	52.4
53.2	11:31:45		53.2	53.2	52.0	11:36:49		52.0	52.0
53.6	11:31:46		53.6	53.6	52.5	11:36:50		52.5	52.5
54.0	11:31:47		54.0	54.0	52.8	11:36:51		52.8	52.8
54.1	11:31:48		54.1	54.1	53.3	11:36:52		53.3	53.3
54.1	11:31:49		54.1	54.1	54.3	11:36:53		54.3	54.3
52.6	11:31:50		52.6	52.6	53.2	11:36:54		53.2	53.2
52.6	11:31:51		52.6	52.6	53.2	11:36:55		53.2	53.2
52.1	11:31:52		52.1	52.1	52.7	11:36:56		52.7	52.7
52.8	11:31:53		52.8	52.8	52.7	11:36:57		52.7	52.7
53.1	11:31:54		53.1	53.1	52.1	11:36:58		52.1	52.1
53.3	11:31:55		53.3	53.3	52.3	11:36:59		52.3	52.3
53.7	11:31:56		53.7	53.7	52.8	11:37:00		52.8	52.8
53.3	11:31:57		53.3	53.3	53.5	11:37:01		53.5	53.5
53.5	11:31:58		53.5	53.5	55.5	11:37:02		55.5	55.5
53.2	11:31:59		53.2	53.2	57.9	11:37:03		57.9	57.9
53.4	11:32:00		53.4	53.4	61.0	11:37:04		61.0	61.0
53.7	11:32:01		53.7	53.7	64.5	11:37:05		64.5	64.5
53.6	11:32:02		53.6	53.6	65.7	11:37:06		65.7	65.7
53.5	11:32:03		53.5	53.5	58.8	11:37:07		58.8	58.8
53.5	11:32:04		53.5	53.5	55.3	11:37:08		55.3	55.3
53.6	11:32:05		53.6	53.6	53.6	11:37:09		53.6	53.6
53.4	11:32:06		53.4	53.4	53.1	11:37:10		53.1	53.1
53.5	11:32:07		53.5	53.5	53.2	11:37:11		53.2	53.2
53.6	11:32:08		53.6	53.6	53.6	11:37:12		53.6	53.6
54.5	11:32:09		54.5	54.5	52.2	11:37:13		52.2	52.2
55.6	11:32:10		55.6	55.6	52.2	11:37:14		52.2	52.2
55.1	11:32:11		55.1	55.1	52.6	11:37:15		52.6	52.6
55.0	11:32:12		55.0	55.0	53.2	11:37:16		53.2	53.2
54.6	11:32:13		54.6	54.6	53.5	11:37:17		53.5	53.5
54.3	11:32:14		54.3	54.3	54.2	11:37:18		54.2	54.2
53.4	11:32:15		53.4	53.4	55.5	11:37:19		55.5	55.5
53.5	11:32:16		53.5	53.5	58.0	11:37:20		58.0	58.0
53.0	11:32:17		53.0	53.0	60.4	11:37:21		60.4	60.4
53.6	11:32:18		53.6	53.6	60.9	11:37:22		60.9	60.9
52.4	11:32:19		52.4	52.4	64.1	11:37:23		64.1	64.1
52.0	11:32:20		52.0	52.0	64.3	11:37:24		64.3	64.3
52.4	11:32:21		52.4	52.4	64.7	11:37:25		64.7	64.7
52.5	11:32:22		52.5	52.5	60.7	11:37:26		60.7	60.7
52.6	11:32:23		52.6	52.6	59.0	11:37:27		59.0	59.0
52.9	11:32:24		52.9	52.9	57.8	11:37:28		57.8	57.8
52.0	11:32:25		52.0	52.0	55.4	11:37:29		55.4	55.4
52.4	11:32:26		52.4	52.4	53.8	11:37:30		53.8	53.8
53.0	11:32:27		53.0	53.0	53.1	11:37:31		53.1	53.1
53.2	11:32:28		53.2	53.2	52.9	11:37:32		52.9	52.9
52.6	11:32:29		52.6	52.6	52.5	11:37:33		52.5	52.5
52.5	11:32:30		52.5	52.5	52.7	11:37:34		52.7	52.7
52.1	11:32:31		52.1	52.1	51.9	11:37:35		51.9	51.9
52.8	11:32:32		52.8	52.8	51.3	11:37:36		51.3	51.3
52.8	11:32:33		52.8	52.8	52.5	11:37:37		52.5	52.5
55.0	11:32:34		55.0	55.0	51.4	11:37:38		51.4	51.4
55.2	11:32:35		55.2	55.2	53.4	11:37:39		53.4	53.4
53.6	11:32:36		53.6	53.6	53.8	11:37:40		53.8	53.8
54.7	11:32:37		54.7	54.7	56.9	11:37:41		56.9	56.9
52.3	11:32:38		52.3	52.3	57.9	11:37:42		57.9	57.9
52.5	11:32:39		52.5	52.5	60.8	11:37:43		60.8	60.8
53.3	11:32:40		53.3	53.3	57.0	11:37:44		57.0	57.0
53.0	11:32:41		53.0	53.0	57.8	11:37:45		57.8	57.8
52.5	11:32:42		52.5	52.5	56.3	11:37:46		56.3	56.3
52.6	11:32:43		52.6	52.6	56.5	11:37:47		56.5	56.5
52.5	11:32:44		52.5	52.5	58.2	11:37:48		58.2	58.2
52.3	11:32:45		52.3	52.3	60.5	11:37:49		60.5	60.5
52.0	11:32:46		52.0	52.0	58.1	11:37:50		58.1	58.1
55.3	11:32:47		55.3	55.3	54.5	11:37:51		54.5	54.5
52.8	11:32:48		52.8	52.8	52.4	11:37:52		52.4	52.4
52.6	11:32:49		52.6	52.6	54.0	11:37:53		54.0	54.0
52.2	11:32:50		52.2	52.2	55.6	11:37:54		55.6	55.6
52.7	11:32:51		52.7	52.7	57.5	11:37:55		57.5	57.5
53.0	11:32:52		53.0	53.0	60.1	11:37:56		60.1	60.1
52.9	11:32:53		52.9	52.9	62.9	11:37:57		62.9	62.9
52.5	11:32:54		52.5	52.5	63.1	11:37:58		63.1	63.1
52.7	11:32:55		52.7	52.7	58.8	11:37:59		58.8	58.8
52.4	11:32:56		52.4	52.4	55.4	11:38:00		55.4	55.4
51.9	11:32:57		51.9	51.9	54.0	11:38:01		54.0	54.0
54.2	11:32:58		54.2	54.2	54.3	11:38:02		54.3	54.3
52.6	11:32:59		52.6	52.6	54.5	11:38:03		54.5	54.5
52.0	11:33:00		52.0	52.0	54.1	11:38:04		54.1	54.1
52.7	11:33:01		52.7	52.7	55.6	11:38:05		55.6	55.6

Site 1 - Near Southeast Corner of Project Site

SPL	Time	Leq (1 hour Avg.)	Ldn	CNEL
53.2	11:33:02		53.2	53.2
52.2	11:33:03		52.2	52.2
52.4	11:33:04		52.4	52.4
51.8	11:33:05		51.8	51.8
52.1	11:33:06		52.1	52.1
52.1	11:33:07		52.1	52.1
52.2	11:33:08		52.2	52.2
51.7	11:33:09		51.7	51.7
51.8	11:33:10		51.8	51.8
51.7	11:33:11		51.7	51.7
51.3	11:33:12		51.3	51.3
51.3	11:33:13		51.3	51.3
51.0	11:33:14		51.0	51.0
51.2	11:33:15		51.2	51.2
51.8	11:33:16		51.8	51.8
51.1	11:33:17		51.1	51.1
50.8	11:33:18		50.8	50.8
51.7	11:33:19		51.7	51.7
51.7	11:33:20		51.7	51.7
51.2	11:33:21		51.2	51.2
50.6	11:33:22		50.6	50.6
50.9	11:33:23		50.9	50.9
50.5	11:33:24		50.5	50.5
50.6	11:33:25		50.6	50.6
50.4	11:33:26		50.4	50.4
50.3	11:33:27		50.3	50.3
51.2	11:33:28		51.2	51.2
52.2	11:33:29		52.2	52.2
51.7	11:33:30		51.7	51.7
50.9	11:33:31		50.9	50.9
51.4	11:33:32		51.4	51.4
50.9	11:33:33		50.9	50.9
50.3	11:33:34		50.3	50.3
50.3	11:33:35		50.3	50.3
50.5	11:33:36		50.5	50.5
50.7	11:33:37		50.7	50.7
51.0	11:33:38		51.0	51.0
51.4	11:33:39		51.4	51.4
51.7	11:33:40		51.7	51.7
52.2	11:33:41		52.2	52.2
52.1	11:33:42		52.1	52.1
51.4	11:33:43		51.4	51.4
51.3	11:33:44		51.3	51.3
51.3	11:33:45		51.3	51.3
51.0	11:33:46		51.0	51.0
51.2	11:33:47		51.2	51.2
51.1	11:33:48		51.1	51.1
50.9	11:33:49		50.9	50.9
51.0	11:33:50		51.0	51.0
54.2	11:33:51		54.2	54.2
51.1	11:33:52		51.1	51.1
51.4	11:33:53		51.4	51.4
53.9	11:33:54		53.9	53.9
53.0	11:33:55		53.0	53.0
52.2	11:33:56		52.2	52.2
52.1	11:33:57		52.1	52.1
52.6	11:33:58		52.6	52.6
52.0	11:33:59		52.0	52.0
52.7	11:34:00		52.7	52.7
53.5	11:34:01		53.5	53.5
53.0	11:34:02		53.0	53.0
53.6	11:34:03		53.6	53.6
54.8	11:34:04		54.8	54.8
53.6	11:34:05		53.6	53.6
53.0	11:34:06		53.0	53.0
53.2	11:34:07		53.2	53.2
54.6	11:34:08		54.6	54.6
54.5	11:34:09		54.5	54.5
52.9	11:34:10		52.9	52.9
54.2	11:34:11		54.2	54.2
53.6	11:34:12		53.6	53.6
53.0	11:34:13		53.0	53.0
52.9	11:34:14		52.9	52.9
52.7	11:34:15		52.7	52.7
52.7	11:34:16		52.7	52.7
53.4	11:34:17		53.4	53.4
53.6	11:34:18		53.6	53.6
54.0	11:34:19		54.0	54.0
53.4	11:34:20		53.4	53.4
53.5	11:34:21		53.5	53.5
52.9	11:34:22		52.9	52.9
52.4	11:34:23		52.4	52.4
53.4	11:34:24		53.4	53.4
53.8	11:34:25		53.8	53.8
53.9	11:34:26		53.9	53.9
51.8	11:34:27		51.8	51.8
51.5	11:34:28		51.5	51.5
51.7	11:34:29		51.7	51.7
54.1	11:34:30		54.1	54.1
53.9	11:34:31		53.9	53.9
53.4	11:34:32		53.4	53.4
53.5	11:34:33		53.5	53.5
52.8	11:34:34		52.8	52.8
52.8	11:34:35		52.8	52.8
53.2	11:34:36		53.2	53.2
53.8	11:34:37		53.8	53.8
53.7	11:34:38		53.7	53.7
53.9	11:34:39		53.9	53.9
53.9	11:34:40		53.9	53.9
53.3	11:34:41		53.3	53.3
53.6	11:34:42		53.6	53.6
53.2	11:34:43		53.2	53.2
52.3	11:34:44		52.3	52.3
52.9	11:34:45		52.9	52.9
53.4	11:34:46		53.4	53.4
53.4	11:34:47		53.4	53.4
52.6	11:34:48		52.6	52.6
52.9	11:34:49		52.9	52.9
53.8	11:34:50		53.8	53.8
54.4	11:34:51		54.4	54.4
54.1	11:34:52		54.1	54.1
54.2	11:34:53		54.2	54.2
54.3	11:34:54		54.3	54.3
53.6	11:34:55		53.6	53.6
52.9	11:34:56		52.9	52.9
55.4	11:34:57		55.4	55.4
54.3	11:34:58		54.3	54.3
53.4	11:34:59		53.4	53.4
53.6	11:35:00		53.6	53.6
54.7	11:35:01		54.7	54.7
54.6	11:35:02		54.6	54.6
54.8	11:35:03		54.8	54.8
54.3	11:35:04		54.3	54.3
54.7	11:35:05		54.7	54.7
54.6	11:35:06		54.6	54.6
54.5	11:35:07		54.5	54.5
54.0	11:35:08		54.0	54.0
55.5	11:35:09		55.5	55.5
55.0	11:35:10		55.0	55.0
54.8	11:35:11		54.8	54.8
54.1	11:35:12		54.1	54.1
54.5	11:35:13		54.5	54.5
55.6	11:35:14		55.6	55.6
54.2	11:35:15		54.2	54.2
54.8	11:35:16		54.8	54.8
54.7	11:35:17		54.7	54.7
53.3	11:35:18		53.3	53.3
53.3	11:35:19		53.3	53.3
52.7	11:35:20		52.7	52.7
52.9	11:35:21		52.9	52.9
52.1	11:35:22		52.1	52.1
52.7	11:35:23		52.7	52.7
52.9	11:35:24		52.9	52.9
52.3	11:35:25		52.3	52.3
53.5	11:35:26		53.5	53.5
52.6	11:35:27		52.6	52.6
52.4	11:35:28		52.4	52.4
51.8	11:35:29		51.8	51.8
51.3	11:35:30		51.3	51.3
51.6	11:35:31		51.6	51.6
52.7	11:35:32		52.7	52.7
51.4	11:35:33		51.4	51.4
51.9	11:35:34		51.9	51.9
51.9	11:35:35		51.9	51.9
50.5	11:35:36		50.5	50.5
52.3	11:35:37		52.3	52.3
51.9	11:35:38		51.9	51.9
52.1	11:35:39		52.1	52.1
53.3	11:35:40		53.3	53.3
54.5	11:35:41		54.5	54.5
51.7	11:35:42		51.7	51.7
51.3	11:35:43		51.3	51.3

Site 2 - Near Northwest Corner of Project Site

SPL	Time	Leq (1 hour Avg.)	Ldn	CNEL
56.2	11:38:06		56.2	56.2
56.6	11:38:07		56.6	56.6
54.5	11:38:08		54.5	54.5
54.3	11:38:09		54.3	54.3
53.3	11:38:10		53.3	53.3
52.1	11:38:11		52.1	52.1
51.8	11:38:12		51.8	51.8
51.9	11:38:13		51.9	51.9
52.7	11:38:14		52.7	52.7
57.8	11:38:15		57.8	57.8
59.4	11:38:16		59.4	59.4
61.7	11:38:17		61.7	61.7
62.5	11:38:18		62.5	62.5
61.2	11:38:19		61.2	61.2
63.4	11:38:20		63.4	63.4
63.0	11:38:21		63.0	63.0
58.8	11:38:22		58.8	58.8
57.3	11:38:23		57.3	57.3
55.9	11:38:24		55.9	55.9
54.7	11:38:25		54.7	54.7
53.5	11:38:26		53.5	53.5
52.3	11:38:27		52.3	52.3
52.1	11:38:28		52.1	52.1
52.1	11:38:29		52.1	52.1
52.9	11:38:30		52.9	52.9
53.5	11:38:31		53.5	53.5
52.7	11:38:32		52.7	52.7
52.1	11:38:33		52.1	52.1
52.7	11:38:34		52.7	52.7
52.3	11:38:35		52.3	52.3
53.5	11:38:36		53.5	53.5
54.4	11:38:37		54.4	54.4
54.6	11:38:38		54.6	54.6
54.6	11:38:39		54.6	54.6
56.9	11:38:40		56.9	56.9
59.2	11:38:41		59.2	59.2
61.3	11:38:42		61.3	61.3
60.4	11:38:43		60.4	60.4
58.9	11:38:44		58.9	58.9
58.2	11:38:45		58.2	58.2
55.5	11:38:46		55.5	55.5
53.8	11:38:47		53.8	53.8
52.4	11:38:48		52.4	52.4
52.6	11:38:49		52.6	52.6
52.3	11:38:50		52.3	52.3
51.7	11:38:51		51.7	51.7
52.5	11:38:52		52.5	52.5
53.3	11:38:53		53.3	53.3
54.1	11:38:54		54.1	54.1
60.3	11:38:55		60.3	60.3
60.0	11:38:56		60.0	60.0
61.7	11:38:57		61.7	61.7
62.0	11:38:58		62.0	62.0
55.4	11:38:59		55.4	55.4
54.5	11:39:00		54.5	54.5
53.6	11:39:01		53.6	53.6
53.3	11:39:02		53.3	53.3
53.0	11:39:03		53.0	53.0
53.1	11:39:04		53.1	53.1
53.1	11:39:05		53.1	53.1
53.5	11:39:06		53.5	53.5
52.5	11:39:07		52.5	52.5
52.2	11:39:08		52.2	52.2
52.4	11:39:09		52.4	52.4
52.3	11:39:10		52.3	52.3
52.3	11:39:11		52.3	52.3
51.9	11:39:12		51.9	51.9
52.0	11:39:13		52.0	52.0
52.1	11:39:14		52.1	52.1
51.9	11:39:15		51.9	51.9
51.9	11:39:16		51.9	51.9
51.7	11:39:17		51.7	51.7
51.9	11:39:18		51.9	51.9
52.0	11:39:19		52.0	52.0
51.8	11:39:20		51.8	51.8
51.9	11:39:21		51.9	51.9
52.2	11:39:22		52.2	52.2
52.6	11:39:23		52.6	52.6
53.4	11:39:24		53.4	53.4
53.2	11:39:25		53.2	53.2
53.9	11:39:26		53.9	53.9
54.0	11:39:27		54.0	54.0
53.6	11:39:28		53.6	53.6
53.0	11:39:29		53.0	53.0
53.5	11:39:30		53.5	53.5
54.7	11:39:31		54.7	54.7
56.2	11:39:32		56.2	56.2
58.1	11:39:33		58.1	58.1
61.6	11:39:34		61.6	61.6
61.8	11:39:35		61.8	61.8
57.8	11:39:36		57.8	57.8
55.4	11:39:37		55.4	55.4
54.0	11:39:38		54.0	54.0
53.5	11:39:39		53.5	53.5
53.6	11:39:40		53.6	53.6
53.6	11:39:41		53.6	53.6
53.5	11:39:42		53.5	53.5
54.1	11:39:43		54.1	54.1
54.5	11:39:44		54.5	54.5
53.8	11:39:45		53.8	53.8
53.8	11:39:46		53.8	53.8
53.2	11:39:47		53.2	53.2
52.9	11:39:48		52.9	52.9
52.5	11:39:49		52.5	52.5
52.5	11:39:50		52.5	52.5
52.6	11:39:51		52.6	52.6
52.7	11:39:52		52.7	52.7
53.1	11:39:53		53.1	53.1
53.1	11:39:54		53.1	53.1
53.3	11:39:55		53.3	53.3
53.6	11:39:56		53.6	53.6
53.5	11:39:57		53.5	53.5
53.9	11:39:58		53.9	53.9
54.7	11:39:59		54.7	54.7
55.2	11:40:00		55.2	55.2
55.8	11:40:01		55.8	55.8
56.3	11:40:02		56.3	56.3
57.4	11:40:03		57.4	57.4
57.8	11:40:04		57.8	57.8
55.8	11:40:05		55.8	55.8
53.9	11:40:06		53.9	53.9
53.7	11:40:07		53.7	53.7
53.1	11:40:08		53.1	53.1
53.8	11:40:09		53.8	53.8
54.2	11:40:10		54.2	54.2
53.5	11:40:11		53.5	53.5
53.5	11:40:12		53.5	53.5
53.7	11:40:13		53.7	53.7
56.0	11:40:14		56.0	56.0
59.2	11:40:15		59.2	59.2
61.7	11:40:16		61.7	61.7
63.2	11:40:17		63.2	63.2
59.7	11:40:18		59.7	59.7
59.4	11:40:19		59.4	59.4
57.9	11:40:20		57.9	57.9
56.7	11:40:21		56.7	56.7
55.4	11:40:22		55.4	55.4
56.5	11:40:23		56.5	56.5
58.7	11:40:24		58.7	58.7
60.1	11:40:25		60.1	60.1
56.1	11:40:26		56.1	56.1
55.1	11:40:27		55.1	55.1
54.4	11:40:28		54.4	54.4
54.0	11:40:29		54.0	54.0
53.9	11:40:30		53.9	53.9
53.4	11:40:31		53.4	53.4
53.4	11:40:32		53.4	53.4
53.4	11:40:33		53.4	53.4
53.0	11:40:34		53.0	53.0
53.5	11:40:35		53.5	53.5
54.0	11:40:36		54.0	54.0
54.0	11:40:37		54.0	54.0
55.1	11:40:38		55.1	55.1
58.0	11:40:39		58.0	58.0
57.8	11:40:40		57.8	57.8
56.6	11:40:41		56.6	56.6
58.0	11:40:42		58.0	58.0
61.3	11:40:43		61.3	61.3
60.9	11:40:44		60.9	60.9
55.9	11:40:45		55.9	55.9
57.4	11:40:46		57.4	57.4
57.5	11:40:47		57.5	57.5

Site 1 - Near Southeast Corner of Project Site					Site 2 - Near Northwest Corner of Project Site				
SPL	Time	Leq (1 hour Avg.)	Ldn	CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn	CNEL
51.5	11:35:44		51.5	51.5	56.4	11:40:48		56.4	56.4
51.0	11:35:45		51.0	51.0	56.5	11:40:49		56.5	56.5
50.6	11:35:46		50.6	50.6	56.3	11:40:50		56.3	56.3
52.0	11:35:47		52.0	52.0	56.1	11:40:51		56.1	56.1
50.6	11:35:48		50.6	50.6	56.8	11:40:52		56.8	56.8
50.7	11:35:49		50.7	50.7	56.2	11:40:53		56.2	56.2
50.6	11:35:50		50.6	50.6	56.8	11:40:54		56.8	56.8
51.9	11:35:51		51.9	51.9	57.4	11:40:55		57.4	57.4
51.0	11:35:52		51.0	51.0	58.4	11:40:56		58.4	58.4
52.9	11:35:53		52.9	52.9	61.7	11:40:57		61.7	61.7
50.8	11:35:54		50.8	50.8	63.2	11:40:58		63.2	63.2
53.8	11:35:55		53.8	53.8	61.2	11:40:59		61.2	61.2
53.5	11:35:56		53.5	53.5	58.6	11:41:00		58.6	58.6
51.6	11:35:57		51.6	51.6	57.6	11:41:01		57.6	57.6
53.2	11:35:58		53.2	53.2	57.0	11:41:02		57.0	57.0
50.8	11:35:59		50.8	50.8	55.8	11:41:03		55.8	55.8
50.8	11:36:00		50.8	50.8	55.3	11:41:04		55.3	55.3
50.9	11:36:01		50.9	50.9	54.2	11:41:05		54.2	54.2
50.7	11:36:02		50.7	50.7	54.2	11:41:06		54.2	54.2
51.8	11:36:03		51.8	51.8	55.5	11:41:07		55.5	55.5
52.5	11:36:04		52.5	52.5	57.7	11:41:08		57.7	57.7
54.9	11:36:05		54.9	54.9	60.8	11:41:09		60.8	60.8
57.5	11:36:06		57.5	57.5	63.7	11:41:10		63.7	63.7
57.4	11:36:07		57.4	57.4	64.3	11:41:11		64.3	64.3
56.5	11:36:08		56.5	56.5	57.6	11:41:12		57.6	57.6
56.1	11:36:09		56.1	56.1	55.5	11:41:13		55.5	55.5
53.3	11:36:10		53.3	53.3	54.4	11:41:14		54.4	54.4
50.8	11:36:11		50.8	50.8	55.2	11:41:15		55.2	55.2
51.4	11:36:12		51.4	51.4	53.9	11:41:16		53.9	53.9
51.3	11:36:13		51.3	51.3	53.2	11:41:17		53.2	53.2
51.3	11:36:14		51.3	51.3	53.5	11:41:18		53.5	53.5
50.8	11:36:15		50.8	50.8	53.7	11:41:19		53.7	53.7
50.8	11:36:16		50.8	50.8	53.8	11:41:20		53.8	53.8
51.0	11:36:17		51.0	51.0	53.9	11:41:21		53.9	53.9
51.9	11:36:18		51.9	51.9	54.2	11:41:22		54.2	54.2
50.3	11:36:19		50.3	50.3	54.6	11:41:23		54.6	54.6
50.7	11:36:20		50.7	50.7	54.5	11:41:24		54.5	54.5
50.4	11:36:21		50.4	50.4	54.0	11:41:25		54.0	54.0
50.2	11:36:22		50.2	50.2	54.2	11:41:26		54.2	54.2
50.7	11:36:23		50.7	50.7	54.1	11:41:27		54.1	54.1
51.6	11:36:24		51.6	51.6	54.4	11:41:28		54.4	54.4
52.8	11:36:25		52.8	52.8	54.9	11:41:29		54.9	54.9
52.1	11:36:26		52.1	52.1	54.5	11:41:30		54.5	54.5
52.2	11:36:27		52.2	52.2	54.7	11:41:31		54.7	54.7
51.3	11:36:28		51.3	51.3	54.3	11:41:32		54.3	54.3
51.5	11:36:29		51.5	51.5	57.0	11:41:33		57.0	57.0
51.2	11:36:30		51.2	51.2	53.9	11:41:34		53.9	53.9
51.4	11:36:31		51.4	51.4	53.8	11:41:35		53.8	53.8
51.8	11:36:32		51.8	51.8	54.3	11:41:36		54.3	54.3
52.0	11:36:33		52.0	52.0	54.1	11:41:37		54.1	54.1
52.5	11:36:34		52.5	52.5	54.1	11:41:38		54.1	54.1
52.6	11:36:35		52.6	52.6	53.8	11:41:39		53.8	53.8
51.7	11:36:36		51.7	51.7	54.1	11:41:40		54.1	54.1
53.6	11:36:37		53.6	53.6	53.7	11:41:41		53.7	53.7
51.8	11:36:38		51.8	51.8	57.7	11:41:42		57.7	57.7
51.6	11:36:39		51.6	51.6	56.0	11:41:43		56.0	56.0
51.4	11:36:40		51.4	51.4	55.0	11:41:44		55.0	55.0
51.2	11:36:41		51.2	51.2	54.4	11:41:45		54.4	54.4
50.9	11:36:42		50.9	50.9	53.8	11:41:46		53.8	53.8
53.4	11:36:43		53.4	53.4	56.2	11:41:47		56.2	56.2
56.3	11:36:44		56.3	56.3	56.8	11:41:48		56.8	56.8
50.4	11:36:45		50.4	50.4	58.4	11:41:49		58.4	58.4
50.7	11:36:46		50.7	50.7	54.7	11:41:50		54.7	54.7
50.7	11:36:47		50.7	50.7	53.3	11:41:51		53.3	53.3
51.0	11:36:48		51.0	51.0	53.6	11:41:52		53.6	53.6
50.5	11:36:49		50.5	50.5	55.2	11:41:53		55.2	55.2
50.3	11:36:50		50.3	50.3	55.7	11:41:54		55.7	55.7
50.5	11:36:51		50.5	50.5	58.2	11:41:55		58.2	58.2
51.0	11:36:52		51.0	51.0	61.2	11:41:56		61.2	61.2
51.1	11:36:53		51.1	51.1	70.6	11:41:57		70.6	70.6
50.1	11:36:54		50.1	50.1	64.9	11:41:58		64.9	64.9
50.6	11:36:55		50.6	50.6	58.2	11:41:59		58.2	58.2
51.3	11:36:56		51.3	51.3	61.9	11:42:00		61.9	61.9
51.7	11:36:57		51.7	51.7	55.6	11:42:01		55.6	55.6
52.1	11:36:58		52.1	52.1	56.9	11:42:02		56.9	56.9
51.1	11:36:59		51.1	51.1	58.0	11:42:03		58.0	58.0
51.6	11:37:00		51.6	51.6	59.1	11:42:04		59.1	59.1
52.5	11:37:01		52.5	52.5	59.2	11:42:05		59.2	59.2
50.2	11:37:02		50.2	50.2	62.7	11:42:06		62.7	62.7
49.5	11:37:03		49.5	49.5	62.5	11:42:07		62.5	62.5
49.9	11:37:04		49.9	49.9	59.6	11:42:08		59.6	59.6
49.6	11:37:05		49.6	49.6	59.4	11:42:09		59.4	59.4
51.1	11:37:06		51.1	51.1	58.6	11:42:10		58.6	58.6
49.1	11:37:07		49.1	49.1	66.7	11:42:11		66.7	66.7
49.1	11:37:08		49.1	49.1	61.5	11:42:12		61.5	61.5
48.9	11:37:09		48.9	48.9	68.5	11:42:13		68.5	68.5
49.3	11:37:10		49.3	49.3	65.0	11:42:14		65.0	65.0
49.6	11:37:11		49.6	49.6	60.0	11:42:15		60.0	60.0
49.7	11:37:12		49.7	49.7	58.4	11:42:16		58.4	58.4
49.7	11:37:13		49.7	49.7	57.2	11:42:17		57.2	57.2
51.0	11:37:14		51.0	51.0	56.9	11:42:18		56.9	56.9
52.0	11:37:15		52.0	52.0	69.0	11:42:19		69.0	69.0
52.7	11:37:16		52.7	52.7	57.0	11:42:20		57.0	57.0
52.3	11:37:17		52.3	52.3	55.5	11:42:21		55.5	55.5
52.9	11:37:18		52.9	52.9	55.6	11:42:22		55.6	55.6
53.2	11:37:19		53.2	53.2	54.1	11:42:23		54.1	54.1
52.6	11:37:20		52.6	52.6	54.9	11:42:24		54.9	54.9
53.3	11:37:21		53.3	53.3	55.1	11:42:25		55.1	55.1
52.4	11:37:22		52.4	52.4	55.1	11:42:26		55.1	55.1
51.1	11:37:23		51.1	51.1	55.3	11:42:27		55.3	55.3
50.3	11:37:24		50.3	50.3	56.9	11:42:28		56.9	56.9
50.8	11:37:25		50.8	50.8	57.5	11:42:29		57.5	57.5
52.2	11:37:26		52.2	52.2	57.9	11:42:30		57.9	57.9
51.8	11:37:27		51.8	51.8	60.2	11:42:31		60.2	60.2
51.0	11:37:28		51.0	51.0	63.4	11:42:32		63.4	63.4
50.6	11:37:29		50.6	50.6	60.5	11:42:33		60.5	60.5
50.8	11:37:30		50.8	50.8	61.3	11:42:34		61.3	61.3
50.8	11:37:31		50.8	50.8	59.1	11:42:35		59.1	59.1
51.1	11:37:32		51.1	51.1	56.3	11:42:36		56.3	56.3
51.2	11:37:33		51.2	51.2	54.9	11:42:37		54.9	54.9
51.8	11:37:34		51.8	51.8	54.3	11:42:38		54.3	54.3
51.0	11:37:35		51.0	51.0	53.9	11:42:39		53.9	53.9
51.0	11:37:36		51.0	51.0	54.9	11:42:40		54.9	54.9
52.0	11:37:37		52.0	52.0	55.3	11:42:41		55.3	55.3
51.5	11:37:38		51.5	51.5	54.6	11:42:42		54.6	54.6
51.2	11:37:39		51.2	51.2	53.8	11:42:43		53.8	53.8
51.4	11:37:40		51.4	51.4	56.5	11:42:44		56.5	56.5
51.9	11:37:41		51.9	51.9	56.3	11:42:45		56.3	56.3
52.6	11:37:42		52.6	52.6	54.5	11:42:46		54.5	54.5
53.7	11:37:43		53.7	53.7	54.6	11:42:47		54.6	54.6
50.8	11:37:44		50.8	50.8	54.2	11:42:48		54.2	54.2
51.8	11:37:45		51.8	51.8	54.0	11:42:49		54.0	54.0
51.5	11:37:46		51.5	51.5	54.1	11:42:50		54.1	54.1
52.0	11:37:47		52.0	52.0	54.8	11:42:51		54.8	54.8
52.7	11:37:48		52.7	52.7	57.7	11:42:52		57.7	57.7
52.5	11:37:49		52.5	52.5	60.6	11:42:53		60.6	60.6
52.1	11:37:50		52.1	52.1	62.3	11:42:54		62.3	62.3
53.3	11:37:51		53.3	53.3	64.3	11:42:55		64.3	64.3
53.7	11:37:52		53.7	53.7	68.8	11:42:56		68.8	68.8
51.4	11:37:53		51.4	51.4	69.4	11:42:57		69.4	69.4
51.7	11:37:54		51.7	51.7	62.1	11:42:58		62.1	62.1
51.7	11:37:55		51.7	51.7	58.8	11:42:59		58.8	58.8
52.5	11:37:56		52.5	52.5	56.1	11:43:00		56.1	56.1
55.0	11:37:57		55.0	55.0	56.1	11:43:01		56.1	56.1
52.6	11:37:58		52.6	52.6	54.5	11:43:02		54.5	54.5
52.1	11:37:59		52.1	52.1	54.6	11:43:03		54.6	54.6
53.9	11:38:00		53.9	53.9	53.5	11:43:04		53.5	53.5
55.0	11:38:01		55.0	55.0	52.4	11:43:05		52.4	52.4
52.9	11:38:02		52.9	52.9	52.8	11:43:06		52.8	52.8
52.3	11:38:03		52.3	52.3	53.2	11:43:07		53.2	53.2
52.5	11:38:04		52.5	52.5	53.7	11:43:08		53.7	53.7
54.6	11:38:05		54.6	54.6	53.8	11:43:09		53.8	53.8
53.3	11:38:06		53.3	53.3	53.9	11:43:10		53.9	53.9
50.5	11:38:07		50.5	50.5	53.5	11:43:11		53.5	53.5
50.7	11:38:08		50.7	50.7	53.0	11:43:12		53.0	53.0
52.4	11:38:09		52.4	52.4	52.3	11:43:13		52.3	52.3
52.7	11:38:10		52.7	52.7	52.7	11:43:14		52.7	52.7
50.6	11:38:11		50.6	50.6	52.2	11:43:15		52.2	52.2
50.6	11:38:12		50.6	50.6	52.7	11:43:16		52.7	52.7
52.4	11:38:13		52.4	52.4	52.3	11:43:17		52.3	52.3
53.3	11:38:14		53.3	53.3	51.9	11:43:18		51.9	51.9
51.0	11:38:15		51.0	51.0	51.5	11:43:19		51.5	51.5
51.5	11:38:16		51.5	51.5	51.2	11:43:20		51.2	51.2
53.2	11:38:17		53.2	53.2	50.8	11:43:21		50.8	50.8
53.5	11:38:18		53.5	53.5	51.2	11:43:22		51.2	51.2
51.4	11:38:19		51.4	51.4	51.7	11:43:23		51.7	51.7
51.0	11:38:20		51.0	51.0	51.6	11:43:24		51.6	51.6
51.3	11:38:21		51.3	51.3	56.4	11:43:25		56.4	56.4
51.1	11:38:22		51.1	51.1	57.5	11:43:26		57.5	57.5
50.2	11:38:23		50.2	50.2	55.2	11:43:27		55.2	55.2
52.4	11:38:24		52.4	52.4	53.1	11:43:28		53.1	53.1
52.6	11:38:25		52.6	52.6	51.8	11:43:29		51.8	51.8

Site 1 - Near Southeast Corner of Project Site					Site 2 - Near Northwest Corner of Project Site				
SPL	Time	Leq (1 hour Avg.)	Ldn	CNEL	SPL	Time	Leq (1 hour Avg.)	Ldn	CNEL
52.7	11:38:26		52.7	52.7	52.2	11:43:30		52.2	52.2
52.6	11:38:27		52.6	52.6	52.0	11:43:31		52.0	52.0
53.2	11:38:28		53.2	53.2	52.1	11:43:32		52.1	52.1
54.3	11:38:29		54.3	54.3	52.9	11:43:33		52.9	52.9
55.5	11:38:30		55.5	55.5	52.9	11:43:34		52.9	52.9
52.3	11:38:31		52.3	52.3	52.4	11:43:35		52.4	52.4
53.3	11:38:32		53.3	53.3	52.4	11:43:36		52.4	52.4
52.7	11:38:33		52.7	52.7	52.5	11:43:37		52.5	52.5
52.5	11:38:34		52.5	52.5	53.2	11:43:38		53.2	53.2
52.3	11:38:35		52.3	52.3	53.0	11:43:39		53.0	53.0
52.8	11:38:36		52.8	52.8	53.3	11:43:40		53.3	53.3
52.3	11:38:37		52.3	52.3	52.9	11:43:41		52.9	52.9
52.2	11:38:38		52.2	52.2	52.8	11:43:42		52.8	52.8
52.1	11:38:39		52.1	52.1	52.6	11:43:43		52.6	52.6
51.1	11:38:40		51.1	51.1	52.7	11:43:44		52.7	52.7
51.4	11:38:41		51.4	51.4	52.3	11:43:45		52.3	52.3
52.2	11:38:42		52.2	52.2	52.8	11:43:46		52.8	52.8
53.1	11:38:43		53.1	53.1	52.9	11:43:47		52.9	52.9
51.9	11:38:44		51.9	51.9	53.4	11:43:48		53.4	53.4
53.2	11:38:45		53.2	53.2	56.4	11:43:49		56.4	56.4
51.5	11:38:46		51.5	51.5	55.9	11:43:50		55.9	55.9
51.8	11:38:47		51.8	51.8	55.1	11:43:51		55.1	55.1
51.5	11:38:48		51.5	51.5	54.9	11:43:52		54.9	54.9
51.1	11:38:49		51.1	51.1	53.7	11:43:53		53.7	53.7
52.2	11:38:50		52.2	52.2	54.2	11:43:54		54.2	54.2
51.0	11:38:51		51.0	51.0	53.7	11:43:55		53.7	53.7
50.8	11:38:52		50.8	50.8	52.3	11:43:56		52.3	52.3
51.9	11:38:53		51.9	51.9	51.9	11:43:57		51.9	51.9
50.8	11:38:54		50.8	50.8	51.7	11:43:58		51.7	51.7
51.7	11:38:55		51.7	51.7	51.9	11:43:59		51.9	51.9
53.5	11:38:56		53.5	53.5	52.0	11:44:00		52.0	52.0
51.4	11:38:57		51.4	51.4	53.4	11:44:01		53.4	53.4
51.3	11:38:58		51.3	51.3	53.6	11:44:02		53.6	53.6
53.6	11:38:59		53.6	53.6	52.9	11:44:03		52.9	52.9
52.2	11:39:00		52.2	52.2	52.9	11:44:04		52.9	52.9
51.4	11:39:01		51.4	51.4	52.5	11:44:05		52.5	52.5
51.8	11:39:02		51.8	51.8	52.4	11:44:06		52.4	52.4
52.8	11:39:03		52.8	52.8	52.2	11:44:07		52.2	52.2
52.5	11:39:04		52.5	52.5	52.1	11:44:08		52.1	52.1
52.9	11:39:05		52.9	52.9	51.8	11:44:09		51.8	51.8
52.1	11:39:06		52.1	52.1	51.7	11:44:10		51.7	51.7
52.3	11:39:07		52.3	52.3	53.0	11:44:11		53.0	53.0
52.4	11:39:08		52.4	52.4	52.5	11:44:12		52.5	52.5
51.9	11:39:09		51.9	51.9	52.3	11:44:13		52.3	52.3
52.0	11:39:10		52.0	52.0	52.6	11:44:14		52.6	52.6
52.0	11:39:11		52.0	52.0	53.5	11:44:15		53.5	53.5
52.1	11:39:12		52.1	52.1	54.2	11:44:16		54.2	54.2
51.9	11:39:13		51.9	51.9	56.2	11:44:17		56.2	56.2
51.7	11:39:14		51.7	51.7	56.0	11:44:18		56.0	56.0
51.9	11:39:15		51.9	51.9	54.8	11:44:19		54.8	54.8
51.8	11:39:16		51.8	51.8	53.4	11:44:20		53.4	53.4
52.1	11:39:17		52.1	52.1	52.9	11:44:21		52.9	52.9
53.3	11:39:18		53.3	53.3	53.1	11:44:22		53.1	53.1
51.5	11:39:19		51.5	51.5	53.5	11:44:23		53.5	53.5
52.6	11:39:20		52.6	52.6	53.5	11:44:24		53.5	53.5
51.5	11:39:21		51.5	51.5	54.4	11:44:25		54.4	54.4
51.9	11:39:22		51.9	51.9	56.4	11:44:26		56.4	56.4
51.6	11:39:23		51.6	51.6	55.0	11:44:27		55.0	55.0
51.6	11:39:24		51.6	51.6	54.2	11:44:28		54.2	54.2
52.0	11:39:25		52.0	52.0	54.4	11:44:29		54.4	54.4
51.7	11:39:26		51.7	51.7	54.2	11:44:30		54.2	54.2
52.1	11:39:27		52.1	52.1	53.9	11:44:31		53.9	53.9
52.8	11:39:28		52.8	52.8	53.7	11:44:32		53.7	53.7
52.2	11:39:29		52.2	52.2	55.1	11:44:33		55.1	55.1
51.8	11:39:30		51.8	51.8	55.5	11:44:34		55.5	55.5
52.3	11:39:31		52.3	52.3	54.0	11:44:35		54.0	54.0
54.3	11:39:32		54.3	54.3	53.9	11:44:36		53.9	53.9
51.3	11:39:33		51.3	51.3	55.9	11:44:37		55.9	55.9
51.4	11:39:34		51.4	51.4	54.8	11:44:38		54.8	54.8
51.5	11:39:35		51.5	51.5	53.3	11:44:39		53.3	53.3
51.4	11:39:36		51.4	51.4	52.9	11:44:40		52.9	52.9
53.5	11:39:37		53.5	53.5	54.5	11:44:41		54.5	54.5
52.6	11:39:38		52.6	52.6	58.1	11:44:42		58.1	58.1
52.0	11:39:39		52.0	52.0	56.8	11:44:43		56.8	56.8
52.0	11:39:40		52.0	52.0	55.9	11:44:44		55.9	55.9
52.2	11:39:41		52.2	52.2	55.2	11:44:45		55.2	55.2
53.3	11:39:42		53.3	53.3	54.3	11:44:46		54.3	54.3
53.1	11:39:43		53.1	53.1	54.4	11:44:47		54.4	54.4
53.3	11:39:44		53.3	53.3	53.1	11:44:48		53.1	53.1
53.0	11:39:45		53.0	53.0	52.4	11:44:49		52.4	52.4
52.7	11:39:46		52.7	52.7	51.7	11:44:50		51.7	51.7
53.0	11:39:47		53.0	53.0	51.6	11:44:51		51.6	51.6
53.5	11:39:48		53.5	53.5	54.6	11:44:52		54.6	54.6
53.5	11:39:49		53.5	53.5	54.4	11:44:53		54.4	54.4
57.6	11:39:50		57.6	57.6	52.8	11:44:54		52.8	52.8
54.4	11:39:51		54.4	54.4	54.9	11:44:55		54.9	54.9
54.5	11:39:52		54.5	54.5	53.8	11:44:56		53.8	53.8
53.6	11:39:53		53.6	53.6	54.2	11:44:57		54.2	54.2
53.0	11:39:54		53.0	53.0	57.1	11:44:58		57.1	57.1
53.3	11:39:55		53.3	53.3	56.7	11:44:59		56.7	56.7
53.0	11:39:56		53.0	53.0	55.9	11:45:00		55.9	55.9
53.4	11:39:57		53.4	53.4	56.8	11:45:01		56.8	56.8
53.6	11:39:58		53.6	53.6	59.3	11:45:02		59.3	59.3
54.1	11:39:59		54.1	54.1	59.1	11:45:03		59.1	59.1
52.8	11:40:00		52.8	52.8	58.8	11:45:04		58.8	58.8
55.5	11:40:01		55.5	55.5	60.3	11:45:05		60.3	60.3
56.0	11:40:02		56.0	56.0	62.3	11:45:06		62.3	62.3
53.8	11:40:03		53.8	53.8	62.3	11:45:07		62.3	62.3
53.9	11:40:04		53.9	53.9	60.1	11:45:08		60.1	60.1
56.2	11:40:05		56.2	56.2	61.7	11:45:09		61.7	61.7
54.1	11:40:06		54.1	54.1	62.3	11:45:10		62.3	62.3
55.4	11:40:07		55.4	55.4	60.9	11:45:11		60.9	60.9
54.2	11:40:08		54.2	54.2	59.5	11:45:12		59.5	59.5
53.3	11:40:09		53.3	53.3	59.8	11:45:13		59.8	59.8
53.3	11:40:10		53.3	53.3	62.4	11:45:14		62.4	62.4
55.3	11:40:11		55.3	55.3	64.0	11:45:15		64.0	64.0
55.3	11:40:12		55.3	55.3	60.8	11:45:16		60.8	60.8
56.1	11:40:13		56.1	56.1	57.9	11:45:17		57.9	57.9
56.5	11:40:14		56.5	56.5	53.4	11:45:18		53.4	53.4
55.8	11:40:15		55.8	55.8	55.4	11:45:19		55.4	55.4
56.4	11:40:16		56.4	56.4	54.2	11:45:20		54.2	54.2
54.6	11:40:17		54.6	54.6	52.9	11:45:21		52.9	52.9
59.4	11:40:18		59.4	59.4	53.1	11:45:22		53.1	53.1
60.3	11:40:19		60.3	60.3	52.9	11:45:23		52.9	52.9
63.8	11:40:20		63.8	63.8	52.9	11:45:24		52.9	52.9
58.3	11:40:21		58.3	58.3	53.5	11:45:25		53.5	53.5
54.7	11:40:22		54.7	54.7	53.4	11:45:26		53.4	53.4
54.3	11:40:23		54.3	54.3	52.9	11:45:27		52.9	52.9
54.2	11:40:24		54.2	54.2	53.0	11:45:28		53.0	53.0
54.0	11:40:25		54.0	54.0	53.0	11:45:29		53.0	53.0
53.7	11:40:26		53.7	53.7	52.4	11:45:30		52.4	52.4
53.6	11:40:27		53.6	53.6	53.5	11:45:31		53.5	53.5
54.8	11:40:28		54.8	54.8	54.2	11:45:32		54.2	54.2
54.2	11:40:29		54.2	54.2	54.5	11:45:33		54.5	54.5
54.3	11:40:30		54.3	54.3	54.4	11:45:34		54.4	54.4
52.8	11:40:31		52.8	52.8	53.7	11:45:35		53.7	53.7
54.3	11:40:32		54.3	54.3	54.4	11:45:36		54.4	54.4
54.3	11:40:33		54.3	54.3	55.9	11:45:37		55.9	55.9
57.1	11:40:34		57.1	57.1	55.5	11:45:38		55.5	55.5
53.3	11:40:35		53.3	53.3	55.1	11:45:39		55.1	55.1
53.2	11:40:36		53.2	53.2	54.1	11:45:40		54.1	54.1
53.1	11:40:37		53.1	53.1	54.1	11:45:41		54.1	54.1
52.8	11:40:38		52.8	52.8	53.4	11:45:42		53.4	53.4
52.8	11:40:39		52.8	52.8	52.3	11:45:43		52.3	52.3
53.0	11:40:40		53.0	53.0	52.3	11:45:44		52.3	52.3
52.8	11:40:41		52.8	52.8	52.8	11:45:45		52.8	52.8
52.9	11:40:42		52.9	52.9	52.4	11:45:46		52.4	52.4
53.3	11:40:43		53.3	53.3	53.7	11:45:47		53.7	53.7
53.0	11:40:44		53.0	53.0	52.0	11:45:48		52.0	52.0
53.6	11:40:45		53.6	53.6	52.3	11:45:49		52.3	52.3
60.7	11:40:46		60.7	60.7	52.7	11:45:50		52.7	52.7
62.8	11:40:47		62.8	62.8	53.3	11:45:51		53.3	53.3
53.1	11:40:48		53.1	53.1	53.9	11:45:52		53.9	53.9
52.6	11:40:49		52.6	52.6	55.8	11:45:53		55.8	55.8
53.0	11:40:50		53.0	53.0	54.3	11:45:54		54.3	54.3
53.1	11:40:51		53.1	53.1	53.4	11:45:55		53.4	53.4
53.0	11:40:52		53.0	53.0	53.1	11:45:56		53.1	53.1
54.7	11:40:53		54.7	54.7	53.0	11:45:57		53.0	53.0
56.2	11:40:54		56.2	56.2	52.9	11:45:58		52.9	52.9
54.1	11:40:55		54.1	54.1	52.6	11:45:59		52.6	52.6
53.2	11:40:56		53.2	53.2	52.6	11:46:00		52.6	52.6
53.3	11:40:57		53.3	53.3	52.6	11:46:01		52.6	52.6
53.5	11:40:58		53.5	53.5	52.6	11:46:02		52.6	52.6
53.9	11:40:59		53.9	53.9	53.1	11:46:03		53.1	53.1
55.1	11:41:00		55.1	55.1	53.6	11:46:04		53.6	53.6
53.8	11:41:01		53.8	53.8	54.6	11:46:05		54.6	54.6
53.3	11:41:02		53.3	53.3	54.5	11:46:06		54.5	54.5
53.0	11:41:03		53.0	53.0	56.7	11:46:07		56.7	56.7
53.5	11:41:04		53.5	53.5	59.7	11:46:08		59.7	59.7
55.8	11:41:05		55.8	55.8	59.8	11:46:09		59.8	59.8
55.6	11:41:06		55.6	55.6	56.9	11:46:10		56.9	56.9
53.1	11:41:07		53.1	53.1	57.8	11:46:11		57.8	57.8

Site 1 - Near Southeast Corner of Project Site

SPL	Time	Leq (1 hour Avg.)	Ldn	CNEL
53.7	11:41:08		53.7	53.7
53.7	11:41:09		53.7	53.7
53.6	11:41:10		53.6	53.6
53.5	11:41:11		53.5	53.5
53.8	11:41:12		53.8	53.8
53.3	11:41:13		53.3	53.3
53.4	11:41:14		53.4	53.4
53.2	11:41:15		53.2	53.2
53.2	11:41:16		53.2	53.2
52.8	11:41:17		52.8	52.8
52.5	11:41:18		52.5	52.5
55.7	11:41:19		55.7	55.7
52.7	11:41:20		52.7	52.7
53.5	11:41:21		53.5	53.5
53.3	11:41:22		53.3	53.3
54.0	11:41:23		54.0	54.0
53.5	11:41:24		53.5	53.5
54.1	11:41:25		54.1	54.1
54.1	11:41:26		54.1	54.1
52.8	11:41:27		52.8	52.8
52.5	11:41:28		52.5	52.5
53.0	11:41:29		53.0	53.0
52.5	11:41:30		52.5	52.5
52.3	11:41:31		52.3	52.3
52.9	11:41:32		52.9	52.9
53.5	11:41:33		53.5	53.5
53.4	11:41:34		53.4	53.4
53.9	11:41:35		53.9	53.9
54.0	11:41:36		54.0	54.0
54.4	11:41:37		54.4	54.4
54.3	11:41:38		54.3	54.3
54.8	11:41:39		54.8	54.8
55.8	11:41:40		55.8	55.8
55.0	11:41:41		55.0	55.0
53.2	11:41:42		53.2	53.2
53.5	11:41:43		53.5	53.5
54.3	11:41:44		54.3	54.3
52.8	11:41:45		52.8	52.8
53.0	11:41:46		53.0	53.0
52.1	11:41:47		52.1	52.1
52.4	11:41:48		52.4	52.4
52.9	11:41:49		52.9	52.9
52.2	11:41:50		52.2	52.2
53.5	11:41:51		53.5	53.5
53.6	11:41:52		53.6	53.6
53.4	11:41:53		53.4	53.4
54.0	11:41:54		54.0	54.0
53.5	11:41:55		53.5	53.5
53.4	11:41:56		53.4	53.4
55.3	11:41:57		55.3	55.3
53.4	11:41:58		53.4	53.4
55.3	11:41:59		55.3	55.3
56.0	11:42:00		56.0	56.0
57.9	11:42:01		57.9	57.9
56.0	11:42:02		56.0	56.0
55.8	11:42:03		55.8	55.8
55.3	11:42:04		55.3	55.3
54.4	11:42:05		54.4	54.4
55.8	11:42:06		55.8	55.8
55.3	11:42:07		55.3	55.3
55.0	11:42:08		55.0	55.0
52.6	11:42:09		52.6	52.6
55.6	11:42:10		55.6	55.6
52.6	11:42:11		52.6	52.6
53.1	11:42:12		53.1	53.1
54.1	11:42:13		54.1	54.1
53.1	11:42:14		53.1	53.1
51.2	11:42:15		51.2	51.2
51.2	11:42:16		51.2	51.2
51.6	11:42:17	55.6	51.6	51.6
51.1	11:42:18	55.6	51.1	51.1
50.7	11:42:19	55.6	50.7	50.7
51.1	11:42:20	55.6	51.1	51.1
52.0	11:42:21	55.6	52.0	52.0
51.9	11:42:22	55.6	51.9	51.9
52.0	11:42:23	55.6	52.0	52.0
52.3	11:42:24	55.6	52.3	52.3
52.3	11:42:25	55.6	52.3	52.3
52.1	11:42:26	55.6	52.1	52.1
52.2	11:42:27	55.5	52.2	52.2
52.0	11:42:28	55.5	52.0	52.0
51.8	11:42:29	55.5	51.8	51.8
51.3	11:42:30	55.5	51.3	51.3
51.2	11:42:31	55.5	51.2	51.2
51.5	11:42:32	55.5	51.5	51.5
52.8	11:42:33	55.5	52.8	52.8
52.6	11:42:34	55.5	52.6	52.6
52.5	11:42:35	55.5	52.5	52.5
51.8	11:42:36	55.5	51.8	51.8
51.8	11:42:37	55.5	51.8	51.8
52.0	11:42:38	55.5	52.0	52.0
51.8	11:42:39	55.4	51.8	51.8
51.7	11:42:40	55.4	51.7	51.7
52.2	11:42:41	55.4	52.2	52.2
52.1	11:42:42	55.4	52.1	52.1
52.2	11:42:43	55.4	52.2	52.2
52.0	11:42:44	55.4	52.0	52.0
51.5	11:42:45	55.4	51.5	51.5
51.4	11:42:46	55.4	51.4	51.4
50.8	11:42:47	55.4	50.8	50.8
51.2	11:42:48	55.4	51.2	51.2
50.9	11:42:49	55.4	50.9	50.9
50.9	11:42:50	55.4	50.9	50.9
50.8	11:42:51	55.4	50.8	50.8
50.5	11:42:52	55.4	50.5	50.5
50.7	11:42:53	55.4	50.7	50.7
51.5	11:42:54	55.4	51.5	51.5
52.3	11:42:55	55.4	52.3	52.3
51.1	11:42:56	55.4	51.1	51.1
53.8	11:42:57	55.4	53.8	53.8
51.3	11:42:58	55.4	51.3	51.3
51.9	11:42:59	55.4	51.9	51.9
52.3	11:43:00	55.4	52.3	52.3
51.4	11:43:01	55.4	51.4	51.4
50.9	11:43:02	55.4	50.9	50.9
50.9	11:43:03	55.4	50.9	50.9
52.6	11:43:04	55.4	52.6	52.6
52.8	11:43:05	55.4	52.8	52.8
51.8	11:43:06	55.4	51.8	51.8
51.8	11:43:07	55.3	51.8	51.8
52.1	11:43:08	55.3	52.1	52.1
52.1	11:43:09	55.3	52.1	52.1
52.5	11:43:10	55.3	52.5	52.5
51.9	11:43:11	55.3	51.9	51.9
52.1	11:43:12	55.3	52.1	52.1
51.9	11:43:13	55.3	51.9	51.9
51.6	11:43:14	55.3	51.6	51.6
51.1	11:43:15	55.3	51.1	51.1
52.7	11:43:16	55.3	52.7	52.7
51.7	11:43:17	55.3	51.7	51.7
51.2	11:43:18	55.3	51.2	51.2
51.1	11:43:19	55.3	51.1	51.1
51.1	11:43:20	55.3	51.1	51.1
50.9	11:43:21	55.3	50.9	50.9
50.8	11:43:22	55.3	50.8	50.8
50.5	11:43:23	55.3	50.5	50.5
51.6	11:43:24	55.3	51.6	51.6
52.1	11:43:25	55.3	52.1	52.1
52.0	11:43:26	55.3	52.0	52.0
52.0	11:43:27	55.3	52.0	52.0
52.0	11:43:28	55.3	52.0	52.0
51.4	11:43:29	55.2	51.4	51.4
51.2	11:43:30	55.2	51.2	51.2
51.1	11:43:31	55.2	51.1	51.1
51.1	11:43:32	55.2	51.1	51.1
57.0	11:43:33	55.2	57.0	57.0
57.1	11:43:34	55.2	57.1	57.1
51.5	11:43:35	55.2	51.5	51.5
51.1	11:43:36	55.2	51.1	51.1
50.8	11:43:37	55.2	50.8	50.8
50.8	11:43:38	55.2	50.8	50.8
52.1	11:43:39	55.2	52.1	52.1
52.7	11:43:40	55.2	52.7	52.7
52.1	11:43:41	55.2	52.1	52.1
51.3	11:43:42	55.2	51.3	51.3
58.1	11:43:43	55.2	58.1	58.1
53.9	11:43:44	55.2	53.9	53.9
52.0	11:43:45	55.2	52.0	52.0
51.8	11:43:46	55.2	51.8	51.8
52.9	11:43:47	55.2	52.9	52.9
54.6	11:43:48	55.2	54.6	54.6
55.9	11:43:49	55.2	55.9	55.9

Site 2 - Near Northwest Corner of Project Site

SPL	Time	Leq (1 hour Avg.)	Ldn	CNEL
58.8	11:46:12		58.8	58.8
59.0	11:46:13		59.0	59.0
56.2	11:46:14		56.2	56.2
56.2	11:46:15		56.2	56.2
56.7	11:46:16		56.7	56.7
56.5	11:46:17		56.5	56.5
56.1	11:46:18		56.1	56.1
55.9	11:46:19		55.9	55.9
54.2	11:46:20		54.2	54.2
53.8	11:46:21		53.8	53.8
54.6	11:46:22		54.6	54.6
54.9	11:46:23		54.9	54.9
55.7	11:46:24		55.7	55.7
55.4	11:46:25		55.4	55.4
54.6	11:46:26		54.6	54.6
54.7	11:46:27		54.7	54.7
54.8	11:46:28		54.8	54.8
55.6	11:46:29		55.6	55.6
56.0	11:46:30		56.0	56.0
56.5	11:46:31		56.5	56.5
56.0	11:46:32		56.0	56.0
56.3	11:46:33		56.3	56.3
56.7	11:46:34		56.7	56.7
56.9	11:46:35		56.9	56.9
56.3	11:46:36		56.3	56.3
58.2	11:46:37		58.2	58.2
59.2	11:46:38		59.2	59.2
57.6	11:46:39		57.6	57.6
57.4	11:46:40		57.4	57.4
56.8	11:46:41		56.8	56.8
56.1	11:46:42		56.1	56.1
59.1	11:46:43		59.1	59.1
56.9	11:46:44		56.9	56.9
57.0	11:46:45		57.0	57.0
56.4	11:46:46		56.4	56.4
62.2	11:46:47		62.2	62.2
62.1	11:46:48		62.1	62.1
59.0	11:46:49		59.0	59.0
55.4	11:46:50		55.4	55.4
55.5	11:46:51		55.5	55.5
54.5	11:46:52		54.5	54.5
56.4	11:46:53		56.4	56.4
56.6	11:46:54		56.6	56.6
57.0	11:46:55		57.0	57.0
57.0	11:46:56		57.0	57.0
56.7	11:46:57		56.7	56.7
55.7	11:46:58		55.7	55.7
55.5	11:46:59		55.5	55.5
55.9	11:47:00		55.9	55.9
56.7	11:47:01		56.7	56.7
57.5	11:47:02		57.5	57.5
56.8	11:47:03		56.8	56.8
55.4	11:47:04		55.4	55.4
55.9	11:47:05		55.9	55.9
56.5	11:47:06		56.5	56.5
55.8	11:47:07		55.8	55.8
57.1	11:47:08		57.1	57.1
58.0	11:47:09		58.0	58.0
60.0	11:47:10		60.0	60.0
58.1	11:47:11		58.1	58.1
56.3	11:47:12		56.3	56.3
55.9	11:47:13		55.9	55.9
55.0	11:47:14		55.0	55.0
57.1	11:47:15		57.1	57.1
60.1	11:47:16		60.1	60.1
58.2	11:47:17		58.2	58.2
55.5	11:47:18		55.5	55.5
54.8	11:47:19		54.8	54.8
54.3	11:47:20		54.3	54.3
53.6	11:47:21	57.5	53.6	53.6
53.2	11:47:22	57.5	53.2	53.2
53.0	11:47:23	57.5	53.0	53.0
52.6	11:47:24	57.5	52.6	52.6
53.3	11:47:25	57.5	53.3	53.3
52.5	11:47:26	57.5	52.5	52.5
52.5	11:47:27	57.5	52.5	52.5
52.6	11:47:28	57.4	52.6	52.6
52.8	11:47:29	57.4	52.8	52.8
52.3	11:47:30	57.4	52.3	52.3
52.7	11:47:31	57.4	52.7	52.7
52.5	11:47:32	57.4	52.5	52.5
52.4	11:47:33	57.4	52.4	52.4
53.9	11:47:34	57.4	53.9	53.9
53.7	11:47:35	57.4	53.7	53.7
53.7	11:47:36	57.4	53.7	53.7
53.6	11:47:37	57.4	53.6	53.6
54.0	11:47:38	57.4	54.0	54.0
53.9	11:47:39	57.4	53.9	53.9
53.5	11:47:40	57.4	53.5	53.5
53.5	11:47:41	57.4	53.5	53.5
54.5	11:47:42	57.4	54.5	54.5
53.1	11:47:43	57.4	53.1	53.1
53.5	11:47:44	57.4	53.5	53.5
53.0	11:47:45	57.4	53.0	53.0
55.0	11:47:46	57.4	55.0	55.0
55.9	11:47:47	57.4	55.9	55.9
53.7	11:47:48	57.4	53.7	53.7
53.4	11:47:49	57.4	53.4	53.4
53.7	11:47:50	57.4	53.7	53.7
54.6	11:47:51	57.4	54.6	54.6
54.6	11:47:52	57.4	54.6	54.6
54.8	11:47:53	57.4	54.8	54.8
54.9	11:47:54	57.4	54.9	54.9
55.5	11:47:55	57.4	55.5	55.5
56.8	11:47:56	57.4	56.8	56.8
57.6	11:47:57	57.4	57.6	57.6
59.8	11:47:58	57.4	59.8	59.8
60.6	11:47:59	57.4	60.6	60.6
63.9	11:48:00	57.4	63.9	63.9
61.5	11:48:01	57.4	61.5	61.5
58.1	11:48:02	57.4	58.1	58.1
58.6	11:48:03	57.4	58.6	58.6
58.0	11:48:04	57.4	58.0	58.0
57.7	11:48:05	57.4	57.7	57.7
57.1	11:48:06	57.4	57.1	57.1
56.5	11:48:07	57.4	56.5	56.5
56.9	11:48:08	57.4	56.9	56.9
57.1	11:48:09	57.4	57.1	57.1
56.1	11:48:10	57.4	56.1	56.1
56.5	11:48:11	57.4	56.5	56.5
56.6	11:48:12	57.4	56.6	56.6
56.7	11:48:13	57.4	56.7	56.7
57.2	11:48:14	57.4	57.2	57.2
56.7	11:48:15	57.4	56.7	56.7
56.6	11:48:16	57.4	56.6	56.6
57.4	11:48:17	57.4	57.4	57.4
57.2	11:48:18	57.4	57.2	57.2
57.2	11:48:19	57.4	57.2	57.2
57.5	11:48:20	57.4	57.5	57.5
57.5	11:48:21	57.4	57.5	57.5
57.4	11:48:22	57.4	57.4	57.4
57.1	11:48:23	57.4	57.1	57.1
57.0	11:48:24	57.4	57.0	57.0
56.6	11:48:25	57.4	56.6	56.6
57.0	11:48:26	57.4	57.0	57.0
57.3	11:48:27	57.4	57.3	57.3
57.3	11:48:28	57.4	57.3	57.3
56.6	11:48:29	57.4	56.6	56.6
56.5	11:48:30	57.4	56.5	56.5
56.2	11:48:31	57.4	56.2	56.2
55.7	11:48:32	57.4	55.7	55.7
55.3	11:48:33	57.4	55.3	55.3
54.6	11:48:34	57.4	54.6	54.6
55.7	11:48:35	57.4	55.7	55.7
55.5	11:48:36	57.4	55.5	55.5
56.1	11:48:37	57.4	56.1	56.1
55.9	11:48:38	57.4	55.9	55.9
57.3	11:48:39	57.4	57.3	57.3
55.6	11:48:40	57.4	55.6	55.6
55.3	11:48:41	57.4	55.3	55.3
56.2	11:48:42	57.4	56.2	56.2
56.2	11:48:43	57.4	56.2	56.2
56.4	11:48:44	57.4	56.4	56.4
56.3	11:48:45	57.4	56.3	56.3
56.5	11:48:46	57.4	56.5	56.5
56.8	11:48:47	57.4	56.8	56.8
57.0	11:48:48	57.4	57.0	57.0
57.6	11:48:49	57.4	57.6	57.6
57.4	11:48:50	57.4	57.4	57.4
58.4	11:48:51	57.4	58.4	58.4
56.7	11:48:52	57.4	56.7	56.7
56.7	11:48:53	57.4	56.7	56.7

APPENDIX C

RCNM Model Construction Noise Calculation Printouts

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 6/2/2025
Case Description: 13040 Coast St Apartments - Demolition

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Homes to South	Residential	58.4	58.4	50.5

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Saw	No	20		89.6	120	0
Tractor	No	40	84		120	0

Equipment	Calculated (dBA) *Lmax	Leq	Results Noise Limits (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq
Concrete Saw	82.0	75.0	N/A	N/A	N/A	N/A
Tractor	76.4	72.4	N/A	N/A	N/A	N/A
Total	**82**	**77**	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 6/2/2025
Case Description: 13040 Coast St Apartments - Site Preparation

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Homes to South	Residential	58.4	58.4	50.5

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		120	0
Tractor	No	40	84		120	0

Equipment		Calculated (dBA) *Lmax	Leq	Results Noise Limits (dBA) Day Lmax	Leq	Evening Lmax	Leq
Grader		77.4	73.4	N/A	N/A	N/A	N/A
Tractor		76.4	72.4	N/A	N/A	N/A	N/A
	Total	**77**	**76**	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 6/2/2025
Case Description: 13040 Coast St Apartments - Grading

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Homes to South	Residential	58.4	58.4	50.5

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		120	0
Tractor	No	40	84		120	0

Equipment		Calculated (dBA) *Lmax	Leq	Results Noise Limits (dBA) Day Lmax	Leq	Evening Lmax	Leq
Grader		77.4	73.4	N/A	N/A	N/A	N/A
Tractor		76.4	72.4	N/A	N/A	N/A	N/A
	Total	**77**	**76**	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 6/2/2025
Case Description: 13040 Coast St Apartments - Building Construction

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Homes to South	Residential	58.4	58.4	50.5

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Gradall	No	40		83.4	120	0
Tractor	No	40	84		120	0

Equipment		Calculated (dBA) *Lmax	Leq	Results Noise Limits (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq
Gradall		75.8	71.8	N/A	N/A	N/A	N/A
Tractor		76.4	72.4	N/A	N/A	N/A	N/A
	Total	**76**	**75**	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 6/2/2025
Case Description: 13040 Coast St Apartments - Paving

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Homes to South	Residential	58.4	58.4	50.5

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Roller	No	20		80	120	0
Tractor	No	40	84		120	0

		Calculated (dBA)		Results Noise Limits (dBA)			
				Day		Evening	
Equipment		***Lmax**	**Leq**	Lmax	Leq	Lmax	Leq
Roller		72.4	65.4	N/A	N/A	N/A	N/A
Tractor		76.4	72.4	N/A	N/A	N/A	N/A
	Total	**76**	**73**	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 6/2/2025
Case Description: 13040 Coast St Apartments - Painting

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Homes to South	Residential	58.4	58.4	50.5

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	120	0

		Results Calculated (dBA)		Day	Noise Limits (dBA)	Evening	
Equipment		***Lmax**	**Leq**	Lmax	Leq	Lmax	Leq
Compressor (air)		70.1	66.1	N/A	N/A	N/A	N/A
	Total	**70**	**66**	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

APPENDIX D

Operational Reference Noise Measurements and Noise Calculation Printouts

Measurement Report

Report Summary

Meter's File Name	831_Data.001	Computer's File Name	SLM_0002509_831_Data_001.15.ldbin
Meter	831		
Firmware	2.314		
User	GT		Location
Description	Magnolia St Park		
Note	2 people working in Garden, a dog walker, birds and vehicles on Magnolia St		
Start Time	2022-04-06 08:42:32	Duration	0:15:00.0
End Time	2022-04-06 08:57:32	Run Time	0:15:00.0
Pause Time	0:00:00.0		

Results

Overall Metrics

LA_{eq}	45.7 dB		
LAE	75.2 dB	SEA	--- dB
EA	3.7 µPa²h		
LZ_{peak}	99.0 dB	2022-04-06 08:42:33	
LAS_{max}	58.6 dB	2022-04-06 08:42:32	
LAS_{min}	39.4 dB	2022-04-06 08:50:06	
LA_{eq}	45.7 dB		
LC_{eq}	60.0 dB	LC_{eq} - LA_{eq}	14.3 dB
LAI_{eq}	49.8 dB	LAI_{eq} - LA_{eq}	4.2 dB

Exceedances	Count	Duration
LAS > 65.0 dB	0	0:00:00.0
LAS > 85.0 dB	0	0:00:00.0
LZpeak > 135.0 dB	0	0:00:00.0
LZpeak > 137.0 dB	0	0:00:00.0
LZpeak > 140.0 dB	0	0:00:00.0

Community Noise	LDN	LDay	LNight
	45.7 dB	45.7 dB	0.0 dB

	LDEN	LDay	LEve	LNight
	45.7 dB	45.7 dB	--- dB	--- dB

Any Data	A		C		Z	
	Level	Time Stamp	Level	Time Stamp	Level	Time Stamp
L_{eq}	45.7 dB		60.0 dB		65.6 dB	
$Ls_{(max)}$	58.6 dB	2022-04-06 08:42:32	70.1 dB	2022-04-06 08:42:33	90.6 dB	2022-04-06 08:42:33
$LF_{(max)}$	58.1 dB	2022-04-06 08:45:16	75.0 dB	2022-04-06 08:42:33	95.1 dB	2022-04-06 08:42:33
$LI_{(max)}$	74.0 dB	2022-04-06 08:42:32	78.9 dB	2022-04-06 08:42:33	96.8 dB	2022-04-06 08:42:32
$LS_{(min)}$	39.4 dB	2022-04-06 08:50:06	56.5 dB	2022-04-06 08:48:37	59.9 dB	2022-04-06 08:49:57
$LF_{(min)}$	37.9 dB	2022-04-06 08:50:05	54.6 dB	2022-04-06 08:48:57	58.0 dB	2022-04-06 08:49:53
$LI_{(min)}$	39.2 dB	2022-04-06 08:50:05	57.2 dB	2022-04-06 08:47:06	60.9 dB	2022-04-06 08:49:57
$L_{Peak(max)}$	74.9 dB	2022-04-06 08:50:36	84.9 dB	2022-04-06 08:42:33	99.0 dB	2022-04-06 08:42:33

Overloads	Count	Duration	OBA Count	OBA Duration
	0	0:00:00.0	0	0:00:00.0

Statistics

LAS 5.0	48.8 dB
LAS 10.0	47.7 dB
LAS 33.3	45.8 dB
LAS 50.0	45.0 dB
LAS 66.6	44.3 dB
LAS 90.0	43.0 dB

Summary					
File Name	831_Data.002				
Serial Number	0002509				
Model	Model 831				
Firmware Version	2.301				
User	GT				
Location	At 7080 Mayten Ave - Edge of MFR Parking Lot				
Job Description	Mayten & Foothill				
Note					
Measurement Description					
Start	2015-09-10 15:54:09				
Stop	2015-09-10 16:10:10				
Duration	0:16:00.5				
Run Time	0:16:00.5				
Pause	0:00:00.0				
Pre Calibration	2015-09-10 15:32:49				
Post Calibration	None				
Calibration Deviation	---				
Overall Settings					
RMS Weight	A Weighting				
Peak Weight	A Weighting				
Detector	Slow				
Preamp	PRM831				
Microphone Correction	Off				
Integration Method	Linear				
OBA Range	High				
OBA Bandwidth	1/1 and 1/3				
OBA Freq. Weighting	Z Weighting				
OBA Max Spectrum	Bin Max				
Gain	0.0 dB				
Overload	143.1 dB				
		A	**C**	**Z**	
Under Range Peak		**75.6**	72.6	77.6 dB	
Under Range Limit		**26.1**	26.4	31.8 dB	
Noise Floor		17.0	17.3	22.5 dB	
Results					
LAeq	52.1 dB				
LAE	81.9 dB				
EA	17.242 µPa²h				
LApeak (max)	2015-09-10 16:03:36	98.6 dB			
LASmax	2015-09-10 16:03:36	74.6 dB			
LASmin	2015-09-10 15:54:57	41.3 dB			
SEA	-99.9 dB				
LAS > 65.0 dB (Exceedance Counts / Duration)	6	11.6 s			

LAS > 85.0 dB (Exceedance Counts / Duration)	0	0.0 s
LApeak > 135.0 dB (Exceedance Counts / Duration)	0	0.0 s
LApeak > 137.0 dB (Exceedance Counts / Duration)	0	0.0 s
LApeak > 140.0 dB (Exceedance Counts / Duration)	0	0.0 s

Community Noise	**Ldn**	**':00-23:00**	**3:00-07:00**	**Lden**
	52.1	52.1	-99.9	52.1
LCeq	65.0 dB			
LAeq	52.1 dB			
LCeq - LAeq	12.9 dB			
LAleq	61.6 dB			
LAeq	52.1 dB			
LAleq - LAeq	9.5 dB			
# Overloads	0			
Overload Duration	0.0 s			
# OBA Overloads	0			
OBA Overload Duration	0.0 s			

Statistics	
LAS5.00	55.0 dB
LAS10.00	53.4 dB
LAS33.30	49.1 dB
LAS50.00	47.1 dB
LAS66.60	45.8 dB
LAS90.00	43.9 dB

Calibration History

Preamp	**Date**	**re. 1V/Pa**	**6.3**
PRM831	2015-09-10 15:32:49	-25.6	73.9
PRM831	2015-08-14 17:54:36	-26.3	36.4
PRM831	2015-08-05 20:29:18	-24.7	64.2
PRM831	2015-07-24 14:47:10	-25.6	60.9
PRM831	2015-05-05 14:56:20	-25.8	61.2
PRM831	2015-04-22 8:42:55	-26.3	58.2
PRM831	2015-04-17 11:29:03	-26.3	21.3
PRM831	2015-04-17 9:59:48	-26.0	30.6
PRM831	2015-04-17 8:00:28	-26.0	9.4
PRM831	2061-08-11 15:40:00	-26.0	44.2
PRM831	2014-10-15 14:30:38	-26.0	72.4

CA15NA
Single–Stage Air Conditioner with Puron® Refrigerant
1–1/2 To 5 Tons

Carrier
turn to the experts

Product Data

INDUSTRY LEADING FEATURES / BENEFITS

Efficiency

- 14.0 SEER / 11.7 – 12.2 EER (based on tested combination)
- Microtube Technology™ refrigeration system

Reliability

- Puron® refrigerant
- Scroll compressor
- Internal pressure relief valve
- Internal thermal overload
- Filter drier

Durability

WeatherArmor™ protection package:

- Solid, durable sheet metal construction
- Dense wire coil guard

Applications

- Long–line – up to 250 feet (76.20 m) total equivalent length, up to 200 feet (60.96 m) condenser above evaporator, or up to 80 ft. (24.38 m) evaporator above condenser (See Longline Guide for more information.)
- Low ambient (down to –20°F/–28.9°C) with accessory kit

NOTE: Ratings contained in this document are subject to change at any time. Always refer to the AHRI directory (www.ahridirectory.org) for the most up–to–date ratings information.

ACCESSORY THERMOSTATS

PART NUMBER	PROGRAM	GAS	ELECTRIC	HEAT PUMP	HEAT	COOL
TC–PAC01	5–2 Day	√	√		1	1
TC–NAC01	NP	√	√		1	1
TCSNAC01	NP	√	√		1	1

THERMOSTAT ACCESSORIES		
PART NUMBER	**DESCRIPTION**	**THERMOSTATS USED WITH**
TSTATXXCNV10‡	Thermostat Conversion Kit (4 to 5 wire) – 10 pack	All Carrier® branded thermostats
TX–LBP01	Large Decorative Backplate	TP–Pxx, TP–Nxx, TC–Pxx
TX–MBP01	Medium Decorative Backplate	TC–Nxx, TB–Pxx

ACCESSORIES

Accessory Kit Number	Description	018	024	030	036	042	048	060
HC32GE234	MOTOR,FAN	X						
HC34GE239	MOTOR,FAN		X	X				
HC38GE219	MOTOR,FAN				X	X		
HC40GE226	MOTOR,FAN						X	X
HH07AT212	BASE,THERM/SUB	X	X	X	X	X	X	X
KAACF1001MED	FILTER KIT	X	X	X	X			
KAACF1101LRG	FILTER KIT					X	X	X
KAACH1201AAA	CRKC HTR KIT					X	X	X
KAACH1401AAA	CRKC HTR KIT	X	X	X	X			
KAACS0201PTC	KIT PTC	X	X	X	X	X	X	X
KAAFT0101AAA	FRZ THERM KIT	X	X	X	X	X	X	X
KAAHI0501PUR	HIGH PRESSURE SW KIT	X	X	X	X	X	X	X
KAALP0401PUR	LOW PRESSURE SW KIT	X	X	X	X	X	X	X
KAALS0201LLS	SOL VALVE KIT	X	X	X	X	X	X	X
KAATD0101TDR	TIME DELAY KIT	X	X	X	X	X	X	X
KAAWS0101AAA	WINTER START KIT	X	X	X	X	X	X	X
KSACY0101AAA	CYCLE PROTRECTOR KIT	X	X	X	X	X	X	X
KSAHS1501AAA	HARD START KIT	X	X	X	X	X	X	X
KSALA0301410	LOW AMBIENT KIT	X	X	X	X	X	X	X
KSALA0601AAA	MOTORMASTER KIT	X	X	X	X	X	X	X
KSASH0601COP	SOUND BLKT KIT				X	X	X	
KSASH1801COP	SOUND BLKT KIT	X	X	X				
KSASH2101COP	SOUND BLKT KIT							X
KSATX0201PUR	TXV KIT	X	X	X				
KSATX0301PUR	TXV KIT				X	X		
KSATX0401PUR	TXV KIT						X	
KSATX0501PUR	TXV KIT							X
KSBTX0201PUR	TXV KIT	X	X	X				
KSBTX0301PUR	TXV KIT				X	X		
KSBTX0401PUR	TXV KIT						X	
TSTATXXSEN01	SENSOR	X	X	X	X	X	X	X

X = Accessory

ELECTRICAL DATA

UNIT SIZE – SERIES	V/PH	OPER VOLTS*		COMPR		FAN	MCA	MAX FUSE† or CKT BRK AMPS
		MAX	MIN	LRA	RLA	FLA		
18–A	208/230/1–60	253	197	47.5	9.0	0.40	11.7	20
24–A				62.9	10.9	0.50	14.1	20
30–A				67.8	12.8	0.75	16.8	25
36–A				79.0	13.6	1.10	18.1	30
42–A				109.0	16.7	1.40	22.3	35
48–A				105.7	15.6	1.40	20.9	35
60–A				127.1	20.8	1.52	27.5	40

* Permissible limits of the voltage range at which the unit will operate satisfactorily

† Time–Delay fuse.

FLA – Full Load Amps

LRA – Locked Rotor Amps

MCA – Minimum Circuit Amps

RLA – Rated Load Amps

NOTE: Control circuit is 24V on all units and requires external power source. Copper wire must be used from service disconnect to unit. All motors/compressors contain internal overload protection.

Complies with 2010 requirements of ASHRAE Standards 90.1

A–WEIGHTED SOUND POWER (dBA)

UNIT SIZE – SERIES	Standard Rating (dBA)	TYPICAL OCTAVE BAND SPECTRUM (dBA without tone adjustment)						
		125	250	500	1000	2000	4000	8000
18–A	75	46.0	55.0	59.5	64.0	60.5	54.5	48.5
24–A	71	50.5	53.5	58.5	60.5	60.0	56.5	52.5
30–A	73	49.5	56.0	62.5	64.0	60.5	57.5	53.5
36–A	75	49.0	57.0	62.5	66.0	61.0	58.5	52.0
42–A	75	52.5	63.0	64.0	63.0	62.0	58.0	52.0
48–A	76	53.0	61.0	64.0	65.5	62.0	59.5	50.5
60–A	75	53.5	57.0	62.5	63.5	61.5	57.5	51.0

NOTE: Tested in compliance with AHRI 270–1995 (not listed with AHRI)

A–WEIGHTED SOUND POWER (dBA) WITH SOUND SHIELD

UNIT SIZE – SERIES	Standard Rating (dBA)	TYPICAL OCTAVE BAND SPECTRUM (dBA without tone adjustment)						
		125	250	500	1000	2000	4000	8000
18–A	75	46.5	55.5	59.5	63.5	60.0	54.0	47.0
24–A	71	47.5	53.5	58.0	59.5	60.0	55.5	49.0
30–A	72	49.0	56.5	61.5	62.5	60.0	57.0	52.0
36–A	73	49.5	57.0	62.0	64.0	60.0	58.0	51.0
42–A	74	53.5	64.0	64.0	62.5	61.0	56.5	50.5
48–A	73	54.5	61.0	63.5	62.5	60.0	56.5	47.5
60–A	73	53.5	59.0	63.0	62.5	59.5	56.0	48.0

NOTE: Tested in compliance with AHRI 270–1995 (not listed with AHRI)

METERING DEVICE

UNIT SIZE – SERIES	INDOOOR	REQUIRED SUBCOOLING °F (°C)
18–A	TXV*	13 (7.22)
24–A		10 (5.56)
30–A		12 (6.67)
36–A		11 (6.11)
42–A		11 (6.11)
48–A		11 (6.11)
60–A		13 (7.22)

* TXV must be ordered separately when indoor coil is not equipped with a TXV. TXV must be hard–shutoff type.

nary Noise Calculations at Tiny Homes North of Project Site

ry ources	Reference Measurement Distance	Leq	Distances and Calculated Noise Level at SFH to South Horiz. Dist	Vert. Dist	Tot. Dist	Leq
ace Area	10	45.7	27	16	31	36
tioner	3.28	73.0	97	59.5	114	42
Lot Area	5	52.1	27	3	27	37

1 (Line Source: hard=0, soft=.5; Point Source: hard=1, soft=1.5)
(eq. N-2141.2 of TeNS)

Combined Noise Level without Shielding **44** **dBA Leq**

ry ources	Distance from Receptor to Wall	Distance from source to Wall	Height of Wall (feet)	Without Wall Noise Level at Residence	With Wall Noise Level at	Source Height (feet)	Exterior Observer Height (feet)	Source Frequency (hz)	barrier to receiver - b (all)	source to barrier - a	source to receiver - c	path difference y =a+b-c (auto)	line of sight (slope)	fresnel	Barri Atte
ace Area	28	3	20	36	**19**	16	5	800	32.10	5.00	33.26	3.85	1	10.94	-17.2
tioner	110	4	63	42	**25**	59.5	5	800	124.17	5.32	126.17	3.32	1	9.43	-16.9
Lot Area	24	3	6	37	**23**	3	5	800	24.19	4.24	27.24	1.19	1	3.38	-13.9

Combined Noise Levels with Shielding **28** **dBA Leq**

nary Noise Calculations at Apartments South of Project Site

ry ources	Reference Measurement Distance	Leq	Distances and Calculated Noise Level at SFH to South Horiz. Dist	Vert. Dist	Tot. Dist	Leq
ace Area	10	45.7	120	16	121	24
tioner	3.28	73.0	80	59.5	100	43
Lot Area	5	52.1	55	3	55	31

1 (Line Source: hard=0, soft=.5; Point Source: hard=1, soft=1.5)
(eq. N-2141.2 of TeNS)

Combined Noise Level without Shielding **44** **dBA Leq**

ry ources	Distance from Receptor to Wall	Distance from source to Wall	Height of Wall (feet)	Without Wall Noise Level at Residence	With Wall Noise Level at	Source Height (feet)	Exterior Observer Height (feet)	Source Frequency (hz)	barrier to receiver - b (all)	source to barrier - a	source to receiver - c	path difference y =a+b-c (auto)	line of sight (slope)	fresnel	Barri Atte
ace Area	118	3	20	24	**8**	16	5	800	119.01	5.00	121.56	2.45	1	6.97	-16.2
tioner	96	4	63	43	**26**	59.5	5	800	111.90	5.32	113.62	3.60	1	10.23	-17.1
Lot Area	52	3	6	31	**17**	3	5	800	52.09	4.24	55.12	1.22	1	3.46	-14.(

Combined Noise Levels with Shielding **27** **dBA Leq**

Appendix D: Air Quality Impact Analysis

To: City of Garden Grove Planning Department

From: Maryam Javanmardi, Tina Yuan, EPD Solutions, Inc.

Date: 9/4/2025

Re: Air Quality Impact Analysis for 13040 Coast Street Apartments Project, EPD Project Number 24-073

This technical memorandum presents an analysis of the air quality impacts for the Coast Street Apartments (proposed Project) located at 13040 Coast Street, within the City of Garden Grove.

The Project site encompasses 0.54 total acres and is comprised of a single parcel identified as Assessor Parcel Number (APNs) 097-011-03. The Project applicant is proposing to demolish the existing 3,252 square foot (SF) one story building previously used by a church and redevelop the site with a five story multi-family residential building inclusive of 34 dwelling units. The five-story building would have a gross floor area of 61,297 square feet (SF). The building would have a footprint of 11,904 SF and a maximum height of 65 feet, with the top of the roof at 55-feet 6-inches. Development of the site would also include landscaping, utility connections, paving of sidewalks, parking areas and drive aisles. For the purpose of this analysis, credit will not be taken from the existing use, to yield a conservative analysis. The proposed Project site is shown in Figure 1, *Project Details*, included at the end of this document.

This report analyzes the proposed Project's construction and operational impacts to air quality (emission of criteria pollutants) using the California Emissions Estimator Model (CalEEMod Version 2022.1) land use emission model and Emission Factor (EMFAC Version 2021) model. Table 1, *Construction Schedule*, shows the CalEEMod default estimated construction schedule, which is expected to last approximately 6 months.

Table 1: Construction Schedule

Activity	Start Date	End Date	Total Working Days
Demolition	7/1/2025	7/15/2025	10
Site Preparation	7/16/2025	7/17/2025	1
Grading	7/18/2025	7/20/2025	2
Building Construction	7/21/2025	12/8/2025	100
Paving	12/9/2025	12/16/2025	5
Architectural Coating	12/17/2025	12/30/2025	10

Source: CalEEMod Output Sheets (see Attachment A).

The following non-default assumptions and adjustments were used in the CalEEMod emission model for this analysis to provide for project specific modeling of emissions:

- Land Use: The default acreage generated by CalEEMod for a 34-unit building was 0.89 acres. To reflect the actual site size, the total acreage was adjusted to 0.54 acres to match the site size. Of this, 0.36 acres were assigned to the building footprint based on the site plan, with the remaining area allocated to parking and other non-asphalt surfaces.

- Construction: Assumed that all equipment would be used for 8 hours per workday. As Appendix A of the CalEEMod User Manual only identifies equipment-specific grading rates for Crawler Tractors, Graders, Rubber Tired Dozers, and Scrapers; therefore, Tractors/Loaders/Backhoes equipment that was included in the site preparation and grading phase was replaced with crawler tractors. An excavator and plate compactor were added to the grading phase to account for the soil excavation and compaction. The architectural coating phase was extended from 5 to 10 days to account for the size of the building façade.
- Operations: The trip rate was adjusted to match the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 11th Edition,* auto trip rates for Multi-Family Housing (Low Rise) as generated by the Project's Trip Generation.
- Operations: Hearths, wood stoves, and wood fireplaces were removed in accordance with SCAQMD Rule 445, which prohibits the installation of wood-burning devices in effort to reduce particulate matter and reduce production of VOCs.[1] Removed gas and propane fireplaces as neither are proposed for the Project.

SUMMARY OF AIR QUALITY IMPACTS

Air Quality

The proposed Project's maximum daily emissions (regional and local) for construction and operation would not exceed the South Coast Air Quality Management District's (SCAQMD) regional thresholds of significance. In addition, all construction activities would be required to comply with comply applicable SCAQMD rules and regulations, including Rule 402, Rule 403, Rule 445 and Rule 1113:

- Rule 402, *Public Nuisance*: Prohibits the discharge of air contaminants that cause injury, nuisance, or annoyance to the public or damage to property.
- Rule 403, *Fugitive Dust*: Aims to minimize fugitive particulate matter dust emissions during construction activities.
- Rule 445, *Wood-Burning Devices:* Reduce emission production of particulate matter and volatile organic compounds from wood burning devices.
- Rule 1113, *Architectural Coatings*: Allows only low-volatile organic compounds (VOC) paints to be used.

The construction and operation of the proposed Project would not exceed SCAQMD thresholds for any of the six criteria pollutants that include ROG, NOx, CO, SO_2, PM_{10}, and $PM_{2.5}$. Projects that do not exceed the regional or localized significance thresholds are assumed to not have a significant impact on both a project level and cumulative level. The proposed Project is consistent with SCAQMD'S 2022 Air Quality Management Plan (AQMP), as it would not result in growth that would be inconsistent with growth forecasts and would not exceed emissions thresholds. Furthermore, odors produced by construction and operation of the proposed residential Project would be minimal and comply with SCAQMD Rule 402. Therefore, the proposed Project would have less-than-significant air quality impacts.

[1] SCAQMD (2020). *Rule 445, Wood-Burning Devices. https://www.aqmd.gov/docs/default-source/rule-book/rule-iv/rule-445.pdf*

AIR QUALITY

Methodology and Model Inputs

To calculate the operational impacts, the air quality emissions were estimated using CalEEMod. The passenger vehicles were analyzed using the CalEEMod default trip distance information.[2]

Regional Emissions

The SCAQMD has adopted maximum daily emission thresholds (pounds/day) for the criteria pollutants during construction and operation of a project.[3] While incremental regional air quality impacts of an individual project are generally very small and difficult to measure, SCAQMD's regional maximum emission thresholds set standards to reduce the burden of SCAQMD to attain and maintain ambient air quality standards. The regional thresholds apply to the criteria pollutants mentioned in Table 2 and Table 3 along with the CalEEMod Project emissions.

Construction, Emission thresholds for construction activities include the Project emissions generated both from onsite sources (such as off-road construction equipment and fugitive dust) and off-site sources (vehicle travel arriving to and leaving from the site). As shown in Table 2, the Project construction activities would generate emissions below the SCAQMD thresholds; and therefore, would result in less-than-significant regional air quality impacts.

Table 2: Regional Construction Emission Estimates

Construction Activity	Maximum Daily Regional Emissions (pounds/day)					
	ROG	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
2025						
Demolition	1.4	14.2	14.3	<0.1	1.8	0.7
Site Preparation	0.7	5.6	6.4	<0.1	0.7	0.4
Grading	1.7	16.0	14.6	<0.1	3.1	1.7
Building Construction	0.9	7.6	10.8	<0.1	0.8	0.4
Paving	0.7	5.3	7.1	<0.1	0.5	0.3
Architectural Coating	40.3	1.2	1.8	<0.1	0.1	0.1
Maximum Daily Emission 2025	**40.3**	**16.0**	**14.6**	**<0.1**	**3.1**	**1.7**
SCAQMD Significance Thresholds	75	100	550	150	150	55
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Notes: ROG = reactive organic gases, NO_x = nitrogen oxides, CO = carbon monoxide, SO_2 = sulfur dioxide, PM_{10} = particulate matter 10 microns in diameter, PM2.5 = particulate matter 2.5 microns in diameter
Source: CalEEMod Output Sheets (see Attachment A).

[2] SCAQMD. (March 2023). *South Coast AQMD Air Quality Significance Thresholds*. Referenced at https://www.aqmd.gov/docs/default-source/ceqa/handbook/south-coast-aqmd-air-quality-significance-thresholds.pdf?sfvrsn=25.

[3] SCAQMD. (March 2023). *South Coast AQMD Air Quality Significance Thresholds*. Referenced at https://www.aqmd.gov/docs/default-source/ceqa/handbook/south-coast-aqmd-air-quality-significance-thresholds.pdf?sfvrsn=25.

Operations. Operational emissions are generated mainly by vehicular and truck emissions, area emissions from onsite equipment and mechanical systems, and from energy generation. To calculate the operational impacts, the air quality emissions were estimated using CalEEMod. No credit was taken for emissions from the existing building on the site. As shown in Table 3, the Project would generate operational emissions below the SCAQMD thresholds; and therefore, would also result in less-than-significant regional air quality impacts.

Table 3: Regional Operational Emission Estimates

Operational Activity	Maximum Daily Regional Emissions (pounds/day)					
	ROG	**NO_x**	**CO**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
Mobile	0.7	0.5	5.4	<0.1	1.3	0.3
Area	1.7	<0.1	2.6	<0.1	<0.1	<0.1
Energy	<0.1	0.1	<0.1	<0.1	<0.1	<0.1
Total Project Operational Emissions	**2.4**	**0.6**	**8.0**	**<0.1**	**1.3**	**0.3**
SCAQMD Significance Thresholds	*55*	*55*	*550*	150	150	*55*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

Notes: ROG = reactive organic gases, NO_x = nitrogen oxides, CO = carbon monoxide, SO_2 = sulfur dioxide, PM_{10} = particulate matter 10 microns in diameter, $PM_{2.5}$ = particulate matter 2.5 microns in diameter
Source: CalEEMod Output Sheets (see Attachment A).

Local Emissions

Localized significance thresholds (LSTs) were also adopted by the SCAQMD due to project-related construction or operational air emissions having the potential to exceed the State and national air quality standards in the project vicinity, while not exceeding the regional emission significance thresholds adopted by the SCAQMD. These thresholds set the maximum rates of daily construction or operational emissions from a project site that would not exceed a national or State ambient air quality standard.[4] The differences between regional thresholds and LSTs are as follows:

1. Regional thresholds include all sources of project construction and operational emissions generated from onsite and offsite emission sources whereas the LSTs only consider the emissions generated from onsite emission sources.
2. LSTs only apply to carbon monoxide (CO), nitrogen oxides (NO_x), and particulate matter (PM_{10} and $PM_{2.5}$), while regional thresholds include both reactive organic gases (ROG) and sulfur dioxide (SO_2).
3. Regional thresholds apply to emission sources located anywhere within the SCAQMD whereas the LSTs are location dependent and rely on the size of the project and emission location relative to the nearest sensitive receptor.

[4] SCAQMD (2008). Final Localized Significance Threshold Methodology. Referenced at http://www.aqmd.gov/docs/defaultsource/ceqa/handbook/localized-significance-thresholds/final-lst-methodology-document.pdf.

The SCAQMD provides screening tables (Appendix C of the SCAQMD *2008 Final Localized Significance Threshold Methodology*) for projects that disturb less than or equal to 5 acres in a day.[5] These tables were created to easily determine if the daily emissions of NO_x, CO, PM_{10}, and $PM_{2.5}$ from a project could result in a significant impact to the local air quality. The thresholds are determined by:

- Source receptor area (SRA), which is the geographic area within the SCAQMD that can act as both a source of emissions and a receptor of emission impacts (the Project is located within SRA 17, Central Orange County);
- Size of grading disturbance (construction)/size of the project (operation); and
- Distance to the nearest sensitive receptor, which is defined as an individual who is most susceptible to negative health effects when exposed to air pollutants and includes children, the elderly, and adults with chronic health issues. Locations for such receptors include residences, schools, elderly care centers, and hospitals.

Table 4, *Construction Equipment Modeled in CalEEMod and Acres Disturbed per Day*, shows the amount of grading that would occur during the demolition, site preparation, and grading phases. As can be seen in Table 4, the phase with the most ground disturbance would be the grading phase, with a maximum of 1.5 acres of total ground disturbance per day occurring though use of graders, dozers, and tractors traversing the site. However, based on SCAQMD's "Fact Sheet for Applying CalEEMod to Localized Significance Thresholds",[6] projects that grade more acreage than the size of the project should utilize the project acreage for the LST screening tables instead of the acres graded. The Project site is 0.54 acres, thus the Project's maximum amount of ground disturbance per day is limited to 0.54 acres according to SCAQMD methodology, which limits construction LST analysis to the Project gross acreage. The smallest acres graded value in the screening tables is 1, so that table was utilized for this analysis.

Distance to the nearest sensitive receptor also determines the SCAQMD emission thresholds. The sensitive receptors closest to the Project site is the row of 5 attached residences approximately 14.63 to 15.24 meters (48-50 feet) south of the Project's southern boundary. The construction and operational emission thresholds for 25 meter distance from the nearest sensitive receptor was used because 25 meters is the lowest distance threshold provided by SCAQMD. Table 5, *Localized Construction Emission Estimates*, shows the thresholds and estimated maximum daily construction emissions for the proposed Project. As shown in Table 5, the proposed Project would not exceed the SCAQMD LST thresholds and would therefore have a less-than-significant localized construction air quality impact.

[5] SCAQMD (2008). Final Localized Significance Threshold Methodology Appendix C. Referenced at http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/appendix-c-mass-rate-lst-look-up-tables.pdf?sfvrsn=2.

[6] SCAQMD (2011). Fact Sheet for Applying CalEEMod to Localized Significance Thresholds. Referenced at https://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/caleemod-guidance.pdf

Table 4: Construction Equipment Modeled in CalEEMod and Acres Disturbed per Day

Activity	Equipment Type	Equipment Quantity	Operating Hours per Day	Acres Disturbed per Piece of Equipment per Day	Acres Disturbed per Day
Site Preparation	Graders	1	8	0.5	0.5
	Crawler Tractors	1	8	0.5	0.5
Total Acres Disturbed Per Day					1.0
Grading	Graders	1	8	0.5	0
	Rubber Tired Dozers	1	8	0.5	0.5
	Tractors/Loaders/Backhoes	0	8	0.5	0.5
	Crawler Tractors	1	8	0.5	0.5
Total Acres Disturbed Per Day					1.5
Maximum Acres Disturbed Per Day (Project Maximum Size)					**0.54**

Source: CalEEMod Output Sheets (see Attachment A).

Table 5: Localized Construction Emission Estimates

Construction Activity	Maximum Daily Regional Emissions (pounds/day)			
	NO_x	CO	PM_{10}	$PM_{2.5}$
2025				
Demolition	12.8	13.2	1.4	0.6
Site Preparation	5.6	6.1	0.6	0.4
Grading	14.7	13.6	2.7	1.6
Building Construction	7.3	9.0	0.3	0.3
Paving	5.2	6.3	0.2	0.2
Architectural Coating	1.2	1.5	<0.1	<0.1
Maximum Daily Emission 2025	**14.7**	**13.6**	**2.7**	**1.6**
SCAQMD Significance Thresholds	81	485	4	3
Threshold Exceeded?	**No**	**No**	**No**	**No**

Notes: NO_x = nitrogen oxides, CO = carbon monoxide, PM_{10} = particulate matter 10 microns in diameter, $PM_{2.5}$ = particulate matter 2.5 microns in diameter
Source: CalEEMod Output Sheets (see Attachment A).

According to the SCAQMD LST methodology, LSTs apply to project stationary mobile sources (SCAQMD, 2008a). Projects that involve mobile sources that spend long periods queuing and idling at a site, such as transfer facilities or warehousing and distribution buildings, have the potential to exceed the operational localized significance thresholds. The proposed Project calls for 34 residential units, which do not involve vehicles idling or queueing for long periods. Therefore, due to the lack of significant stationary source emissions, impacts related to operational localized significance thresholds would be less than significant.

Air Quality Management Plan Consistency

SCAQMD's CEQA Handbook provides the following two criteria to determine whether a project would be consistent or in conflict with the AQMP:

1. The Project would not generate population and employment growth that would be inconsistent with Southern California Association of Governments (SCAG)'s growth forecasts.
2. The Project would not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.

Consistency Criterion No. 1 refers to the SCAG's growth forecasts, and associated assumptions included in the AQMP. The future air quality levels projected in the AQMP are based on SCAG's growth projections, which are based, in part, on the general plans of cities located within the SCAG region. Therefore, if the level of housing and employment growth related to the proposed Project is consistent with the applicable assumptions used in the development of the AQMP, the Project would not jeopardize attainment of the air quality levels identified in the AQMP.

The Project site has a General Plan land use designation of Medium Density Residential (MDR) and is zoned as Multiple Family Residential (R-3) that allows residential development at a range from 21.1 to 32.0 dwelling units per acre. However, the proposed Project includes three units restricted for Very-Low Income households that provide a 50 percent density bonus, and three units restricted for Moderate Income households that provides an additional 38.75 percent density bonus, which would provide for housing as required by the City's Regional Housing Needs Allocation (RHNA) that allocated 19,168 new housing units for the 2021-2029 planning period.[7] The California Department of Finance estimated that the City had a vacancy rate of 2.5% in 2024[8] and as of 2024, 639 new permits have been issued toward meeting the RHNA target of 19,168 new housing units.[9] Thus, the 34 residential units provided by the Project (including three very-low-income affordable units and three moderate-income affordable units) would be within housing growth projections and consistent with Criterion 1.

Also, the local labor force remains stable, with approximately 63.8% of City residents aged 16 and over in the civilian workforce and an unemployment rate of 4.2% in February 2025[10]. These factors indicate that the construction and operation of the proposed Project would primarily draw from the existing population, meeting local housing needs and utilizing the current workforce. Thus, the proposed Project would not induce employment related population growth or growth in the area, and would not result in an exceedance of growth assumptions. As a result, the proposed Project would be consistent with Criterion 1.

Consistency Criterion No. 2 refers to the California Ambient Air Quality Standards. An impact would occur if the long-term emissions associated with the proposed Project would exceed SCAQMD's regional significance thresholds for operation-phase emissions. As presented in Table 3, operation of the proposed

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[7] City of Garden Grove Housing Element. Accessed: https://ggcity.org/housing-element

[8] California, Department of Finance, E-5 Population and Housing Estimates for Cities, Counties and the State — January 1, 2021-2024, May 2024. Accessed: https://dof.ca.gov/forecasting/demographics/estimates/e-5-population-and-housing-estimates-for-cities-counties-and-the-state-2020-2024/

[9] City of Garden Grove, *2024 Housing Element Annual Progress Report*, Attachment 2. Accessed: https://agendasuite.org/iip/gardengrove/file/getfile/15406

[10] California Employment Development Department Labor Force and Unemployment Rate for Cities February 2025. Accessed: https://labormarketinfo.edd.ca.gov/data/labor-force-and-unemployment-for-cities-and-census-areas.html

Project would result in emissions that do not exceed any SCAQMD thresholds. Therefore, the proposed Project would be consistent with Criterion No. 2.

As the Project would be consistent with both Criterion No. 1 and 2, impacts related to consistency with the AQMP would be less than significant.

Odors

Odors would be produced during the construction of the proposed Project due to the operation of heavy-duty off-road equipment. The primary odor emitted would be diesel particulate matter (DPM) from the vendor trucks and heavy-duty off-road equipment. This odor may be noticeable by nearby residents; however, these odors would be expected and not necessarily objectionable. These odors would also dissipate quickly and would be temporary. Therefore, due to the nature of the odor produced during construction as temporary and non-objectionable to a substantial number of people, the odor impact from construction of the proposed Project would be less than significant.

For operational odor emissions, SCAQMD's *CEQA Air Quality Handbook* describes odor complaints associated with the following land uses:

- Agricultural uses
- Chemical plants
- Composting activities
- Dairies
- Fiberglass molding
- Food processing plants
- Landfills
- Refineries
- Wastewater treatment plants

The Project does not propose any of the above land uses and is required to comply with SCAQMD Rule 402, *Nuisance*, which states:

> *A person shall not discharge from any source whatsoever such quantities of air contaminants or other material which cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or which endanger the comfort, repose, health, or safety of any such persons or the public, or which cause, or have a natural tendency to cause, injury or damage to business or property. The provisions of this rule shall not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.*

Thus, impacts associated with odor produced by operation of the proposed Project would be less than significant.

Conclusion

The proposed Project's maximum daily regional and localized construction and operational emissions would not exceed SCAQMD's regional thresholds of significance, as detailed in Tables 2 through 5. All construction and operational activities would comply with applicable SCAQMD rules and regulations and not exceed any criteria pollutant thresholds. Additionally, the proposed Project is consistent with SCAQMD'S 2022 AQMP, reflecting adherence to regional air quality management goals and standards. Finally, odors produced during construction would be temporary and not significantly objectionable, and during operation, the proposed Project involves residential land uses that typically do not generate significant odor complaints

and would comply with SCAQMD Rule 402. Therefore, the proposed Project would result in less-than-significant air quality impacts without requiring mitigation.

Figure 1: Project Details

PROJECT SUMMARY

PROJECT SITE INFORMATION

APN#	ADDRESS	ZONING	LAND USE	NET LOT AREA (SF)	NET LOT AREA (ACRE)	GROSS LOT AREA (SF)	GROSS LOT AREA (ACRE)
097-011-02	13040 COAST STREET, GARDEN GROVE	R-3	MEDIUM DENSITY RESIDENTIAL	21,829.0 SF	.50 ACRES	23,598 SF	.54 ACRES

PROJECT CONSTRUCTION TYPE: S13-R FULLY SPRINKLERED 4 STORY TYPE V-A OVER 1 STORY TYPE I (PARKING / R-2 RESIDENTIAL) - 5 STORY TOTAL

	REQUIRED SETBACK	REQUIRED STEPBACKS			PROPOSED SETBACK	PROPOSED STEPBACKS	NOTES
	1ST AND 2ND FLOOR	3RD FLOOR	4TH FLOOR	5TH FLOOR	1ST & 2ND FLOOR	3RD TO 5TH FLOOR	
FRONT	20'-0" MIN.	25'-0" MIN.	25'-0" MIN.	25'-0" MIN.	6'-0"	6'-0"	WAIVER REQUESTED
SIDE	10'-0" MIN.	15'-0" MIN.	15'-0" MIN.	15'-0" MIN.	10'-0"	10'-0"	WAIVER REQUESTED
STREET SIDE (ALLEY)	10'-0" MIN.	15'-0" MIN.	15'-0" MIN.	15'-0" MIN.	15'-0"	15'-0"	
REAR	10'-0" MIN.	15'-0" MIN.	15'-0" MIN.	15'-0" MIN.	10'-0"	10'-0"	WAIVER REQUESTED

DENSITY

32 DU/AC	18 DU	BASE DENSITY (32 DU/AC) =	18 DU	G.G.M.C. 9.12.040.020 General Development Standards
88.75% DENSITY INCREASE WITH STATE DENSITY LAW		67 DU / NET AC =	34 DU	
		TOTAL (64 DU/AC) =	34 DU	DENSITY BONUS / STACKED DENSITY

FLOOR AREA RATIO

		1.81	

FLOOR AREA

TOTAL NET FLOOR AREA =		42,594 SF	

BUILDING HEIGHT

3 STORY / 39'-9" ALLOWED		5 STORY / 65'-8" TOP OF ROOF STRUCTURE	G.G.M.C. 9.12.040.020 General Development Standards

LOT COVERAGE

LOT COVERAGE AREA	BUILDING FOOTPRINT =	11,904.0 SF	54.5%	G.G.M.C. 9.12.040.020 General Development Standards
	PODIUM LEVEL HARDSCAPE AREA =	3,257 SF	15.0%	
	PODIUM LEVEL LANDSCAPED AREA =	338 SF	1.5%	
	OPEN DRIVE WAY =	2,042 SF	9.4%	
	GROUND LEVEL HARDSCAPE AREA =	2,073 SF	9.5%	
	GROUND LEVEL LANDSCAPE AREA =	2,215 SF	10.1%	
	TOTAL =	21,829.0 SF		
BUILDING LOT COVERAGE (60% MAX.)	TOTAL LOT COVERAGE AREA =	15,499.0 SF	71%	CONCESSION REQUESTED
FRONT SETBACK COVERAGE (50% MAX.)	HARDSCAPE AREA ALONG FRONT SETBACK	337 SF /780 SF	43%	
TOTAL LANDSCAPE / OUTDOOR AREA	PODIUM LEVEL LANDSCAPED AREA =	338 SF	2%	10% MINIMUM LANDSCAPE AREA REQUIRED
	GROUND LEVEL LANDSCAPE AREA =	2,215 SF	10%	

UNIT SUMMARY

PLAN	DESCRIPTION		QUANTITY	REQUIRED MIN. AREA		PROPOSED MIN. AREA	AREA SUBTOTAL	DECK	TOTAL DECK
UNIT A	1 BEDROOM / 1 BATH FLAT		12 UNITS	750 SF	WAIVER	636 SF	7,872 SF	90 SF (270 SF UNIT #207)	1,356 SF
UNIT B	2 BEDROOM / 2 BATH FLAT		22 UNITS	900 SF		936 SF	20,570 SF	96 SF	2,096 SF
PROJECT UNIT TOTAL			34 UNITS				28,442 SF		3,452 SF

PARKING SUMMARY — CALCULATED PER CA STATE DENSITY BONUS LAW

	REQUIRED			PROVIDED		PARKING BREAK DOWN
	MINIMUM REQUIRED					STANDARD = 11 SPACES
	1 BR UNIT	1.0 SPACE PER UNIT	12 SPACES	GARAGE ACCESS PARKING SPACES=	36 SPACES	* TANDEM = 11 SPACES
	2 BR UNIT	1.5 SPACES PER UNIT	33 SPACES	TUCK-UNDER PARKING SPACES =	9 SPACES	STANDARD EV READY = 12 SPACES
						STANDARD EV CAPABLE = 5 SPACES
						STANDARD EV EQUIPPED= 2 SPACES
						HC EV EQUIPPED = 1 SPACES
						HC ACCESSIBLE = 3 SPACES
	TOTAL =	45 SPACES		TOTAL =	45 SPACES	TOTAL = 45 SPACES

* TANDEM PARKING PROPOSED PER STATE DENSITY BONUS CAL GOV CODE SECTION 65915 (p) (4)

BUILDING SUMMARY

	RESIDENTIAL / COMM. ROOM	DECK	CIRCULATIONS / LOBBY	MECHANICAL / VERTICAL CIRCULATION / GARAGE	NET BUILDING FLOOR AREA	TOTAL GROSS BUILDING FLOOR AREA
LEVEL 1			486 SF	14,892 SF	486 SF	15,398 SF
LEVEL 2	7,490 SF	665 SF	2,161 SF	1,049 SF	10,316 SF	11,364 SF
LEVEL 3	7,578 SF	655 SF	2,161 SF	921 SF	10,594 SF	11,515 SF
LEVEL 4	7,578 SF	655 SF	2,161 SF	921 SF	10,594 SF	11,515 SF
LEVEL 5	7,578 SF	655 SF	2,161 SF	921 SF	10,594 SF	11,910 SF
TOTAL	30,224 SF	3,230 SF	9,140 SF	18,703 SF	42,594 SF	61,397 SF
GARAGE				14,892 SF		

OPEN SPACE / AMMENITY SUMMARY

	REQUIRED — G.G.M.U. 9.12.040.050 J Multi-Family Residential		PROPOSED	
COMMON OPEN SPACE	* 1,700 SF MIN. OUTDOOR ACTIVE OPEN SPACE REQUIRED WITH		GROUND LEVEL PASSIVE =	2,264 SF
	4 BBQ AREA WITH SEATING, COMMUNITY GARDEN AT 56 SF, INDOOR GYM AT 250 SF		PODIUM ACTIVE / PASSIVE OPEN AREA (400 SF ACTIVE YOGA LAWN) =	3,201 SF
	CLUBHOUSE WITH KITCHEN AT 400 SF AND BUSINESS CENTER WITH 5 STATIONS		COMMUNITY ROOM / INDOOR RECREATIONAL AREA =	1,782 SF
	205 SF COMMON OPEN SPACE / UNIT =	6,970 SF	SUB-TOTAL =	7,247 SF
PRIVATE OPEN SPACE				
	95 SF MIN. PRIVATE OPEN SPACE / UNIT =	3,230 SF	PRIVATE DECK =	3,488 SF
TOTAL OPEN SPACE	300 SF COMBINED OPEN SPACE / UNIT TOTAL =	10,200 SF	TOTAL =	10,735 SF

STORAGE — G.G.M.C. 9.12.040.050 E. Special Requirements

REQUIRED	PROVIDED
120 CF PER UNIT OF STORAGE SPACE (34 UNITS)	34 STORAGE SPACES AT 120 CF MIN. PROVIDED AT EVERY RESIDENTIAL FLOORS

BICYCLE SUMMARY — G.G.M.U. 9.18.140.040 (E)

	REQUIRED		PROVIDED	
BICYCLE SPACE	1 SPACE PER 10 REQUIRED PARKING SPACES (34 SPACES/10) =		BICYCLE RACK LOCATED IN GARAGE =	5 SPACES
	BICYCLE SPACE REQUIRED	5 SPACES	TOTAL PROVIDED BICYCLE SPACE =	5 SPACES

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- BUILDING STORIES GREATER THAN 3
- LOT COVERAGE MORE THAN 50%
- FRONT YARD SETBACK REDUCTION
- FRONT YARD STEP BACK REDUCTIONS
- SIDE YARD STEP BACK REDUCTIONS (NORTH)
- REAR YARD STEP BACK REDUCTIONS
- REDUCE MINIMUM AREA FOR 1 BEDROOM UNITS

PROPOSED UNITS
- 3 VERY LOW INCOME UNITS
- 3 MODERATE INCOME UNITS
- 28 MARKET RATE UNITS

COAST STREET APARTMENTS
APPLICANT:

13040 COAST ST., GARDEN GROVE, CA. 92844

PROJECT INFORMATION

May 14, 2025

BSB DESIGN 870 West 190th Street Suite 350 Torrance, CA 90502 t. 310.217.9885 f. 310.217.0425

SD-0.2

BSB DESIGN

ATTACHMENT A: CALEEMOD OUTPUT SHEETS

24-073 Coast St Apartments Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	24-073 Coast St Apartments
Construction Start Date	7/1/2025
Operational Year	2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.80
Precipitation (days)	6.20
Location	13040 Coast St, Garden Grove, CA 92844, USA
County	Orange
City	Garden Grove
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5813
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.29

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Apartments Mid Rise	34.0	Dwelling Unit	0.36	61,297	2,553	—	101	—

Other Asphalt Surfaces	2.04	1000sqft	0.05	0.21	0.00	—	—	—
Enclosed Parking Structure	45.0	Space	0.00	14,892	0.00	—	—	—
Other Non-Asphalt Surfaces	1.40	Acre	1.40	0.00	337	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Unmit.	1.66	16.0	14.6	0.03	3.12	1.71	3,505
Daily, Winter (Max)	—	—	—	—	—	—	—
Unmit.	38.9	7.67	10.6	0.02	0.77	0.40	2,477
Average Daily (Max)	—	—	—	—	—	—	—
Unmit.	1.36	2.70	3.56	0.01	0.29	0.14	822
Annual (Max)	—	—	—	—	—	—	—
Unmit.	0.25	0.49	0.65	< 0.005	0.05	0.03	136
Exceeds (Daily Max)	—	—	—	—	—	—	—
Threshold	75.0	100	550	150	150	55.0	—
Unmit.	No	No	No	No	No	No	—
Exceeds (Average Daily)	—	—	—	—	—	—	—
Threshold	75.0	100	550	150	150	55.0	—
Unmit.	No	No	No	No	No	No	—

2.2. Construction Emissions by Year, Unmitigated

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

Year	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—
2025	1.66	16.0	14.6	0.03	3.12	1.71	3,505
Daily - Winter (Max)	—	—	—	—	—	—	—
2025	38.9	7.67	10.6	0.02	0.77	0.40	2,477
Average Daily	—	—	—	—	—	—	—
2025	1.36	2.70	3.56	0.01	0.29	0.14	822
Annual	—	—	—	—	—	—	—
2025	0.25	0.49	0.65	< 0.005	0.05	0.03	136

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Unmit.	2.41	0.60	8.03	0.01	1.31	0.34	1,780
Daily, Winter (Max)	—	—	—	—	—	—	—
Unmit.	2.12	0.61	5.12	0.01	1.30	0.34	1,715
Average Daily (Max)	—	—	—	—	—	—	—
Unmit.	2.23	0.58	6.44	0.01	1.16	0.31	1,589
Annual (Max)	—	—	—	—	—	—	—
Unmit.	0.41	0.11	1.18	< 0.005	0.21	0.06	263
Exceeds (Daily Max)	—	—	—	—	—	—	—
Threshold	55.0	55.0	550	150	150	55.0	—
Unmit.	No	No	No	No	No	No	—
Exceeds (Average Daily)	—	—	—	—	—	—	—

Threshold	55.0	55.0	550	150	150	55.0	—
Unmit.	No	No	No	No	No	No	—
Exceeds (Annual)	—	—	—	—	—	—	—
Threshold	—	—	—	—	—	—	3,000
Unmit.	—	—	—	—	—	—	No

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Mobile	0.70	0.48	5.42	0.01	1.30	0.33	1,415
Area	1.70	0.02	2.58	< 0.005	< 0.005	< 0.005	7.85
Energy	0.01	0.10	0.04	< 0.005	0.01	0.01	290
Water	—	—	—	—	—	—	19.0
Waste	—	—	—	—	—	—	47.3
Refrig.	—	—	—	—	—	—	0.44
Total	2.41	0.60	8.03	0.01	1.31	0.34	1,780
Daily, Winter (Max)	—	—	—	—	—	—	—
Mobile	0.69	0.52	5.08	0.01	1.30	0.33	1,358
Area	1.42	0.00	0.00	0.00	0.00	0.00	0.00
Energy	0.01	0.10	0.04	< 0.005	0.01	0.01	290
Water	—	—	—	—	—	—	19.0
Waste	—	—	—	—	—	—	47.3
Refrig.	—	—	—	—	—	—	0.44
Total	2.12	0.61	5.12	0.01	1.30	0.34	1,715
Average Daily	—	—	—	—	—	—	—
Mobile	0.61	0.47	4.63	0.01	1.15	0.30	1,227
Area	1.61	0.02	1.76	< 0.005	< 0.005	< 0.005	5.38

Energy	0.01	0.10	0.04	< 0.005	0.01	0.01	290
Water	—	—	—	—	—	—	19.0
Waste	—	—	—	—	—	—	47.3
Refrig.	—	—	—	—	—	—	0.44
Total	2.23	0.58	6.44	0.01	1.16	0.31	1,589
Annual	—	—	—	—	—	—	—
Mobile	0.11	0.09	0.85	< 0.005	0.21	0.05	203
Area	0.29	< 0.005	0.32	< 0.005	< 0.005	< 0.005	0.89
Energy	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	48.0
Water	—	—	—	—	—	—	3.15
Waste	—	—	—	—	—	—	7.82
Refrig.	—	—	—	—	—	—	0.07
Total	0.41	0.11	1.18	< 0.005	0.21	0.06	263

3. Construction Emissions Details

3.1. Demolition (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Off-Road Equipment	1.36	12.8	13.2	0.02	0.53	0.48	2,211
Demolition	—	—	—	—	0.85	0.13	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.35	0.36	< 0.005	0.01	0.01	60.6
Demolition	—	—	—	—	0.02	< 0.005	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.06	0.07	< 0.005	< 0.005	< 0.005	10.0
Demolition	—	—	—	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Worker	0.04	0.03	0.56	0.00	0.13	0.03	135
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	1.34	0.59	0.01	0.30	0.09	1,160
Daily, Winter (Max)	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	< 0.005	< 0.005	3.55
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.04	0.02	< 0.005	0.01	< 0.005	31.7
Annual	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.59
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	5.25

3.3. Site Preparation (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Off-Road Equipment	0.66	5.62	6.13	0.01	0.35	0.33	920
Dust From Material Movement	—	—	—	—	0.28	0.03	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	2.52
Dust From Material Movement	—	—	—	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.42
Dust From Material Movement	—	—	—	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Worker	0.02	0.02	0.28	0.00	0.07	0.02	67.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.18
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.03
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Off-Road Equipment	1.62	14.7	13.6	0.02	0.75	0.69	2,303
Dust From Material Movement	—	—	—	—	1.98	0.91	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.08	0.07	< 0.005	< 0.005	< 0.005	12.6
Dust From Material Movement	—	—	—	—	0.01	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	2.09
Dust From Material Movement	—	—	—	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Worker	0.03	0.03	0.42	0.00	0.10	0.02	101
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	1.27	0.56	0.01	0.28	0.09	1,101
Daily, Winter (Max)	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.53
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	6.03
Annual	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.09
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.00

3.7. Building Construction (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Off-Road Equipment	0.75	7.34	9.02	0.02	0.31	0.29	1,883
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—
Off-Road Equipment	0.75	7.34	9.02	0.02	0.31	0.29	1,883
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	0.21	2.01	2.47	< 0.005	0.09	0.08	516
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.37	0.45	< 0.005	0.02	0.01	85.4
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Worker	0.11	0.11	1.72	0.00	0.40	0.09	414
Vendor	0.01	0.20	0.10	< 0.005	0.05	0.02	203
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—
Worker	0.11	0.12	1.49	0.00	0.40	0.09	393
Vendor	0.01	0.21	0.10	< 0.005	0.05	0.02	202

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Worker	0.03	0.03	0.43	0.00	0.11	0.03	109
Vendor	< 0.005	0.06	0.03	< 0.005	0.01	< 0.005	55.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Worker	0.01	0.01	0.08	0.00	0.02	< 0.005	18.1
Vendor	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	9.17
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Paving (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Off-Road Equipment	0.61	5.24	6.25	0.01	0.23	0.21	977
Paving	0.02	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	0.09	< 0.005	< 0.005	< 0.005	13.4
Paving	< 0.005	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.02	< 0.005	< 0.005	< 0.005	2.21
Paving	< 0.005	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Worker	0.06	0.07	0.85	0.00	0.23	0.05	224
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	< 0.005	< 0.005	3.11
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.51
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Architectural Coating (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Off-Road Equipment	0.17	1.18	1.52	< 0.005	0.04	0.03	179
Architectural Coatings	38.7	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.03	0.04	< 0.005	< 0.005	< 0.005	4.89
Architectural Coatings	1.06	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—

Off-Road Equipment	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.81
Architectural Coatings	0.19	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Worker	0.02	0.02	0.30	0.00	0.08	0.02	78.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	< 0.005	< 0.005	2.18
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.36
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	0.70	0.48	5.42	0.01	1.30	0.33	1,415
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Enclosed Parking Structure	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.70	0.48	5.42	0.01	1.30	0.33	1,415
Daily, Winter (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	0.69	0.52	5.08	0.01	1.30	0.33	1,358
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enclosed Parking Structure	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.69	0.52	5.08	0.01	1.30	0.33	1,358
Annual	—	—	—	—	—	—	—
Apartments Mid Rise	0.11	0.09	0.85	< 0.005	0.21	0.05	203
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enclosed Parking Structure	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.11	0.09	0.85	< 0.005	0.21	0.05	203

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	119

Other Asphalt Surfaces	—	—	—	—	—	—	0.00
Enclosed Parking Structure	—	—	—	—	—	—	49.7
Other Non-Asphalt Surfaces	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	169
Daily, Winter (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	119
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
Enclosed Parking Structure	—	—	—	—	—	—	49.7
Other Non-Asphalt Surfaces	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	169
Annual	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	19.7
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
Enclosed Parking Structure	—	—	—	—	—	—	8.24
Other Non-Asphalt Surfaces	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	27.9

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	0.01	0.10	0.04	< 0.005	0.01	0.01	121

Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enclosed Parking Structure	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.01	0.10	0.04	< 0.005	0.01	0.01	121
Daily, Winter (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	0.01	0.10	0.04	< 0.005	0.01	0.01	121
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enclosed Parking Structure	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.01	0.10	0.04	< 0.005	0.01	0.01	121
Annual	—	—	—	—	—	—	—
Apartments Mid Rise	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	20.1
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enclosed Parking Structure	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	20.1

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—

Hearths	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	1.32	—	—	—	—	—	—
Architectural Coatings	0.11	—	—	—	—	—	—
Landscape Equipment	0.28	0.02	2.58	< 0.005	< 0.005	< 0.005	7.85
Total	1.70	0.02	2.58	< 0.005	< 0.005	< 0.005	7.85
Daily, Winter (Max)	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	1.32	—	—	—	—	—	—
Architectural Coatings	0.11	—	—	—	—	—	—
Total	1.42	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.24	—	—	—	—	—	—
Architectural Coatings	0.02	—	—	—	—	—	—
Landscape Equipment	0.03	< 0.005	0.32	< 0.005	< 0.005	< 0.005	0.89
Total	0.29	< 0.005	0.32	< 0.005	< 0.005	< 0.005	0.89

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	19.0
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
Enclosed Parking Structure	—	—	—	—	—	—	0.00

Other Non-Asphalt Surfaces	—	—	—	—	—	—	0.02
Total	—	—	—	—	—	—	19.0
Daily, Winter (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	19.0
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
Enclosed Parking Structure	—	—	—	—	—	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	0.02
Total	—	—	—	—	—	—	19.0
Annual	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	3.14
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
Enclosed Parking Structure	—	—	—	—	—	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	< 0.005
Total	—	—	—	—	—	—	3.15

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	47.3
Other Asphalt Surfaces	—	—	—	—	—	—	0.00

Enclosed Parking Structure	—	—	—	—	—	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	47.3
Daily, Winter (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	47.3
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
Enclosed Parking Structure	—	—	—	—	—	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	47.3
Annual	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	7.82
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
Enclosed Parking Structure	—	—	—	—	—	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	7.82

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	0.44

Total	—	—	—	—	—	—	0.44
Daily, Winter (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	0.44
Total	—	—	—	—	—	—	0.44
Annual	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	0.07
Total	—	—	—	—	—	—	0.07

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

Equipment Type	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

Equipment Type	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

Equipment Type	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

Vegetation	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—

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

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

Species	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—

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

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	7/1/2025	7/15/2025	5.00	10.0	—
Site Preparation	Site Preparation	7/16/2025	7/17/2025	5.00	1.00	—
Grading	Grading	7/18/2025	7/20/2025	5.00	2.00	—
Building Construction	Building Construction	7/21/2025	12/8/2025	5.00	100	—
Paving	Paving	12/9/2025	12/16/2025	5.00	5.00	—
Architectural Coating	Architectural Coating	12/17/2025	12/30/2025	5.00	10.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Demolition	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40

Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	0.00	8.00	84.0	0.37
Site Preparation	Crawler Tractors	Diesel	Average	1.00	8.00	87.0	0.43
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	0.00	8.00	84.0	0.37
Grading	Crawler Tractors	Diesel	Average	1.00	8.00	87.0	0.43
Building Construction	Cranes	Diesel	Average	1.00	8.00	367	0.29
Building Construction	Forklifts	Diesel	Average	2.00	8.00	82.0	0.20
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Average	4.00	8.00	10.0	0.56
Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	10.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT

Demolition	Hauling	15.8	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	5.00	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	7.50	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	15.0	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	30.7	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	6.08	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	17.5	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	6.15	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	124,126	41,375	0.00	0.00	645

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	630	—
Site Preparation	—	—	1.00	0.00	—
Grading	233	—	3.00	0.00	—
Paving	0.00	0.00	0.00	0.00	0.25

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Apartments Mid Rise	—	0%

Other Asphalt Surfaces	0.05	100%
Enclosed Parking Structure	0.00	100%
Other Non-Asphalt Surfaces	0.20	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	349	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Mid Rise	229	155	131	74,655	1,820	1,229	1,042	593,006
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enclosed Parking Structure	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0

Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	34
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
124126.42499999999	41,375	0.00	0.00	645

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Mid Rise	124,638	346	0.0330	0.0040	377,633
Other Asphalt Surfaces	0.00	346	0.0330	0.0040	0.00
Enclosed Parking Structure	52,143	346	0.0330	0.0040	0.00
Other Non-Asphalt Surfaces	0.00	346	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	1,275,872	40,441
Other Asphalt Surfaces	0.00	0.00
Enclosed Parking Structure	0.00	0.00
Other Non-Asphalt Surfaces	0.00	4,368

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	25.1	—
Other Asphalt Surfaces	0.00	—
Enclosed Parking Structure	0.00	—
Other Non-Asphalt Surfaces	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	8.94	annual days of extreme heat
Extreme Precipitation	3.65	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A

Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	40.0
AQ-PM	69.0
AQ-DPM	82.7
Drinking Water	64.5
Lead Risk Housing	51.4
Pesticides	31.7
Toxic Releases	91.0
Traffic	93.8
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	69.9
Haz Waste Facilities/Generators	29.2
Impaired Water Bodies	0.00
Solid Waste	9.67
Sensitive Population	—
Asthma	33.3
Cardio-vascular	51.3
Low Birth Weights	43.2
Socioeconomic Factor Indicators	—
Education	69.2
Housing	86.8
Linguistic	91.6
Poverty	67.9
Unemployment	70.0

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	31.00218144
Employed	59.16848454
Median HI	26.3826511
Education	—
Bachelor's or higher	45.32272552
High school enrollment	100
Preschool enrollment	54.90825099
Transportation	—
Auto Access	33.27345053
Active commuting	35.48055948
Social	—
2-parent households	23.22597203
Voting	4.38855383
Neighborhood	—
Alcohol availability	24.43218273
Park access	17.79802387
Retail density	62.06852303
Supermarket access	94.25125112
Tree canopy	23.5724368
Housing	—
Homeownership	18.06749647
Housing habitability	27.26806108
Low-inc homeowner severe housing cost burden	58.73219556
Low-inc renter severe housing cost burden	22.91800334

Uncrowded housing	30.12960349
Health Outcomes	—
Insured adults	19.91530861
Arthritis	81.7
Asthma ER Admissions	65.5
High Blood Pressure	51.5
Cancer (excluding skin)	82.6
Asthma	72.9
Coronary Heart Disease	81.5
Chronic Obstructive Pulmonary Disease	62.6
Diagnosed Diabetes	41.8
Life Expectancy at Birth	52.0
Cognitively Disabled	46.5
Physically Disabled	74.5
Heart Attack ER Admissions	57.9
Mental Health Not Good	48.5
Chronic Kidney Disease	73.0
Obesity	90.2
Pedestrian Injuries	73.8
Physical Health Not Good	47.6
Stroke	64.5
Health Risk Behaviors	—
Binge Drinking	91.0
Current Smoker	42.3
No Leisure Time for Physical Activity	23.1
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0

Children	69.7
Elderly	60.0
English Speaking	12.0
Foreign-born	96.7
Outdoor Workers	37.5
Climate Change Adaptive Capacity	—
Impervious Surface Cover	20.7
Traffic Density	90.8
Traffic Access	52.4
Other Indices	—
Hardship	63.8
Other Decision Support	—
2016 Voting	30.5

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	73.0
Healthy Places Index Score for Project Location (b)	30.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Adjusted to match the site plans provided by the client.
Construction: Off-Road Equipment	Assumed that all equipment would be used for 8 hours per workday. Tractors/loaders/backhoes were replaced with crawler tractors in the site preparation and grading phases.
Operations: Vehicle Data	Adjusted trip rates to match the 11th Generation ITE Trip Rates for Multifamily Housing Low Rise as generated by the Project's Trip Generation.
Operations: Hearths	Adjusted wood stoves in accordance with Rule 445. Removed gas and propane fireplaces as neither are proposed for the Project.
Construction: Construction Phases	Extended architectural coating phase from 5 to 10 days to account for building façade size.

Appendix E: Construction Health Risk Assessment

13040 Coast Street
Apartments Project

Construction Health Risk Assessment

Prepared for City of Garden Grove

June 9, 2025

Prepared by

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APPENDIX B – AERMOD CONSTRUCTION MODEL OUTPUT
APPENDIX C – ESTIMATION OF PROJECT CONSTRUCTION DPM EMISSIONS
APPENDIX D – ESTIMATION OF CONSTRUCTION HEALTH RISK

1 INTRODUCTION

This Construction Health Risk Assessment (HRA) evaluates the potential health impacts from construction of the Coast Street Apartments Project (proposed Project). The Project site is located at 13040 Coast Street, in the southwestern portion of the City of Garden Grove (City). The site is located along the east side of Coast Street, just south of the intersection with Garden Grove Boulevard. The Project location is shown in Figure 1, *Project Location*.

The 0.54-acre Project site is comprised of a single parcel identified as Assessor Parcel Number (APNs) 097-011-03. The Project site is currently developed with a 3,252 square foot (SF) one-story building that was previously used by a church. The Project applicant is proposing to demolish the existing building occupying the site and redevelop the site with a five story multi-family residential building with 34 dwelling units. The five-story building would have a gross floor area of 61,297 square feet (SF). The building would have a footprint of 11,904 SF and a maximum height of 65 feet, with the top of the roof at 55 feet 6-inches. Development of the site would also include landscaping, utility connections, sidewalks, parking areas, and drive aisles. For the purpose of this analysis, credit will not be taken for the existing use, to yield a conservative analysis.

The Project site has a General Plan land use designation of Medium Density Residential (MDR), which allows a maximum density of 32 units per acre. The Project site is zoned Multiple Family Residential (R-3), which allows residential development at a range of 21.1 to 32.0 dwelling units per acre. However, the proposed Project includes three units restricted for Very-Low Income households that provide a 50% density bonus, and three units restricted for Moderate Income households that provide an additional 38.75% density bonus, and contributing to the City's Regional Housing Needs Allocation (RHNA) requirements. The proposed Project is shown in Figure 2, *Project Site Details*.

The proposed Project is within the jurisdiction of the South Coast Air Quality Management District (SCAQMD).

Figure 1: Project Location

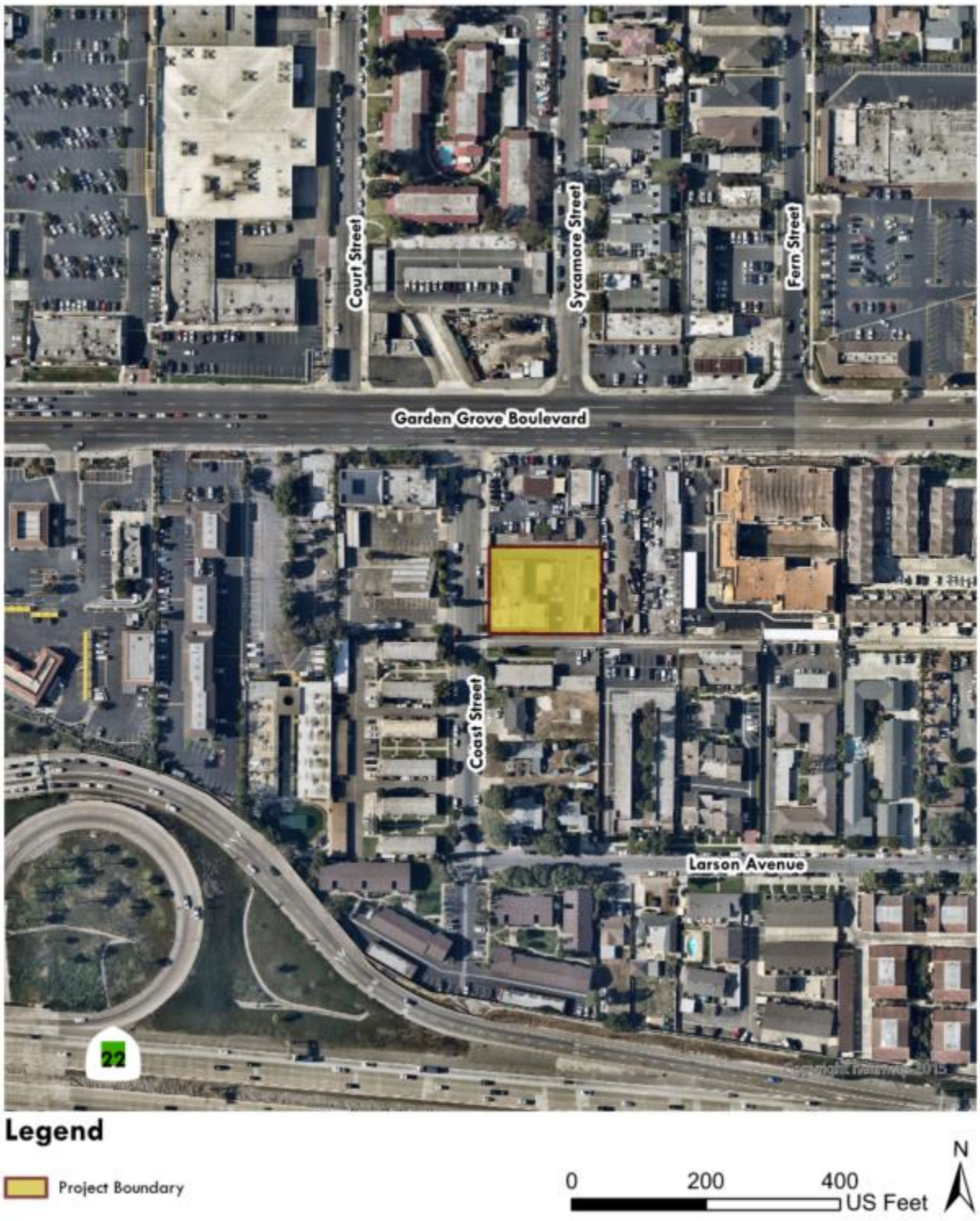

Figure 2: Project Site Details

PROJECT SUMMARY

PROJECT SITE INFORMATION

APN#	ADDRESS	ZONING	LAND USE	NET LOT AREA (SF)	NET LOT AREA (ACRE)	GROSS LOT AREA (SF)	GROSS LOT AREA (ACRE)
097-011-03	13040 COAST STREET, GARDEN GROVE	R-3	MEDIUM DENSITY RESIDENTIAL	21,829.0 SF	.50 ACRES	23,598 SF	.54 ACRES

PROJECT CONSTRUCTION TYPE: 813-R FULLY SPRINKLERED 4 STORY TYPE V-A OVER 1 STORY TYPE I (PARKING / R-2 RESIDENTIAL) - 5 STORY TOTAL

	REQUIRED SETBACK	REQUIRED STEPBACKS			PROPOSED SETBACK	PROPOSED STEPBACKS	NOTES
	1ST AND 2ND FLOOR	3RD FLOOR	4TH FLOOR	5TH FLOOR	1ST & 2ND FLOOR	3RD TO 5TH FLOOR	G.G.M.C. 9.12.040.020 General Development Standards
FRONT	20'-0" MIN.	25'-0" MIN.	25'-0" MIN.	25'-0" MIN.	6'-0"	6' 6"	WAIVER REQUESTED
SIDE	10'-0" MIN.	15'-0" MIN.	15'-0" MIN.	15'-0" MIN.	10'-0"	10'-0"	WAIVER REQUESTED
STREET SIDE (ALLEY)	10'-0" MIN.	15'-0" MIN.	15'-0" MIN.	15'-0" MIN.	15'-0"	15'-0"	
REAR	10'-0" MIN.	15'-0" MIN.	15'-0" MIN.	15'-0" MIN.	10'-0"	10'-0"	WAIVER REQUESTED

DENSITY

	32 DU/AC	18 DU	BASE DENSITY (32 DU/AC) =	18 DU. G.G.M.C. 9.12.040.020 General Development Standards
	88.75% DENSITY INCREASE WITH STATE DENSITY LAW		67 DU / NET AC =	34 DU.
			TOTAL (64 DU/AC) =	34 DU. DENSITY BONUS / STACKED DENSITY

FLOOR AREA RATIO

		1.91	

FLOOR AREA

	TOTAL NET FLOOR AREA =	42,594 SF	

BUILDING HEIGHT

	3 STORY / 35'-0" ALLOWED	5 STORY / 55'-8" TOP OF ROOF STRUCTURE	G.G.M.C. 9.12.040.020 General Development Standards

LOT COVERAGE

LOT COVERAGE AREA	BUILDING FOOTPRINT =	11,504.0 SF	54.5%	G.G.M.C. 9.12.040.020 General Development Standards
	PODIUM LEVEL HARDSCAPE AREA =	3,257 SF	15.0%	
	PODIUM LEVEL LANDSCAPED AREA =	338 SF	1.5%	
	OPEN DRIVE WAY =	2,042 SF	9.4%	
	GROUND LEVEL HARDSCAPE AREA =	2,073 SF	9.5%	
	GROUND LEVEL LANDSCAPE AREA =	2,215 SF	10.1%	
	TOTAL =	21,829.0 SF		
BUILDING LOT COVERAGE (50% MAX.)	TOTAL LOT COVERAGE AREA =	15,499.0 SF	71%	CONCESSION REQUESTED
FRONT SETBACK COVERAGE (50% MAX.)	HARDSCAPE AREA ALONG FRONT SETBACK	337 SF /780 SF	43%	
TOTAL LANDSCAPE / OUTDOOR AREA	PODIUM LEVEL LANDSCAPED AREA =	338 SF	2%	10% MINIMUM LANDSCAPE AREA REQUIRED
	GROUND LEVEL LANDSCAPE AREA =	2,215 SF	10%	

UNIT SUMMARY

PLAN	DESCRIPTION	QUANTITY	REQUIRED MIN. AREA		PROPOSED MIN. AREA	AREA SUBTOTAL	DECK	TOTAL DECK
UNIT A	1 BEDROOM / 1 BATH FLAT	12 UNITS	750 SF	WAIVER	656 SF	7,872 SF	96 SF (270 SF UNIT #207)	1,368 SF
UNIT B	2 BEDROOM / 2 BATH FLAT	22 UNITS	900 SF		933 SF	20,570 SF	95 SF	2,090 SF
PROJECT UNIT TOTAL		34 UNITS				28,442 SF		3,458 SF

PARKING SUMMARY — CALCULATED PER CA STATE DENSITY BONUS LAW

REQUIRED			PROVIDED		PARKING BREAK DOWN
MINIMUM REQUIRED					STANDARD = 11 SPACES
1 BR UNIT	1.0 SPACE PER UNIT	12 SPACES	GARAGE ACCESS PARKING SPACES=	36 SPACES	* TANDEM = 11 SPACES
2 BR UNIT	1.5 SPACES PER UNIT	33 SPACES	TUCK-UNDER PARKING SPACES =	9 SPACES	STANDARD EV READY = 12 SPACES
					STANDARD EV CAPABLE = 3 SPACES
					STANDARD EV EQUIPPED= 2 SPACES
					HC EV EQUIPPED = 1 SPACES
					HC ACCESSIBLE = 3 SPACES
		TOTAL = 45 SPACES		TOTAL = 45 SPACES	TOTAL = 45 SPACES

* TANDEM PARKING PROPOSED PER STATE DENSITY BONUS CAL GOV CODE SECTION 65915 (p) (4)

BUILDING SUMMARY

	RESIDENTIAL / COMM. ROOM	DECK	CIRCULATIONS / LOBBY	MECHANICAL / VERTICAL CIRCULATION / GARAGE	NET BUILDING FLOOR AREA	TOTAL GROSS BUILDING FLOOR AREA
LEVEL 1			496 SF	14,892 SF	496 SF	15,388 SF
LEVEL 2	7,490 SF	665 SF	2,161 SF	1,048 SF	10,316 SF	11,364 SF
LEVEL 3	7,578 SF	855 SF	2,161 SF	921 SF	10,594 SF	11,515 SF
LEVEL 4	7,578 SF	855 SF	2,161 SF	921 SF	10,594 SF	11,515 SF
LEVEL 5	7,578 SF	855 SF	2,161 SF	921 SF	10,594 SF	11,515 SF
TOTAL	30,224 SF	3,230 SF	9,140 SF	18,703 SF	42,594 SF	61,297 SF
GARAGE				14,892 SF		

OPEN SPACE / AMMENITY SUMMARY

	REQUIRED — G.G.M.U. 9.12.040.000 J Multi-Family Residential	PROPOSED
COMMON OPEN SPACE	* 1,700 SF MIN. OUTDOOR ACTIVE OPEN SPACE REQUIRED WITH	GROUND LEVEL PASSIVE = 2,264 SF
	4 BBQ AREA WITH SEATING, COMMUNITY GARDEN AT 98 SF, INDOOR GYM AT 250 SF	PODIUM ACTIVE / PASSIVE OPEN AREA (400 SF ACTIVE YOGA LAWN) = 3,201 SF
	CLUBHOUSE WITH KITCHEN AT 400 SF AND BUSINESS CENTER WITH 5 STATIONS	COMMUNITY ROOM / INDOOR RECREATIONAL AREA = 1,782 SF
	205 SF COMMON OPEN SPACE / UNIT = 6,970 SF	SUB-TOTAL = 7,247 SF
PRIVATE OPEN SPACE	95 SF MIN. PRIVATE OPEN SPACE / UNIT = 3,230 SF	PRIVATE DECK = 3,488 SF
TOTAL OPEN SPACE	300 SF COMBINED OPEN SPACE / UNIT TOTAL = 10,200 SF	TOTAL = 10,735 SF

STORAGE — G.G.M.C. 9.12.040.050 E. Special Requirements

120 CF PER UNIT OF STORAGE SPACE (34 UNITS)	34 STORAGE SPACES AT 126 CF MIN. PROVIDED AT EVERY RESIDENTIAL FLOORS

BICYCLE SUMMARY — G.G.M.U. 9.18.140.040 (E)

	REQUIRED		PROVIDED	
BICYCLE SPACE	1 SPACE PER 10 REQUIRED PARKING SPACES (34 SPACES/10) =		BICYCLE RACK LOCATED IN GARAGE =	5 SPACES
	BICYCLE SPACE REQUIRED	5 SPACES	TOTAL PROVIDED BICYCLE SPACE =	5 SPACES

AERIAL MAP — SCALE: N.T.S.

SHEET INDEX

ARCHITECTURAL
- SD-0.1 TITLE SHEET
- SD-0.2 PROJECT INFORMATION
- SD-0.3 PROJECT NOTE
- SD-1.1 SITE PLAN
- SD-1.2 SIGHT DISTANCE DIAGRAM
- SD-1.3 LOT COVERAGE DIAGRAM
- SD-1.4 CODE ANALYSIS
- SD-2.1 GROUND LEVEL BUILDING PLAN
- SD-2.2 2ND (PODIUM) LEVEL BUILDING PLAN
- SD-2.3 3RD LEVEL BUILDING PLAN
- SD-2.4 4TH LEVEL BUILDING PLAN
- SD-2.5 5TH LEVEL BUILDING PLAN
- SD-2.6 ROOF PLAN
- SD-3.1 BUILDING SECTIONS
- SD-3.2 BUILDING ELEVATIONS
- SD-3.3 BUILDING ELEVATIONS
- SD-4.1 UNIT PLANS
- SD-4.2 CONCEPTUAL OPEN SPACE PLAN
- SD-4.3 OPEN SPACE DIAGRAM
- SD-5.1 MATERIAL BOARD

CIVIL
- PRELIM GRADING PLAN
- PRELIM DETAILS
- TOPOGRAPHIC SURVEY

LANDSCAPE
- L1.0 GROUND LEVEL LANDSCAPE
- L1.1 PODIUM LEVEL LANDSCAPE

FIRE
- F-1 PRELIMINARY FIRE ACCESS PLAN

REQUESTED INCENTIVES AND WAIVERS

CONCESSIONS / WAIVERS
- BUILDING HEIGHT GREATER THAN 35'-0"
- BUILDING STORIES GREATER THAN 3
- LOT COVERAGE MORE THAN 50%
- FRONT YARD SETBACK REDUCTION
- FRONT YARD STEP BACK REDUCTIONS
- SIDE YARD STEP BACK REDUCTIONS (NORTH)
- REAR YARD STEP BACK REDUCTIONS
- REDUCE MINIMUM AREA FOR 1 BEDROOM UNITS

PROPOSED UNITS
- 3 VERY LOW INCOME UNITS
- 3 MODERATE INCOME UNITS
- 28 MARKET RATE UNITS

COAST STREET APARTMENTS
APPLICANT
13040 COAST ST., GARDEN GROVE, CA. 92844

PROJECT INFORMATION

BSB DESIGN
970 West 190th Street Suite 250
Torrance, CA 90502
t. 310. 217. 6888 f. 310. 217. 0425

May 14, 2025
SD-0.2

BSB DESIGN

Source: BSB Design

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1.1 Access, Circulation, Parking Summary

The proposed Project would be accessed through a driveway along Coast Street. Entrance to the site would be provided by a 30-foot-wide right-in-right-out driveway. The driveway would lead directly to a parking garage on the ground level (first floor) of the building that would include 36 vehicle parking spaces and bike racks/storage for residents. An additional 9 vehicle parking spaces would be accessed off the alley on the south side of the proposed building. A total of 45 on-site vehicle parking spaces are proposed.

The ensuing construction truck routes are described in Section 2.3, *Estimation of Project DPM Emissions*.

1.2 Purpose of the Report

To support the California Environmental Quality Act (CEQA) document for the proposed Project, this report evaluates the potential health impacts to sensitive receptors from the construction of the Project. This HRA focuses on the emissions of diesel particulate matter (DPM) from the Project's construction on-site and off-site equipment and vehicles, measuring the health risk impact of surrounding land uses. DPM has been identified by the California Air Resources Board (CARB) as a carcinogenic substance responsible for nearly 70% of the airborne cancer risk in California (California Air Resources Board, 2017). The estimated health risk impacts from the Project construction were compared to the health risk significance thresholds recommended by the SCAQMD for use in CEQA assessments.

This HRA employed the following tools to estimate the health impacts of the Project:

- The California Air Pollution Control Officers Association California Emissions Estimator Model (CalEEMod, Version 2022.1) to calculate exhaust emissions from mobile sources such as diesel trucks and construction equipment such as crawler tractors and cranes during the construction of the Project.
- The U.S. Environmental Protection Agency (EPA) AMS/EPA Regulatory Model (AERMOD Version 23132) air dispersion model to estimate DPM impacts to sensitive receptors.
- Cancer Risk Methodology from the California Office of Environmental Health Hazards Assessment (OEHHA) (California Office of Environmental Health Hazards Assessment, 2015) and the SCAQMD (South Coast Air Quality Management District, 2017).

1.3 Summary of the Results

The emissions from the Project construction would not result in cancer health risks that exceed the lifetime cancer risk threshold of 10 in one million at the maximum impacted sensitive receptor. The Project's construction emissions would not result in a non-cancer risk greater than the 1.0 non-cancer hazard index (HI) threshold. The Project's maximum construction health risk results are summarized below.

Maximum Project Construction Health Risk Results:

- Sensitive/residential receptor for the 30-year lifetime exposure duration: 1.39 in one million
- Worker receptor: 0.14 in one million
- Sensitive receptor chronic non-cancer HI: less than 0.01
- Worker receptor chronic non-cancer HI: 0.02

Therefore, the construction of the proposed Project would result in less-than-significant project-level impacts for cancer and non-cancer health risks. Since there are no cumulative projects that would involve significant long-term emissions of DPM or other hazardous airborne emissions located within 0.25 miles of the Project site, the cumulative cancer and non-cancer health risk impacts would be less than significant.

2 HEALTH RISK ASSESSMENT

An HRA is a guide that helps determine whether the risks from current or future exposures to a toxic chemical or substance in the environment could affect the health of a population. In general, the quantification of risk from the development of a project depends on the following factors:

- Identification of the toxic air contaminants (TACs) that may be present in the air;
- Estimation of the amount of TACs released from all emission sources using emission models;
- Estimation of the airborne concentrations of TACs in the geographic area of concern using air dispersion models using information about emissions, source locations, weather, and other factors;
- Estimation of the level of exposure to different concentrations of the TACs at different geographic locations and their consequential health impacts.

Thus, an HRA identifies the TACs that could affect public health, identifies the sources and quantities of the TAC emissions, estimates where the emissions are transported by prevailing meteorological conditions, and assesses the consequential health impacts due to the identified exposures.

The State of California Office of Environmental Health Hazards Assessment (OEHHA) has developed methods for conducting HRAs. As defined under the Air Toxics "Hot Spots" Information and Assessment Act:

> "*A health risk assessment means a detailed, comprehensive analysis prepared pursuant to Section 44361 to evaluate and predict the dispersion of hazardous substances in the environment and the potential for exposure of human populations and to assess and quantify both the individual and population-wide health risks associated with those levels of exposure*" *(California Health and Safety Code)*.

The methodology used to estimate health risks and hazards that could potentially affect nearby sensitive receptors from the emissions of TACs is described below. The methodology included assumptions regarding emission source quantification, configurations and locations, receptor locations, air dispersion modeling, and health risk modeling. As noted above, this HRA focused on DPM emissions that the ARB has identified as the principal airborne carcinogenic substance in California. For purposes of this HRA, DPM was assumed to be comprised of PM_{10} from construction related vehicle and equipment exhaust emissions.

2.1 SCAQMD Significance Thresholds

Project-Level

The City of Garden Grove has not adopted a numerical significance threshold for cancer risk or non-cancer hazards. Therefore, the significance thresholds recommended by the SCAQMD were used for this assessment. The relevant significance thresholds are provided below:

- Cancer Risk: ten (10) persons per million population as the maximum acceptable incremental cancer risk due to exposure to TACs
- Non-Cancer Hazard Index (HI): 1.0

These thresholds are discussed further in Section 2.2, *Health Risk Estimation Methodology*.

Cumulative

The SCAQMD conducted an analysis of the cumulative effects of TACs within the South Coast Air Basin as part of its *Multiple Air Toxics Exposure Study in the South Coast Air Basin* (MATES-V, the draft version of this MATES study series) (South Coast Air Quality Management District, 2021). The MATES-V study expresses cumulative TAC impacts in terms of potential increased cancer risks. The MATES-V Study estimates the cumulative TAC-source cancer risk for the localized area encompassing the Project site ranges from 300 to 400 in one million. DPM-source cancer risks are reflected in the area's ambient cumulative cancer risk along with all other TAC-source risks and account for the predominance (68%) of the total risk shown in MATES-V for the Project site area. The cancer risk upper limit of 400 in a million was assumed to comprise the impact from existing TAC emission sources in the region without the impacts from the Project.

The TAC emissions inventory used in the MATES-V study to estimate health impacts was representative of emissions for the year 2018. In addition to the MATES-V cumulative TAC-source cancer risk noted above, other new or proposed potential TAC-generating projects (related projects) in the Project area not included in the MATES V study could contribute to cumulative TAC impacts. The SCAQMD has published a white paper on addressing cumulative impacts from air pollution (South Coast Air Quality Management District, 2003). The white paper recommends a 1,000-foot distance from a proposed project to identify other development projects that could contribute to cumulative impacts with the proposed Project (South Coast Air Quality Management District, 2019). The 1,000-foot evaluation distance is supported by research-based findings concerning TAC emission dispersion rates from roadways and large sources, showing that emissions diminish substantially between 500 and 1,000 feet from emission sources. While the cumulative analysis incorporates future emissions within 1,000 feet of the source, the project-specific and cumulative significance thresholds of 10 in one million remain the same.

Section 3.2, *Cumulative Analysis,* for the cumulative analysis of the Project.

2.2 Health Risk Estimation Methodology

Cancer Risk

Cancer risks are estimated as the upper-bound incremental probability that an individual would develop cancer due to exposure to potential carcinogens over a specified exposure duration. The estimated risk is expressed as a probability since there is no level below which some level of impact may occur. The cancer risk attributed to a chemical is calculated by multiplying the chemical intake or dose at the human exchange boundaries (e.g., lungs) by the chemical-specific cancer potency factor (CPF). A risk level of 10 in one million implies a likelihood that up to 10 people in a population of one million equally exposed people could contract cancer if exposed continuously (24 hours per day) to the levels of TACs over a specified duration of time. This risk is an excess cancer risk in addition to any environmental cancer risk borne by a person not exposed to these air toxins.

The exposure dose is the amount of a chemical taken into the body at a given time. In particular, the exposure dose through inhalation ($Dose_{air}$) is a function of the breathing rate, the exposure frequency, and the concentration of exposures. Breathing rates change over time for different age groups and are determined for specific age groups. The $Dose_{air}$ is calculated for each of the following age groups: third trimester to birth, and 0 to 2, 2 to 16, and 16 to 30 years of age. The OEHHA recommends that the 30-year exposure duration be used as the basis for public notification and risk reduction audits and plans (California Office

of Environmental Health Hazards Assessment, 2015). The risks for each age group are summed together to provide a total estimate of lifetime cancer risks for sensitive receptors. To estimate the cancer risk, the $Dose_{air}$ is estimated by applying the following equation to the DPM concentration at each receptor as calculated by the air dispersion model:

$$Dose_{air} = C_{DPM} \times DBR_i \times A \times EF_i \quad \text{(EQ-1)}$$

Where:

$Dose_{air}$ = dose through inhalation (mg/kg/day)

C_{DPM} = period average concentration of DPM as estimated by the air dispersion model ($\mu g/m^3$)

DBR = daily breathing rate for each age group (liters/kg-day)—see Table 1

A = Inhalation absorption factor (unitless = 1)

EF = exposure frequency (days per year)

i – number of age groups

The dose is multiplied by the cancer potency factor, the age sensitivity factors (ASF), the exposure duration (ED), and the fraction of time spent at home (FAH, for sensitive/residential receptors only) divided by averaging time (AT) to arrive at an estimate of cancer risk:

$$\text{Cancer Risk} = Dose_{air,i} \times CPF \times ASF_i \times ED_i \times FAH_i/AT \quad \text{(EQ-2)}$$

Where:

Cancer Risk = Total individual excess inhalation cancer risk, defined as the cancer risk a hypothetical individual faces if exposed to carcinogenic emissions from a particular source for specified exposure durations; this risk is summed over all age groups; cancer risk is expressed in terms of risk per million exposed individuals.

$Dose_{air,i}$ = inhalation dose through inhalation (mg/kg-day)

CPF = inhalation cancer potency factor $(mg/kg\text{-}day)^{-1}$

ASF_i = age sensitivity factors (see Table 1)

ED_i = exposure duration (years)—see Table 1

AT = averaging time of lifetime cancer risk (70 years or 25550 days)

FAH_i = fraction of time spent at home—see Table 1

n = number of age groups

While the OEHHA recommends that the 30-year exposure duration be used as the basis for public notification and risk reduction audits and plans, the Project's construction duration is expected to only span 0.45 years, and no significant DPM emissions are anticipated to occur after the completion of the Project's construction during the operation of the Project. Thus, for the remainder of this report, the lifetime cancer risk will refer to the construction's time span of 0.45 years.

Thus, for the purpose of this HRA, the exposure duration for sensitive/residential receptors' lifetime cancer risk was assumed to only analyze a daily construction duration of eight hours, five days a week, as a reasonable assumption for the site's construction operation hours. The exposure period was assumed to span

the duration of a third trimester pre-birth in 2025 (the Project's starting year of construction) through the end of 2025, when the Project's construction is anticipated to conclude.

Estimates of cancer risk were also provided for informational purposes for adult exposure, also spanning the duration of construction.

Table 1, *Exposure Assumptions for Cancer Risk–OEHHA/SCAQMD Guidance*, provides the values for the various cancer risk parameters shown in equations EQ-1 and EQ-2 for the receptor groups examined in this assessment for the construction of the Project. For DPM, the value of the CPF is 1.1 milligrams per kilogram per day.

Table 1: Exposure Assumptions for Cancer Risk–OEHHA/SCAQMD Guidance

Age Group	Exposure Frequency, EF		Exposure Duration (ED) (Years)	Age Sensitivity Factors (ASF)	Fraction Time at Home (FAH)	Daily Breathing Rate[1] (DBR) (l/kg-day)
	Construction		Construction			
	Hours/Day	Days/Year				
Sensitive/Residential Receptor – Pre-birth to Adult (30-year duration)						
3rd Trimester to Birth	8	250	0.25	10	1	361
0 to 2 years	8	250	0.21	10	1	1,090
2 to 16 years	8	250		3	1	745
16 to 30 years	8	250		1	0.73	335
Sensitive Receptor/Residential Child (9-year duration)						
3rd Trimester to Birth	8	250	0.25	10	1	361
0 to 2 years	8	250	0.21	10	1	1,090
2 to 9 years	8	250		3	1	861
Sensitive Receptor/Residential Receptor – Adult (30-year duration)						
17 years and older	8	250	1.62	1	0.73	335
Worker Receptor (25-years duration)						
17 years and older	8	250	1.62	1		230

Notes: [1] Daily breathing rates are representative of the 95th percentile for sensitive/residential receptors.
(L/kg-day) = liters per kilogram body weight per day
Source: (South Coast Air Quality Management District, 2017)

Chronic Non-Cancer Hazard

TACs can also cause chronic (long-term) effects on non-cancer illnesses such as reproductive effects, birth defects, or adverse environmental effects. Non-cancer health risks are conveyed in terms of the Hazard Index (HI). A ratio of the predicted concentration of the facility's reported TAC emissions to the concentration is considered acceptable to public health professionals. A significant risk is defined as an HI of 1.0 or greater. An HI of less than 1 indicates that no significant health risks are expected from the facility's TAC emissions. The following equation gives the relationship for the non-cancer hazards for TACs:

$$HI = C_{ann}/REL \quad \text{(EQ-3)}$$

Where:

HI = Hazard Index: an expression of the potential for chronic non-cancer health risks

C_{ann} = Annual average TAC concentration ($\mu g/m^3$)

REL = Reference Exposure Level: the DPM concentration at which no adverse health effects are anticipated

As predicted by the air dispersion model, annual concentrations of DPM are used to estimate chronic non-cancer hazards. The OEHHA has defined a REL for DPM of 5 $\mu g/m^3$.

2.3 Estimation of Project Construction DPM Emissions

Construction DPM Emissions

Construction emissions were calculated using the latest CalEEMod Version 2022.1. DPM construction emissions were based on the CalEEMod construction runs for the proposed construction schedule and equipment inventory, using exhaust PM_{10} construction emissions to represent DPM emissions. Construction-related DPM emissions are expected to primarily occur as a function of heavy-duty equipment that would operate on-site during the construction phase. Additional DPM emissions would occur from the operation of construction vehicles that travel to/from the Project during construction (haul trucks, vendor trucks, and worker vehicles).

These travel link assumptions can be found in Appendix C.

Construction Equipment Emission Inventory Development

The first requirement to conduct the HRA involves identifying and quantifying the sources of construction DPM emissions from the Project, also termed an emissions inventory. Each piece of equipment that emits DPM is identified in terms of its location and physical characteristics (release height, release temperature, etc.) and the chemical nature of the emissions. The predominant sources of DPM emissions resulting from the construction of the Project derive from the heavy-duty diesel trucks that travel to, from, and within the Project site each day, as well as the off-road construction equipment used during the five construction phases: site preparation, grading, building construction, paving, and architectural coating. The Project's DPM exhaust emissions were calculated using the PM_{10} exhaust emissions calculated from CalEEMod. Table 2, *Construction Schedule,* shows the Project's construction schedule, and Table 3, *Proposed Project Construction Equipment Inventory*, shows the Project's proposed construction equipment. Table 4, *Proposed Construction of Vehicle Use*, shows the proposed construction vehicle use for worker, vendor, and haul trips. Table 5, *Project On-site and Off-Site Construction Source DPM Daily Emissions*, depicts the daily average DPM emissions of the Project's construction.

Table 2: Construction Schedule

Activity	Start Date	End Date	Total Working Days
Site Preparation	7/16/2025	7/17/2025	1
Grading	7/18/2025	7/20/2025	2
Building Construction	7/21/2025	12/8/2025	100
Paving	12/9/2025	12/16/2025	5
Architectural Coating	12/17/2025	12/30/2025	10

Source: CalEEMod Output Sheets (see Data Attachment in Appendix A).

Table 3: Proposed Project Construction Equipment Inventory

Activity	Equipment	Number per day	Hours per day	Horse-power	Load Factor
Site Preparation	Graders	1	8	148	0.41
	Crawler Tractors	1	8	84	0.43
Grading	Graders	1	8	148	0.41
	Rubber Tired Dozers	1	8	367	0.4
	Crawler Tractors	1	8	87	0.43
Building Construction	Cranes	1	8	367	0.29
	Forklifts	2	8	82	0.20
	Tractors/Loaders/Backhoes	2	8	84	0.37
Paving	Tractors/Loaders/Backhoes	1	8	84	0.37
	Pavers	1	8	81	0.42
	Cement and Mortar Mixers	4	8	10	0.56
	Rollers	1	8	36	0.38
Architectural Coating	Air Compressors	1	8	37	0.48

Source: CalEEMod Output Sheets (see Data Attachment in Appendix A).

Table 4: Proposed Construction of Vehicle Use

Activity	Daily Worker Trips	Daily Vendor Trips	Total Haul Trips
Site Preparation	5	0	0
Grading	8	0	15
Building Construction	31	6	0
Paving	18	0	0
Architectural Coating	6	0	0

Source: See CalEEMod Output in Appendix A.

Table 5: Project On-site and Off-Site Construction Source DPM Daily Emissions

Activity	Working Days	On-Site	Off-Site	Total
		Maximum Daily DPM Emissions (pounds/day)	Maximum Daily DPM Emissions (pounds/day)	Average Daily Construction Emissions (pounds/day)
Site Preparation	1	0.35	<0.01	
Grading	2	0.79	<0.01	
Building Construction	100	0.31	<0.01	
Paving	5	0.23	<0.01	
Architectural Coating	10	0.04	<0.01	
Average Daily Construction Emissions		0.79	<0.01	**0.79**
Maximum Daily Construction Emissions (pounds/day)				**0.79**

Source: See Data Attachment in Appendix C.

Atmospheric Dispersion Methodology

Atmospheric dispersion modeling is the mathematical simulation of how air pollutants disperse in the ambient atmosphere. The modeling is performed with computer programs that solve algorithms simulating the movement and dispersion of air pollutants. The air dispersion model uses emissions from various emission sources and meteorological data such as wind speed and direction, air temperature, and atmospheric mixing rates to estimate the air pollutant impacts at various geographic locations (referred to as receptor locations).

Table 6, *General Modeling Assumptions*, and Table 7, *Summary of Construction Emissions Source Configuration*, provide the general assumptions applied in the AERMOD model (Version 23132). The AERMOD output sheets can be found in Appendix B for construction.

Table 6: General Modeling Assumptions

Feature	Assumption
Terrain Processing	Complex terrain; elevations were obtained for the Project site using the EPA AERMAP terrain data pre-processor Version 18081; Data Set: Santa_ana-W.DEM
Land Use	Urban – Based on land use patterns surrounding the Project site.
Meteorological Data	The Fullerton Airport National Weather Service (NWS) Station was used for the years of 2012-2016 as representative of meteorological conditions on the Project site.
Receptor Locations	A uniform network grid was used to include all existing residences and worker locations surrounding the Project site. Additional receptors were located at nearby residences and the nearby schools. Receptors were placed at ground level.
Population	Orange County: ~ 3.2 million

Source: See Data Attachment in Appendix B.

Table 7: Summary of Construction Emissions Source Configuration

Emission Source Type	Geometric Configuration	Relevant Assumptions
Construction Sources	Polygon Area Source	• Size of the construction area source was the size of the gross site acreage, approximately 0.54 acres, or 2,186.3 m^2. • Construction equipment emission source release height – 5 meters. • Emissions generated from the CalEEMod model. • Construction operation: Assumed 8 hours per day, 5 days a week.
On-Site Construction Vehicle Traffic	Line Area Sources	• Line source height of 3.11 meters (10.2 feet) and plume height of 6.2 meters (20.4 feet) (from EPA Haul Roads Calculator); Construction on-site access: ◦ 100% of on-site truck trips utilized Coast Street *to/from* the eastern side of the Project site. • Assumed two lanes, in and out of driveways on-site as number of truck trips. • Construction operation: Assumed 8 hours per day, 5 days a week.
Construction Vehicle Traffic	Line Area Source	• Line source release height of 3.11 meters (10.2 feet) with a plume height of 6.2 meters (20.4 feet) (from EPA Haul Roads Calculator). • Identical off-site travel routes were used for the calculation of construction DPM emissions. • The assumed routes used are as follows: ◦ Offsite 1: East on Coast St > West on Garden Grove Blvd > South Beach Blvd > I- 22 Junction: 100% • Construction operation: Assumed 8 hours per day, 5 days a week.

Source: See Data Attachment in Appendix B.

2.4 Receptors

The SCAQMD defines a sensitive receptor as any residence, including private homes, condominiums, apartments, and living quarters, schools, preschools, daycare centers, and health facilities such as hospitals or retirement and nursing homes. A sensitive receptor includes long-term care hospitals, hospices, prisons, and dormitories, or similar live-in housing. For the purpose of this HRA, sensitive receptors were placed within the air dispersion model at the locations of the closest existing residences and other establishments or residences nearest to the Project site that qualify as sensitive receptors. Receptor points were placed on existing residences, schools, healthcare facilities along the Project's travel routes, as well as the closest worker receptors to the Project's boundary. In addition, a uniform grid network of receptors was placed over the Project site to complete the receptor network. These receptors were used to evaluate the health risk during the Project's construction, including on-site source emissions and along the off-site Project routes. The closest

receptors to the Project site and the Project's on-site and off-site travel links approximate the maximum DPM emissions from the construction of the Project and thus yield the highest cancer risk values. The sensitive receptors closest to the Project site include residences located approximately 14.63 meters (48 feet) south of the project's southern boundary. However, the maximally impacted sensitive receptor was identified in the southwestern portion of the Project site, located approximately 82.90 feet (25.27 meters) away. The nearest worker receptor was a business located approximately 29.94 meters (98.23 feet) north of the boundary. Figure 3, *Locations of the Project's Construction On-Site and Off-Site DPM Emission Sources*, shows the locations of the Project's on-site and off-site construction-related DPM emission sources, while Figure 4, *Locations of Air Dispersion Model Receptors,* shows the receptor locations incorporated into the HRA.

Figure 3: Locations of the Project's Construction On-Site and Off-Site DPM Emission Sources

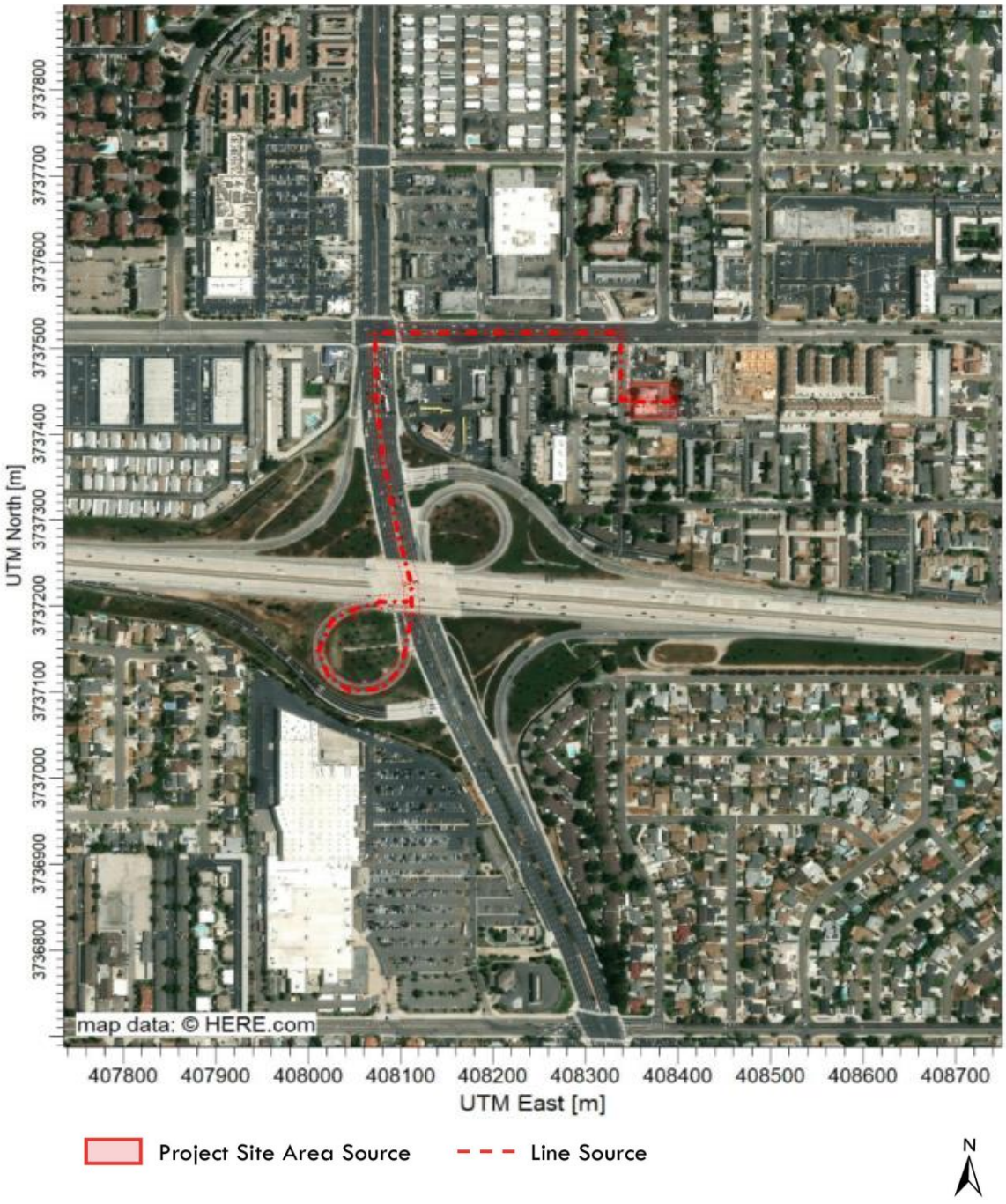


Figure 4: Locations of Air Dispersion Model Receptors

3 RESULTS OF THE HEALTH RISK ASSESSMENT

3.1 Project-Level Risk Results

Table 8, *Summary of Proposed Project Construction Health Risk*, presents a summary of the cancer risks resulting from the Project's construction DPM emissions along with the SCAQMD health risk significance thresholds. As shown in Table 8, the estimated maximum cancer risk for construction is 1.39 in one million for sensitive/residential receptors, which is below the SCAQMD cancer risk significance threshold of 10 in one million. The estimated maximum cancer risk for worker receptors during construction would be 0.14 in one million, which is below the SCAQMD cancer risk significance threshold of 10 in one million. In addition, the Project's maximum estimated construction results for non-cancer health risk would be less than 0.01, which is below the significance threshold of 1.0.

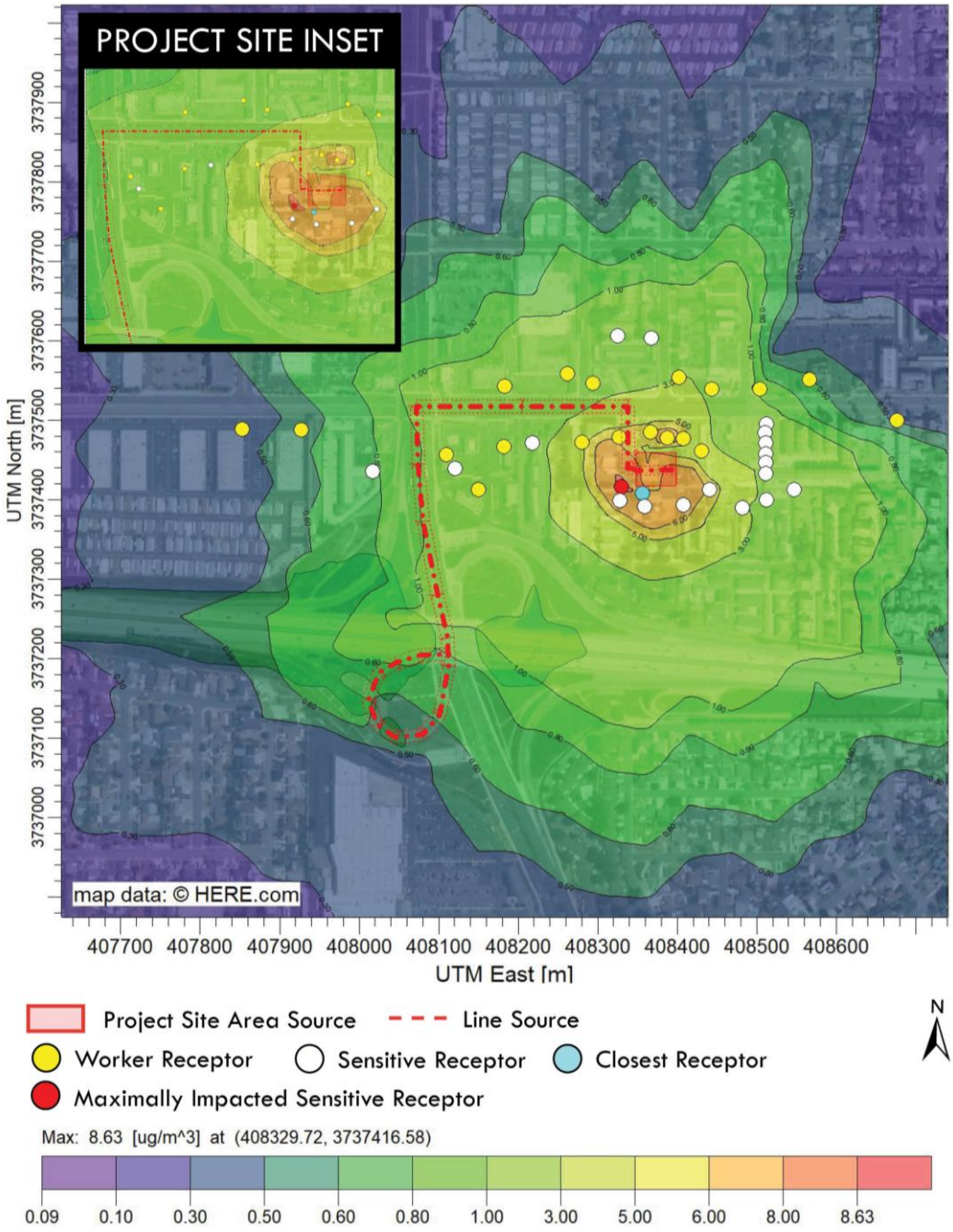
The Project construction health risk results would not exceed the SCAQMD significance thresholds of 10 in one million for cancer risk and 1.0 for non-cancer HI. Thus, the Project would have a less-than-significant impact related to both cancer and non-cancer health risks. Figure 5, *Total Construction Model Output,* displays the total emission contour output for the Project's construction model.

Table 8: Summary of Proposed Project Construction Health Risk

Receptor	Cancer Risk (per million)		Exceeds Significance Threshold?
	Maximum Lifetime Proposed Project Risk	Significance Threshold	
Maximum Impacted Sensitive Receptor – Infant to Adult (30 years)	1.39	10	No
Maximum Impacted Sensitive Receptor – Adult	0.05	10	No
Maximum Impacted Worker Receptor	0.14	10	No
Receptor	**Chronic Non-Cancer Hazard Index**		**Exceeds Significance Threshold?**
	Maximum Lifetime Proposed Project Risk	**Significance Threshold**	
Maximum Impacted Sensitive Receptor – Infant to Adult (30 years)	<0.01	1	No
Maximum Impacted Sensitive Receptor – Adult	<0.01	1	No
Maximum Impacted Worker Receptor	0.02	1	No

Source: See Data Attachment in Appendix D.

Figure 5: Total Construction Model Output



3.2 Cumulative Analysis

As discussed in Section 2.1, *SCAQMD Significance Thresholds*, the SCAQMD has recommended a 1,000-foot distance to identify other development projects that could contribute to cumulative impacts with a project. The search radius for this Project was extended to 0.25 miles (1,320 feet) to identify potential cumulative sources.

There are no cumulative projects that would involve significant long-term emissions of DPM or other hazardous airborne emissions located within 0.25 miles of the Project site. The Project's maximum cancer risk is below the 10 in one million project-level threshold. Therefore, the Project would result in a less-than-significant cumulative impact related to cancer and non-cancer health risks.

4 CONCLUSION

The emissions from the Project construction would not result in cancer health risk results that exceed the lifetime cancer risk threshold of 10 in one million at the maximum impacted sensitive receptor. The Project's emissions for construction impacts would also not result in a non-cancer risk greater than the 1.0 non-cancer HI threshold. The Project's maximum construction health risk impacts would result in the following:

Maximum Project Construction Health Risk Results:

- Sensitive/residential receptor for the 30-year lifetime exposure duration: 1.39 in one million
- Worker receptor: 0.14 in one million
- Sensitive receptor chronic non-cancer HI: less than 0.01
- Worker receptor chronic non-cancer HI: 0.02

The Project construction health risk results would not exceed the SCAQMD significance thresholds of 10 in one million for cancer risk and 1.0 for non-cancer HI. Therefore, the construction of the proposed Project would result in a less-than-significant Project-level for cancer and non-cancer health risks.

In addition, since there are no cumulative projects that would involve significant long-term emissions of DPM or other hazardous airborne emissions located within 0.25 miles of the Project site, the cumulative cancer and non-cancer health risk impacts would be less than significant.

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APPENDIX A – CALEEMOD OUTPUT FOR PROJECT CONSTRUCTION

24-073 Coast St Apartments Detailed Report

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1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	24-073 Coast St Apartments
Construction Start Date	7/1/2025
Operational Year	2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	1.80
Precipitation (days)	6.20
Location	13040 Coast St, Garden Grove, CA 92844, USA
County	Orange
City	Garden Grove
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	5813
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Southern California Gas
App Version	2022.1.1.29

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Apartments Mid Rise	34.0	Dwelling Unit	0.36	61,297	2,553	—	101	—

Other Asphalt Surfaces	2.04	1000sqft	0.05	0.21	0.00	—	—	—
Enclosed Parking Structure	45.0	Space	0.00	14,892	0.00	—	—	—
Other Non-Asphalt Surfaces	1.40	Acre	1.40	0.00	337	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Unmit.	1.66	16.0	14.6	0.03	3.12	1.71	3,505
Daily, Winter (Max)	—	—	—	—	—	—	—
Unmit.	38.9	7.67	10.6	0.02	0.77	0.40	2,477
Average Daily (Max)	—	—	—	—	—	—	—
Unmit.	1.36	2.70	3.56	0.01	0.29	0.14	822
Annual (Max)	—	—	—	—	—	—	—
Unmit.	0.25	0.49	0.65	< 0.005	0.05	0.03	136
Exceeds (Daily Max)	—	—	—	—	—	—	—
Threshold	75.0	100	550	150	150	55.0	—
Unmit.	No	No	No	No	No	No	—
Exceeds (Average Daily)	—	—	—	—	—	—	—
Threshold	75.0	100	550	150	150	55.0	—
Unmit.	No	No	No	No	No	No	—

2.2. Construction Emissions by Year, Unmitigated

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

Year	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—
2025	1.66	16.0	14.6	0.03	3.12	1.71	3,505
Daily - Winter (Max)	—	—	—	—	—	—	—
2025	38.9	7.67	10.6	0.02	0.77	0.40	2,477
Average Daily	—	—	—	—	—	—	—
2025	1.36	2.70	3.56	0.01	0.29	0.14	822
Annual	—	—	—	—	—	—	—
2025	0.25	0.49	0.65	< 0.005	0.05	0.03	136

2.4. Operations Emissions Compared Against Thresholds

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

Un/Mit.	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Unmit.	2.41	0.60	8.03	0.01	1.31	0.34	1,780
Daily, Winter (Max)	—	—	—	—	—	—	—
Unmit.	2.12	0.61	5.12	0.01	1.30	0.34	1,715
Average Daily (Max)	—	—	—	—	—	—	—
Unmit.	2.23	0.58	6.44	0.01	1.16	0.31	1,589
Annual (Max)	—	—	—	—	—	—	—
Unmit.	0.41	0.11	1.18	< 0.005	0.21	0.06	263
Exceeds (Daily Max)	—	—	—	—	—	—	—
Threshold	55.0	55.0	550	150	150	55.0	—
Unmit.	No	No	No	No	No	No	—
Exceeds (Average Daily)	—	—	—	—	—	—	—

Threshold	55.0	55.0	550	150	150	55.0	—
Unmit.	No	No	No	No	No	No	—
Exceeds (Annual)	—	—	—	—	—	—	—
Threshold	—	—	—	—	—	—	3,000
Unmit.	—	—	—	—	—	—	No

2.5. Operations Emissions by Sector, Unmitigated

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

Sector	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Mobile	0.70	0.48	5.42	0.01	1.30	0.33	1,415
Area	1.70	0.02	2.58	< 0.005	< 0.005	< 0.005	7.85
Energy	0.01	0.10	0.04	< 0.005	0.01	0.01	290
Water	—	—	—	—	—	—	19.0
Waste	—	—	—	—	—	—	47.3
Refrig.	—	—	—	—	—	—	0.44
Total	2.41	0.60	8.03	0.01	1.31	0.34	1,780
Daily, Winter (Max)	—	—	—	—	—	—	—
Mobile	0.69	0.52	5.08	0.01	1.30	0.33	1,358
Area	1.42	0.00	0.00	0.00	0.00	0.00	0.00
Energy	0.01	0.10	0.04	< 0.005	0.01	0.01	290
Water	—	—	—	—	—	—	19.0
Waste	—	—	—	—	—	—	47.3
Refrig.	—	—	—	—	—	—	0.44
Total	2.12	0.61	5.12	0.01	1.30	0.34	1,715
Average Daily	—	—	—	—	—	—	—
Mobile	0.61	0.47	4.63	0.01	1.15	0.30	1,227
Area	1.61	0.02	1.76	< 0.005	< 0.005	< 0.005	5.38

Energy	0.01	0.10	0.04	< 0.005	0.01	0.01	290
Water	—	—	—	—	—	—	19.0
Waste	—	—	—	—	—	—	47.3
Refrig.	—	—	—	—	—	—	0.44
Total	2.23	0.58	6.44	0.01	1.16	0.31	1,589
Annual	—	—	—	—	—	—	—
Mobile	0.11	0.09	0.85	< 0.005	0.21	0.05	203
Area	0.29	< 0.005	0.32	< 0.005	< 0.005	< 0.005	0.89
Energy	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	48.0
Water	—	—	—	—	—	—	3.15
Waste	—	—	—	—	—	—	7.82
Refrig.	—	—	—	—	—	—	0.07
Total	0.41	0.11	1.18	< 0.005	0.21	0.06	263

3. Construction Emissions Details

3.1. Demolition (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Off-Road Equipment	1.36	12.8	13.2	0.02	0.53	0.48	2,211
Demolition	—	—	—	—	0.85	0.13	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.35	0.36	< 0.005	0.01	0.01	60.6
Demolition	—	—	—	—	0.02	< 0.005	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.06	0.07	< 0.005	< 0.005	< 0.005	10.0
Demolition	—	—	—	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Worker	0.04	0.03	0.56	0.00	0.13	0.03	135
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	1.34	0.59	0.01	0.30	0.09	1,160
Daily, Winter (Max)	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	< 0.005	< 0.005	3.55
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.04	0.02	< 0.005	0.01	< 0.005	31.7
Annual	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.59
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	5.25

3.3. Site Preparation (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Off-Road Equipment	0.66	5.62	6.13	0.01	0.35	0.33	920
Dust From Material Movement	—	—	—	—	0.28	0.03	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.02	0.02	< 0.005	< 0.005	< 0.005	2.52
Dust From Material Movement	—	—	—	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	0.42
Dust From Material Movement	—	—	—	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Worker	0.02	0.02	0.28	0.00	0.07	0.02	67.4
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.18
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.03
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Off-Road Equipment	1.62	14.7	13.6	0.02	0.75	0.69	2,303
Dust From Material Movement	—	—	—	—	1.98	0.91	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.08	0.07	< 0.005	< 0.005	< 0.005	12.6
Dust From Material Movement	—	—	—	—	0.01	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	2.09
Dust From Material Movement	—	—	—	—	< 0.005	< 0.005	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Worker	0.03	0.03	0.42	0.00	0.10	0.02	101
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.02	1.27	0.56	0.01	0.28	0.09	1,101
Daily, Winter (Max)	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.53
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	6.03
Annual	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.09
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	1.00

3.7. Building Construction (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Off-Road Equipment	0.75	7.34	9.02	0.02	0.31	0.29	1,883
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—
Off-Road Equipment	0.75	7.34	9.02	0.02	0.31	0.29	1,883
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	0.21	2.01	2.47	< 0.005	0.09	0.08	516
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.37	0.45	< 0.005	0.02	0.01	85.4
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Worker	0.11	0.11	1.72	0.00	0.40	0.09	414
Vendor	0.01	0.20	0.10	< 0.005	0.05	0.02	203
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—
Worker	0.11	0.12	1.49	0.00	0.40	0.09	393
Vendor	0.01	0.21	0.10	< 0.005	0.05	0.02	202

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Worker	0.03	0.03	0.43	0.00	0.11	0.03	109
Vendor	< 0.005	0.06	0.03	< 0.005	0.01	< 0.005	55.4
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Worker	0.01	0.01	0.08	0.00	0.02	< 0.005	18.1
Vendor	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	9.17
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Paving (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Off-Road Equipment	0.61	5.24	6.25	0.01	0.23	0.21	977
Paving	0.02	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.07	0.09	< 0.005	< 0.005	< 0.005	13.4
Paving	< 0.005	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.02	< 0.005	< 0.005	< 0.005	2.21
Paving	< 0.005	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Worker	0.06	0.07	0.85	0.00	0.23	0.05	224
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	< 0.005	< 0.005	3.11
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.51
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Architectural Coating (2025) - Unmitigated

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

Location	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Onsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Off-Road Equipment	0.17	1.18	1.52	< 0.005	0.04	0.03	179
Architectural Coatings	38.7	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.03	0.04	< 0.005	< 0.005	< 0.005	4.89
Architectural Coatings	1.06	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—

Off-Road Equipment	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	0.81
Architectural Coatings	0.19	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Worker	0.02	0.02	0.30	0.00	0.08	0.02	78.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	< 0.005	< 0.005	2.18
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	< 0.005	< 0.005	0.36
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	0.70	0.48	5.42	0.01	1.30	0.33	1,415
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Enclosed Parking Structure	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.70	0.48	5.42	0.01	1.30	0.33	1,415
Daily, Winter (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	0.69	0.52	5.08	0.01	1.30	0.33	1,358
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enclosed Parking Structure	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.69	0.52	5.08	0.01	1.30	0.33	1,358
Annual	—	—	—	—	—	—	—
Apartments Mid Rise	0.11	0.09	0.85	< 0.005	0.21	0.05	203
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enclosed Parking Structure	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.11	0.09	0.85	< 0.005	0.21	0.05	203

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	119

Other Asphalt Surfaces	—	—	—	—	—	—	0.00
Enclosed Parking Structure	—	—	—	—	—	—	49.7
Other Non-Asphalt Surfaces	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	169
Daily, Winter (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	119
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
Enclosed Parking Structure	—	—	—	—	—	—	49.7
Other Non-Asphalt Surfaces	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	169
Annual	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	19.7
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
Enclosed Parking Structure	—	—	—	—	—	—	8.24
Other Non-Asphalt Surfaces	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	27.9

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	0.01	0.10	0.04	< 0.005	0.01	0.01	121

Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enclosed Parking Structure	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.01	0.10	0.04	< 0.005	0.01	0.01	121
Daily, Winter (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	0.01	0.10	0.04	< 0.005	0.01	0.01	121
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enclosed Parking Structure	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	0.01	0.10	0.04	< 0.005	0.01	0.01	121
Annual	—	—	—	—	—	—	—
Apartments Mid Rise	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	20.1
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enclosed Parking Structure	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	20.1

4.3. Area Emissions by Source

4.3.1. Unmitigated

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

Source	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—

Hearths	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	1.32	—	—	—	—	—	—
Architectural Coatings	0.11	—	—	—	—	—	—
Landscape Equipment	0.28	0.02	2.58	< 0.005	< 0.005	< 0.005	7.85
Total	1.70	0.02	2.58	< 0.005	< 0.005	< 0.005	7.85
Daily, Winter (Max)	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	1.32	—	—	—	—	—	—
Architectural Coatings	0.11	—	—	—	—	—	—
Total	1.42	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—
Hearths	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.24	—	—	—	—	—	—
Architectural Coatings	0.02	—	—	—	—	—	—
Landscape Equipment	0.03	< 0.005	0.32	< 0.005	< 0.005	< 0.005	0.89
Total	0.29	< 0.005	0.32	< 0.005	< 0.005	< 0.005	0.89

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	19.0
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
Enclosed Parking Structure	—	—	—	—	—	—	0.00

Other Non-Asphalt Surfaces	—	—	—	—	—	—	0.02
Total	—	—	—	—	—	—	19.0
Daily, Winter (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	19.0
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
Enclosed Parking Structure	—	—	—	—	—	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	0.02
Total	—	—	—	—	—	—	19.0
Annual	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	3.14
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
Enclosed Parking Structure	—	—	—	—	—	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	< 0.005
Total	—	—	—	—	—	—	3.15

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	47.3
Other Asphalt Surfaces	—	—	—	—	—	—	0.00

Enclosed Parking Structure	—	—	—	—	—	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	47.3
Daily, Winter (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	47.3
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
Enclosed Parking Structure	—	—	—	—	—	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	47.3
Annual	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	7.82
Other Asphalt Surfaces	—	—	—	—	—	—	0.00
Enclosed Parking Structure	—	—	—	—	—	—	0.00
Other Non-Asphalt Surfaces	—	—	—	—	—	—	0.00
Total	—	—	—	—	—	—	7.82

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	0.44

Total	—	—	—	—	—	—	0.44
Daily, Winter (Max)	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	0.44
Total	—	—	—	—	—	—	0.44
Annual	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	0.07
Total	—	—	—	—	—	—	0.07

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

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

Equipment Type	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

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

Equipment Type	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

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

Equipment Type	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

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

Vegetation	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—

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

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

Land Use	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

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

Species	ROG	NOx	CO	SO2	PM10T	PM2.5T	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—

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

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	7/1/2025	7/15/2025	5.00	10.0	—
Site Preparation	Site Preparation	7/16/2025	7/17/2025	5.00	1.00	—
Grading	Grading	7/18/2025	7/20/2025	5.00	2.00	—
Building Construction	Building Construction	7/21/2025	12/8/2025	5.00	100	—
Paving	Paving	12/9/2025	12/16/2025	5.00	5.00	—
Architectural Coating	Architectural Coating	12/17/2025	12/30/2025	5.00	10.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Demolition	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40

Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	0.00	8.00	84.0	0.37
Site Preparation	Crawler Tractors	Diesel	Average	1.00	8.00	87.0	0.43
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Grading	Tractors/Loaders/Backhoes	Diesel	Average	0.00	8.00	84.0	0.37
Grading	Crawler Tractors	Diesel	Average	1.00	8.00	87.0	0.43
Building Construction	Cranes	Diesel	Average	1.00	8.00	367	0.29
Building Construction	Forklifts	Diesel	Average	2.00	8.00	82.0	0.20
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	2.00	8.00	84.0	0.37
Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Paving	Cement and Mortar Mixers	Diesel	Average	4.00	8.00	10.0	0.56
Paving	Pavers	Diesel	Average	1.00	8.00	81.0	0.42
Paving	Rollers	Diesel	Average	1.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	8.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	10.0	18.5	LDA,LDT1,LDT2
Demolition	Vendor	—	10.2	HHDT,MHDT

Demolition	Hauling	15.8	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	5.00	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	—	10.2	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	7.50	18.5	LDA,LDT1,LDT2
Grading	Vendor	—	10.2	HHDT,MHDT
Grading	Hauling	15.0	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	30.7	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	6.08	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—
Paving	Worker	17.5	18.5	LDA,LDT1,LDT2
Paving	Vendor	—	10.2	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	6.15	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Non-applicable. No control strategies activated by user.

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	124,126	41,375	0.00	0.00	645

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	630	—
Site Preparation	—	—	1.00	0.00	—
Grading	233	—	3.00	0.00	—
Paving	0.00	0.00	0.00	0.00	0.25

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	3	74%	74%
Water Demolished Area	2	36%	36%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Apartments Mid Rise	—	0%

Other Asphalt Surfaces	0.05	100%
Enclosed Parking Structure	0.00	100%
Other Non-Asphalt Surfaces	0.20	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	349	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Apartments Mid Rise	229	155	131	74,655	1,820	1,229	1,042	593,006
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Enclosed Parking Structure	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other Non-Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

Hearth Type	Unmitigated (number)
Apartments Mid Rise	—
Wood Fireplaces	0

Gas Fireplaces	0
Propane Fireplaces	0
Electric Fireplaces	0
No Fireplaces	34
Conventional Wood Stoves	0
Catalytic Wood Stoves	0
Non-Catalytic Wood Stoves	0
Pellet Wood Stoves	0

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
124126.42499999999	41,375	0.00	0.00	645

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Apartments Mid Rise	124,638	346	0.0330	0.0040	377,633
Other Asphalt Surfaces	0.00	346	0.0330	0.0040	0.00
Enclosed Parking Structure	52,143	346	0.0330	0.0040	0.00
Other Non-Asphalt Surfaces	0.00	346	0.0330	0.0040	0.00

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	1,275,872	40,441
Other Asphalt Surfaces	0.00	0.00
Enclosed Parking Structure	0.00	0.00
Other Non-Asphalt Surfaces	0.00	4,368

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	25.1	—
Other Asphalt Surfaces	0.00	—
Enclosed Parking Structure	0.00	—
Other Non-Asphalt Surfaces	0.00	—

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
Apartments Mid Rise	Average room A/C & Other residential A/C and heat pumps	R-410A	2,088	< 0.005	2.50	2.50	10.0
Apartments Mid Rise	Household refrigerators and/or freezers	R-134a	1,430	0.12	0.60	0.00	1.00

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor

5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)

5.17. User Defined

Equipment Type	Fuel Type

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres

5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	8.94	annual days of extreme heat
Extreme Precipitation	3.65	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	0.00	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.
Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters
Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	0	0	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	0	0	N/A

Wildfire	1	0	0	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	0	0	0	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	1	1	1	2
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	1	1	1	2
Wildfire	1	1	1	2
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	1	1	1	2

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.
The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.
The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	40.0
AQ-PM	69.0
AQ-DPM	82.7
Drinking Water	64.5
Lead Risk Housing	51.4
Pesticides	31.7
Toxic Releases	91.0
Traffic	93.8
Effect Indicators	—
CleanUp Sites	0.00
Groundwater	69.9
Haz Waste Facilities/Generators	29.2
Impaired Water Bodies	0.00
Solid Waste	9.67
Sensitive Population	—
Asthma	33.3
Cardio-vascular	51.3
Low Birth Weights	43.2
Socioeconomic Factor Indicators	—
Education	69.2
Housing	86.8
Linguistic	91.6
Poverty	67.9
Unemployment	70.0

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	31.00218144
Employed	59.16848454
Median HI	26.3826511
Education	—
Bachelor's or higher	45.32272552
High school enrollment	100
Preschool enrollment	54.90825099
Transportation	—
Auto Access	33.27345053
Active commuting	35.48055948
Social	—
2-parent households	23.22597203
Voting	4.38855383
Neighborhood	—
Alcohol availability	24.43218273
Park access	17.79802387
Retail density	62.06852303
Supermarket access	94.25125112
Tree canopy	23.5724368
Housing	—
Homeownership	18.06749647
Housing habitability	27.26806108
Low-inc homeowner severe housing cost burden	58.73219556
Low-inc renter severe housing cost burden	22.91800334

Uncrowded housing	30.12960349
Health Outcomes	—
Insured adults	19.91530861
Arthritis	81.7
Asthma ER Admissions	65.5
High Blood Pressure	51.5
Cancer (excluding skin)	82.6
Asthma	72.9
Coronary Heart Disease	81.5
Chronic Obstructive Pulmonary Disease	62.6
Diagnosed Diabetes	41.8
Life Expectancy at Birth	52.0
Cognitively Disabled	46.5
Physically Disabled	74.5
Heart Attack ER Admissions	57.9
Mental Health Not Good	48.5
Chronic Kidney Disease	73.0
Obesity	90.2
Pedestrian Injuries	73.8
Physical Health Not Good	47.6
Stroke	64.5
Health Risk Behaviors	—
Binge Drinking	91.0
Current Smoker	42.3
No Leisure Time for Physical Activity	23.1
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0

Children	69.7
Elderly	60.0
English Speaking	12.0
Foreign-born	96.7
Outdoor Workers	37.5
Climate Change Adaptive Capacity	—
Impervious Surface Cover	20.7
Traffic Density	90.8
Traffic Access	52.4
Other Indices	—
Hardship	63.8
Other Decision Support	—
2016 Voting	30.5

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	73.0
Healthy Places Index Score for Project Location (b)	30.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	No
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Land Use	Adjusted to match the site plans provided by the client.
Construction: Off-Road Equipment	Assumed that all equipment would be used for 8 hours per workday. Tractors/loaders/backhoes were replaced with crawler tractors in the site preparation and grading phases.
Operations: Vehicle Data	Adjusted trip rates to match the 11th Generation ITE Trip Rates for Multifamily Housing Low Rise as generated by the Project's Trip Generation.
Operations: Hearths	Adjusted wood stoves in accordance with Rule 445. Removed gas and propane fireplaces as neither are proposed for the Project.
Construction: Construction Phases	Extended architectural coating phase from 5 to 10 days to account for building façade size.

APPENDIX B – AERMOD CONSTRUCTION MODEL OUTPUT

```
**
**************************************
**
** AERMOD Input Produced by:
** AERMOD View Ver. 12.0.0
** Lakes Environmental Software Inc.
** Date: 6/3/2025
** File: C:\Lakes\AERMOD View\24-073_Coast St Con\24-073_Coast St Con.ADI
**
**************************************
**
**
**************************************
** AERMOD Control Pathway
**************************************
**
**
CO STARTING
   TITLEONE C:\Lakes\AERMOD View\24-073_Coast St Con\24-073_Coast St Con.isc
   MODELOPT DFAULT CONC
   AVERTIME 1 24 PERIOD
   POLLUTID PM_10
   RUNORNOT RUN
   ERRORFIL "24-073_Coast St Con.err"
CO FINISHED
**
**************************************
** AERMOD Source Pathway
**************************************
**
**
SO STARTING
** Source Location **
** Source ID - Type - X Coord. - Y Coord. **
   LOCATION PAREA1       AREAPOLY   408347.633  3737459.757       16.740
** DESCRSRC Project Site
** ------------------------------------------------------------------
** Line Source Represented by Area Sources
** LINE AREA Source ID = ONS1
** DESCRSRC OnSite Travel Lenght
** PREFIX
** Length of Side = 11.00
** Ratio = 10
** Vertical Dimension = 2.46
** Emission Rate = 5.9239E-11
** Nodes = 2
** 408393.331, 3737437.663, 16.66, 2.64
** 408348.373, 3737436.950, 16.73, 2.64
** ------------------------------------------------------------------
   LOCATION A0000001     AREA     408393.244 3737443.163 16.69
```

```
** End of LINE AREA Source ID = ONS1
** ----------------------------------------------------------------------
** Line Source Represented by Area Sources
** LINE AREA Source ID = ARLN1
** DESCRSRC Off Site Line 1
** PREFIX
** Length of Side = 16.00
** Ratio = 10
** Vertical Dimension = 2.46
** Emission Rate = 4.0693E-11
** Nodes = 18
** 408344.113, 3737439.607, 16.58, 0.00
** 408338.178, 3737439.470, 16.59, 0.00
** 408337.902, 3737517.121, 16.68, 0.00
** 408072.191, 3737517.188, 16.36, 0.00
** 408074.066, 3737444.741, 16.47, 0.00
** 408080.361, 3737372.758, 16.60, 0.00
** 408098.293, 3737280.337, 16.74, 0.00
** 408111.500, 3737225.994, 18.04, 0.00
** 408112.433, 3737190.923, 17.12, 0.00
** 408101.610, 3737129.538, 17.70, 0.00
** 408080.295, 3737104.407, 19.20, 0.00
** 408045.479, 3737100.589, 20.51, 0.00
** 408022.235, 3737117.576, 21.44, 0.00
** 408011.293, 3737147.784, 22.35, 0.00
** 408025.542, 3737182.659, 23.37, 0.00
** 408047.605, 3737195.174, 23.42, 0.00
** 408077.362, 3737204.739, 23.87, 0.00
** 408107.145, 3737205.348, 18.36, 0.00
** ----------------------------------------------------------------------
   LOCATION A0000002     AREA     408343.928 3737447.605 16.62
   LOCATION A0000003     AREA     408346.178 3737439.498 16.67
   LOCATION A0000004     AREA     408337.904 3737525.121 16.63
   LOCATION A0000005     AREA     408205.048 3737525.154 16.34
   LOCATION A0000006     AREA     408064.193 3737516.981 16.32
   LOCATION A0000007     AREA     408066.096 3737444.044 16.47
   LOCATION A0000008     AREA     408072.508 3737371.234 16.86
   LOCATION A0000009     AREA     408090.519 3737278.447 16.87
   LOCATION A0000010     AREA     408103.502 3737225.781 18.63
   LOCATION A0000011     AREA     408104.554 3737192.312 17.50
   LOCATION A0000012     AREA     408095.508 3737134.713 17.20
   LOCATION A0000013     AREA     408079.423 3737112.359 18.39
   LOCATION A0000014     AREA     408050.200 3737107.048 19.91
   LOCATION A0000015     AREA     408029.757 3737120.301 20.83
   LOCATION A0000016     AREA     408018.698 3737144.758 21.83
   LOCATION A0000017     AREA     408029.489 3737175.701 22.61
   LOCATION A0000018     AREA     408050.053 3737187.558 23.15
   LOCATION A0000019     AREA     408077.525 3737196.740 23.48
** End of LINE AREA Source ID = ARLN1
** Source Parameters **
```

```
   SRCPARAM PAREA1        7.04E-07     5.000         4
   AREAVERT PAREA1       408347.633 3737459.757 408398.395 3737459.840
   AREAVERT PAREA1       408399.006 3737417.231 408347.961 3737416.693
** LINE AREA Source ID = ONS1
   SRCPARAM A0000001     5.9239E-11     2.644    44.964    11.000   179.091
2.459
** ------------------------------------------------------------------
** LINE AREA Source ID = ARLN1
   SRCPARAM A0000002     4.0693E-11     0.000     5.936    16.000   178.679
2.459
   SRCPARAM A0000003     4.0693E-11     0.000    77.651    16.000   -90.204
2.459
   SRCPARAM A0000004     4.0693E-11     0.000   132.856    16.000  -179.986
2.459
   SRCPARAM A0000005     4.0693E-11     0.000   132.856    16.000  -179.986
2.459
   SRCPARAM A0000006     4.0693E-11     0.000    72.471    16.000    88.517
2.459
   SRCPARAM A0000007     4.0693E-11     0.000    72.258    16.000    85.002
2.459
   SRCPARAM A0000008     4.0693E-11     0.000    94.145    16.000    79.020
2.459
   SRCPARAM A0000009     4.0693E-11     0.000    55.925    16.000    76.341
2.459
   SRCPARAM A0000010     4.0693E-11     0.000    35.083    16.000    88.476
2.459
   SRCPARAM A0000011     4.0693E-11     0.000    62.331    16.000    99.999
2.459
   SRCPARAM A0000012     4.0693E-11     0.000    32.953    16.000   130.301
2.459
   SRCPARAM A0000013     4.0693E-11     0.000    35.024    16.000   173.743
2.459
   SRCPARAM A0000014     4.0693E-11     0.000    28.790    16.000  -143.841
2.459
   SRCPARAM A0000015     4.0693E-11     0.000    32.128    16.000  -109.912
2.459
   SRCPARAM A0000016     4.0693E-11     0.000    37.674    16.000   -67.776
2.459
   SRCPARAM A0000017     4.0693E-11     0.000    25.365    16.000   -29.564
2.459
   SRCPARAM A0000018     4.0693E-11     0.000    31.256    16.000   -17.819
2.459
   SRCPARAM A0000019     4.0693E-11     0.000    29.789    16.000    -1.172
2.459
** ------------------------------------------------------------------

** Variable Emissions Type: "By Hour / Seven Days (HRDOW7)"
** Variable Emission Scenario: "Scenario 1"
   EMISFACT PAREA1       HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0
   EMISFACT PAREA1       HRDOW7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 0.0
```

```
EMISFACT PAREA1       HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT PAREA1       HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0
EMISFACT PAREA1       HRDOW7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 0.0
EMISFACT PAREA1       HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT PAREA1       HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0
EMISFACT PAREA1       HRDOW7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 0.0
EMISFACT PAREA1       HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT PAREA1       HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT PAREA1       HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT PAREA1       HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT A0000012     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0
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EMISFACT A0000012     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT A0000014     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0
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EMISFACT A0000017     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000018     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0
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EMISFACT A0000018     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT A0000019     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000002     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0
EMISFACT A0000002     HRDOW7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 0.0
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EMISFACT A0000005     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0
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EMISFACT A0000006     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0
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EMISFACT A0000019     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0
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EMISFACT A0000017     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT A0000003     HRDOW7 1.0 1.0 1.0 1.0 1.0 1.0 1.0 0.0
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EMISFACT A0000016     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0
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EMISFACT A0000018     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 1.0
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EMISFACT A0000019     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT A0000002     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000002     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT A0000003     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT A0000005     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000005     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT A0000006     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000006     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT A0000008     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
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EMISFACT A0000011     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000011     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000011     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000012     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000012     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000012     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000013     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000013     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000013     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000014     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000014     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000014     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000015     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
```

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EMISFACT A0000015     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000015     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000016     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000016     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000016     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000017     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000017     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000017     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000018     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000018     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000018     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000019     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000019     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000019     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000002     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000002     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000002     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000003     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000003     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000003     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000004     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000004     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000004     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000005     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000005     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000005     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000006     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000006     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000006     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000007     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000007     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000007     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000008     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000008     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000008     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000009     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000009     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000009     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000010     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000010     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000010     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000011     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000011     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000011     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000012     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000012     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000012     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000013     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000013     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
EMISFACT A0000013     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
```

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   EMISFACT A0000014     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT A0000014     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT A0000014     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT A0000015     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT A0000015     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT A0000015     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT A0000016     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT A0000016     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT A0000016     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT A0000017     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT A0000017     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT A0000017     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT A0000018     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT A0000018     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT A0000018     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT A0000019     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT A0000019     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   EMISFACT A0000019     HRDOW7 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0
   SRCGROUP ALL
SO FINISHED
**
**********************************
** AERMOD Receptor Pathway
**********************************
**
**
RE STARTING
   INCLUDED "24-073_Coast St Con.rou"
RE FINISHED
**
**********************************
** AERMOD Meteorology Pathway
**********************************
**
**
ME STARTING
   SURFFILE "..\..\Met Files\KFUL_V9_ADJU\KFUL_v9.SFC"
   PROFFILE "..\..\Met Files\KFUL_V9_ADJU\KFUL_v9.PFL"
   SURFDATA 3166 2012 Fullerton_Municipal_Airport
   UAIRDATA 3190 2012
   PROFBASE 29.3 METERS
ME FINISHED
**
**********************************
** AERMOD Output Pathway
**********************************
**
**
OU STARTING
   RECTABLE ALLAVE 1ST
```

```
   RECTABLE 1 1ST
   RECTABLE 24 1ST 6TH
** Auto-Generated Plotfiles
   PLOTFILE 1 ALL 1ST "24-073_Coast St Con.AD\01H1GALL.PLT" 31
   PLOTFILE 24 ALL 1ST "24-073_Coast St Con.AD\24H1GALL.PLT" 32
   PLOTFILE 24 ALL 6TH "24-073_Coast St Con.AD\24H6GALL.PLT" 33
   PLOTFILE PERIOD ALL "24-073_Coast St Con.AD\PE00GALL.PLT" 34
   SUMMFILE "24-073_Coast St Con.sum"
OU FINISHED


  *** Message Summary For AERMOD Model Setup ***

  --------- Summary of Total Messages --------

 A Total of            0 Fatal Error Message(s)
 A Total of            2 Warning Message(s)
 A Total of            0 Informational Message(s)


    ******** FATAL ERROR MESSAGES ********
              ***  NONE  ***


    ********   WARNING MESSAGES   ********
 ME W186     573       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used
     0.50
 ME W187     573       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET


 ***********************************
 *** SETUP Finishes Successfully ***
 ***********************************

 *** AERMOD - VERSION 23132  ***   *** C:\Lakes\AERMOD View\24-073_Coast St
Con\24-073_Coast St Con.isc     ***        06/03/25
 *** AERMET - VERSION  16216 ***   ***
                       ***        20:32:06

                                  PAGE   1
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                                            ***     MODEL SETUP OPTIONS SUMMARY
 ***
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - -

 ** Model Options Selected:
      * Model Uses Regulatory DEFAULT Options
      * Model Is Setup For Calculation of Average CONCentration Values.
```

```
      * NO GAS DEPOSITION Data Provided.
      * NO PARTICLE DEPOSITION Data Provided.
      * Model Uses NO DRY DEPLETION. DDPLETE  =  F
      * Model Uses NO WET DEPLETION. WETDPLT  =  F
      * Stack-tip Downwash.
      * Model Accounts for ELEVated Terrain Effects.
      * Use Calms Processing Routine.
      * Use Missing Data Processing Routine.
      * No Exponential Decay.
      * Model Uses RURAL Dispersion Only.
      * ADJ_U*   - Use ADJ_U* option for SBL in AERMET
      * CCVR_Sub - Meteorological data includes CCVR substitutions
      * TEMP_Sub - Meteorological data includes TEMP substitutions
      * Model Assumes No FLAGPOLE Receptor Heights.
      * The User Specified a Pollutant Type of: PM_10

 **Model Calculates  2 Short Term Average(s) of:   1-HR  24-HR
     and Calculates PERIOD Averages

 **This Run Includes:     20 Source(s);       1 Source Group(s); and    1640
Receptor(s)

                with:      0 POINT(s), including
                           0 POINTCAP(s) and      0 POINTHOR(s)
                 and:      0 VOLUME source(s)
                 and:     20 AREA type source(s)
                 and:      0 LINE source(s)
                 and:      0 RLINE/RLINEXT source(s)
                 and:      0 OPENPIT source(s)
                 and:      0 BUOYANT LINE source(s) with a total of     0 line(s)
                 and:      0 SWPOINT source(s)


 **Model Set To Continue RUNning After the Setup Testing.

 **The AERMET Input Meteorological Data Version Date:  16216

 **Output Options Selected:
          Model Outputs Tables of PERIOD Averages by Receptor
          Model Outputs Tables of Highest Short Term Values by Receptor (RECTABLE
Keyword)
          Model Outputs External File(s) of High Values for Plotting (PLOTFILE
Keyword)
          Model Outputs Separate Summary File of High Ranked Values (SUMMFILE
Keyword)

 **NOTE:  The Following Flags May Appear Following CONC Values:  c for Calm Hours
                                                                 m for Missing Hours
                                                                 b for Both Calm and
Missing Hours
```

*** AREA SOURCE DATA ***

SOURCE ID	NUMBER PART. CATS.	EMISSION RATE (GRAMS/SEC /METER**2)	COORD (SW CORNER) X (METERS)	COORD (SW CORNER) Y (METERS)	BASE ELEV. (METERS)	RELEASE HEIGHT (METERS)	X-DIM OF AREA (METERS)	Y-DIM OF AREA (METERS)	ORIENT. (DEG.)	INIT. SZ (METERS)	URBAN SOURCE	EMISSION RATE SCALAR VARY BY	AIRCRAFT
A0000001	0	0.59239E-10	408393.2	3737443.2	16.7	2.64	44.96	11.00	179.09	2.46	NO	HRDOW7	NO
A0000002	0	0.40693E-10	408343.9	3737447.6	16.6	0.00	5.94	16.00	178.68	2.46	NO	HRDOW7	NO
A0000003	0	0.40693E-10	408346.2	3737439.5	16.7	0.00	77.65	16.00	-90.20	2.46	NO	HRDOW7	NO
A0000004	0	0.40693E-10	408337.9	3737525.1	16.6	0.00	132.86	16.00	-179.99	2.46	NO	HRDOW7	NO
A0000005	0	0.40693E-10	408205.0	3737525.2	16.3	0.00	132.86	16.00	-179.99	2.46	NO	HRDOW7	NO
A0000006	0	0.40693E-10	408064.2	3737517.0	16.3	0.00	72.47	16.00	88.52	2.46	NO	HRDOW7	NO

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 A0000007         0   0.40693E-10  408066.1 3737444.0    16.5     0.00     72.26
16.00     85.00     2.46     NO    HRDOW7           NO
 A0000008         0   0.40693E-10  408072.5 3737371.2    16.9     0.00     94.14
16.00     79.02     2.46     NO    HRDOW7           NO
 A0000009         0   0.40693E-10  408090.5 3737278.4    16.9     0.00     55.93
16.00     76.34     2.46     NO    HRDOW7           NO
 A0000010         0   0.40693E-10  408103.5 3737225.8    18.6     0.00     35.08
16.00     88.48     2.46     NO    HRDOW7           NO
 A0000011         0   0.40693E-10  408104.6 3737192.3    17.5     0.00     62.33
16.00    100.00     2.46     NO    HRDOW7           NO
 A0000012         0   0.40693E-10  408095.5 3737134.7    17.2     0.00     32.95
16.00    130.30     2.46     NO    HRDOW7           NO
 A0000013         0   0.40693E-10  408079.4 3737112.4    18.4     0.00     35.02
16.00    173.74     2.46     NO    HRDOW7           NO
 A0000014         0   0.40693E-10  408050.2 3737107.0    19.9     0.00     28.79
16.00   -143.84     2.46     NO    HRDOW7           NO
 A0000015         0   0.40693E-10  408029.8 3737120.3    20.8     0.00     32.13
16.00   -109.91     2.46     NO    HRDOW7           NO
 A0000016         0   0.40693E-10  408018.7 3737144.8    21.8     0.00     37.67
16.00    -67.78     2.46     NO    HRDOW7           NO
 A0000017         0   0.40693E-10  408029.5 3737175.7    22.6     0.00     25.36
16.00    -29.56     2.46     NO    HRDOW7           NO
 A0000018         0   0.40693E-10  408050.1 3737187.6    23.2     0.00     31.26
16.00    -17.82     2.46     NO    HRDOW7           NO
 A0000019         0   0.40693E-10  408077.5 3737196.7    23.5     0.00     29.79
16.00     -1.17     2.46     NO    HRDOW7           NO
↟ *** AERMOD - VERSION 23132  ***   *** C:\Lakes\AERMOD View\24-073_Coast St
Con\24-073_Coast St Con.isc     ***        06/03/25
 *** AERMET - VERSION  16216 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*


                                                  *** AREAPOLY SOURCE DATA ***

               NUMBER EMISSION RATE   LOCATION OF AREA  BASE     RELEASE  NUMBER
 INIT.   URBAN  EMISSION RATE    AIRCRAFT
   SOURCE       PART.  (GRAMS/SEC       X        Y      ELEV.    HEIGHT  OF VERTS.
  SZ     SOURCE  SCALAR VARY
     ID         CATS.   /METER**2)   (METERS) (METERS) (METERS) (METERS)
(METERS)             BY
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - -

 PAREA1           0   0.70400E-06  408347.6 3737459.8    16.7     5.00       4
  0.00     NO    HRDOW7           NO
↟ *** AERMOD - VERSION 23132  ***   *** C:\Lakes\AERMOD View\24-073_Coast St
Con\24-073_Coast St Con.isc     ***        06/03/25
```

*** SOURCE IDs DEFINING SOURCE GROUPS ***

SRCGROUP ID	SOURCE IDs
ALL	PAREA1 , A0000001 , A0000002 , A0000003 , A0000004 , A0000005 , A0000006 , A0000007 , A0000008 , A0000009 , A0000010 , A0000011 , A0000012 , A0000013 , A0000014 , A0000015 , A0000016 , A0000017 , A0000018 , A0000019 ,

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW7) *

SOURCE ID = PAREA1   ; SOURCE TYPE = AREAPOLY :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = MONDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = TUESDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

```
                                                DAY OF WEEK = WEDNESDY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = THURSDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = FRIDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 23132  ***   *** C:\Lakes\AERMOD View\24-073_Coast St
Con\24-073_Coast St Con.isc     ***        06/03/25
 *** AERMET - VERSION  16216 ***   ***
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW7) *

 SOURCE ID = A0000001     ; SOURCE TYPE = AREA     :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
```

```
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = MONDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = TUESDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = WEDNESDY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = THURSDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = FRIDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW7) *

SOURCE ID = A0000002 ; SOURCE TYPE = AREA :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = MONDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = TUESDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = WEDNESDY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = THURSDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = FRIDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00						

22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW7) *

SOURCE ID = A0000003   ; SOURCE TYPE = AREA   :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = MONDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = TUESDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = WEDNESDY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00

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   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = THURSDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = FRIDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW7) *

 SOURCE ID = A0000004     ; SOURCE TYPE = AREA     :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = MONDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
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14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = TUESDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = WEDNESDY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = THURSDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = FRIDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 23132  ***   *** C:\Lakes\AERMOD View\24-073_Coast St
Con\24-073_Coast St Con.isc     ***        06/03/25
 *** AERMET - VERSION  16216 ***   ***
                       ***        20:32:06
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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW7) *

SOURCE ID = A0000005 ; SOURCE TYPE = AREA :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = MONDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = TUESDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = WEDNESDY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = THURSDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = FRIDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00						

DAY OF WEEK = SUNDAY

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW7) *

SOURCE ID = A0000006 ; SOURCE TYPE = AREA :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = MONDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01
14 .1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = TUESDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01
14 .1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = WEDNESDY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01
14 .1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = THURSDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .1000E+01

```
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = FRIDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 23132  ***   *** C:\Lakes\AERMOD View\24-073_Coast St
Con\24-073_Coast St Con.isc     ***        06/03/25
 *** AERMET - VERSION  16216 ***   ***
                       ***        20:32:06

                                   PAGE  12
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW7) *

 SOURCE ID = A0000007     ; SOURCE TYPE = AREA     :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = MONDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = TUESDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
```

```
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = WEDNESDY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = THURSDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = FRIDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 23132  ***   *** C:\Lakes\AERMOD View\24-073_Coast St
Con\24-073_Coast St Con.isc     ***        06/03/25
 *** AERMET - VERSION  16216 ***   ***
                      ***        20:32:06

                                  PAGE  13
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW7) *
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```
 SOURCE ID = A0000008     ; SOURCE TYPE = AREA     :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - -
```

6 .0000E+00   7 .0000E+00   8 .0000E+00
    9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
   17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

 *** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW7) *

 SOURCE ID = A0000009   ; SOURCE TYPE = AREA   :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - -

```
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00

                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00

                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 23132  ***   *** C:\Lakes\AERMOD View\24-073_Coast St
Con\24-073_Coast St Con.isc     ***        06/03/25
 *** AERMET - VERSION  16216 ***   ***
                       ***        20:32:06

                                   PAGE  15
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW7) *

 SOURCE ID = A0000010     ; SOURCE TYPE = AREA     :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -

                                                DAY OF WEEK = MONDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00

                                                DAY OF WEEK = TUESDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
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                                                DAY OF WEEK = WEDNESDY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = THURSDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = FRIDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 23132  ***   *** C:\Lakes\AERMOD View\24-073_Coast St
Con\24-073_Coast St Con.isc     ***        06/03/25
 *** AERMET - VERSION  16216 ***   ***
                      ***        20:32:06

                                PAGE  16
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW7) *

 SOURCE ID = A0000011     ; SOURCE TYPE = AREA     :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
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- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = MONDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = TUESDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = WEDNESDY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = THURSDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = FRIDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW7) *

SOURCE ID = A0000012 ; SOURCE TYPE = AREA :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR
DAY OF WEEK = MONDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = TUESDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = WEDNESDY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = THURSDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00
DAY OF WEEK = FRIDAY															
1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00						

22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SATURDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = SUNDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .0000E+00
9 .0000E+00   10 .0000E+00   11 .0000E+00   12 .0000E+00   13 .0000E+00
14 .0000E+00   15 .0000E+00   16 .0000E+00
17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW7) *

SOURCE ID = A0000013   ; SOURCE TYPE = AREA   :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = MONDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = TUESDAY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00
17 .0000E+00   18 .0000E+00   19 .0000E+00   20 .0000E+00   21 .0000E+00
22 .0000E+00   23 .0000E+00   24 .0000E+00

DAY OF WEEK = WEDNESDY

1 .0000E+00   2 .0000E+00   3 .0000E+00   4 .0000E+00   5 .0000E+00
6 .0000E+00   7 .0000E+00   8 .1000E+01
9 .1000E+01   10 .1000E+01   11 .1000E+01   12 .1000E+01   13 .1000E+01
14 .1000E+01   15 .1000E+01   16 .0000E+00

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   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = THURSDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = FRIDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
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 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW7) *

 SOURCE ID = A0000014     ; SOURCE TYPE = AREA     :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                DAY OF WEEK = MONDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
```

```
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = TUESDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = WEDNESDY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = THURSDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = FRIDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
 *** AERMOD - VERSION 23132  ***   *** C:\Lakes\AERMOD View\24-073_Coast St
Con\24-073_Coast St Con.isc     ***        06/03/25
 *** AERMET - VERSION  16216 ***   ***
                       ***        20:32:06
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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW7) *

SOURCE ID = A0000015 ; SOURCE TYPE = AREA :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = MONDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = TUESDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = WEDNESDY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = THURSDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = FRIDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.1000E+01
9	.1000E+01	10	.1000E+01	11	.1000E+01	12	.1000E+01	13	.1000E+01	14	.1000E+01	15	.1000E+01	16	.0000E+00
17	.0000E+00	18	.0000E+00	19	.0000E+00	20	.0000E+00	21	.0000E+00	22	.0000E+00	23	.0000E+00	24	.0000E+00

DAY OF WEEK = SATURDAY

1	.0000E+00	2	.0000E+00	3	.0000E+00	4	.0000E+00	5	.0000E+00	6	.0000E+00	7	.0000E+00	8	.0000E+00
9	.0000E+00	10	.0000E+00	11	.0000E+00	12	.0000E+00	13	.0000E+00						

DAY OF WEEK = SUNDAY

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW7) *

SOURCE ID = A0000016 ; SOURCE TYPE = AREA :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = MONDAY

DAY OF WEEK = TUESDAY

DAY OF WEEK = WEDNESDY

DAY OF WEEK = THURSDAY

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    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = FRIDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↑ *** AERMOD - VERSION 23132  ***   *** C:\Lakes\AERMOD View\24-073_Coast St
Con\24-073_Coast St Con.isc     ***        06/03/25
 *** AERMET - VERSION  16216 ***   ***
                       ***        20:32:06

                                  PAGE  22
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                   * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW7) *

 SOURCE ID = A0000017     ; SOURCE TYPE = AREA     :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                              DAY OF WEEK = MONDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = TUESDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
```

```
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = WEDNESDY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = THURSDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = FRIDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
↟ *** AERMOD - VERSION 23132  ***   *** C:\Lakes\AERMOD View\24-073_Coast St
Con\24-073_Coast St Con.isc     ***        06/03/25
 *** AERMET - VERSION  16216 ***   ***
                      ***        20:32:06

                                 PAGE  23
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                  * SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF
WEEK (HRDOW7) *
```

```
 SOURCE ID = A0000018     ; SOURCE TYPE = AREA     :
  HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
HOUR   SCALAR   HOUR   SCALAR   HOUR   SCALAR
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -
                                                  DAY OF WEEK = MONDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                  DAY OF WEEK = TUESDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                  DAY OF WEEK = WEDNESDY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                  DAY OF WEEK = THURSDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                  DAY OF WEEK = FRIDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                  DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
                                                  DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
```

* SOURCE EMISSION RATE SCALARS WHICH VARY DIURNALLY AND BY DAY OF WEEK (HRDOW7) *

SOURCE ID = A0000019 ; SOURCE TYPE = AREA :

HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR	HOUR	SCALAR

DAY OF WEEK = MONDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01
14 .1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = TUESDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01
14 .1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = WEDNESDY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01
14 .1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = THURSDAY

1 .0000E+00 2 .0000E+00 3 .0000E+00 4 .0000E+00 5 .0000E+00
6 .0000E+00 7 .0000E+00 8 .1000E+01
9 .1000E+01 10 .1000E+01 11 .1000E+01 12 .1000E+01 13 .1000E+01
14 .1000E+01 15 .1000E+01 16 .0000E+00
17 .0000E+00 18 .0000E+00 19 .0000E+00 20 .0000E+00 21 .0000E+00
22 .0000E+00 23 .0000E+00 24 .0000E+00

DAY OF WEEK = FRIDAY

```
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .1000E+01
    9  .1000E+01   10  .1000E+01   11  .1000E+01   12  .1000E+01   13  .1000E+01
14  .1000E+01   15  .1000E+01   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00

                                              DAY OF WEEK = SATURDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00

                                              DAY OF WEEK = SUNDAY
    1  .0000E+00    2  .0000E+00    3  .0000E+00    4  .0000E+00    5  .0000E+00
6  .0000E+00    7  .0000E+00    8  .0000E+00
    9  .0000E+00   10  .0000E+00   11  .0000E+00   12  .0000E+00   13  .0000E+00
14  .0000E+00   15  .0000E+00   16  .0000E+00
   17  .0000E+00   18  .0000E+00   19  .0000E+00   20  .0000E+00   21  .0000E+00
22  .0000E+00   23  .0000E+00   24  .0000E+00
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                                       *** GRIDDED RECEPTOR NETWORK SUMMARY ***

                                     *** NETWORK ID: UCART1   ;  NETWORK TYPE: GRIDCART
***

                                         *** X-COORDINATES OF GRID ***
                                                   (METERS)

       407512.3,  407565.5,  407618.6,  407671.7,  407724.9,  407778.0,  407831.1,
407884.2,  407937.4,  407990.5,
       408043.6,  408096.8,  408149.9,  408203.0,  408256.2,  408309.3,  408362.4,
408415.5,  408468.7,  408521.8,
       408574.9,  408628.1,  408681.2,  408734.3,  408787.5,  408840.6,  408893.7,
408946.8,  409000.0,  409053.1,
       409106.2,  409159.4,  409212.5,  409265.6,  409318.8,  409371.9,  409425.0,
409478.1,  409531.3,  409584.4,


                                         *** Y-COORDINATES OF GRID ***
                                                   (METERS)

      3736708.3, 3736750.2, 3736792.1, 3736834.0, 3736875.9, 3736917.9, 3736959.8,
```

3737001.7, 3737043.6, 3737085.5,
      3737127.5, 3737169.4, 3737211.3, 3737253.2, 3737295.1, 3737337.1, 3737379.0,
3737420.9, 3737462.8, 3737504.7,
      3737546.7, 3737588.6, 3737630.5, 3737672.4, 3737714.3, 3737756.3, 3737798.2,
3737840.1, 3737882.0, 3737923.9,
      3737965.9, 3738007.8, 3738049.7, 3738091.6, 3738133.5, 3738175.5, 3738217.4,
3738259.3, 3738301.2, 3738343.1,

 *** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

                                 *** NETWORK ID: UCART1   ; NETWORK TYPE: GRIDCART
***

                                                 * ELEVATION HEIGHTS IN METERS *

    Y-COORD | X-COORD (METERS)
    (METERS) | 407512.33   407565.46   407618.59   407671.72   407724.85
407777.98   407831.11   407884.24   407937.37
 -
- -

  3738343.14 | 17.60   17.00   17.10   16.30   17.30
   17.40   17.50   17.70   17.80
  3738301.22 | 17.50   17.60   15.00   17.50   17.40
   17.60   17.80   18.00   18.10
  3738259.30 | 17.50   14.70   17.00   17.30   17.30
   17.60   17.70   18.00   18.10
  3738217.38 | 15.50   16.60   17.20   17.40   17.30
   17.50   17.50   17.80   17.80
  3738175.46 | 17.40   16.70   17.20   17.40   17.70
   17.80   17.90   19.00   18.70
  3738133.54 | 17.30   16.80   17.20   17.20   17.30
   17.40   17.50   19.10   18.60
  3738091.62 | 17.30   16.90   17.20   17.30   17.90
   17.90   17.80   17.30   17.40
  3738049.70 | 17.20   17.10   17.20   17.30   17.30
   17.60   17.70   18.00   17.20
  3738007.78 | 17.20   17.20   17.30   17.50   16.90
   18.10   18.60   18.00   17.40
  3737965.86 | 17.10   17.30   17.50   17.50   17.30
   18.20   18.20   17.60   17.30
  3737923.94 | 17.10   17.00   17.10   17.10   17.60
   17.70   18.10   17.30   17.00
  3737882.02 | 17.00   16.70   16.80   17.10   17.30

 17.40 17.40 17.10 16.80
3737840.10 | 16.90 17.00 16.70 16.90 16.70
 16.50 16.90 16.60 17.10
3737798.18 | 16.80 17.10 16.80 16.90 16.80
 16.60 17.10 16.70 17.00
3737756.26 | 16.60 16.80 16.20 16.70 16.90
 17.30 17.10 16.80 17.00
3737714.34 | 16.30 16.70 16.30 16.70 16.80
 17.30 17.10 16.60 17.00
3737672.42 | 16.20 15.80 16.30 16.70 16.70
 16.60 17.10 16.50 16.80
3737630.50 | 15.90 16.10 16.70 16.40 17.20
 17.10 17.20 16.40 16.70
3737588.58 | 16.10 15.90 16.00 16.30 16.40
 16.70 16.80 16.30 16.50
3737546.66 | 16.20 16.10 16.00 16.40 16.30
 16.40 16.60 16.10 16.00
3737504.74 | 16.30 15.70 15.70 15.70 15.70
 15.60 15.60 15.70 15.80
3737462.82 | 16.00 15.70 16.00 16.20 16.00
 15.90 15.80 15.70 15.90
3737420.90 | 15.90 15.50 15.80 16.00 16.00
 15.90 15.80 15.70 15.90
3737378.98 | 15.80 15.00 15.00 15.10 15.20
 15.30 15.30 15.40 15.80
3737337.06 | 15.70 14.90 14.80 14.80 15.00
 15.10 15.10 15.30 15.80
3737295.14 | 15.60 20.50 20.20 19.00 17.80
 17.00 16.20 16.00 22.10
3737253.22 | 17.50 23.90 24.80 24.70 24.60
 24.50 24.40 24.20 24.10
3737211.30 | 15.30 14.80 15.30 16.20 19.30
 22.40 23.90 23.90 23.60
3737169.38 | 15.10 14.70 14.60 14.80 15.00
 15.30 15.40 15.20 22.20
3737127.46 | 14.90 14.70 14.50 15.10 15.10
 15.20 15.30 15.20 15.50
3737085.54 | 14.80 14.70 14.40 15.00 14.90
 15.30 15.20 15.00 15.60
3737043.62 | 14.60 14.70 14.40 14.90 14.80
 15.00 15.10 15.00 15.30
3737001.70 | 14.60 14.60 14.30 14.90 14.80
 15.00 15.10 14.90 15.30
3736959.78 | 14.50 14.50 14.30 14.40 14.50
 14.60 14.70 14.80 15.40
3736917.86 | 14.40 14.60 14.20 14.70 14.90
 15.10 15.10 14.90 15.40
3736875.94 | 14.40 14.50 14.10 14.60 14.70
 14.90 14.90 15.30 15.10
3736834.02 | 14.30 14.50 14.10 14.60 14.60

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS)				
	407990.50	408043.63	408096.76	408149.89	408203.02
408256.15	408309.28	408362.41	408415.54		
3738343.14	18.00	18.10	18.50	18.80	18.90
18.90	19.10	19.20	19.20		
3738301.22	18.30	18.10	18.60	18.60	18.80
18.70	18.80	18.80	18.90		
3738259.30	18.20	18.50	18.40	17.70	17.80
18.10	18.20	18.30	18.70		
3738217.38	18.00	18.20	18.40	17.80	18.30
19.00	18.90	18.40	18.80		
3738175.46	18.60	18.90	18.40	17.90	18.40
19.10	18.80	18.60	18.80		
3738133.54	18.60	18.80	18.40	18.00	18.20
18.50	18.60	18.60	18.80		
3738091.62	17.90	17.70	18.20	18.20	18.40
18.50	18.40	18.30	18.40		
3738049.70	17.40	17.60	18.00	17.70	18.00
18.10	18.10	18.00	18.20		
3738007.78	17.40	17.70	17.70	17.70	17.70
17.90	17.80	18.00	18.20		
3737965.86	17.30	17.90	17.50	17.70	17.50
17.60	17.80	18.00	18.00		
3737923.94	16.90	17.30	17.20	17.00	17.20
17.30	17.50	17.70	17.80		
3737882.02	17.10	17.50	17.20	17.40	17.40
17.20	17.50	17.70	17.70		

3737840.10 | 16.90 17.10 17.10 17.40 17.20
17.10 17.50 17.50 17.30
3737798.18 | 16.80 17.30 16.90 17.20 17.20
17.00 17.30 17.20 17.10
3737756.26 | 16.70 17.00 16.90 17.00 17.30
16.90 17.00 17.00 16.90
3737714.34 | 16.50 16.80 16.70 17.00 17.00
16.80 16.70 16.70 16.80
3737672.42 | 16.40 16.80 16.70 16.90 17.60
17.50 17.20 16.80 16.80
3737630.50 | 16.20 16.80 16.50 16.30 17.40
16.60 17.20 17.20 17.20
3737588.58 | 16.10 16.80 16.20 16.10 17.00
16.90 16.50 16.60 17.30
3737546.66 | 16.30 16.60 16.30 16.60 16.60
16.80 16.80 17.00 17.00
3737504.74 | 16.00 16.20 16.10 16.00 16.30
16.60 16.80 16.70 16.70
3737462.82 | 16.60 16.60 16.00 16.30 16.50
16.40 16.90 17.00 16.60
3737420.90 | 16.50 17.00 16.10 16.80 16.60
16.10 16.90 16.50 16.50
3737378.98 | 16.20 18.00 16.20 16.40 16.40
16.10 16.40 16.40 16.80
3737337.06 | 19.90 20.30 16.50 17.50 16.70
15.80 16.40 16.30 16.70
3737295.14 | 21.40 21.10 16.60 16.10 18.50
16.90 16.30 16.60 16.50
3737253.22 | 24.00 23.80 17.20 20.70 21.50
16.30 17.30 16.30 16.20
3737211.30 | 24.00 24.00 19.50 20.80 22.20
20.90 19.50 18.30 17.70
3737169.38 | 16.70 20.00 17.50 16.70 20.90
18.30 16.80 17.10 17.30
3737127.46 | 22.20 18.20 17.50 16.70 16.50
16.50 16.60 16.00 16.60
3737085.54 | 15.40 20.30 17.70 16.90 17.50
17.10 16.30 16.20 16.40
3737043.62 | 15.30 15.20 15.30 16.90 16.60
16.40 16.20 16.00 16.00
3737001.70 | 15.30 15.30 14.80 15.60 16.70
16.10 16.20 16.20 16.20
3736959.78 | 15.30 15.30 14.80 15.60 16.30
16.20 15.90 15.80 15.90
3736917.86 | 15.30 15.30 14.80 15.60 16.30
16.20 15.70 15.70 16.30
3736875.94 | 15.30 15.30 14.90 15.60 16.10
16.30 15.80 15.60 16.30
3736834.02 | 15.30 15.30 14.80 15.30 15.90
16.00 15.80 15.70 16.00

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS)								
	408468.67	408521.80	408574.93	408628.06	408681.19	408734.32	408787.45	408840.58	408893.71
3738343.14	19.30	19.40	19.50	19.70	19.60	19.80	19.90	20.10	20.20
3738301.22	19.20	19.50	19.50	19.50	19.90	20.30	20.30	20.50	20.20
3738259.30	19.00	19.20	19.50	19.60	18.90	19.00	19.10	19.40	20.10
3738217.38	18.80	19.10	19.30	19.50	18.70	19.10	19.10	19.40	20.00
3738175.46	18.90	19.30	19.20	19.50	18.50	18.70	18.80	19.40	19.80
3738133.54	18.90	19.40	19.40	19.10	18.40	18.90	18.80	19.20	19.60
3738091.62	18.50	17.90	18.50	18.30	18.30	18.50	18.50	19.00	19.30
3738049.70	18.40	17.80	18.50	18.30	18.20	18.70	18.80	19.10	19.10
3738007.78	18.00	17.70	17.40	18.20	18.10	18.20	18.20	18.90	18.90
3737965.86	17.90	17.70	18.40	18.20	18.00	18.60	18.60	18.90	18.60
3737923.94	17.70	17.40	17.60	17.70	17.70	17.90	18.00	18.20	18.30
3737882.02	17.70	17.90	17.90	18.10	18.10	18.20	18.30	18.60	18.30
3737840.10	17.40	17.70	17.30	17.60	17.90

 17.60 17.90 18.40 18.10
3737798.18 | 17.20 17.60 17.30 17.70 17.80
 17.70 17.90 18.30 18.00
3737756.26 | 17.10 17.50 17.30 17.60 17.70
 17.60 17.90 18.20 17.80
3737714.34 | 16.90 17.00 17.10 17.20 17.30
 17.40 17.50 17.70 17.70
3737672.42 | 16.90 16.60 16.70 16.80 17.00
 17.10 17.30 17.50 17.60
3737630.50 | 16.90 17.20 17.30 17.30 17.20
 17.60 17.70 17.90 17.80
3737588.58 | 16.80 16.70 16.60 16.70 16.90
 17.10 17.20 17.40 17.90
3737546.66 | 17.00 16.60 17.20 17.50 17.50
 17.70 17.90 18.10 17.90
3737504.74 | 16.90 17.10 17.30 17.10 17.30
 17.30 17.50 17.60 17.80
3737462.82 | 17.00 17.70 17.80 17.40 17.80
 17.30 17.60 17.70 17.90
3737420.90 | 16.80 17.40 17.50 17.20 17.50
 17.50 17.90 17.70 18.10
3737378.98 | 16.90 17.00 16.80 17.50 17.50
 17.30 17.80 17.60 18.10
3737337.06 | 16.70 17.00 16.70 17.40 17.30
 17.30 17.90 17.50 17.90
3737295.14 | 16.50 17.00 16.90 17.30 17.10
 17.20 17.60 17.50 18.00
3737253.22 | 16.20 16.80 16.80 17.50 17.60
 17.30 17.50 17.50 18.10
3737211.30 | 17.60 17.60 17.50 16.60 17.30
 17.00 17.40 17.40 17.90
3737169.38 | 17.50 17.70 17.90 18.00 18.20
 18.40 19.00 19.90 20.90
3737127.46 | 16.50 16.70 16.80 16.90 17.30
 17.10 17.30 18.10 20.00
3737085.54 | 16.60 16.60 16.80 16.90 16.70
 17.10 17.30 17.50 17.30
3737043.62 | 16.10 16.20 16.40 16.60 16.70
 17.20 16.90 17.20 17.20
3737001.70 | 16.40 16.40 16.50 16.90 16.70
 16.90 16.80 17.20 16.90
3736959.78 | 16.00 16.30 16.30 16.70 16.60
 17.10 16.70 17.10 16.90
3736917.86 | 16.00 16.50 16.60 16.30 16.40
 16.30 16.70 17.00 16.80
3736875.94 | 15.80 16.50 16.10 16.70 16.30
 16.60 16.70 17.10 16.80
3736834.02 | 15.70 16.20 16.40 16.20 16.40
 16.80 16.50 17.10 16.70
3736792.10 | 15.70 16.10 16.40 16.10 16.50

| Y-COORD (METERS) | X-COORD (METERS) | | |

3737798.18 | 18.20 18.30 18.40 18.80 19.00
19.80 19.60 19.70 20.10
3737756.26 | 18.10 18.20 18.70 18.70 19.00
19.00 19.40 19.50 19.70
3737714.34 | 18.10 18.10 18.40 18.60 18.80
19.00 19.20 20.00 20.00
3737672.42 | 18.20 18.20 18.50 18.60 19.00
19.20 19.40 19.30 19.30
3737630.50 | 18.30 18.30 18.80 18.80 19.10
19.50 19.50 19.60 19.90
3737588.58 | 18.20 18.20 18.60 18.80 19.00
19.20 19.60 19.80 19.70
3737546.66 | 18.10 18.30 18.80 18.70 19.10
19.20 19.60 19.50 19.70
3737504.74 | 18.20 18.30 18.60 18.80 18.80
19.00 19.20 19.40 19.60
3737462.82 | 18.10 18.40 18.50 18.90 18.80
19.70 19.30 19.70 20.00
3737420.90 | 18.00 18.50 18.90 18.80 18.70
19.40 19.10 19.50 20.10
3737378.98 | 18.00 18.40 18.80 18.80 18.40
18.60 19.00 19.50 19.60
3737337.06 | 17.90 18.40 18.50 18.60 18.50
19.10 19.10 19.20 19.20
3737295.14 | 17.90 18.30 18.40 18.70 18.50
18.60 18.90 19.00 19.60
3737253.22 | 17.70 18.30 19.00 18.80 18.20
18.60 18.80 19.10 19.00
3737211.30 | 17.70 18.20 18.90 18.60 18.10
18.60 18.90 19.50 19.10
3737169.38 | 22.40 22.60 21.50 18.50 18.00
18.30 18.30 19.30 19.40
3737127.46 | 20.20 20.80 23.70 25.00 21.80
20.40 18.20 19.00 19.00
3737085.54 | 17.80 18.30 18.00 18.60 20.10
25.40 25.60 19.00 19.90
3737043.62 | 17.80 18.20 18.30 18.20 17.90
19.10 24.70 25.90 18.70
3737001.70 | 18.10 18.40 18.00 17.70 17.90
18.10 18.10 24.30 25.60
3736959.78 | 18.00 18.50 18.30 17.80 17.80
17.70 18.40 18.30 24.20
3736917.86 | 18.00 17.90 17.80 18.00 17.50
17.60 18.10 18.00 18.40
3736875.94 | 17.10 17.20 17.40 17.80 17.50
18.00 18.00 18.00 18.50
3736834.02 | 17.00 17.10 17.30 17.60 17.60
17.70 18.00 17.80 18.40
3736792.10 | 16.80 17.10 17.60 17.70 17.40
17.60 17.60 17.80 18.10

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* ELEVATION HEIGHTS IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 409425.01	409478.14	409531.27	409584.40
3736750.18	16.80	17.10	17.60	17.30	17.40
	17.70	17.80	17.90	18.00	
3736708.26	16.60	16.70	16.80	17.00	16.90
	17.30	17.40	17.60	17.80	
3738343.14	21.80	22.30	22.20	22.60	
3738301.22	22.10	22.20	22.00	22.40	
3738259.30	21.20	21.50	21.70	21.80	
3738217.38	21.10	21.30	21.10	21.30	
3738175.46	20.90	21.20	20.90	21.60	
3738133.54	20.90	21.10	20.80	21.40	
3738091.62	20.80	21.10	20.80	21.30	
3738049.70	20.70	20.90	21.10	21.40	
3738007.78	20.70	20.80	20.90	21.20	
3737965.86	20.60	20.70	20.60	20.90	
3737923.94	20.70	20.80	20.60	20.70	
3737882.02	20.20	20.30	20.50	20.60	
3737840.10	20.60	20.50	20.40	20.50	
3737798.18	20.20	20.50	20.40	20.40	
3737756.26	19.90	20.10	20.30	20.30	
3737714.34	20.10	20.40	20.00	20.10	
3737672.42	19.40	19.60	19.70	19.90	
3737630.50	20.00	20.00	20.60	20.70	
3737588.58	20.00	20.10	20.30	20.50	
3737546.66	19.90	19.90	20.20	20.30	
3737504.74	19.70	19.90	20.10	20.40	
3737462.82	19.90	20.40	20.30	20.10	
3737420.90	19.20	19.70	20.00	20.20	
3737378.98	19.30	19.70	19.90	19.90	
3737337.06	19.20	19.50	20.00	20.00	
3737295.14	19.00	19.50	19.60	20.00	
3737253.22	18.70	19.10	19.60	20.00	
3737211.30	19.50	19.50	19.70	19.80	

  3738343.14 | 17.60   17.00   17.10   17.70   17.30
   17.40   17.50   17.70   17.80
  3738301.22 | 17.50   17.60   17.70   17.50   17.40
   17.60   17.80   18.00   18.10
  3738259.30 | 17.50   17.80   17.00   17.30   17.30
   17.60   17.70   18.00   18.10
  3738217.38 | 17.70   16.60   17.20   17.40   17.30
   17.50   17.50   17.80   17.80
  3738175.46 | 17.40   16.70   17.20   17.40   17.70
   17.80   17.90   19.00   18.70
  3738133.54 | 17.30   16.80   17.20   17.20   17.30
   17.40   17.50   19.10   18.60
  3738091.62 | 17.30   16.90   17.20   17.30   17.90
   17.90   17.80   17.30   17.40
  3738049.70 | 17.20   17.10   17.20   17.30   17.30
   17.60   17.70   18.00   17.20
  3738007.78 | 17.20   17.20   17.30   17.50   16.90
   18.10   18.60   18.00   17.40
  3737965.86 | 17.10   17.30   17.50   17.50   17.30

 18.20 18.20 17.60 17.30
3737923.94 | 17.10 17.00 17.10 17.10 17.60
 17.70 18.10 17.30 17.00
3737882.02 | 17.00 16.70 16.80 17.10 17.30
 17.40 17.40 17.10 16.80
3737840.10 | 16.90 17.00 16.70 16.90 16.70
 16.50 16.90 16.60 17.10
3737798.18 | 16.80 17.10 16.80 16.90 16.80
 16.60 17.10 16.70 17.00
3737756.26 | 16.60 16.80 16.20 16.70 16.90
 17.30 17.10 16.80 17.00
3737714.34 | 16.30 16.70 16.30 16.70 16.80
 17.30 17.10 16.60 17.00
3737672.42 | 16.20 15.80 16.30 16.70 16.70
 16.60 17.10 16.50 16.80
3737630.50 | 15.90 16.10 16.70 16.40 17.20
 17.10 17.20 16.40 16.70
3737588.58 | 16.10 15.90 16.00 16.30 16.40
 16.70 16.80 16.30 16.50
3737546.66 | 16.20 16.10 16.00 16.40 16.30
 16.40 16.60 16.10 16.00
3737504.74 | 16.30 15.70 15.70 15.70 15.70
 15.60 15.60 15.70 15.80
3737462.82 | 16.00 15.70 16.00 16.20 16.00
 15.90 15.80 15.70 15.90
3737420.90 | 15.90 15.50 15.80 16.00 16.00
 15.90 15.80 15.70 15.90
3737378.98 | 15.80 24.70 15.00 15.10 15.20
 15.30 15.30 15.40 15.80
3737337.06 | 25.20 25.00 25.00 25.00 24.70
 24.70 24.50 24.40 24.10
3737295.14 | 25.20 25.00 25.00 24.90 24.70
 24.70 24.60 24.50 22.10
3737253.22 | 25.20 25.00 24.80 24.70 24.60
 24.50 24.40 24.20 24.10
3737211.30 | 25.20 25.20 25.00 25.00 24.70
 24.30 23.90 23.90 23.60
3737169.38 | 25.20 25.00 25.00 24.90 24.70
 24.70 24.60 24.50 23.40
3737127.46 | 14.90 14.70 14.50 15.10 15.10
 15.20 23.80 23.80 23.70
3737085.54 | 14.80 14.70 14.40 15.00 14.90
 15.30 15.20 15.00 22.70
3737043.62 | 14.60 14.70 14.40 14.90 14.80
 15.00 15.10 15.00 15.30
3737001.70 | 14.60 14.60 14.30 14.90 14.80
 15.00 15.10 14.90 15.30
3736959.78 | 14.50 14.50 14.30 14.40 14.50
 14.60 14.70 14.80 15.40
3736917.86 | 14.40 14.60 14.20 14.70 14.90

*** NETWORK ID: UCART1   ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

| Y-COORD (METERS) | X-COORD (METERS) | | |

3737923.94 | 16.90 17.30 17.20 17.00 17.20
17.30 17.50 17.70 17.80
3737882.02 | 17.10 17.50 17.20 17.40 17.40
17.20 17.50 17.70 17.70
3737840.10 | 16.90 17.10 17.10 17.40 17.20
17.10 17.50 17.50 17.30
3737798.18 | 16.80 17.30 16.90 17.20 17.20
17.00 17.30 17.20 17.10
3737756.26 | 16.70 17.00 16.90 17.00 17.30
16.90 17.00 17.00 16.90
3737714.34 | 16.50 16.80 16.70 17.00 17.00
16.80 16.70 16.70 16.80
3737672.42 | 16.40 16.80 16.70 16.90 17.60
17.50 17.20 16.80 16.80
3737630.50 | 16.20 16.80 16.50 16.30 17.40
16.60 17.20 17.20 17.20
3737588.58 | 16.10 16.80 16.20 16.10 17.00
16.90 16.50 16.60 17.30
3737546.66 | 16.30 16.60 16.30 16.60 16.60
16.80 16.80 17.00 17.00
3737504.74 | 16.00 16.20 16.10 16.00 16.30
16.60 16.80 16.70 16.70
3737462.82 | 16.60 16.60 16.00 16.30 16.50
16.40 16.90 17.00 16.60
3737420.90 | 16.50 17.00 16.10 16.80 16.60
16.10 16.90 16.50 16.50
3737378.98 | 19.60 18.00 16.20 16.40 16.40
16.10 16.40 16.40 16.80
3737337.06 | 19.90 20.30 16.50 17.50 19.70
17.30 16.40 16.30 16.70
3737295.14 | 21.40 21.10 24.20 22.90 20.10
21.10 16.30 16.60 16.50
3737253.22 | 24.00 23.80 24.30 22.70 21.50
21.80 17.30 16.30 16.20
3737211.30 | 24.00 24.00 24.20 23.10 22.20
20.90 19.50 18.30 17.70
3737169.38 | 24.30 24.00 24.20 23.10 21.30
20.80 19.80 17.10 17.30
3737127.46 | 22.20 23.10 17.50 16.70 21.30
17.80 16.60 16.00 16.60
3737085.54 | 23.10 20.30 18.30 16.90 17.50
17.10 16.30 16.20 16.40
3737043.62 | 21.80 21.30 19.80 16.90 16.60
16.40 16.20 16.00 16.00
3737001.70 | 15.30 15.30 14.80 15.60 16.70
16.10 16.20 16.20 16.20
3736959.78 | 15.30 15.30 14.80 15.60 16.30
16.20 15.90 15.80 15.90
3736917.86 | 15.30 15.30 14.80 15.60 16.30
16.20 15.70 15.70 16.30

3736875.94 | 15.30 15.30 14.90 15.60 16.10
 16.30 15.80 15.60 16.30
3736834.02 | 15.30 15.30 14.80 15.30 15.90
 16.00 15.80 15.70 16.00
3736792.10 | 15.30 15.30 14.70 15.00 15.40
 16.00 16.30 15.50 15.90
3736750.18 | 15.10 14.90 14.80 15.10 15.60
 15.70 16.00 15.60 15.70
3736708.26 | 14.70 14.70 14.80 15.00 15.10
 15.10 15.60 15.60 15.40
*** AERMOD - VERSION 23132 *** *** C:\Lakes\AERMOD View\24-073_Coast St Con\24-073_Coast St Con.isc *** 06/03/25
*** AERMET - VERSION 16216 *** ***
*** 20:32:06

PAGE 33
*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS) | X-COORD (METERS)
408468.67 408521.80 408574.93 408628.06 408681.19 408734.32 408787.45 408840.58 408893.71
- - - -

 17.90   18.00   18.20   18.30
3737882.02 | 17.70   17.90   17.90   18.10   18.10
 18.20   18.30   18.60   18.30
3737840.10 | 17.40   17.70   17.30   17.60   17.90
 17.60   17.90   18.40   18.10
3737798.18 | 17.20   17.60   17.30   17.70   17.80
 17.70   17.90   18.30   18.00
3737756.26 | 17.10   17.50   17.30   17.60   17.70
 17.60   17.90   18.20   17.80
3737714.34 | 16.90   17.00   17.10   17.20   17.30
 17.40   17.50   17.70   17.70
3737672.42 | 16.90   16.60   16.70   16.80   17.00
 17.10   17.30   17.50   17.60
3737630.50 | 16.90   17.20   17.30   17.30   17.20
 17.60   17.70   17.90   17.80
3737588.58 | 16.80   16.70   16.60   16.70   16.90
 17.10   17.20   17.40   17.90
3737546.66 | 17.00   16.60   17.20   17.50   17.50
 17.70   17.90   18.10   17.90
3737504.74 | 16.90   17.10   17.30   17.10   17.30
 17.30   17.50   17.60   17.80
3737462.82 | 17.00   17.70   17.80   17.40   17.80
 17.30   17.60   17.70   17.90
3737420.90 | 16.80   17.40   17.50   17.20   17.50
 17.50   17.90   17.70   18.10
3737378.98 | 16.90   17.00   16.80   17.50   17.50
 17.30   17.80   17.60   18.10
3737337.06 | 16.70   17.00   16.70   17.40   17.30
 17.30   17.90   17.50   17.90
3737295.14 | 16.50   17.00   16.90   17.30   17.10
 17.20   17.60   17.50   18.00
3737253.22 | 16.20   16.80   16.80   17.50   17.60
 17.30   17.50   17.50   18.10
3737211.30 | 17.60   17.60   17.50   17.90   17.30
 17.00   17.40   17.40   17.90
3737169.38 | 17.50   17.70   17.90   18.00   18.20
 18.40   19.00   19.90   20.90
3737127.46 | 16.50   16.70   16.80   16.90   17.30
 17.10   17.30   20.10   20.00
3737085.54 | 16.60   16.60   16.80   16.90   16.70
 17.10   17.30   17.50   17.30
3737043.62 | 16.10   16.20   16.40   16.60   16.70
 17.20   16.90   17.20   17.20
3737001.70 | 16.40   16.40   16.50   16.90   16.70
 16.90   16.80   17.20   16.90
3736959.78 | 16.00   16.30   16.30   16.70   16.60
 17.10   16.70   17.10   16.90
3736917.86 | 16.00   16.50   16.60   16.30   16.40
 16.30   16.70   17.00   16.80
3736875.94 | 15.80   16.50   16.10   16.70   16.30

16.60 16.70 17.10 16.80
3736834.02 | 15.70 16.20 16.40 16.20 16.40
16.80 16.50 17.10 16.70
3736792.10 | 15.70 16.10 16.40 16.10 16.50
16.40 16.70 17.00 16.60
3736750.18 | 15.70 16.10 16.20 16.00 16.30
16.60 16.60 16.90 16.60
3736708.26 | 15.60 15.70 15.60 15.70 15.90
16.00 16.20 16.30 16.40
↟ *** AERMOD - VERSION 23132 *** *** C:\Lakes\AERMOD View\24-073_Coast St Con\24-073_Coast St Con.isc *** 06/03/25
*** AERMET - VERSION 16216 *** ***
*** 20:32:06

PAGE 34
*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD | X-COORD (METERS)
(METERS) | 408946.84 408999.97 409053.10 409106.23 409159.36 409212.49 409265.62 409318.75 409371.88
- - - -

3737882.02 | 19.10 18.80 19.00 19.10 19.80
19.60 20.00 19.90 19.90
3737840.10 | 18.50 18.30 18.70 18.90 19.10
19.80 20.00 20.20 20.30
3737798.18 | 18.20 18.30 18.40 18.80 19.00
19.80 19.60 19.70 20.10
3737756.26 | 18.10 18.20 18.70 18.70 19.00
19.00 19.40 19.50 19.70
3737714.34 | 18.10 18.10 18.40 18.60 18.80
19.00 19.20 20.00 20.00
3737672.42 | 18.20 18.20 18.50 18.60 19.00
19.20 19.40 19.30 19.30
3737630.50 | 18.30 18.30 18.80 18.80 19.10
19.50 19.50 19.60 19.90
3737588.58 | 18.20 18.20 18.60 18.80 19.00
19.20 19.60 19.80 19.70
3737546.66 | 18.10 18.30 18.80 18.70 19.10
19.20 19.60 19.50 19.70
3737504.74 | 18.20 18.30 18.60 18.80 18.80
19.00 19.20 19.40 19.60
3737462.82 | 18.10 18.40 18.50 18.90 18.80
19.70 19.30 19.70 20.00
3737420.90 | 18.00 18.50 18.90 18.80 18.70
19.40 19.10 19.50 20.10
3737378.98 | 18.00 18.40 18.80 18.80 18.40
18.60 19.00 19.50 19.60
3737337.06 | 17.90 18.40 18.50 18.60 18.50
19.10 19.10 19.20 19.20
3737295.14 | 17.90 18.30 18.40 18.70 18.50
18.60 18.90 19.00 19.60
3737253.22 | 17.70 18.30 19.00 18.80 18.20
18.60 18.80 19.10 19.00
3737211.30 | 23.40 24.80 25.30 26.10 26.10
18.60 18.90 19.50 19.10
3737169.38 | 22.40 24.00 25.50 26.10 26.60
26.60 26.60 19.30 19.40
3737127.46 | 21.70 23.50 23.70 25.00 26.60
26.60 26.60 26.50 19.00
3737085.54 | 17.80 18.30 25.40 26.30 26.60
25.40 26.50 26.50 26.40
3737043.62 | 17.80 18.20 18.30 24.40 26.60
26.60 24.70 25.90 26.40
3737001.70 | 18.10 18.40 18.00 17.70 17.90
25.10 26.40 24.30 25.60
3736959.78 | 18.00 18.50 18.30 17.80 17.80
17.70 18.40 26.20 24.20
3736917.86 | 18.00 17.90 17.80 18.00 17.50
17.60 18.10 18.00 25.90
3736875.94 | 17.10 17.20 17.40 17.80 17.50
18.00 18.00 18.00 24.80

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

* HILL HEIGHT SCALES IN METERS *

Y-COORD (METERS)	X-COORD (METERS) 409425.01	409478.14	409531.27	409584.40
3738343.14	21.80	22.30	22.20	22.60
3738301.22	22.10	22.20	22.00	22.40
3738259.30	21.20	21.50	21.70	21.80
3738217.38	21.10	21.30	21.10	21.30
3738175.46	20.90	21.20	20.90	21.60
3738133.54	20.90	21.10	20.80	21.40
3738091.62	20.80	21.10	20.80	21.30
3738049.70	20.70	20.90	21.10	21.40
3738007.78	20.70	20.80	20.90	21.20
3737965.86	20.60	20.70	20.60	20.90
3737923.94	20.70	20.80	20.60	20.70
3737882.02	20.20	20.30	20.50	20.60
3737840.10	20.60	20.50	20.40	20.50
3737798.18	20.20	20.50	20.40	20.40
3737756.26	19.90	20.10	20.30	20.30
3737714.34	20.10	20.40	20.00	20.10
3737672.42	19.40	19.60	19.70	19.90
3737630.50	20.00	20.00	20.60	20.70
3737588.58	20.00	20.10	20.30	20.50
3737546.66	19.90	19.90	20.20	20.30
3737504.74	19.70	19.90	20.10	20.40
3737462.82	19.90	20.40	20.30	20.10
3737420.90	19.20	19.70	20.00	20.20
3737378.98	19.30	19.70	19.90	19.90

3737337.06	19.20	19.50	20.00	20.00
3737295.14	19.00	19.50	19.60	20.00
3737253.22	18.70	19.10	19.60	20.00
3737211.30	19.50	19.50	19.70	19.80
3737169.38	19.40	19.70	19.40	19.20
3737127.46	19.40	19.10	19.60	19.30
3737085.54	20.00	19.80	19.30	19.10
3737043.62	26.10	20.30	19.70	19.10
3737001.70	26.20	25.80	19.20	18.90
3736959.78	25.60	25.90	18.70	18.70
3736917.86	24.90	25.10	25.40	18.80
3736875.94	25.40	25.20	25.20	25.30
3736834.02	25.30	26.00	25.30	25.80
3736792.10	18.60	26.00	26.20	25.30
3736750.18	18.00	26.00	27.00	26.90
3736708.26	17.90	17.90	27.00	27.00

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** DISCRETE CARTESIAN RECEPTORS ***
(X-COORD, Y-COORD, ZELEV, ZHILL, ZFLAG)
(METERS)

(408366.4, 3737485.4, 17.0, 17.0, 0.0); (408430.1, 3737461.1, 16.7, 16.7, 0.0);
(408182.0, 3737466.7, 16.8, 16.8, 0.0); (408150.1, 3737412.7, 16.9, 16.9, 0.0);
(408109.6, 3737456.3, 16.4, 16.4, 0.0); (408217.5, 3737471.7, 16.8, 16.8, 0.0);
(408016.8, 3737435.5, 16.4, 16.4, 0.0); (408279.9, 3737472.8, 16.6, 16.6, 0.0);
(408798.6, 3737545.0, 17.9, 17.9, 0.0); (408676.1, 3737499.8, 17.5, 17.5, 0.0);
(407927.2, 3737488.1, 15.9, 15.9, 0.0); (407852.9, 3737488.8, 15.7, 15.7, 0.0);
(408566.6, 3737551.5, 17.1, 17.1, 0.0); (408261.4, 3737558.8, 17.0, 17.0, 0.0);
(408120.7, 3737439.8, 16.6, 16.6, 0.0); (408512.1, 3737495.1, 17.2, 17.2, 0.0);
(408510.1, 3737484.4, 17.2, 17.2, 0.0); (408511.4, 3737471.8, 17.3, 17.3, 0.0);
(408511.6, 3737457.3, 17.4, 17.4, 0.0); (408356.3, 3737407.9, 16.5, 16.5, 0.0);
(408511.6, 3737446.6, 17.4, 17.4, 0.0); (408511.1, 3737433.2, 17.3, 17.3, 0.0);

```
     ( 408327.2, 3737479.2,      16.8,      16.8,       0.0);         ( 408329.7,
3737416.6,      16.7,      16.7,       0.0);
     ( 408387.6, 3737478.2,      17.0,      17.0,       0.0);         ( 408407.5,
3737476.5,      16.7,      16.7,       0.0);
     ( 408293.5, 3737546.4,      16.5,      16.5,       0.0);         ( 408183.2,
3737543.0,      16.8,      16.8,       0.0);
     ( 408402.1, 3737553.9,      17.1,      17.1,       0.0);         ( 408440.7,
3737412.3,      16.7,      16.7,       0.0);
     ( 408407.3, 3737393.6,      16.7,      16.7,       0.0);         ( 408359.4,
3737391.6,      16.4,      16.4,       0.0);
     ( 408512.3, 3737400.0,      17.0,      17.0,       0.0);         ( 408481.6,
3737390.1,      16.9,      16.9,       0.0);
     ( 408443.7, 3737538.9,      17.0,      17.0,       0.0);         ( 408503.6,
3737538.9,      16.8,      16.8,       0.0);
     ( 408367.2, 3737603.9,      17.1,      17.1,       0.0);         ( 408324.8,
3737606.2,      17.0,      17.0,       0.0);
     ( 408547.3, 3737413.0,      17.2,      17.2,       0.0);         ( 408327.5,
3737398.9,      16.5,      16.5,       0.0);
 *** AERMOD - VERSION 23132  ***   *** C:\Lakes\AERMOD View\24-073_Coast St
Con\24-073_Coast St Con.isc     ***        06/03/25
 *** AERMET - VERSION  16216 ***   ***
                       ***        20:32:06

                                   PAGE  37
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                                          *** METEOROLOGICAL DAYS SELECTED FOR
PROCESSING ***
                                                                (1=YES; 0=NO)

           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1   1 1 1
1 1 1 1 1 1 1   1 1 1 1 1 1 1 1 1 1
           1 1 1 1 1 1 1 1 1 1   1 1 1 1 1 1

               NOTE:  METEOROLOGICAL DATA ACTUALLY PROCESSED WILL ALSO DEPEND ON
WHAT IS INCLUDED IN THE DATA FILE.
```

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** UP TO THE FIRST 24 HOURS OF METEOROLOGICAL DATA ***

Surface file: ..\..\Met Files\KFUL_V9_ADJU\KFUL_v9.SFC
Met Version: 16216
Profile file: ..\..\Met Files\KFUL_V9_ADJU\KFUL_v9.PFL

Surface format: FREE

Profile format: FREE

Surface station no.: 3166 Upper air station no.: 3190
Name: FULLERTON_MUNICIPAL_AIRPORT Name: UNKNOWN

Year: 2012 Year: 2012

First 24 hours of scalar data

YR	MO	DY	JDY	HR	H0	U*	W*	DT/DZ	ZICNV	ZIMCH	M-O LEN	Z0	BOWEN	ALBEDO	REF WS	WD	HT	REF TA	HT
12	01	01	1	01	-4.8	0.098	-9.000	-9.000	-999.	74.	18.0	0.26	2.61	1.00	0.96	322.	10.1	283.8	2.0
12	01	01	1	02	-1.9	0.072	-9.000	-9.000	-999.	47.	18.0	0.26	2.61	1.00	0.52	13.	10.1	283.1	2.0
12	01	01	1	03	-3.1	0.083	-9.000	-9.000	-999.	57.	16.3	0.26	2.61	1.00	0.75	73.	10.1	282.0	2.0
12	01	01	1	04	-4.3	0.094	-9.000	-9.000	-999.	69.	17.3	0.26	2.61	1.00	0.91	98.	10.1	281.4	2.0
12	01	01	1	05	-999.0	-9.000	-9.000	-9.000	-999.	-999.	-99999.0	0.26	2.61	1.00	0.00	0.	10.1	280.9	2.0
12	01	01	1	06	-2.1	0.074	-9.000	-9.000	-999.	48.	17.6	0.26	2.61	1.00	0.55	80.	10.1	280.4	2.0
12	01	01	1	07	-2.8	0.080	-9.000	-9.000	-999.	54.	16.3	0.26	2.61	1.00	0.69	201.	10.1	280.4	2.0

```
 12 01 01   1 08   -1.5  0.066 -9.000 -9.000 -999.   41.     17.0  0.26   2.61
0.54    0.52   72.   10.1  280.9    2.0
 12 01 01   1 09   37.4 -9.000 -9.000 -9.000   38. -999. -99999.0  0.26   2.61
0.31    0.00    0.   10.1  285.9    2.0
 12 01 01   1 10  109.1  0.151  0.713  0.008  121.  141.     -2.9  0.26   2.61
0.24    0.79  268.   10.1  289.9    2.0
 12 01 01   1 11  160.5  0.148  1.143  0.005  338.  136.     -1.8  0.26   2.61
0.21    0.70  273.   10.1  294.2    2.0
 12 01 01   1 12  186.9  0.156  1.483  0.005  634.  148.     -1.8  0.26   2.61
0.20    0.74  230.   10.1  297.5    2.0
 12 01 01   1 13  187.4  0.210  1.777  0.005 1088.  231.     -4.5  0.26   2.61
0.20    1.20  227.   10.1  300.4    2.0
 12 01 01   1 14  160.3  0.235  1.833  0.005 1395.  274.     -7.4  0.26   2.61
0.21    1.47  233.   10.1  300.9    2.0
 12 01 01   1 15  109.1  0.197  1.662  0.005 1527.  210.     -6.3  0.26   2.61
0.25    1.20  233.   10.1  302.0    2.0
 12 01 01   1 16   33.3  0.243  1.125  0.005 1548.  288.    -39.2  0.26   2.61
0.33    1.91  229.   10.1  298.1    2.0
 12 01 01   1 17   -9.1  0.141 -9.000 -9.000 -999.  132.     28.3  0.26   2.61
0.60    1.37  212.   10.1  294.2    2.0
 12 01 01   1 18   -4.3  0.094 -9.000 -9.000 -999.   69.     17.5  0.26   2.61
1.00    0.91  190.   10.1  292.0    2.0
 12 01 01   1 19   -2.8  0.079 -9.000 -9.000 -999.   54.     16.3  0.26   2.61
1.00    0.70  302.   10.1  289.2    2.0
 12 01 01   1 20   -4.0  0.091 -9.000 -9.000 -999.   65.     17.0  0.26   2.61
1.00    0.87  338.   10.1  288.1    2.0
 12 01 01   1 21   -6.3  0.113 -9.000 -9.000 -999.   91.     20.5  0.26   2.61
1.00    1.11  304.   10.1  287.0    2.0
 12 01 01   1 22   -3.1  0.082 -9.000 -9.000 -999.   57.     16.3  0.26   2.61
1.00    0.75   76.   10.1  285.4    2.0
 12 01 01   1 23   -2.4  0.076 -9.000 -9.000 -999.   50.     16.7  0.26   2.61
1.00    0.62  306.   10.1  284.9    2.0
 12 01 01   1 24   -3.6  0.087 -9.000 -9.000 -999.   62.     16.6  0.26   2.61
1.00    0.82  318.   10.1  283.8    2.0


 First hour of profile data
 YR MO DY HR HEIGHT F  WDIR    WSPD AMB_TMP sigmaA  sigmaW  sigmaV
 12 01 01 01   10.1 1  322.    0.96   283.8   99.0  -99.00  -99.00

 F indicates top of profile (=1) or below (=0)
 *** AERMOD - VERSION 23132  ***   *** C:\Lakes\AERMOD View\24-073_Coast St
Con\24-073_Coast St Con.isc     ***        06/03/25
 *** AERMET - VERSION  16216 ***   ***
                       ***        20:32:06

                                   PAGE  39
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                               *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION
```

VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): PAREA1 , A0000001
, A0000002 , A0000003 , A0000004 ,
A0000005 , A0000006 , A0000007 , A0000008 , A0000009
, A0000010 , A0000011 , A0000012 ,
A0000013 , A0000014 , A0000015 , A0000016 , A0000017
, A0000018 , A0000019 ,

*** NETWORK ID: UCART1 ; NETWORK TYPE:
GRIDCART ***

** CONC OF PM_10 IN MICROGRAMS/M**3
**

Y-COORD (METERS)	X-COORD (METERS)									
	407512.33	407565.46	407618.59	407671.72	407724.85	407777.98	407831.11	407884.24	407937.37	
3738343.14	0.00004	0.00004	0.00004	0.00004	0.00004	0.00005	0.00005	0.00006	0.00006	
3738301.22	0.00004	0.00004	0.00004	0.00004	0.00005	0.00005	0.00005	0.00006	0.00007	
3738259.30	0.00004	0.00005	0.00005	0.00005	0.00005	0.00005	0.00006	0.00006	0.00007	
3738217.38	0.00005	0.00005	0.00005	0.00005	0.00005	0.00006	0.00006	0.00007	0.00007	
3738175.46	0.00005	0.00005	0.00005	0.00005	0.00006	0.00006	0.00006	0.00007	0.00008	
3738133.54	0.00006	0.00006	0.00006	0.00006	0.00006	0.00006	0.00007	0.00007	0.00008	
3738091.62	0.00006	0.00006	0.00006	0.00006	0.00007	0.00007	0.00007	0.00008	0.00009	
3738049.70	0.00006	0.00007	0.00007	0.00007	0.00007	0.00008	0.00008	0.00008	0.00009	
3738007.78	0.00007	0.00007	0.00007	0.00008	0.00008	0.00008	0.00009	0.00009	0.00010	
3737965.86	0.00008	0.00008	0.00008	0.00009	0.00009	0.00009	0.00010	0.00010	0.00011	
3737923.94	0.00009	0.00009	0.00009	0.00009	0.00010	0.00010	0.00011	0.00012	0.00012	
3737882.02	0.00010	0.00010	0.00010	0.00011	0.00011	0.00012	0.00012	0.00013	0.00014	
3737840.10	0.00011	0.00011	0.00012	0.00012	0.00013	0.00013	0.00014	0.00015	0.00016	
3737798.18	0.00012	0.00013	0.00013	0.00014	0.00014	0.00015	0.00016	0.00017	0.00019	
3737756.26	0.00014	0.00015	0.00015	0.00016	0.00017	0.00018	0.00019	0.00020	0.00022	

 3737714.34 | 0.00016   0.00017   0.00018   0.00019   0.00020
0.00021   0.00023   0.00024   0.00026
 3737672.42 | 0.00019   0.00020   0.00021   0.00023   0.00024
0.00026   0.00028   0.00030   0.00032
 3737630.50 | 0.00022   0.00023   0.00025   0.00027   0.00029
0.00031   0.00034   0.00037   0.00041
 3737588.58 | 0.00024   0.00026   0.00029   0.00031   0.00034
0.00038   0.00042   0.00047   0.00053
 3737546.66 | 0.00027   0.00029   0.00032   0.00036   0.00040
0.00045   0.00051   0.00058   0.00068
 3737504.74 | 0.00029   0.00032   0.00035   0.00039   0.00044
0.00051   0.00059   0.00069   0.00083
 3737462.82 | 0.00030   0.00033   0.00037   0.00042   0.00048
0.00055   0.00064   0.00077   0.00093
 3737420.90 | 0.00030   0.00034   0.00038   0.00043   0.00049
0.00056   0.00066   0.00079   0.00096
 3737378.98 | 0.00030   0.00033   0.00037   0.00042   0.00048
0.00055   0.00064   0.00076   0.00091
 3737337.06 | 0.00029   0.00032   0.00036   0.00040   0.00045
0.00051   0.00058   0.00068   0.00080
 3737295.14 | 0.00027   0.00030   0.00033   0.00036   0.00040
0.00045   0.00051   0.00057   0.00063
 3737253.22 | 0.00025   0.00028   0.00030   0.00032   0.00035
0.00037   0.00040   0.00043   0.00047
 3737211.30 | 0.00023   0.00025   0.00026   0.00028   0.00030
0.00031   0.00032   0.00034   0.00036
 3737169.38 | 0.00020   0.00022   0.00023   0.00024   0.00025
0.00027   0.00028   0.00030   0.00029
 3737127.46 | 0.00018   0.00019   0.00020   0.00020   0.00021
0.00022   0.00023   0.00024   0.00025
 3737085.54 | 0.00016   0.00016   0.00017   0.00017   0.00018
0.00019   0.00019   0.00020   0.00021
 3737043.62 | 0.00014   0.00014   0.00014   0.00015   0.00015
0.00016   0.00016   0.00017   0.00018
 3737001.70 | 0.00012   0.00012   0.00012   0.00013   0.00013
0.00014   0.00014   0.00015   0.00015
 3736959.78 | 0.00010   0.00011   0.00011   0.00011   0.00012
0.00012   0.00012   0.00013   0.00013
 3736917.86 | 0.00009   0.00010   0.00010   0.00010   0.00010
0.00011   0.00011   0.00011   0.00012
 3736875.94 | 0.00008   0.00009   0.00009   0.00009   0.00009
0.00010   0.00010   0.00010   0.00011
 3736834.02 | 0.00008   0.00008   0.00008   0.00008   0.00009
0.00009   0.00009   0.00009   0.00010
 3736792.10 | 0.00007   0.00007   0.00007   0.00008   0.00008
0.00008   0.00008   0.00009   0.00009
 3736750.18 | 0.00007   0.00007   0.00007   0.00007   0.00007
0.00007   0.00007   0.00008   0.00009
 3736708.26 | 0.00006   0.00006   0.00006   0.00006   0.00006
0.00007   0.00007   0.00008   0.00009

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): PAREA1 , A0000001 , A0000002 , A0000003 , A0000004 , A0000005 , A0000006 , A0000007 , A0000008 , A0000009 , A0000010 , A0000011 , A0000012 , A0000013 , A0000014 , A0000015 , A0000016 , A0000017 , A0000018 , A0000019 ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS)								
	407990.50	408043.63	408096.76	408149.89	408203.02	408256.15	408309.28	408362.41	408415.54
3738343.14	0.00007	0.00008	0.00008	0.00009	0.00010	0.00011	0.00012	0.00013	0.00015
3738301.22	0.00007	0.00008	0.00009	0.00010	0.00011	0.00012	0.00013	0.00015	0.00016
3738259.30	0.00008	0.00009	0.00009	0.00010	0.00012	0.00013	0.00014	0.00016	0.00018
3738217.38	0.00008	0.00009	0.00010	0.00011	0.00013	0.00014	0.00016	0.00018	0.00020
3738175.46	0.00009	0.00010	0.00011	0.00012	0.00014	0.00015	0.00018	0.00020	0.00023
3738133.54	0.00009	0.00010	0.00012	0.00013	0.00015	0.00017	0.00020	0.00023	0.00026
3738091.62	0.00010	0.00011	0.00013	0.00015	0.00017	0.00019	0.00022	0.00026	0.00030
3738049.70	0.00011	0.00012	0.00014	0.00016	0.00019	0.00022	0.00026	0.00030	0.00035
3738007.78	0.00011	0.00013	0.00015	0.00018	0.00021	0.00025	0.00030	0.00035	0.00042
3737965.86	0.00012	0.00014	0.00017	0.00020	0.00024	0.00028	0.00034	0.00042	0.00050
3737923.94	0.00014	0.00016	0.00019	0.00022	0.00027				

0.00033 0.00041 0.00051 0.00061
3737882.02 | 0.00015 0.00017 0.00021 0.00025 0.00031
0.00039 0.00049 0.00062 0.00076
3737840.10 | 0.00018 0.00020 0.00023 0.00029 0.00036
0.00046 0.00060 0.00078 0.00097
3737798.18 | 0.00020 0.00023 0.00027 0.00033 0.00042
0.00056 0.00075 0.00100 0.00127
3737756.26 | 0.00024 0.00027 0.00031 0.00039 0.00050
0.00068 0.00095 0.00132 0.00171
3737714.34 | 0.00029 0.00033 0.00038 0.00046 0.00060
0.00085 0.00124 0.00182 0.00239
3737672.42 | 0.00036 0.00040 0.00047 0.00057 0.00074
0.00107 0.00168 0.00264 0.00353
3737630.50 | 0.00046 0.00052 0.00061 0.00074 0.00096
0.00141 0.00237 0.00409 0.00557
3737588.58 | 0.00061 0.00070 0.00083 0.00101 0.00132
0.00195 0.00353 0.00704 0.00960
3737546.66 | 0.00080 0.00097 0.00119 0.00150 0.00199
0.00295 0.00569 0.01424 0.01883
3737504.74 | 0.00101 0.00128 0.00167 0.00226 0.00327
0.00522 0.01072 0.03916 0.04413
3737462.82 | 0.00117 0.00152 0.00208 0.00302 0.00487
0.00934 0.02597 0.12435 0.10164
3737420.90 | 0.00121 0.00159 0.00217 0.00318 0.00517
0.00999 0.02766 0.06263 0.06275
3737378.98 | 0.00113 0.00143 0.00189 0.00258 0.00371
0.00559 0.00867 0.01548 0.01801
3737337.06 | 0.00094 0.00113 0.00143 0.00173 0.00214
0.00262 0.00360 0.00549 0.00663
3737295.14 | 0.00073 0.00084 0.00100 0.00111 0.00123
0.00151 0.00210 0.00281 0.00325
3737253.22 | 0.00050 0.00055 0.00069 0.00072 0.00080
0.00104 0.00142 0.00171 0.00190
3737211.30 | 0.00038 0.00042 0.00050 0.00052 0.00053
0.00078 0.00101 0.00115 0.00125
3737169.38 | 0.00033 0.00035 0.00039 0.00042 0.00049
0.00064 0.00078 0.00085 0.00089
3737127.46 | 0.00025 0.00029 0.00033 0.00034 0.00043
0.00053 0.00062 0.00065 0.00067
3737085.54 | 0.00022 0.00023 0.00026 0.00030 0.00037
0.00045 0.00050 0.00051 0.00052
3737043.62 | 0.00018 0.00020 0.00022 0.00027 0.00033
0.00038 0.00041 0.00042 0.00042
3737001.70 | 0.00016 0.00017 0.00020 0.00024 0.00029
0.00033 0.00035 0.00035 0.00035
3736959.78 | 0.00014 0.00016 0.00018 0.00022 0.00026
0.00029 0.00030 0.00030 0.00030
3736917.86 | 0.00013 0.00015 0.00017 0.00021 0.00024
0.00025 0.00026 0.00026 0.00026
3736875.94 | 0.00012 0.00014 0.00016 0.00019 0.00021

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): PAREA1 , A0000001 , A0000002 , A0000003 , A0000004 ,
A0000005 , A0000006 , A0000007 , A0000008 , A0000009 , A0000010 , A0000011 , A0000012 ,
A0000013 , A0000014 , A0000015 , A0000016 , A0000017 , A0000018 , A0000019 ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS)									
	408468.67	408521.80	408574.93	408628.06	408681.19	408734.32	408787.45	408840.58	408893.71	
3738343.14	0.00016	0.00017	0.00019	0.00020	0.00021	0.00021	0.00021	0.00021	0.00020	
3738301.22	0.00018	0.00019	0.00021	0.00022	0.00023	0.00023	0.00023	0.00022	0.00021	
3738259.30	0.00020	0.00022	0.00024	0.00025	0.00026	0.00026	0.00025	0.00024	0.00023	
3738217.38	0.00023	0.00025	0.00027	0.00028	0.00029	0.00029	0.00028	0.00026	0.00024	
3738175.46	0.00026	0.00028	0.00030	0.00032	0.00032	0.00032	0.00030	0.00028	0.00026	
3738133.54	0.00030	0.00033	0.00035	0.00036	0.00036	0.00035	0.00033	0.00030	0.00027	

 3738091.62 | 0.00034   0.00038   0.00041   0.00042   0.00041
0.00039   0.00036   0.00033   0.00029
 3738049.70 | 0.00040   0.00045   0.00047   0.00048   0.00046
0.00043   0.00039   0.00035   0.00031
 3738007.78 | 0.00048   0.00053   0.00056   0.00055   0.00053
0.00048   0.00043   0.00037   0.00032
 3737965.86 | 0.00058   0.00063   0.00065   0.00064   0.00059
0.00053   0.00046   0.00039   0.00033
 3737923.94 | 0.00071   0.00077   0.00078   0.00074   0.00067
0.00059   0.00050   0.00042   0.00035
 3737882.02 | 0.00088   0.00094   0.00093   0.00086   0.00076
0.00064   0.00053   0.00043   0.00035
 3737840.10 | 0.00112   0.00117   0.00113   0.00100   0.00085
0.00070   0.00056   0.00045   0.00036
 3737798.18 | 0.00145   0.00148   0.00136   0.00116   0.00094
0.00075   0.00058   0.00046   0.00036
 3737756.26 | 0.00193   0.00188   0.00165   0.00133   0.00103
0.00079   0.00060   0.00046   0.00036
 3737714.34 | 0.00263   0.00243   0.00199   0.00151   0.00112
0.00082   0.00061   0.00046   0.00035
 3737672.42 | 0.00370   0.00315   0.00237   0.00168   0.00118
0.00083   0.00060   0.00045   0.00035
 3737630.50 | 0.00537   0.00407   0.00275   0.00180   0.00120
0.00082   0.00059   0.00044   0.00034
 3737588.58 | 0.00802   0.00514   0.00307   0.00186   0.00119
0.00080   0.00057   0.00043   0.00033
 3737546.66 | 0.01202   0.00613   0.00320   0.00182   0.00114
0.00077   0.00055   0.00042   0.00033
 3737504.74 | 0.01675   0.00650   0.00309   0.00174   0.00110
0.00075   0.00055   0.00042   0.00033
 3737462.82 | 0.01791   0.00593   0.00284   0.00165   0.00106
0.00075   0.00055   0.00042   0.00033
 3737420.90 | 0.01383   0.00527   0.00269   0.00161   0.00106
0.00075   0.00055   0.00043   0.00034
 3737378.98 | 0.00887   0.00436   0.00247   0.00154   0.00105
0.00075   0.00056   0.00044   0.00035
 3737337.06 | 0.00513   0.00326   0.00210   0.00142   0.00101
0.00074   0.00056   0.00045   0.00036
 3737295.14 | 0.00307   0.00234   0.00169   0.00123   0.00092
0.00071   0.00055   0.00045   0.00036
 3737253.22 | 0.00196   0.00170   0.00134   0.00104   0.00081
0.00065   0.00053   0.00043   0.00036
 3737211.30 | 0.00132   0.00126   0.00107   0.00087   0.00071
0.00058   0.00049   0.00041   0.00035
 3737169.38 | 0.00095   0.00095   0.00086   0.00073   0.00061
0.00052   0.00044   0.00038   0.00033
 3737127.46 | 0.00071   0.00074   0.00071   0.00063   0.00054
0.00046   0.00040   0.00035   0.00030
 3737085.54 | 0.00055   0.00058   0.00058   0.00054   0.00048
0.00042   0.00036   0.00032   0.00029

```
  3737043.62 |       0.00044      0.00047      0.00048      0.00046      0.00042
 0.00038      0.00033      0.00029      0.00026
  3737001.70 |       0.00036      0.00038      0.00040      0.00040      0.00038
 0.00034      0.00031      0.00027      0.00025
  3736959.78 |       0.00030      0.00032      0.00034      0.00034      0.00033
 0.00031      0.00028      0.00025      0.00023
  3736917.86 |       0.00026      0.00027      0.00029      0.00030      0.00029
 0.00028      0.00026      0.00024      0.00022
  3736875.94 |       0.00022      0.00023      0.00025      0.00026      0.00026
 0.00025      0.00024      0.00022      0.00020
  3736834.02 |       0.00020      0.00020      0.00021      0.00023      0.00023
 0.00023      0.00022      0.00021      0.00019
  3736792.10 |       0.00017      0.00018      0.00019      0.00020      0.00021
 0.00021      0.00020      0.00019      0.00018
  3736750.18 |       0.00016      0.00016      0.00017      0.00018      0.00018
 0.00019      0.00019      0.00018      0.00017
  3736708.26 |       0.00014      0.00014      0.00015      0.00016      0.00016
 0.00017      0.00017      0.00017      0.00016
 *** AERMOD - VERSION 23132  ***   *** C:\Lakes\AERMOD View\24-073_Coast St
Con\24-073_Coast St Con.isc     ***        06/03/25
 *** AERMET - VERSION  16216 ***   ***
                      ***        20:32:06

                                 PAGE  42
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                               *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: ALL       ***
                                   INCLUDING SOURCE(S):     PAREA1      , A0000001
, A0000002    , A0000003    , A0000004    ,
                A0000005    , A0000006    , A0000007    , A0000008    , A0000009
, A0000010    , A0000011    , A0000012    ,
                A0000013    , A0000014    , A0000015    , A0000016    , A0000017
, A0000018    , A0000019    ,

                                    *** NETWORK ID: UCART1   ;  NETWORK TYPE:
GRIDCART ***

                                        ** CONC OF PM_10    IN MICROGRAMS/M**3
                  **

    Y-COORD  |                                              X-COORD (METERS)
    (METERS) |     408946.84    408999.97    409053.10    409106.23    409159.36
409212.49    409265.62    409318.75    409371.88
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - -

  3738343.14 |       0.00019      0.00017      0.00016      0.00015      0.00013
 0.00012      0.00011      0.00010      0.00009
  3738301.22 |       0.00020      0.00018      0.00017      0.00015      0.00014
```

0.00012 0.00011 0.00010 0.00009
3738259.30 | 0.00021 0.00019 0.00017 0.00016 0.00014
0.00013 0.00011 0.00010 0.00009
3738217.38 | 0.00022 0.00020 0.00018 0.00016 0.00014
0.00013 0.00011 0.00010 0.00009
3738175.46 | 0.00023 0.00021 0.00018 0.00016 0.00015
0.00013 0.00011 0.00010 0.00009
3738133.54 | 0.00024 0.00022 0.00019 0.00017 0.00015
0.00013 0.00011 0.00010 0.00009
3738091.62 | 0.00025 0.00022 0.00019 0.00017 0.00015
0.00013 0.00011 0.00010 0.00009
3738049.70 | 0.00027 0.00023 0.00020 0.00017 0.00015
0.00013 0.00011 0.00010 0.00009
3738007.78 | 0.00027 0.00023 0.00020 0.00017 0.00015
0.00013 0.00011 0.00010 0.00009
3737965.86 | 0.00028 0.00024 0.00020 0.00017 0.00015
0.00013 0.00011 0.00010 0.00009
3737923.94 | 0.00029 0.00024 0.00020 0.00017 0.00014
0.00012 0.00011 0.00010 0.00009
3737882.02 | 0.00029 0.00024 0.00020 0.00017 0.00014
0.00012 0.00011 0.00009 0.00008
3737840.10 | 0.00029 0.00024 0.00020 0.00016 0.00014
0.00012 0.00011 0.00009 0.00008
3737798.18 | 0.00029 0.00023 0.00019 0.00016 0.00014
0.00012 0.00011 0.00009 0.00008
3737756.26 | 0.00028 0.00023 0.00019 0.00016 0.00014
0.00012 0.00010 0.00009 0.00008
3737714.34 | 0.00028 0.00023 0.00019 0.00016 0.00014
0.00012 0.00010 0.00009 0.00008
3737672.42 | 0.00027 0.00022 0.00018 0.00016 0.00013
0.00012 0.00010 0.00009 0.00008
3737630.50 | 0.00027 0.00022 0.00018 0.00016 0.00013
0.00012 0.00010 0.00009 0.00008
3737588.58 | 0.00026 0.00022 0.00018 0.00016 0.00014
0.00012 0.00011 0.00009 0.00009
3737546.66 | 0.00026 0.00022 0.00018 0.00016 0.00014
0.00012 0.00011 0.00010 0.00009
3737504.74 | 0.00027 0.00022 0.00019 0.00016 0.00014
0.00012 0.00011 0.00010 0.00009
3737462.82 | 0.00027 0.00023 0.00019 0.00016 0.00014
0.00013 0.00011 0.00010 0.00009
3737420.90 | 0.00028 0.00023 0.00020 0.00017 0.00015
0.00013 0.00012 0.00010 0.00009
3737378.98 | 0.00029 0.00024 0.00020 0.00018 0.00015
0.00014 0.00012 0.00011 0.00010
3737337.06 | 0.00030 0.00025 0.00021 0.00018 0.00016
0.00014 0.00013 0.00011 0.00010
3737295.14 | 0.00030 0.00025 0.00022 0.00019 0.00017
0.00015 0.00013 0.00012 0.00011
3737253.22 | 0.00030 0.00026 0.00022 0.00019 0.00017

```
 0.00015      0.00013      0.00012      0.00011
  3737211.30 |       0.00030      0.00026      0.00022      0.00020      0.00017
 0.00016      0.00014      0.00013      0.00011
  3737169.38 |       0.00028      0.00025      0.00022      0.00020      0.00018
 0.00016      0.00014      0.00013      0.00012
  3737127.46 |       0.00027      0.00024      0.00021      0.00019      0.00018
 0.00016      0.00014      0.00013      0.00012
  3737085.54 |       0.00026      0.00023      0.00021      0.00019      0.00017
 0.00016      0.00014      0.00013      0.00012
  3737043.62 |       0.00024      0.00022      0.00020      0.00018      0.00017
 0.00015      0.00014      0.00013      0.00012
  3737001.70 |       0.00022      0.00020      0.00019      0.00017      0.00016
 0.00015      0.00014      0.00013      0.00012
  3736959.78 |       0.00021      0.00019      0.00018      0.00016      0.00015
 0.00014      0.00013      0.00012      0.00012
  3736917.86 |       0.00020      0.00018      0.00017      0.00016      0.00015
 0.00014      0.00013      0.00012      0.00011
  3736875.94 |       0.00019      0.00017      0.00016      0.00015      0.00014
 0.00013      0.00012      0.00012      0.00011
  3736834.02 |       0.00018      0.00016      0.00015      0.00014      0.00013
 0.00012      0.00012      0.00011      0.00011
  3736792.10 |       0.00017      0.00016      0.00014      0.00013      0.00013
 0.00012      0.00011      0.00011      0.00010
  3736750.18 |       0.00016      0.00015      0.00014      0.00013      0.00012
 0.00011      0.00011      0.00010      0.00010
  3736708.26 |       0.00015      0.00014      0.00013      0.00012      0.00012
 0.00011      0.00010      0.00010      0.00010
 *** AERMOD - VERSION 23132  ***   *** C:\Lakes\AERMOD View\24-073_Coast St
Con\24-073_Coast St Con.isc     ***        06/03/25
 *** AERMET - VERSION  16216 ***   ***
                      ***        20:32:06

                                 PAGE  43
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                               *** THE PERIOD ( 43848 HRS) AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: ALL      ***
                                 INCLUDING SOURCE(S):     PAREA1      , A0000001
, A0000002    , A0000003    , A0000004    ,
                  A0000005    , A0000006    , A0000007    , A0000008    , A0000009
, A0000010    , A0000011    , A0000012    ,
                  A0000013    , A0000014    , A0000015    , A0000016    , A0000017
, A0000018    , A0000019    ,

                                    *** NETWORK ID: UCART1   ;  NETWORK TYPE:
GRIDCART ***

                                        ** CONC OF PM_10    IN MICROGRAMS/M**3
                  **
```

Y-COORD (METERS)	X-COORD (METERS)			
	409425.01	409478.14	409531.27	409584.40
3738343.14	0.00008	0.00008	0.00007	0.00006
3738301.22	0.00008	0.00008	0.00007	0.00006
3738259.30	0.00008	0.00008	0.00007	0.00006
3738217.38	0.00008	0.00007	0.00007	0.00006
3738175.46	0.00008	0.00007	0.00007	0.00006
3738133.54	0.00008	0.00007	0.00007	0.00006
3738091.62	0.00008	0.00007	0.00007	0.00006
3738049.70	0.00008	0.00007	0.00007	0.00006
3738007.78	0.00008	0.00007	0.00006	0.00006
3737965.86	0.00008	0.00007	0.00006	0.00006
3737923.94	0.00008	0.00007	0.00006	0.00006
3737882.02	0.00008	0.00007	0.00006	0.00006
3737840.10	0.00008	0.00007	0.00006	0.00006
3737798.18	0.00008	0.00007	0.00006	0.00006
3737756.26	0.00008	0.00007	0.00006	0.00006
3737714.34	0.00008	0.00007	0.00006	0.00006
3737672.42	0.00008	0.00007	0.00007	0.00006
3737630.50	0.00008	0.00007	0.00007	0.00006
3737588.58	0.00008	0.00007	0.00007	0.00006
3737546.66	0.00008	0.00007	0.00007	0.00006
3737504.74	0.00008	0.00007	0.00007	0.00006
3737462.82	0.00008	0.00008	0.00007	0.00007
3737420.90	0.00009	0.00008	0.00007	0.00007
3737378.98	0.00009	0.00008	0.00008	0.00007
3737337.06	0.00009	0.00009	0.00008	0.00007
3737295.14	0.00010	0.00009	0.00008	0.00008
3737253.22	0.00010	0.00009	0.00008	0.00008
3737211.30	0.00010	0.00009	0.00009	0.00008
3737169.38	0.00011	0.00010	0.00009	0.00008
3737127.46	0.00011	0.00010	0.00009	0.00009
3737085.54	0.00011	0.00010	0.00010	0.00009
3737043.62	0.00011	0.00010	0.00010	0.00009
3737001.70	0.00011	0.00010	0.00010	0.00009
3736959.78	0.00011	0.00010	0.00010	0.00009
3736917.86	0.00010	0.00010	0.00010	0.00009
3736875.94	0.00010	0.00010	0.00009	0.00009
3736834.02	0.00010	0.00010	0.00009	0.00009
3736792.10	0.00010	0.00009	0.00009	0.00008
3736750.18	0.00009	0.00009	0.00009	0.00008
3736708.26	0.00009	0.00009	0.00008	0.00008

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** THE PERIOD (43848 HRS) AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***

INCLUDING SOURCE(S): PAREA1 , A0000001 , A0000002 , A0000003 , A0000004 , A0000005 , A0000006 , A0000007 , A0000008 , A0000009 , A0000010 , A0000011 , A0000012 , A0000013 , A0000014 , A0000015 , A0000016 , A0000017 , A0000018 , A0000019 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	X-COORD (M)	Y-COORD (M)	CONC
408366.38	3737485.43	0.08038	408430.14	3737461.14	0.05946
408181.97	3737466.67	0.00388	408150.06	3737412.73	0.00312
408109.61	3737456.33	0.00230	408217.52	3737471.69	0.00531
408016.80	3737435.48	0.00138	408279.89	3737472.78	0.01193
408798.65	3737545.01	0.00052	408676.12	3737499.78	0.00113
407927.20	3737488.08	0.00084	407852.89	3737488.76	0.00065
408566.64	3737551.51	0.00351	408261.37	3737558.76	0.00271
408120.70	3737439.75	0.00257	408512.12	3737495.11	0.00759
408510.14	3737484.42	0.00776	408511.38	3737471.75	0.00736
408511.63	3737457.34	0.00702	408356.31	3737407.88	0.04065
408511.63	3737446.65	0.00677	408511.13	3737433.23	0.00653
408327.23	3737479.20	0.02820	408329.72	3737416.58	0.04091
408387.62	3737478.21	0.12670	408407.50	3737476.47	0.10445
408293.50	3737546.37	0.00451	408183.24	3737542.99	0.00185

408402.13 3737553.87 0.01670 408440.68
3737412.33 0.02482
408407.34 3737393.62 0.03085 408359.39
3737391.57 0.02310
408512.32 3737400.05 0.00556 408481.62
3737390.11 0.00822
408443.74 3737538.89 0.01740 408503.64
3737538.89 0.00802
408367.16 3737603.86 0.00596 408324.78
3737606.24 0.00358
408547.34 3737413.04 0.00366 408327.55
3737398.88 0.02000
*** AERMOD - VERSION 23132 *** *** C:\Lakes\AERMOD View\24-073_Coast St
Con\24-073_Coast St Con.isc *** 06/03/25
*** AERMET - VERSION 16216 *** ***
*** 20:32:06

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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): PAREA1 , A0000001
, A0000002 , A0000003 , A0000004 ,
A0000005 , A0000006 , A0000007 , A0000008 , A0000009
, A0000010 , A0000011 , A0000012 ,
A0000013 , A0000014 , A0000015 , A0000016 , A0000017
, A0000018 , A0000019 ,

*** NETWORK ID: UCART1 ; NETWORK TYPE:
GRIDCART ***

** CONC OF PM_10 IN MICROGRAMS/M**3
**

Y-COORD | X-COORD (METERS)
(METERS) | 407512.33 407565.46 407618.59
407671.72 407724.85
- - - -

```
    0.15921 (15012908)      0.15509 (15012908)
3738133.5 |      0.11074 (15012908)      0.13346 (15012908)      0.15382 (15012908)
    0.16797 (15012908)      0.17255 (15012908)
3738091.6 |      0.09937 (13013008)      0.12228 (15012908)      0.14806 (15012908)
    0.17045 (15012908)      0.18488 (15012908)
3738049.7 |      0.11873 (15011308)      0.10844 (13013008)      0.13592 (15012908)
    0.16525 (15012908)      0.19000 (15012908)
3738007.8 |      0.14130 (15011308)      0.13352 (15011308)      0.12067 (15011308)
    0.15215 (15012908)      0.18581 (15012908)
3737965.9 |      0.16000 (15011308)      0.15868 (15011308)      0.15114 (15011308)
    0.13723 (15011308)      0.17166 (15012908)
3737923.9 |      0.17135 (15011308)      0.17845 (15011308)      0.17936 (15011308)
    0.17247 (15011308)      0.15752 (15011308)
3737882.0 |      0.19374 (12122808)      0.19536 (12122808)      0.19979 (15011308)
    0.20401 (15011308)      0.19863 (15011308)
3737840.1 |      0.20864 (12122808)      0.21865 (12122808)      0.22436 (12122808)
    0.22460 (15011308)      0.23369 (15011308)
3737798.2 |      0.22817 (12121008)      0.23109 (12122808)      0.24685 (12122808)
    0.25848 (12122808)      0.26332 (12122808)
3737756.3 |      0.25538 (12121008)      0.26596 (12121008)      0.27249 (12121008)
    0.27847 (12122808)      0.29854 (12122808)
3737714.3 |      0.26738 (12121008)      0.28823 (12121008)      0.30734 (12121008)
    0.32368 (12121008)      0.33464 (12121008)
3737672.4 |      0.26171 (12121008)      0.28981 (12121008)      0.32008 (12121008)
    0.35099 (12121008)      0.38073 (12121008)
3737630.5 |      0.23756 (12121008)      0.27016 (12121008)      0.30702 (12121008)
    0.34781 (12121008)      0.39276 (12121008)
3737588.6 |      0.22075 (13010908)      0.24128 (13010908)      0.26821 (12121008)
    0.31222 (12121008)      0.36449 (12121008)
3737546.7 |      0.21905 (16021108)      0.23941 (16021108)      0.26221 (16021108)
    0.28829 (16021108)      0.32359 (13010908)
3737504.7 |      0.23370 (13012208)      0.25262 (13012208)      0.27465 (13012208)
    0.30042 (13012208)      0.32976 (13012208)
3737462.8 |      0.24083 (13012208)      0.26231 (13012208)      0.28784 (13012208)
    0.31792 (13012208)      0.35346 (13012208)
3737420.9 |      0.22920 (13012208)      0.24955 (13012208)      0.27379 (13012208)
    0.30231 (13012208)      0.33577 (13012208)
3737379.0 |      0.23315 (13013108)      0.25588 (13013108)      0.28313 (13013108)
    0.31498 (13013108)      0.35247 (13013108)
3737337.1 |      0.24307 (13013108)      0.26402 (13013108)      0.28836 (13013108)
    0.31602 (13013108)      0.34785 (13013108)
3737295.1 |      0.23365 (13013108)      0.25058 (16121408)      0.27532 (16121408)
    0.30267 (16121408)      0.34194 (13011608)
3737253.2 |      0.22839 (13011608)      0.32134 (16121408)      0.36583 (13011608)
    0.41137 (13011608)      0.45705 (13011608)
3737211.3 |      0.23891 (13011608)      0.26033 (13011608)      0.28316 (13011608)
    0.31129 (12010408)      0.34024 (12010408)
3737169.4 |      0.23587 (12010408)      0.25504 (12010408)      0.27383 (12010408)
    0.29118 (12010408)      0.30477 (12010408)
3737127.5 |      0.22775 (12010408)      0.23907 (12010408)      0.24768 (12010408)
```

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): PAREA1 , A0000001 , A0000002 , A0000003 , A0000004 ,
A0000005 , A0000006 , A0000007 , A0000008 , A0000009 , A0000010 , A0000011 , A0000012 ,
A0000013 , A0000014 , A0000015 , A0000016 , A0000017 , A0000018 , A0000019 ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS)				
3737085.5	0.20703 (12010408)	0.22539 (13010408)	0.26118 (12020208)	0.31016 (12020208)	0.35873 (12020208)
3737043.6	0.21017 (12020208)	0.24784 (12020208)	0.28639 (12020208)	0.32397 (12020208)	0.35488 (12020208)
3737001.7	0.23376 (12020208)	0.26481 (12020208)	0.29289 (12020208)	0.31557 (12020208)	0.32713 (12020208)
3736959.8	0.24468 (12020208)	0.26623 (12020208)	0.28177 (12020208)	0.28832 (12020208)	0.28219 (12020208)
3736917.9	0.24261 (12020208)	0.25377 (12020208)	0.25638 (12020208)	0.24925 (12020208)	0.25003 (13011708)
3736875.9	0.22940 (12020208)	0.22998 (12020208)	0.22155 (12020208)	0.22474 (13011708)	0.23538 (13011708)
3736834.0	0.20720 (12020208)	0.19895 (12020208)	0.20347 (13011708)	0.21295 (13011708)	0.21402 (15122908)
3736792.1	0.17954 (12020208)	0.18572 (13011708)	0.19380 (13011708)	0.19410 (13011708)	0.21276 (15122908)
3736750.2	0.17054 (13011708)	0.17771 (13011708)	0.17844 (13011708)	0.19223 (15122908)	0.20451 (15122908)
3736708.3	0.16379 (13011708)	0.16453 (13011708)	0.17410 (15122908)	0.18663 (15122908)	0.19024 (15122908)

```
3738343.1 |      0.06758 (12120608)      0.09723 (12120608)      0.12816 (12120608)
    0.15409 (12120608)      0.16696 (12120608)
3738301.2 |      0.07332 (15012908)      0.08904 (12120608)      0.12323 (12120608)
    0.15504 (12120608)      0.17526 (12120608)
3738259.3 |      0.09309 (15012908)      0.07941 (12120608)      0.11593 (12120608)
    0.15326 (12120608)      0.18183 (12120608)
3738217.4 |      0.11567 (15012908)      0.09056 (15012908)      0.10641 (12120608)
    0.14849 (12120608)      0.18570 (12120608)
3738175.5 |      0.13993 (15012908)      0.11578 (15012908)      0.09456 (12120608)
    0.14066 (12120608)      0.18606 (12120608)
3738133.5 |      0.16460 (15012908)      0.14409 (15012908)      0.11391 (15012908)
    0.12925 (12120608)      0.18237 (12120608)
3738091.6 |      0.18712 (15012908)      0.17394 (15012908)      0.14665 (15012908)
    0.11486 (12120608)      0.17408 (12120608)
3738049.7 |      0.20426 (15012908)      0.20287 (15012908)      0.18268 (15012908)
    0.14673 (15012908)      0.16088 (12120608)
3738007.8 |      0.21306 (15012908)      0.22649 (15012908)      0.21947 (15012908)
    0.18992 (15012908)      0.14264 (15012908)
3737965.9 |      0.21070 (15012908)      0.24063 (15012908)      0.25205 (15012908)
    0.23605 (15012908)      0.19317 (15012908)
3737923.9 |      0.19548 (15012908)      0.24123 (15012908)      0.27363 (15012908)
    0.27981 (15012908)      0.25109 (15012908)
3737882.0 |      0.18262 (15011308)      0.22510 (15012908)      0.27820 (15012908)
    0.31242 (15012908)      0.31082 (15012908)
3737840.1 |      0.23103 (15011308)      0.21379 (15011308)      0.26132 (15012908)
    0.32498 (15012908)      0.36090 (15012908)
3737798.2 |      0.26956 (15011308)      0.27083 (15011308)      0.25359 (15011308)
    0.30927 (15012908)      0.38679 (15012908)
3737756.3 |      0.31153 (12122808)      0.31342 (12122808)      0.32217 (15011308)
    0.30721 (15011308)      0.37421 (15012908)
3737714.3 |      0.34517 (12122808)      0.37105 (12122808)      0.38415 (12122808)
    0.39049 (15011308)      0.38145 (15011308)
3737672.4 |      0.40646 (12121008)      0.42478 (12121008)      0.44398 (12122808)
    0.47797 (12122808)      0.48592 (12122808)
3737630.5 |      0.44071 (12121008)      0.48908 (12121008)      0.53305 (12121008)
    0.56599 (12121008)      0.60175 (12122808)
3737588.6 |      0.42580 (12121008)      0.49660 (12121008)      0.57541 (12121008)
    0.66199 (12121008)      0.74495 (12121008)
3737546.7 |      0.36511 (13010908)      0.43822 (12121008)      0.53223 (12121008)
    0.65049 (12121008)      0.79745 (12121008)
3737504.7 |      0.36472 (13012208)      0.41002 (16021108)      0.47261 (16021108)
    0.55002 (16021108)      0.68057 (12121008)
3737462.8 |      0.39621 (13012208)      0.44866 (13012208)      0.51459 (13012208)
    0.59725 (13012208)      0.70824 (13012208)
3737420.9 |      0.37603 (13012208)      0.42557 (13012208)      0.48779 (13012208)
    0.56799 (13013108)      0.68600 (13013108)
3737379.0 |      0.39793 (13013108)      0.45274 (13013108)      0.52066 (13013108)
    0.60431 (13013108)      0.70935 (13013108)
3737337.1 |      0.38399 (13013108)      0.42872 (16121408)      0.49468 (13011608)
    0.59510 (13011608)      0.71787 (13011608)
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 3737295.1 |      0.39219 (13011608)      0.44866 (13011608)      0.51278 (13011608)
     0.71598 (12010408)      0.67517 (12010408)
 3737253.2 |      0.50319 (12010408)      0.55949 (12010408)      0.60059 (12010408)
     0.66412 (13010408)      0.80414 (13010408)
 3737211.3 |      0.44373 (12010408)      0.49123 (13010408)      0.58861 (13010408)
     0.71652 (12020208)      0.87799 (12020208)
 3737169.4 |      0.35777 (12020208)      0.44183 (12020208)      0.52756 (12020208)
     0.70921 (12020208)      0.64607 (12020208)
 3737127.5 |      0.39827 (12020208)      0.45933 (12020208)      0.50672 (12020208)
     0.52628 (12020208)      0.64746 (13011708)
 3737085.5 |      0.40269 (12020208)      0.43302 (12020208)      0.43958 (12020208)
     0.42646 (13011708)      0.44993 (13011708)
 3737043.6 |      0.37436 (12020208)      0.37454 (12020208)      0.36496 (13011708)
     0.38519 (13011708)      0.42684 (15122908)
 3737001.7 |      0.32337 (12020208)      0.31805 (13011708)      0.33452 (13011708)
     0.36430 (15122908)      0.38512 (15122908)
 3736959.8 |      0.28018 (13011708)      0.29438 (13011708)      0.31410 (15122908)
     0.33880 (15122908)      0.32891 (15122908)
 3736917.9 |      0.26235 (13011708)      0.27428 (15122908)      0.29883 (15122908)
     0.29968 (15122908)      0.32507 (16012508)
 3736875.9 |      0.24134 (15122908)      0.26554 (15122908)      0.27211 (15122908)
     0.26556 (16012508)      0.32110 (16012508)
 3736834.0 |      0.23708 (15122908)      0.24679 (15122908)      0.23832 (15122908)
     0.27143 (16012508)      0.30638 (16012508)
 3736792.1 |      0.22450 (15122908)      0.22137 (15122908)      0.22821 (16012508)
     0.26788 (16012508)      0.28448 (16012508)
 3736750.2 |      0.20547 (15122908)      0.19242 (15122908)      0.23150 (16012508)
     0.25696 (16012508)      0.27165 (12121708)
 3736708.3 |      0.18247 (15122908)      0.19808 (16012508)      0.22799 (16012508)
     0.24063 (16012508)      0.26617 (12121708)
 *** AERMOD - VERSION 23132  ***   *** C:\Lakes\AERMOD View\24-073_Coast St
Con\24-073_Coast St Con.isc     ***        06/03/25
 *** AERMET - VERSION  16216 ***   ***
                       ***        20:32:06

                                  PAGE  47
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                               *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                  INCLUDING SOURCE(S):     PAREA1      , A0000001
, A0000002    , A0000003    , A0000004    ,
                A0000005    , A0000006    , A0000007    , A0000008    , A0000009
, A0000010    , A0000011    , A0000012    ,
                A0000013    , A0000014    , A0000015    , A0000016    , A0000017
, A0000018    , A0000019    ,

                                   *** NETWORK ID: UCART1   ;  NETWORK TYPE:
GRIDCART ***
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** CONC OF PM_10 IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS) 408043.63	408096.76	408149.89	408203.02	408256.15
3738343.1	0.16165 (12120608)	0.14459 (12020708)	0.12059 (12020708)	0.10787 (12112608)	0.14267 (12112608)
3738301.2	0.17649 (12120608)	0.15807 (12020708)	0.13588 (12020708)	0.11005 (12112608)	0.14924 (12112608)
3738259.3	0.19090 (12120608)	0.17554 (12120608)	0.15284 (12020708)	0.11512 (12020708)	0.15645 (12112608)
3738217.4	0.20459 (12120608)	0.19626 (12120608)	0.17104 (12020708)	0.13266 (12020708)	0.16382 (12112608)
3738175.5	0.21630 (12120608)	0.21783 (12120608)	0.19066 (12020708)	0.15302 (12020708)	0.17190 (12112608)
3738133.5	0.22540 (12120608)	0.23930 (12120608)	0.21455 (12120608)	0.17676 (12020708)	0.17927 (12112608)
3738091.6	0.23010 (12120608)	0.25980 (12120608)	0.24555 (12120608)	0.20409 (12020708)	0.18744 (12112608)
3738049.7	0.22903 (12120608)	0.27709 (12120608)	0.27812 (12120608)	0.23536 (12020708)	0.19540 (12112608)
3738007.8	0.22051 (12120608)	0.28912 (12120608)	0.31152 (12120608)	0.27050 (12020708)	0.20407 (12020708)
3737965.9	0.20434 (12120608)	0.29374 (12120608)	0.34421 (12120608)	0.31756 (12120608)	0.24640 (12020708)
3737923.9	0.19154 (15012908)	0.28844 (12120608)	0.37284 (12120608)	0.37381 (12120608)	0.29813 (12020708)
3737882.0	0.26388 (15012908)	0.27063 (12120608)	0.39256 (12120608)	0.43485 (12120608)	0.36098 (12020708)
3737840.1	0.34508 (15012908)	0.27051 (15012908)	0.39695 (12120608)	0.49675 (12120608)	0.43844 (12120608)
3737798.2	0.42144 (15012908)	0.38006 (15012908)	0.37955 (12120608)	0.55145 (12120608)	0.54899 (12120608)
3737756.3	0.47005 (15012908)	0.49637 (15012908)	0.40894 (15012908)	0.58502 (12120608)	0.68052 (12120608)
3737714.3	0.46554 (15012908)	0.58540 (15012908)	0.58630 (15012908)	0.57819 (12120608)	0.82453 (12120608)
3737672.4	0.48899 (15011308)	0.59972 (15012908)	0.75078 (15012908)	0.68378 (15012908)	0.95419 (12120608)
3737630.5	0.64233 (12122808)	0.65141 (15011308)	0.80922 (15012908)	0.99536 (15012908)	1.01031 (12120608)
3737588.6	0.81174 (12121008)	0.87640 (12122808)	0.91543 (15011308)	1.17830 (15012908)	1.36046 (15012908)
3737546.7	0.97295 (12121008)	1.15847 (12121008)	1.31303 (12121008)	1.46161 (12122808)	1.91924 (15012908)
3737504.7	0.89692 (12121008)	1.20015 (12121008)	1.62759 (12121008)		

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    2.20096 (12121008)      2.71047 (12121008)
 3737462.8 |      0.85903 (13012208)      1.07111 (13012208)      1.39992 (13012208)
    2.05864 (12121008)      3.63491 (12121008)
 3737420.9 |      0.85159 (13013108)      1.08806 (13013108)      1.47152 (13013108)
    2.11829 (13013108)      3.34030 (13013108)
 3737379.0 |      0.84633 (13013108)      1.09128 (13011608)      1.47466 (13011608)
    2.04310 (12010408)      3.44535 (12020208)
 3737337.1 |      0.86415 (12010408)      1.05987 (12010408)      1.46218 (12020208)
    2.13066 (12020208)      2.41338 (12020208)
 3737295.1 |      0.81710 (12020208)      1.13950 (12020208)      1.43768 (12020208)
    1.52282 (12020208)      1.74458 (15122908)
 3737253.2 |      1.05833 (12020208)      1.05668 (12020208)      1.05195 (12020208)
    1.19070 (15122908)      1.48175 (16012508)
 3737211.3 |      0.93354 (12020208)      0.79075 (12020208)      0.87788 (15122908)
    1.16418 (16012508)      1.29982 (12121708)
 3737169.4 |      0.61932 (13011708)      0.68009 (15122908)      0.74169 (15122908)
    0.89833 (16012508)      1.09966 (12121708)
 3737127.5 |      0.54300 (15122908)      0.61045 (15122908)      0.68056 (16012508)
    0.82998 (12121708)      0.89217 (12121708)
 3737085.5 |      0.50869 (15122908)      0.50934 (16012508)      0.63196 (16012508)
    0.75239 (12121708)      0.75321 (13120908)
 3737043.6 |      0.43892 (15122908)      0.50514 (16012508)      0.58079 (12121708)
    0.65906 (12121708)      0.64146 (14012008)
 3737001.7 |      0.39932 (16012508)      0.47324 (16012508)      0.54697 (12121708)
    0.56625 (12121708)      0.59353 (14012008)
 3736959.8 |      0.39537 (16012508)      0.43024 (12121708)      0.50233 (12121708)
    0.50222 (13120908)      0.54729 (14012008)
 3736917.9 |      0.37465 (16012508)      0.41823 (12121708)      0.45190 (12121708)
    0.44786 (13120908)      0.50282 (14012008)
 3736875.9 |      0.34346 (16012508)      0.39585 (12121708)      0.40065 (12121708)
    0.39615 (13120908)      0.46175 (14012008)
 3736834.0 |      0.33287 (12121708)      0.36743 (12121708)      0.36368 (13120908)
    0.36235 (14012008)      0.42358 (14012008)
 3736792.1 |      0.32166 (12121708)      0.33602 (12121708)      0.33401 (13120908)
    0.34548 (14012008)      0.38957 (14012008)
 3736750.2 |      0.30483 (12121708)      0.30404 (12121708)      0.30511 (13120908)
    0.32862 (14012008)      0.35834 (14012008)
 3736708.3 |      0.28508 (12121708)      0.27969 (13120908)      0.27685 (13120908)
    0.31124 (14012008)      0.32995 (14012008)
 *** AERMOD - VERSION 23132  ***   *** C:\Lakes\AERMOD View\24-073_Coast St
Con\24-073_Coast St Con.isc     ***        06/03/25
 *** AERMET - VERSION  16216 ***   ***
                       ***        20:32:06

                                  PAGE  48
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                               *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                  INCLUDING SOURCE(S):     PAREA1      , A0000001
```

, A0000002   , A0000003   , A0000004   ,
                A0000005   , A0000006   , A0000007   , A0000008   , A0000009
, A0000010   , A0000011   , A0000012   ,
                A0000013   , A0000014   , A0000015   , A0000016   , A0000017
, A0000018   , A0000019   ,

                                *** NETWORK ID: UCART1   ; NETWORK TYPE:
GRIDCART ***

                                     ** CONC OF PM_10   IN MICROGRAMS/M**3
                **

  Y-COORD | X-COORD (METERS)
  (METERS) | 408309.28   408362.41   408415.54
      408468.67   408521.80
 -
- -

 3738343.1 | 0.16212 (12112608)   0.15807 (12112608)   0.13174 (12112608)
     0.09404 (12112608)   0.09467 (14120808)
 3738301.2 | 0.17239 (12112608)   0.16901 (12112608)   0.14012 (12112608)
     0.09838 (12112608)   0.10948 (14120808)
 3738259.3 | 0.18392 (12112608)   0.18129 (12112608)   0.14949 (12112608)
     0.10289 (12112608)   0.12678 (14120808)
 3738217.4 | 0.19675 (12112608)   0.19512 (12112608)   0.15989 (12112608)
     0.10774 (12112608)   0.14755 (14120808)
 3738175.5 | 0.21072 (12112608)   0.21068 (12112608)   0.17116 (12112608)
     0.11298 (12112608)   0.17192 (14120808)
 3738133.5 | 0.22595 (12112608)   0.22788 (12112608)   0.18344 (12112608)
     0.12724 (14120808)   0.20079 (14120808)
 3738091.6 | 0.24324 (12112608)   0.24790 (12112608)   0.19769 (12112608)
     0.15218 (14120808)   0.23515 (14120808)
 3738049.7 | 0.26289 (12112608)   0.27148 (12112608)   0.21436 (12112608)
     0.18294 (14120808)   0.27575 (14120808)
 3738007.8 | 0.28569 (12112608)   0.29945 (12112608)   0.23348 (12112608)
     0.22155 (14120808)   0.32355 (14120808)
 3737965.9 | 0.31164 (12112608)   0.33298 (12112608)   0.25564 (12112608)
     0.27007 (14120808)   0.37945 (14120808)
 3737923.9 | 0.34167 (12112608)   0.37362 (12112608)   0.28218 (12112608)
     0.33058 (14120808)   0.44379 (14120808)
 3737882.0 | 0.37638 (12112608)   0.42361 (12112608)   0.31325 (12112608)
     0.40661 (14120808)   0.51414 (14120808)
 3737840.1 | 0.41656 (12112608)   0.48633 (12112608)   0.35085 (12112608)
     0.50394 (14120808)   0.59015 (14120808)
 3737798.2 | 0.46259 (12112608)   0.56628 (12112608)   0.39619 (12112608)
     0.62820 (14120808)   0.66660 (14120808)
 3737756.3 | 0.51497 (12112608)   0.67173 (12112608)   0.50228 (14120808)
     0.78428 (14120808)   0.73214 (14120808)
 3737714.3 | 0.66849 (12020708)   0.81477 (12112608)   0.68836 (14120808)
     0.97493 (14120808)   0.76699 (14120808)

3737672.4 | 0.92536 (12120608) 1.01785 (12112608) 0.97048 (14120808)
    1.19007 (14120808) 0.74012 (14120808)
3737630.5 | 1.31651 (12120608) 1.32301 (12112608) 1.41184 (14120808)
    1.38877 (14120808) 0.62076 (14120808)
3737588.6 | 1.83383 (12120608) 1.81556 (12112608) 2.11792 (14120808)
    1.46121 (14120808) 0.46971 (14013108)
3737546.7 | 2.34186 (12120608) 2.70632 (12112608) 3.21731 (14120808)
    1.19634 (14120808) 0.80665 (16120208)
3737504.7 | 3.80941 (15012908) 4.43054 (12112608) 4.43701 (14120808)
    1.56400 (16120208) 1.06308 (15010508)
3737462.8 | 7.03546 (12121008) 4.77008 (12120608) 4.06857 (16120208)
    2.54268 (15012808) 1.71220 (15012808)
3737420.9 | 6.84728 (13011608) 5.21185 (12011108) 7.76942 (12021708)
    4.38719 (12021708) 2.40059 (12021708)
3737379.0 | 4.76088 (12020208) 7.10157 (14012008) 5.88308 (12011808)
    3.71603 (12020808) 2.22687 (13020408)
3737337.1 | 3.28003 (12121708) 4.32864 (14012208) 3.84220 (16121308)
    3.12920 (12020808) 2.11639 (12020808)
3737295.1 | 2.48336 (12121708) 2.92269 (14012208) 2.67525 (16121308)
    2.06988 (12011808) 1.95450 (12020808)
3737253.2 | 1.76455 (13120908) 2.11027 (14012208) 1.88028 (16121308)
    1.69452 (13021408) 1.34860 (12020808)
3737211.3 | 1.42294 (14012008) 1.62405 (14012208) 1.37208 (16121308)
    1.34787 (16121308) 1.13897 (12011808)
3737169.4 | 1.21201 (14012008) 1.30027 (14012208) 1.06578 (14010708)
    1.15874 (16121308) 1.01987 (13021408)
3737127.5 | 1.02890 (14012008) 1.06574 (14012208) 0.85603 (14010708)
    0.97810 (16121308) 0.86222 (13021408)
3737085.5 | 0.87888 (14012008) 0.89935 (14012208) 0.73539 (14012108)
    0.82164 (16121308) 0.73973 (16121308)
3737043.6 | 0.75803 (14012008) 0.77086 (14012208) 0.64454 (14012108)
    0.68761 (16121308) 0.67882 (16121308)
3737001.7 | 0.65980 (14012008) 0.67183 (14012208) 0.57220 (14012108)
    0.57933 (16121308) 0.61401 (16121308)
3736959.8 | 0.57778 (14012008) 0.59115 (14012208) 0.51142 (14012108)
    0.50488 (14010708) 0.54908 (16121308)
3736917.9 | 0.51896 (14012208) 0.52625 (14012208) 0.46192 (14012108)
    0.44659 (14010708) 0.48884 (16121308)
3736875.9 | 0.47258 (14012208) 0.47258 (14012208) 0.41996 (14012108)
    0.39669 (14010708) 0.43359 (16121308)
3736834.0 | 0.43268 (14012208) 0.42784 (14012208) 0.38311 (14012108)
    0.35368 (14010708) 0.38374 (16121308)
3736792.1 | 0.39804 (14012208) 0.38945 (14012208) 0.35173 (14012108)
    0.31685 (14010708) 0.33976 (16121308)
3736750.2 | 0.36705 (14012208) 0.35684 (14012208) 0.32465 (14012108)
    0.28479 (14010708) 0.31019 (14010708)
3736708.3 | 0.33982 (14012208) 0.32853 (14012208) 0.30099 (14012108)
    0.26580 (14011608) 0.28516 (14010708)

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

                             *** THE   1ST HIGHEST 1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: ALL   ***
                             INCLUDING SOURCE(S):   PAREA1   , A0000001
, A0000002   , A0000003   , A0000004   ,
                A0000005   , A0000006   , A0000007   , A0000008   , A0000009
, A0000010   , A0000011   , A0000012   ,
                A0000013   , A0000014   , A0000015   , A0000016   , A0000017
, A0000018   , A0000019   ,

                              *** NETWORK ID: UCART1   ; NETWORK TYPE:
GRIDCART ***

                                   ** CONC OF PM_10   IN MICROGRAMS/M**3
                **

  Y-COORD | X-COORD (METERS)
  (METERS) | 408574.93   408628.06   408681.19
      408734.32   408787.45
 -
- -

 3738343.1 | 0.13743 (14120808)   0.17412 (14120808)   0.19552 (14120808)
     0.19536 (14120808)   0.17587 (14120808)
 3738301.2 | 0.15616 (14120808)   0.19363 (14120808)   0.21072 (14120808)
     0.20359 (14120808)   0.17610 (14120808)
 3738259.3 | 0.17758 (14120808)   0.21455 (14120808)   0.22595 (14120808)
     0.21012 (14120808)   0.17404 (14120808)
 3738217.4 | 0.20204 (14120808)   0.23676 (14120808)   0.24021 (14120808)
     0.21385 (14120808)   0.16907 (14120808)
 3738175.5 | 0.22955 (14120808)   0.25987 (14120808)   0.25287 (14120808)
     0.21433 (14120808)   0.16084 (14120808)
 3738133.5 | 0.26045 (14120808)   0.28317 (14120808)   0.26275 (14120808)
     0.21095 (14120808)   0.14920 (14120808)
 3738091.6 | 0.29473 (14120808)   0.30607 (14120808)   0.26863 (14120808)
     0.20284 (14120808)   0.13417 (14120808)
 3738049.7 | 0.33175 (14120808)   0.32661 (14120808)   0.26910 (14120808)
     0.18979 (14120808)   0.11633 (14120808)
 3738007.8 | 0.37087 (14120808)   0.34311 (14120808)   0.26294 (14120808)
     0.17115 (14120808)   0.09628 (14120808)
 3737965.9 | 0.41013 (14120808)   0.35267 (14120808)   0.24881 (14120808)
     0.14762 (14120808)   0.07909 (12111308)
 3737923.9 | 0.44731 (14120808)   0.35269 (14120808)   0.22565 (14120808)
     0.12036 (14120808)   0.10808 (12111308)
 3737882.0 | 0.47682 (14120808)   0.33954 (14120808)   0.19354 (14120808)

```
    0.10434 (12111308)      0.13374 (12111308)
3737840.1 |      0.49225 (14120808)      0.30992 (14120808)      0.15410 (14120808)
    0.13851 (12111308)      0.14882 (12111308)
3737798.2 |      0.48756 (14120808)      0.26349 (14120808)      0.14057 (12111308)
    0.16152 (12111308)      0.14420 (12111308)
3737756.3 |      0.45378 (14120808)      0.20306 (14120808)      0.17598 (12111308)
    0.16187 (12111308)      0.16989 (16120208)
3737714.3 |      0.38408 (14120808)      0.19240 (12111308)      0.19704 (14013108)
    0.20955 (16120208)      0.20466 (16120208)
3737672.4 |      0.28012 (14120808)      0.24966 (14013108)      0.26711 (16120208)
    0.25306 (16120208)      0.21510 (16120208)
3737630.5 |      0.33135 (14013108)      0.35633 (16120208)      0.32254 (16120208)
    0.25738 (16120208)      0.24047 (15010508)
3737588.6 |      0.50791 (16120208)      0.42752 (16120208)      0.34931 (15010508)
    0.31959 (15010508)      0.27734 (15010508)
3737546.7 |      0.59597 (16120208)      0.51463 (15010508)      0.42009 (15010508)
    0.33183 (15010508)      0.25947 (15010508)
3737504.7 |      0.75843 (15010508)      0.52340 (15010508)      0.44923 (15012808)
    0.40312 (15012808)      0.36116 (15012808)
3737462.8 |      1.22788 (15012808)      0.93277 (15012808)      0.73922 (15012808)
    0.60523 (15012808)      0.50780 (15012808)
3737420.9 |      1.51146 (12021708)      1.04499 (12021708)      0.80439 (15012808)
    0.65204 (15012808)      0.54338 (15012808)
3737379.0 |      1.52769 (12021708)      1.18558 (12021708)      0.92756 (12021708)
    0.73767 (12021708)      0.59717 (12021708)
3737337.1 |      1.37329 (16012108)      1.09296 (13020408)      0.85464 (13020408)
    0.69838 (12021708)      0.60524 (12021708)
3737295.1 |      1.40942 (12020808)      0.92958 (16012108)      0.80054 (16012108)
    0.68532 (13020408)      0.57703 (13020408)
3737253.2 |      1.36247 (12020808)      1.03079 (12020808)      0.66489 (12020808)
    0.62052 (16012108)      0.54161 (16012108)
3737211.3 |      1.06638 (12020808)      1.02042 (12020808)      0.79667 (12020808)
    0.54910 (12020808)      0.48914 (16012108)
3737169.4 |      0.79540 (12011808)      0.85858 (12020808)      0.80035 (12020808)
    0.63993 (12020808)      0.46216 (12020808)
3737127.5 |      0.75574 (12011808)      0.64404 (12020808)      0.70667 (12020808)
    0.65040 (12020808)      0.53007 (12020808)
3737085.5 |      0.69670 (13021408)      0.57475 (12011808)      0.56499 (12020808)
    0.59295 (12020808)      0.54209 (12020808)
3737043.6 |      0.62304 (13021408)      0.54947 (12011808)      0.43537 (12011808)
    0.49671 (12020808)      0.50603 (12020808)
3737001.7 |      0.53913 (13021408)      0.51408 (13021408)      0.44020 (12011808)
    0.38949 (12020808)      0.43891 (12020808)
3736959.8 |      0.48331 (16121308)      0.47675 (13021408)      0.42424 (12011808)
    0.34996 (12011808)      0.35830 (12020808)
3736917.9 |      0.45922 (16121308)      0.42853 (13021408)      0.39926 (13021408)
    0.35170 (12011808)      0.28404 (13020108)
3736875.9 |      0.42913 (16121308)      0.37769 (13021408)      0.37870 (13021408)
    0.34130 (12011808)      0.28950 (12011808)
3736834.0 |      0.39804 (16121308)      0.34801 (16121308)      0.35012 (13021408)
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*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): PAREA1 , A0000001 , A0000002 , A0000003 , A0000004 , A0000005 , A0000006 , A0000007 , A0000008 , A0000009 , A0000010 , A0000011 , A0000012 , A0000013 , A0000014 , A0000015 , A0000016 , A0000017 , A0000018 , A0000019 ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS)				
	408840.58	408893.71	408946.84	408999.97	409053.10
3738343.1	0.14346 (14120808)	0.10729 (14120808)	0.07542 (15111708)	0.06554 (15111708)	0.04815 (15111708)
3738301.2	0.13793 (14120808)	0.09858 (14120808)	0.07420 (15111708)	0.05831 (15111708)	0.04630 (12111308)
3738259.3	0.13026 (14120808)	0.08847 (14120808)	0.06912 (15111708)	0.04865 (15111708)	0.06014 (12111308)
3738217.4	0.12012 (14120808)	0.07942 (15111708)	0.06027 (15111708)	0.05652 (12111308)	0.07487 (12111308)
3738175.5	0.10788 (14120808)	0.07326 (15111708)	0.05220 (12111308)	0.07297 (12111308)	0.08890 (12111308)
3738133.5	0.09387 (14120808)	0.06283 (15111708)	0.07015 (12111308)	0.08913 (12111308)	0.09975 (12111308)
3738091.6	0.07870 (14120808)	0.06634 (12111308)	0.08862 (12111308)	0.10265 (12111308)	0.10481 (12111308)

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3738049.7 |      0.06541 (15111708)      0.08732 (12111308)      0.10571 (12111308)
    0.11053 (12111308)      0.10279 (12111308)
3738007.8 |      0.08415 (12111308)      0.10753 (12111308)      0.11642 (12111308)
    0.10993 (12111308)      0.09269 (12111308)
3737965.9 |      0.10824 (12111308)      0.12251 (12111308)      0.11795 (12111308)
    0.10008 (12111308)      0.07926 (16120208)
3737923.9 |      0.12854 (12111308)      0.12728 (12111308)      0.10862 (12111308)
    0.08989 (16120208)      0.09367 (16120208)
3737882.0 |      0.13714 (12111308)      0.11853 (12111308)      0.10304 (16120208)
    0.10664 (16120208)      0.10389 (16120208)
3737840.1 |      0.12995 (12111308)      0.11971 (16120208)      0.12274 (16120208)
    0.11777 (16120208)      0.10756 (16120208)
3737798.2 |      0.14122 (16120208)      0.14313 (16120208)      0.13469 (16120208)
    0.12019 (16120208)      0.10298 (16120208)
3737756.3 |      0.16951 (16120208)      0.15563 (16120208)      0.13483 (16120208)
    0.11416 (15010508)      0.11586 (15010508)
3737714.3 |      0.18185 (16120208)      0.15171 (16120208)      0.14270 (15010508)
    0.14033 (15010508)      0.13377 (15010508)
3737672.4 |      0.18193 (15010508)      0.17904 (15010508)      0.16905 (15010508)
    0.15525 (15010508)      0.13994 (15010508)
3737630.5 |      0.22415 (15010508)      0.20138 (15010508)      0.17691 (15010508)
    0.15336 (15010508)      0.13179 (15010508)
3737588.6 |      0.23427 (15010508)      0.19513 (15010508)      0.16151 (15010508)
    0.13355 (15010508)      0.11057 (15010508)
3737546.7 |      0.20311 (15010508)      0.18546 (15012808)      0.17777 (15012808)
    0.16959 (15012808)      0.16154 (15012808)
3737504.7 |      0.32397 (15012808)      0.29216 (15012808)      0.26552 (15012808)
    0.24244 (15012808)      0.22290 (15012808)
3737462.8 |      0.43468 (15012808)      0.37832 (15012808)      0.33336 (15012808)
    0.29762 (15012808)      0.26878 (15012808)
3737420.9 |      0.46228 (15012808)      0.40031 (15012808)      0.35190 (15012808)
    0.31307 (15012808)      0.28178 (15012808)
3737379.0 |      0.49102 (12021708)      0.40985 (12021708)      0.34629 (12021708)
    0.29609 (15011908)      0.26243 (15011908)
3737337.1 |      0.52315 (12021708)      0.45246 (12021708)      0.39311 (12021708)
    0.34286 (12021708)      0.30056 (12021708)
3737295.1 |      0.47692 (13020408)      0.42328 (12021708)      0.38477 (12021708)
    0.34783 (12021708)      0.31401 (12021708)
3737253.2 |      0.48779 (13020408)      0.42642 (13020408)      0.36617 (13020408)
    0.31176 (12021708)      0.29292 (12021708)
3737211.3 |      0.45348 (16012108)      0.40274 (13020408)      0.36981 (13020408)
    0.33158 (13020408)      0.29281 (13020408)
3737169.4 |      0.39215 (16012108)      0.37774 (16012108)      0.44856 (16012108)
    0.39875 (13020408)      0.29284 (13020408)
3737127.5 |      0.39675 (12020808)      0.31822 (16012108)      0.31694 (16012108)
    0.30145 (16012108)      0.37143 (16012108)
3737085.5 |      0.44865 (12020808)      0.34538 (12020808)      0.26685 (13122308)
    0.26773 (16012108)      0.26190 (16012108)
3737043.6 |      0.46114 (12020808)      0.38651 (12020808)      0.30405 (12020808)
    0.23956 (13122308)      0.22739 (16012108)
```

 *** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

                              *** THE   1ST HIGHEST 1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: ALL   ***
                                 INCLUDING SOURCE(S):   PAREA1   , A0000001
, A0000002   , A0000003   , A0000004   ,
                  A0000005   , A0000006   , A0000007   , A0000008   , A0000009
, A0000010   , A0000011   , A0000012   ,
                  A0000013   , A0000014   , A0000015   , A0000016   , A0000017
, A0000018   , A0000019   ,

                                  *** NETWORK ID: UCART1   ; NETWORK TYPE:
GRIDCART ***

                                       ** CONC OF PM_10   IN MICROGRAMS/M**3
                  **

  Y-COORD | X-COORD (METERS)
  (METERS) | 409106.23   409159.36   409212.49
      409265.62   409318.75
 -
- -

 3738343.1 | 0.04957 (12111308)   0.06459 (12111308)   0.07629 (12111308)
    0.08268 (12111308)   0.08292 (12111308)
 3738301.2 | 0.06264 (12111308)   0.07633 (12111308)   0.08465 (12111308)
    0.08621 (12111308)   0.08150 (12111308)
 3738259.3 | 0.07596 (12111308)   0.08645 (12111308)   0.08952 (12111308)

```
    0.08563 (12111308)      0.07622 (12111308)
3738217.4 |      0.08784 (12111308)      0.09297 (12111308)      0.08993 (12111308)
    0.08056 (12111308)      0.06725 (12111308)
3738175.5 |      0.09641 (12111308)      0.09461 (12111308)      0.08529 (12111308)
    0.07140 (12111308)      0.05614 (12111308)
3738133.5 |      0.09960 (12111308)      0.09052 (12111308)      0.07590 (12111308)
    0.05937 (12111308)      0.05526 (16120208)
3738091.6 |      0.09646 (12111308)      0.08079 (12111308)      0.06300 (12111308)
    0.06059 (16120208)      0.06180 (16120208)
3738049.7 |      0.08644 (12111308)      0.06689 (12111308)      0.06684 (16120208)
    0.06772 (16120208)      0.06628 (16120208)
3738007.8 |      0.07140 (12111308)      0.07424 (16120208)      0.07466 (16120208)
    0.07234 (16120208)      0.06806 (16120208)
3737965.9 |      0.08304 (16120208)      0.08280 (16120208)      0.07933 (16120208)
    0.07366 (16120208)      0.06666 (16120208)
3737923.9 |      0.09241 (16120208)      0.08738 (16120208)      0.07995 (16120208)
    0.07112 (16120208)      0.06182 (16120208)
3737882.0 |      0.09672 (16120208)      0.08688 (16120208)      0.07581 (16120208)
    0.06924 (15010508)      0.07090 (15010508)
3737840.1 |      0.09458 (16120208)      0.08070 (16120208)      0.08177 (15010508)
    0.08226 (15010508)      0.08114 (15010508)
3737798.2 |      0.09572 (15010508)      0.09667 (15010508)      0.09515 (15010508)
    0.09194 (15010508)      0.08740 (15010508)
3737756.3 |      0.11402 (15010508)      0.10950 (15010508)      0.10322 (15010508)
    0.09601 (15010508)      0.08841 (15010508)
3737714.3 |      0.12470 (15010508)      0.11447 (15010508)      0.10391 (15010508)
    0.09351 (15010508)      0.08363 (15010508)
3737672.4 |      0.12464 (15010508)      0.10996 (15010508)      0.09649 (15010508)
    0.08431 (15010508)      0.07361 (15010508)
3737630.5 |      0.11271 (15010508)      0.09628 (15010508)      0.08221 (15010508)
    0.07032 (15010508)      0.06815 (14120408)
3737588.6 |      0.10423 (14120408)      0.10214 (14120408)      0.09940 (14120408)
    0.09695 (14120408)      0.09384 (14120408)
3737546.7 |      0.15364 (15012808)      0.14488 (15012808)      0.13772 (15012808)
    0.13037 (15012808)      0.12364 (15012808)
3737504.7 |      0.20512 (15012808)      0.18983 (15012808)      0.17601 (15012808)
    0.16359 (15012808)      0.15273 (15012808)
3737462.8 |      0.24369 (15012808)      0.22196 (15012808)      0.20331 (15012808)
    0.18739 (15012808)      0.17346 (15012808)
3737420.9 |      0.25496 (15012808)      0.23203 (15012808)      0.21223 (15012808)
    0.19525 (15012808)      0.18044 (15012808)
3737379.0 |      0.23618 (15012808)      0.21684 (15012808)      0.20032 (15012808)
    0.18549 (15012808)      0.17241 (15012808)
3737337.1 |      0.26505 (12021708)      0.23447 (12021708)      0.20857 (12021708)
    0.18796 (15011908)      0.17250 (15011908)
3737295.1 |      0.28311 (12021708)      0.25565 (12021708)      0.23130 (12021708)
    0.20925 (12021708)      0.19003 (12021708)
3737253.2 |      0.27329 (12021708)      0.25352 (12021708)      0.23457 (12021708)
    0.21661 (12021708)      0.19982 (12021708)
3737211.3 |      0.25578 (13020408)      0.22985 (12021708)      0.21905 (12021708)
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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** THE 1ST HIGHEST 1-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): PAREA1 , A0000001 , A0000002 , A0000003 , A0000004 , A0000005 , A0000006 , A0000007 , A0000008 , A0000009 , A0000010 , A0000011 , A0000012 , A0000013 , A0000014 , A0000015 , A0000016 , A0000017 , A0000018 , A0000019 ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS)		
	409371.88	409425.01	409478.14

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     409531.27              409584.40
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 3737379.0 |      0.16096 (15012808)      0.15086 (15012808)      0.14155 (15012808)
     0.13312 (15012808)      0.12556 (15012808)
 3737337.1 |      0.15886 (15011908)      0.14641 (15011908)      0.13539 (15011908)
     0.12579 (15011908)      0.11679 (15011908)
 3737295.1 |      0.17264 (12021708)      0.15761 (12021708)      0.14354 (12021708)
     0.13267 (15011908)      0.12433 (15011908)
 3737253.2 |      0.18447 (12021708)      0.17022 (12021708)      0.15732 (12021708)
     0.14519 (12021708)      0.13448 (12021708)
 3737211.3 |      0.18405 (12021708)      0.17262 (12021708)      0.16177 (12021708)
     0.15145 (12021708)      0.14173 (12021708)
 3737169.4 |      0.17217 (12021708)      0.16500 (12021708)      0.15729 (12021708)
     0.14957 (12021708)      0.14197 (12021708)
 3737127.5 |      0.16603 (13020408)      0.14832 (13020408)      0.14461 (12021708)
     0.14023 (12021708)      0.13538 (12021708)
 3737085.5 |      0.17524 (13020408)      0.16065 (13020408)      0.14626 (13020408)
     0.13244 (13020408)      0.12279 (12021708)
 3737043.6 |      0.17432 (13020408)      0.16400 (13020408)      0.15301 (13020408)
     0.14162 (13020408)      0.13025 (13020408)
 3737001.7 |      0.22963 (16012108)      0.15875 (13020408)      0.15194 (13020408)
     0.14392 (13020408)      0.13523 (13020408)
 3736959.8 |      0.22287 (16012108)      0.21747 (16012108)      0.14367 (13020408)
     0.13959 (13020408)      0.13415 (13020408)
 3736917.9 |      0.15357 (16012108)      0.20567 (16012108)      0.19487 (16012108)
     0.13531 (16012108)      0.12746 (13020408)
 3736875.9 |      0.13789 (16012108)      0.13868 (16012108)      0.18611 (16012108)
     0.17630 (16012108)      0.12682 (16012108)
 3736834.0 |      0.11863 (16012108)      0.12319 (16012108)      0.12519 (16012108)
     0.16657 (16012108)      0.12251 (16012108)
 3736792.1 |      0.12702 (13122308)      0.11184 (13122308)      0.11040 (16012108)
     0.11322 (16012108)      0.14805 (16012108)
 3736750.2 |      0.13056 (13122308)      0.11910 (13122308)      0.10595 (13122308)
     0.09920 (16012108)      0.12454 (12112808)
 3736708.3 |      0.14430 (12020808)      0.12172 (13122308)      0.11189 (13122308)
     0.10051 (13122308)      0.08942 (16012108)
 *** AERMOD - VERSION 23132  ***   *** C:\Lakes\AERMOD View\24-073_Coast St
Con\24-073_Coast St Con.isc     ***        06/03/25
 *** AERMET - VERSION  16216 ***   ***
                      ***        20:32:06

                                   PAGE  53
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                                *** THE   1ST HIGHEST  1-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                   INCLUDING SOURCE(S):     PAREA1      , A0000001
, A0000002    , A0000003    , A0000004    ,
                A0000005    , A0000006    , A0000007    , A0000008    , A0000009
, A0000010    , A0000011    , A0000012    ,
                A0000013    , A0000014    , A0000015    , A0000016    , A0000017
, A0000018    , A0000019    ,
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*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
408366.38	3737485.43	5.62099	(12112608)	408430.14	3737461.14	3.67132	(15010508)
408181.97	3737466.67	1.76552	(12121008)	408150.06	3737412.73	1.48651	(13013108)
408109.61	3737456.33	1.16416	(13012208)	408217.52	3737471.69	2.54821	(12121008)
408016.80	3737435.48	0.77288	(13012208)	408279.89	3737472.78	4.74499	(12121008)
408798.65	3737545.01	0.24441	(15010508)	408676.12	3737499.78	0.49241	(15012808)
407927.20	3737488.08	0.54417	(13012208)	407852.89	3737488.76	0.45173	(13012208)
408566.64	3737551.51	0.63230	(16120208)	408261.37	3737558.76	1.84033	(15012908)
408120.70	3737439.75	1.24028	(13012208)	408512.12	3737495.11	1.21810	(15010508)
408510.14	3737484.42	1.29251	(15010508)	408511.38	3737471.75	1.51286	(15012808)
408511.63	3737457.34	2.01866	(15012808)	408356.31	3737407.88	7.73484	(12121708)
408511.63	3737446.65	2.27539	(15012808)	408511.13	3737433.23	2.39639	(12021708)
408327.23	3737479.20	5.78332	(15012908)	408329.72	3737416.58	8.62577	(12020208)
408387.62	3737478.21	7.15759	(14120808)	408407.50	3737476.47	5.37260	(14120808)
408293.50	3737546.37	2.08534	(15012908)	408183.24	3737542.99	1.45125	(12122808)
408402.13	3737553.87	2.89305	(14120808)	408440.68	3737412.33	5.73205	(13020408)
408407.34	3737393.62	7.45448	(12011808)	408359.39	3737391.57	7.86993	(14012008)
408512.32	3737400.05	2.58871	(12021708)	408481.62	3737390.11	3.21235	(13020408)
408443.74	3737538.89	2.25757	(14120808)	408503.64	3737538.89	0.91408	(16120208)
408367.16	3737603.86	1.60855	(12112608)	408324.78	3737606.24	1.51111	(12120608)
408547.34	3737413.04	1.97451	(12021708)	408327.55			

 *** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

                               *** THE   1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL   ***
                                  INCLUDING SOURCE(S):   PAREA1   , A0000001 , A0000002   , A0000003   , A0000004   ,
                  A0000005   , A0000006   , A0000007   , A0000008   , A0000009 , A0000010   , A0000011   , A0000012   ,
                  A0000013   , A0000014   , A0000015   , A0000016   , A0000017 , A0000018   , A0000019   ,

                                   *** NETWORK ID: UCART1   ; NETWORK TYPE: GRIDCART ***

                                        ** CONC OF PM_10   IN MICROGRAMS/M**3
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  Y-COORD | X-COORD (METERS)
  (METERS) | 407512.33   407565.46   407618.59
      407671.72   407724.85
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3737923.9 |      0.00753c(12122824)      0.00762 (15011324)      0.00764 (15011324)
    0.00761c(15020424)      0.00760c(15020424)
3737882.0 |      0.00854c(12122824)      0.00862c(12122824)      0.00854 (15011324)
    0.00870 (15011324)      0.00858c(15020424)
3737840.1 |      0.01010c(12121024)      0.00973c(12121024)      0.00991c(12122824)
    0.00991c(12122824)      0.00999 (15011324)
3737798.2 |      0.01201c(12121024)      0.01205c(12121024)      0.01183c(12121024)
    0.01143c(12122824)      0.01166c(12122824)
3737756.3 |      0.01344c(12121024)      0.01400c(12121024)      0.01434c(12121024)
    0.01443c(12121024)      0.01415c(12121024)
3737714.3 |      0.01407c(12121024)      0.01517c(12121024)      0.01618c(12121024)
    0.01704c(12121024)      0.01761c(12121024)
3737672.4 |      0.01377c(12121024)      0.01525c(12121024)      0.01685c(12121024)
    0.01847c(12121024)      0.02004c(12121024)
3737630.5 |      0.01250c(12121024)      0.01422c(12121024)      0.01616c(12121024)
    0.01831c(12121024)      0.02067c(12121024)
3737588.6 |      0.01129c(13010924)      0.01227c(13010924)      0.01412c(12121024)
    0.01643c(12121024)      0.01918c(12121024)
3737546.7 |      0.01112 (16021124)      0.01206 (16021124)      0.01311c(13010924)
    0.01464c(13010924)      0.01636c(13010924)
3737504.7 |      0.01104c(12010324)      0.01200c(12010324)      0.01313c(12010324)
    0.01444c(12010324)      0.01597c(12010324)
3737462.8 |      0.01187c(14120524)      0.01293c(14120524)      0.01418c(14120524)
    0.01565c(14120524)      0.01738c(14120524)
3737420.9 |      0.01263c(14120524)      0.01378c(14120524)      0.01515c(14120524)
    0.01676c(14120524)      0.01869c(14120524)
3737379.0 |      0.01229c(14120524)      0.01331c(14120524)      0.01449c(14120524)
    0.01589c(14120524)      0.01752c(14120524)
3737337.1 |      0.01089c(14120524)      0.01159c(14120524)      0.01244 (13013124)
    0.01362 (13013124)      0.01498 (13013124)
3737295.1 |      0.01003 (13013124)      0.01072 (13013124)      0.01156 (16121424)
    0.01301c(15010224)      0.01478c(15010224)
3737253.2 |      0.00991c(15010224)      0.01443c(15010224)      0.01646c(15010224)
    0.01821c(15010224)      0.02011c(12010424)
3737211.3 |      0.01041c(12010424)      0.01156c(12010424)      0.01281c(12010424)
    0.01415c(12010424)      0.01547c(12010424)
3737169.4 |      0.01072c(12010424)      0.01159c(12010424)      0.01245c(12010424)
    0.01324c(12010424)      0.01430c(13010424)
3737127.5 |      0.01035c(12010424)      0.01087c(12010424)      0.01154c(13010424)
    0.01306c(13010424)      0.01451c(13010424)
3737085.5 |      0.00959c(13010424)      0.01073c(13010424)      0.01183c(13010424)
    0.01295 (12020224)      0.01497 (12020224)
3737043.6 |      0.00991c(13010424)      0.01072c(13010424)      0.01195 (12020224)
    0.01352 (12020224)      0.01480 (12020224)
3737001.7 |      0.00975 (12020224)      0.01105 (12020224)      0.01222 (12020224)
    0.01316 (12020224)      0.01364 (12020224)
3736959.8 |      0.01021 (12020224)      0.01110 (12020224)      0.01175 (12020224)
    0.01202 (12020224)      0.01176 (12020224)
3736917.9 |      0.01012 (12020224)      0.01058 (12020224)      0.01069 (12020224)
    0.01039 (12020224)      0.01059 (13011724)
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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): PAREA1 , A0000001 , A0000002 , A0000003 , A0000004 , A0000005 , A0000006 , A0000007 , A0000008 , A0000009 , A0000010 , A0000011 , A0000012 , A0000013 , A0000014 , A0000015 , A0000016 , A0000017 , A0000018 , A0000019 ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS)				
	407777.98	407831.11	407884.24	407937.37	407990.50
3738343.1	0.00307c(12120624)	0.00442c(12120624)	0.00583c(12120624)	0.00700c(12120624)	0.00759c(12120624)
3738301.2	0.00310 (15012924)	0.00405c(12120624)	0.00560c(12120624)	0.00705c(12120624)	0.00797c(12120624)
3738259.3	0.00392 (15012924)	0.00361c(12120624)	0.00527c(12120624)	0.00697c(12120624)	0.00826c(12120624)
3738217.4	0.00486 (15012924)	0.00383 (15012924)	0.00484c(12120624)	0.00675c(12120624)	0.00844c(12120624)
3738175.5	0.00587 (15012924)	0.00488 (15012924)	0.00430c(12120624)	0.00639c(12120624)	0.00846c(12120624)
3738133.5	0.00690 (15012924)	0.00606 (15012924)	0.00482 (15012924)		
3736875.9	0.00956 (12020224)	0.00959 (12020224)	0.00923 (12020224)	0.00951 (13011724)	0.00996 (13011724)
3736834.0	0.00864 (12020224)	0.00829 (12020224)	0.00859 (13011724)	0.00900 (13011724)	0.00901 (13011724)
3736792.1	0.00748 (12020224)	0.00784 (13011724)	0.00818 (13011724)	0.00821 (13011724)	0.00887 (15122924)
3736750.2	0.00719 (13011724)	0.00749 (13011724)	0.00753 (13011724)	0.00801 (15122924)	0.00852 (15122924)
3736708.3	0.00690 (13011724)	0.00694 (13011724)	0.00726 (15122924)	0.00778 (15122924)	0.00793 (15122924)

0.00588c(12120624) 0.00829c(12120624)
3738091.6 | 0.00783 (15012924) 0.00730 (15012924) 0.00618 (15012924)
0.00522c(12120624) 0.00791c(12120624)
3738049.7 | 0.00854 (15012924) 0.00850 (15012924) 0.00768 (15012924)
0.00621 (15012924) 0.00731c(12120624)
3738007.8 | 0.00891 (15012924) 0.00948 (15012924) 0.00921 (15012924)
0.00801 (15012924) 0.00646c(12120624)
3737965.9 | 0.00880 (15012924) 0.01007 (15012924) 0.01056 (15012924)
0.00993 (15012924) 0.00818 (15012924)
3737923.9 | 0.00817 (15012924) 0.01009 (15012924) 0.01146 (15012924)
0.01174 (15012924) 0.01059 (15012924)
3737882.0 | 0.00865c(15020424) 0.00941 (15012924) 0.01164 (15012924)
0.01310 (15012924) 0.01307 (15012924)
3737840.1 | 0.00985 (15011324) 0.00998c(15020424) 0.01093 (15012924)
0.01361 (15012924) 0.01515 (15012924)
3737798.2 | 0.01154 (15011324) 0.01158 (15011324) 0.01167c(15020424)
0.01295 (15012924) 0.01622 (15012924)
3737756.3 | 0.01382c(12122824) 0.01393c(12122824) 0.01381 (15011324)
0.01389c(15020424) 0.01569 (15012924)
3737714.3 | 0.01775c(12121024) 0.01732c(12121024) 0.01712c(12122824)
0.01691c(12122824) 0.01690c(15020424)
3737672.4 | 0.02139c(12121024) 0.02236c(12121024) 0.02260c(12121024)
0.02185c(12121024) 0.02183c(12122824)
3737630.5 | 0.02320c(12121024) 0.02574c(12121024) 0.02806c(12121024)
0.02979c(12121024) 0.03015c(12121024)
3737588.6 | 0.02241c(12121024) 0.02614c(12121024) 0.03028c(12121024)
0.03484c(12121024) 0.03921c(12121024)
3737546.7 | 0.01907c(12121024) 0.02306c(12121024) 0.02801c(12121024)
0.03424c(12121024) 0.04197c(12121024)
3737504.7 | 0.01774c(12010324) 0.01987c(13010924) 0.02321c(13010924)
0.02770c(12121024) 0.03582c(12121024)
3737462.8 | 0.01948c(14120524) 0.02207c(14120524) 0.02525c(14120524)
0.02939c(14120524) 0.03506c(14120524)
3737420.9 | 0.02104c(14120524) 0.02394c(14120524) 0.02749c(14120524)
0.03221c(14120524) 0.03865c(14120524)
3737379.0 | 0.01945c(14120524) 0.02174c(14120524) 0.02446c(14120524)
0.02786c(14120524) 0.03215c(14120524)
3737337.1 | 0.01653 (13013124) 0.01828 (13013124) 0.02156c(15010224)
0.02577c(12010424) 0.03184c(12010424)
3737295.1 | 0.01691c(12010424) 0.01978c(12010424) 0.02310c(12010424)
0.03254c(12010424) 0.03069c(12010424)
3737253.2 | 0.02287c(12010424) 0.02543c(12010424) 0.02730c(12010424)
0.03162c(13010424) 0.03829c(13010424)
3737211.3 | 0.02017c(12010424) 0.02339c(13010424) 0.02803c(13010424)
0.03119c(13010424) 0.03669 (12020224)
3737169.4 | 0.01636c(13010424) 0.01848 (12020224) 0.02205 (12020224)
0.02961 (12020224) 0.02699 (12020224)
3737127.5 | 0.01664 (12020224) 0.01918 (12020224) 0.02115 (12020224)
0.02197 (12020224) 0.02763 (13011724)
3737085.5 | 0.01681 (12020224) 0.01807 (12020224) 0.01834 (12020224)

 3738343.1 | 0.00735c(12120624)   0.00629c(12120624)   0.00505 (12020724)
    0.00456 (12112624)   0.00598 (12112624)

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3738301.2 |      0.00802c(12120624)      0.00709c(12120624)      0.00569 (12020724)
    0.00467 (12112624)      0.00626 (12112624)
3738259.3 |      0.00868c(12120624)      0.00798c(12120624)      0.00641 (12020724)
    0.00484 (12020724)      0.00658 (12112624)
3738217.4 |      0.00930c(12120624)      0.00892c(12120624)      0.00734c(12120624)
    0.00558 (12020724)      0.00690 (12112624)
3738175.5 |      0.00983c(12120624)      0.00990c(12120624)      0.00847c(12120624)
    0.00643 (12020724)      0.00725 (12112624)
3738133.5 |      0.01025c(12120624)      0.01088c(12120624)      0.00975c(12120624)
    0.00743 (12020724)      0.00759 (12112624)
3738091.6 |      0.01046c(12120624)      0.01181c(12120624)      0.01116c(12120624)
    0.00863c(12120624)      0.00797 (12112624)
3738049.7 |      0.01041c(12120624)      0.01259c(12120624)      0.01264c(12120624)
    0.01025c(12120624)      0.00835 (12112624)
3738007.8 |      0.01002c(12120624)      0.01314c(12120624)      0.01416c(12120624)
    0.01218c(12120624)      0.00877 (12112624)
3737965.9 |      0.00929c(12120624)      0.01335c(12120624)      0.01565c(12120624)
    0.01444c(12120624)      0.01045 (12020724)
3737923.9 |      0.00819c(12120624)      0.01311c(12120624)      0.01695c(12120624)
    0.01699c(12120624)      0.01266 (12020724)
3737882.0 |      0.01118 (15012924)      0.01230c(12120624)      0.01784c(12120624)
    0.01977c(12120624)      0.01587c(12120624)
3737840.1 |      0.01456 (15012924)      0.01154 (15012924)      0.01804c(12120624)
    0.02258c(12120624)      0.01994c(12120624)
3737798.2 |      0.01774 (15012924)      0.01611 (15012924)      0.01725c(12120624)
    0.02507c(12120624)      0.02496c(12120624)
3737756.3 |      0.01975 (15012924)      0.02096 (15012924)      0.01748 (15012924)
    0.02659c(12120624)      0.03094c(12120624)
3737714.3 |      0.01956 (15012924)      0.02466 (15012924)      0.02489 (15012924)
    0.02628c(12120624)      0.03749c(12120624)
3737672.4 |      0.02117c(15020424)      0.02526 (15012924)      0.03176 (15012924)
    0.02932 (15012924)      0.04338c(12120624)
3737630.5 |      0.02900c(12122824)      0.02842c(12122824)      0.03422 (15012924)
    0.04238 (15012924)      0.04592c(12120624)
3737588.6 |      0.04272c(12121024)      0.04318c(12121024)      0.04192c(12122824)
    0.05014 (15012924)      0.05877 (15012924)
3737546.7 |      0.05121c(12121024)      0.06097c(12121024)      0.06911c(12121024)
    0.06852c(12121024)      0.08266 (15012924)
3737504.7 |      0.04721c(12121024)      0.06321c(12121024)      0.08570c(12121024)
    0.11588c(12121024)      0.14269c(12121024)
3737462.8 |      0.04279c(14120524)      0.05378c(14120524)      0.07091c(14120524)
    0.10836c(12121024)      0.19132c(12121024)
3737420.9 |      0.04770c(14120524)      0.06069c(14120524)      0.08169c(14120524)
    0.11780c(14120524)      0.19086c(14120524)
3737379.0 |      0.03757c(14120524)      0.04789c(15010224)      0.06592c(12010424)
    0.09288c(12010424)      0.14963 (12020224)
3737337.1 |      0.03928c(12010424)      0.04823c(12010424)      0.06224 (12020224)
    0.09033 (12020224)      0.10888 (13011724)
3737295.1 |      0.03630c(13010424)      0.04802 (12020224)      0.06047 (12020224)
    0.06592 (13011724)      0.08045c(12011124)
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 3737253.2 |      0.04429 (12020224)      0.04429 (12020224)      0.04504 (13011724)
     0.04990 (15122924)      0.07828c(12011124)
 3737211.3 |      0.03901 (12020224)      0.03394 (13011724)      0.03676 (15122924)
     0.04851 (16012524)      0.06678c(12011124)
 3737169.4 |      0.02681 (13011724)      0.02872 (13011724)      0.03098 (15122924)
     0.04668c(12011124)      0.05569c(12121724)
 3737127.5 |      0.02334 (13011724)      0.02551 (15122924)      0.03204c(12011124)
     0.04333c(12011124)      0.04603c(12121724)
 3737085.5 |      0.02123 (15122924)      0.02196c(12011124)      0.03249c(12011124)
     0.03817c(12011124)      0.03752c(12121724)
 3737043.6 |      0.01831 (15122924)      0.02354c(12011124)      0.03101c(12011124)
     0.03294c(12121724)      0.03055c(14012024)
 3737001.7 |      0.01714c(12011124)      0.02390c(12011124)      0.02831c(12011124)
     0.02875c(12121724)      0.02826c(14012024)
 3736959.8 |      0.01830c(12011124)      0.02330c(12011124)      0.02529c(12011124)
     0.02478c(12121724)      0.02606c(14012024)
 3736917.9 |      0.01870c(12011124)      0.02198c(12011124)      0.02246c(12121724)
     0.02131c(12121724)      0.02394c(14012024)
 3736875.9 |      0.01846c(12011124)      0.02026c(12011124)      0.02019c(12121724)
     0.01833c(14010824)      0.02199c(14012024)
 3736834.0 |      0.01774c(12011124)      0.01834c(12011124)      0.01799c(12121724)
     0.01725c(14012024)      0.02017c(14012024)
 3736792.1 |      0.01670c(12011124)      0.01664c(12121724)      0.01596c(12121724)
     0.01645c(14012024)      0.01855c(14012024)
 3736750.2 |      0.01545c(12011124)      0.01526c(12121724)      0.01417c(12121724)
     0.01565c(14012024)      0.01706c(14012024)
 3736708.3 |      0.01412c(12011124)      0.01389c(12121724)      0.01274c(13121124)
     0.01482c(14012024)      0.01571c(14012024)
 *** AERMOD - VERSION 23132  ***   *** C:\Lakes\AERMOD View\24-073_Coast St
Con\24-073_Coast St Con.isc     ***        06/03/25
 *** AERMET - VERSION  16216 ***   ***
                       ***        20:32:06

                                  PAGE  57
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                              *** THE   1ST HIGHEST 24-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                  INCLUDING SOURCE(S):     PAREA1      , A0000001
, A0000002    , A0000003    , A0000004    ,
                A0000005    , A0000006    , A0000007    , A0000008    , A0000009
, A0000010    , A0000011    , A0000012    ,
                A0000013    , A0000014    , A0000015    , A0000016    , A0000017
, A0000018    , A0000019    ,

                                   *** NETWORK ID: UCART1   ;  NETWORK TYPE:
GRIDCART ***

                                        ** CONC OF PM_10    IN MICROGRAMS/M**3
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Y-COORD (METERS)	X-COORD (METERS)				
	408309.28	408362.41	408415.54	408468.67	408521.80
3738343.1	0.00677 (12112624)	0.00660 (12112624)	0.00551 (12112624)	0.00396 (12112624)	0.00410c(16020824)
3738301.2	0.00721 (12112624)	0.00706 (12112624)	0.00587 (12112624)	0.00414 (12112624)	0.00467c(16020824)
3738259.3	0.00769 (12112624)	0.00758 (12112624)	0.00626 (12112624)	0.00434 (12112624)	0.00534c(16020824)
3738217.4	0.00823 (12112624)	0.00816 (12112624)	0.00670 (12112624)	0.00460c(13020624)	0.00615 (14120824)
3738175.5	0.00883 (12112624)	0.00881 (12112624)	0.00718 (12112624)	0.00492c(13020624)	0.00717 (14120824)
3738133.5	0.00948 (12112624)	0.00954 (12112624)	0.00771 (12112624)	0.00545c(16020824)	0.00837 (14120824)
3738091.6	0.01022 (12112624)	0.01039 (12112624)	0.00832 (12112624)	0.00640c(16020824)	0.00981 (14120824)
3738049.7	0.01106 (12112624)	0.01139 (12112624)	0.00904 (12112624)	0.00763 (14120824)	0.01150 (14120824)
3738007.8	0.01205 (12112624)	0.01258 (12112624)	0.00987 (12112624)	0.00924 (14120824)	0.01350 (14120824)
3737965.9	0.01319 (12112624)	0.01401 (12112624)	0.01084 (12112624)	0.01127 (14120824)	0.01585 (14120824)
3737923.9	0.01452 (12112624)	0.01575 (12112624)	0.01201 (12112624)	0.01380 (14120824)	0.01855 (14120824)
3737882.0	0.01608 (12112624)	0.01791 (12112624)	0.01341 (12112624)	0.01698 (14120824)	0.02151 (14120824)
3737840.1	0.01793 (12112624)	0.02063 (12112624)	0.01513 (12112624)	0.02107 (14120824)	0.02473 (14120824)
3737798.2	0.02013 (12112624)	0.02414 (12112624)	0.01726 (12112624)	0.02630 (14120824)	0.02800 (14120824)
3737756.3	0.02276 (12112624)	0.02882 (12112624)	0.02101 (14120824)	0.03290 (14120824)	0.03088 (14120824)
3737714.3	0.02984c(12120624)	0.03527 (12112624)	0.02884 (14120824)	0.04102 (14120824)	0.03257 (14120824)
3737672.4	0.04220c(12120624)	0.04465 (12112624)	0.04076 (14120824)	0.05033 (14120824)	0.03189 (14120824)
3737630.5	0.06001c(12120624)	0.05922 (12112624)	0.05956 (14120824)	0.05934 (14120824)	0.03019 (12021324)
3737588.6	0.08355c(12120624)	0.08405 (12112624)	0.09007 (14120824)	0.06412 (14120824)	0.03216c(14013124)
3737546.7	0.10659c(12120624)	0.13324 (12112624)	0.13967 (14120824)	0.06578 (12021324)	0.04932c(14013124)
3737504.7	0.16962 (15012924)	0.27836c(13020524)	0.23319 (12021324)	0.10588c(14013124)	0.05308c(14013124)
3737462.8	0.37029c(12121024)	0.65264c(13020524)	0.41888c(14013124)		

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     0.11942 (14120424)      0.07167 (15012824)
 3737420.9 |      0.39711c(14120524)      0.50686c(14120524)      0.60507c(12112024)
     0.21449 (12021724)      0.11164 (12021724)
 3737379.0 |      0.23892 (13011724)      0.36656c(12121724)      0.39876c(12011724)
     0.20745b(12020824)      0.10089 (13020424)
 3737337.1 |      0.17390c(12011124)      0.20792c(14012124)      0.19877c(16121324)
     0.16854b(12020824)      0.11204b(12020824)
 3737295.1 |      0.13045c(12121724)      0.13694c(14012124)      0.13177c(16121324)
     0.10812c(12011724)      0.10176b(12020824)
 3737253.2 |      0.09434c(12121724)      0.09817c(14012124)      0.09022c(16121324)
     0.08104c(12011724)      0.07045b(12020824)
 3737211.3 |      0.06776c(14012024)      0.07531c(14012124)      0.06471c(16121324)
     0.06431c(16121324)      0.05766c(12011824)
 3737169.4 |      0.05772c(14012024)      0.06042c(14012124)      0.04853c(14012124)
     0.05442c(16121324)      0.04871c(12011824)
 3737127.5 |      0.04900c(14012024)      0.04976c(14012124)      0.04146c(14012124)
     0.04548c(16121324)      0.03942c(12011824)
 3737085.5 |      0.04186c(14012024)      0.04223c(14012124)      0.03597c(14012124)
     0.03793c(16121324)      0.03519c(14011024)
 3737043.6 |      0.03610c(14012024)      0.03637c(14012124)      0.03153c(14012124)
     0.03159c(16121324)      0.03140c(16121324)
 3737001.7 |      0.03142c(14012024)      0.03181c(14012124)      0.02800c(14012124)
     0.02652c(16121324)      0.02825c(16121324)
 3736959.8 |      0.02751c(14012024)      0.02809c(14012124)      0.02504c(14012124)
     0.02234c(16121324)      0.02516c(16121324)
 3736917.9 |      0.02431c(14012024)      0.02510c(14012124)      0.02263c(14012124)
     0.01959b(15011624)      0.02234c(16121324)
 3736875.9 |      0.02161c(14012024)      0.02262c(14012124)      0.02059c(14012124)
     0.01728b(15011624)      0.01977c(16121324)
 3736834.0 |      0.01936c(14012024)      0.02054c(14012124)      0.01879c(14012124)
     0.01527b(15011624)      0.01747c(16121324)
 3736792.1 |      0.01747c(14012124)      0.01876c(14012124)      0.01726c(14012124)
     0.01357b(15011624)      0.01546c(16121324)
 3736750.2 |      0.01618c(14012124)      0.01724c(14012124)      0.01593c(14012124)
     0.01263c(14012124)      0.01372b(15011624)
 3736708.3 |      0.01502c(14012124)      0.01591c(14012124)      0.01478c(14012124)
     0.01192c(14012124)      0.01260b(15011624)
 *** AERMOD - VERSION 23132  ***   *** C:\Lakes\AERMOD View\24-073_Coast St
Con\24-073_Coast St Con.isc     ***        06/03/25
 *** AERMET - VERSION  16216 ***   ***
                        ***        20:32:06

                                   PAGE  58
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                               *** THE   1ST HIGHEST 24-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                   INCLUDING SOURCE(S):     PAREA1      , A0000001
, A0000002    , A0000003    , A0000004    ,
                A0000005    , A0000006    , A0000007    , A0000008    , A0000009
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, A0000010    , A0000011    , A0000012    ,
                A0000013    , A0000014    , A0000015    , A0000016    , A0000017
, A0000018    , A0000019    ,

                                  *** NETWORK ID: UCART1   ;  NETWORK TYPE:
GRIDCART ***

                                       ** CONC OF PM_10    IN MICROGRAMS/M**3
                 **

  Y-COORD  |                                                  X-COORD (METERS)
  (METERS) |       408574.93               408628.06              408681.19
      408734.32              408787.45
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - - - - -

 3738343.1 |      0.00573 (14120824)      0.00726 (14120824)      0.00815 (14120824)
     0.00815 (14120824)      0.00734 (14120824)
 3738301.2 |      0.00651 (14120824)      0.00807 (14120824)      0.00879 (14120824)
     0.00850 (14120824)      0.00736 (14120824)
 3738259.3 |      0.00740 (14120824)      0.00895 (14120824)      0.00943 (14120824)
     0.00877 (14120824)      0.00728 (14120824)
 3738217.4 |      0.00842 (14120824)      0.00988 (14120824)      0.01003 (14120824)
     0.00894 (14120824)      0.00708 (14120824)
 3738175.5 |      0.00957 (14120824)      0.01084 (14120824)      0.01056 (14120824)
     0.00896 (14120824)      0.00675 (14120824)
 3738133.5 |      0.01086 (14120824)      0.01182 (14120824)      0.01098 (14120824)
     0.00883 (14120824)      0.00627 (14120824)
 3738091.6 |      0.01230 (14120824)      0.01279 (14120824)      0.01124 (14120824)
     0.00851 (14120824)      0.00566 (14120824)
 3738049.7 |      0.01385 (14120824)      0.01366 (14120824)      0.01128 (14120824)
     0.00799 (14120824)      0.00521 (12021324)
 3738007.8 |      0.01550 (14120824)      0.01436 (14120824)      0.01105 (14120824)
     0.00724 (14120824)      0.00489 (12021324)
 3737965.9 |      0.01715 (14120824)      0.01479 (14120824)      0.01049 (14120824)
     0.00658 (12021324)      0.00444 (12021324)
 3737923.9 |      0.01873 (14120824)      0.01483 (14120824)      0.00957 (14120824)
     0.00614 (12021324)      0.00528 (12111324)
 3737882.0 |      0.02001 (14120824)      0.01434 (14120824)      0.00863 (12021324)
     0.00552 (12021324)      0.00643 (12111324)
 3737840.1 |      0.02073 (14120824)      0.01319 (14120824)      0.00802 (12021324)
     0.00686 (12111324)      0.00715 (12111324)
 3737798.2 |      0.02064 (14120824)      0.01193 (12021324)      0.00729 (12111324)
     0.00797 (12111324)      0.00776c(14013124)
 3737756.3 |      0.01940 (14120824)      0.01097 (12021324)      0.00900 (12111324)
     0.00945c(14013124)      0.00923c(14013124)
 3737714.3 |      0.01780 (12021324)      0.01051c(14013124)      0.01185c(14013124)
     0.01149c(14013124)      0.01008c(14013124)
 3737672.4 |      0.01602 (12021324)      0.01546c(14013124)      0.01481c(14013124)
     0.01257c(14013124)      0.00992c(14013124)
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 3737630.5 |      0.02136c(14013124)      0.02012c(14013124)      0.01625c(14013124)
     0.01212c(14013124)      0.01060m(15010524)
 3737588.6 |      0.02955c(14013124)      0.02211c(14013124)      0.01554m(15010524)
     0.01431m(15010524)      0.01251m(15010524)
 3737546.7 |      0.03236c(14013124)      0.02352m(15010524)      0.01942m(15010524)
     0.01553m(15010524)      0.01231m(15010524)
 3737504.7 |      0.03710m(15010524)      0.02606m(15010524)      0.01875 (15012824)
     0.01681 (15012824)      0.01505 (15012824)
 3737462.8 |      0.05122 (15012824)      0.03888 (15012824)      0.03080 (15012824)
     0.02522 (15012824)      0.02116 (15012824)
 3737420.9 |      0.06868 (12021724)      0.04690 (12021724)      0.03414 (12021724)
     0.02717 (15012824)      0.02264 (15012824)
 3737379.0 |      0.06907 (12021724)      0.05286 (12021724)      0.04104 (12021724)
     0.03249 (12021724)      0.02622 (12021724)
 3737337.1 |      0.05814 (13020424)      0.04845 (13020424)      0.03802 (13020424)
     0.03115 (12021724)      0.02684 (12021724)
 3737295.1 |      0.07301b(12020824)      0.04310b(12020824)      0.03441 (13020424)
     0.03026 (13020424)      0.02562 (13020424)
 3737253.2 |      0.06982b(12020824)      0.05270b(12020824)      0.03427b(12020824)
     0.02585 (16012124)      0.02373 (13020424)
 3737211.3 |      0.05469b(12020824)      0.05179b(12020824)      0.04043b(12020824)
     0.02805b(12020824)      0.02038 (16012124)
 3737169.4 |      0.04040c(12011824)      0.04359b(12020824)      0.04038b(12020824)
     0.03230b(12020824)      0.02345b(12020824)
 3737127.5 |      0.03833c(12011824)      0.03290b(12020824)      0.03566b(12020824)
     0.03269b(12020824)      0.02666b(12020824)
 3737085.5 |      0.03423c(12011824)      0.02931c(12011824)      0.02863b(12020824)
     0.02980b(12020824)      0.02717b(12020824)
 3737043.6 |      0.02940c(12011824)      0.02812c(12011824)      0.02264c(12011724)
     0.02505b(12020824)      0.02537b(12020824)
 3737001.7 |      0.02544c(14011024)      0.02590c(12011824)      0.02264c(12011824)
     0.01977b(12020824)      0.02207b(12020824)
 3736959.8 |      0.02342c(14011024)      0.02312c(12011824)      0.02195c(12011824)
     0.01809c(12011824)      0.01812b(12020824)
 3736917.9 |      0.02127c(14011024)      0.02016c(12011824)      0.02060c(12011824)
     0.01827c(12011824)      0.01556c(12011724)
 3736875.9 |      0.01966c(16121324)      0.01823c(14011024)      0.01885c(12011824)
     0.01787c(12011824)      0.01511c(12011824)
 3736834.0 |      0.01820c(16121324)      0.01708c(14011024)      0.01692c(12011824)
     0.01701c(12011824)      0.01525c(12011824)
 3736792.1 |      0.01671c(16121324)      0.01583c(14011024)      0.01496c(12011824)
     0.01583c(12011824)      0.01499c(12011824)
 3736750.2 |      0.01529c(16121324)      0.01472c(16121324)      0.01394c(14011024)
     0.01450c(12011824)      0.01440c(12011824)
 3736708.3 |      0.01393c(16121324)      0.01391c(16121324)      0.01321c(14011024)
     0.01307c(12011824)      0.01356c(12011824)
 *** AERMOD - VERSION 23132  ***   *** C:\Lakes\AERMOD View\24-073_Coast St
Con\24-073_Coast St Con.isc     ***        06/03/25
 *** AERMET - VERSION  16216 ***   ***
                       ***        20:32:06
```

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***

INCLUDING SOURCE(S): PAREA1 , A0000001 , A0000002 , A0000003 , A0000004 , A0000005 , A0000006 , A0000007 , A0000008 , A0000009 , A0000010 , A0000011 , A0000012 , A0000013 , A0000014 , A0000015 , A0000016 , A0000017 , A0000018 , A0000019 ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS)				
	408840.58	408893.71	408946.84	408999.97	409053.10
3738343.1	0.00600 (14120824)	0.00450 (14120824)	0.00328 (15111724)	0.00287 (15111724)	0.00214 (15111724)
3738301.2	0.00577 (14120824)	0.00414 (14120824)	0.00324 (15111724)	0.00258 (15111724)	0.00221 (12111324)
3738259.3	0.00546 (14120824)	0.00373 (14120824)	0.00305 (15111724)	0.00218 (15111724)	0.00280 (12111324)
3738217.4	0.00505 (14120824)	0.00356 (12021324)	0.00269 (15111724)	0.00268 (12111324)	0.00343 (12111324)
3738175.5	0.00455 (14120824)	0.00335 (12021324)	0.00254 (12111324)	0.00339 (12111324)	0.00403 (12111324)
3738133.5	0.00425 (12021324)	0.00310 (12021324)	0.00332 (12111324)	0.00408 (12111324)	0.00450 (12111324)
3738091.6	0.00400 (12021324)	0.00322 (12111324)	0.00411 (12111324)	0.00467 (12111324)	0.00473 (12111324)
3738049.7	0.00367 (12021324)	0.00413 (12111324)	0.00486 (12111324)	0.00502 (12111324)	0.00466 (12111324)
3738007.8	0.00408 (12111324)	0.00501 (12111324)	0.00533 (12111324)	0.00502 (12111324)	0.00426 (12111324)
3737965.9	0.00514 (12111324)	0.00568 (12111324)	0.00543 (12111324)	0.00463 (12111324)	0.00427c(14013124)
3737923.9	0.00605 (12111324)	0.00592 (12111324)	0.00507 (12111324)	0.00484c(14013124)	0.00459c(14013124)
3737882.0	0.00647 (12111324)	0.00560 (12111324)	0.00554c(14013124)	0.00521c(14013124)	0.00470c(14013124)
3737840.1	0.00652c(14013124)	0.00645c(14013124)	0.00599c(14013124)		

```
    0.00531c(14013124)      0.00461 (16120224)
3737798.2 |      0.00763c(14013124)      0.00699c(14013124)      0.00608c(14013124)
    0.00517 (16120224)      0.00443 (16120224)
3737756.3 |      0.00830c(14013124)      0.00704c(14013124)      0.00583 (16120224)
    0.00498m(15010524)      0.00505m(15010524)
3737714.3 |      0.00829c(14013124)      0.00660 (16120224)      0.00623m(15010524)
    0.00614m(15010524)      0.00586m(15010524)
3737672.4 |      0.00797m(15010524)      0.00786m(15010524)      0.00743m(15010524)
    0.00685m(15010524)      0.00619m(15010524)
3737630.5 |      0.00992m(15010524)      0.00895m(15010524)      0.00790m(15010524)
    0.00689m(15010524)      0.00596m(15010524)
3737588.6 |      0.01065m(15010524)      0.00894m(15010524)      0.00748m(15010524)
    0.00626m(15010524)      0.00525m(15010524)
3737546.7 |      0.00978m(15010524)      0.00784m(15010524)      0.00741 (15012824)
    0.00707 (15012824)      0.00673 (15012824)
3737504.7 |      0.01350 (15012824)      0.01217 (15012824)      0.01106 (15012824)
    0.01010 (15012824)      0.00929 (15012824)
3737462.8 |      0.01811 (15012824)      0.01576 (15012824)      0.01389 (15012824)
    0.01240 (15012824)      0.01120 (15012824)
3737420.9 |      0.01926 (15012824)      0.01668 (15012824)      0.01466 (15012824)
    0.01304 (15012824)      0.01174 (15012824)
3737379.0 |      0.02154 (12021724)      0.01796 (12021724)      0.01517 (12021724)
    0.01297 (12021724)      0.01119 (12021724)
3737337.1 |      0.02312 (12021724)      0.01994 (12021724)      0.01729 (12021724)
    0.01506 (12021724)      0.01320 (12021724)
3737295.1 |      0.02132 (13020424)      0.01895 (12021724)      0.01715 (12021724)
    0.01545 (12021724)      0.01391 (12021724)
3737253.2 |      0.02159 (13020424)      0.01900 (13020424)      0.01645 (13020424)
    0.01413 (12021724)      0.01319 (12021724)
3737211.3 |      0.01889 (16012124)      0.01779 (13020424)      0.01645 (13020424)
    0.01486 (13020424)      0.01323 (13020424)
3737169.4 |      0.01703m(13010324)      0.01574 (16012124)      0.01869 (16012124)
    0.01748 (13020424)      0.01310 (13020424)
3737127.5 |      0.02005b(12020824)      0.01515m(13010324)      0.01321 (16012124)
    0.01256 (16012124)      0.01548 (16012124)
3737085.5 |      0.02252b(12020824)      0.01741b(12020824)      0.01359m(13010324)
    0.01116 (16012124)      0.01091 (16012124)
3737043.6 |      0.02308b(12020824)      0.01937b(12020824)      0.01531m(13010324)
    0.01224m(13010324)      0.00966c(13122324)
3737001.7 |      0.02193b(12020824)      0.01994b(12020824)      0.01691b(12020824)
    0.01361m(13010324)      0.01110m(13010324)
3736959.8 |      0.01959b(12020824)      0.01921b(12020824)      0.01746b(12020824)
    0.01495b(12020824)      0.01222m(13010324)
3736917.9 |      0.01660b(12020824)      0.01751b(12020824)      0.01700b(12020824)
    0.01547b(12020824)      0.01335b(12020824)
3736875.9 |      0.01368c(12011724)      0.01522b(12020824)      0.01576b(12020824)
    0.01520b(12020824)      0.01384b(12020824)
3736834.0 |      0.01307c(12011724)      0.01273b(12020824)      0.01399b(12020824)
    0.01427b(12020824)      0.01369b(12020824)
3736792.1 |      0.01291c(12011824)      0.01177c(12011724)      0.01197b(12020824)
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*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** THE 1ST HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): PAREA1 , A0000001 , A0000002 , A0000003 , A0000004 , A0000005 , A0000006 , A0000007 , A0000008 , A0000009 , A0000010 , A0000011 , A0000012 , A0000013 , A0000014 , A0000015 , A0000016 , A0000017 , A0000018 , A0000019 ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS)				
	409106.23	409159.36	409212.49	409265.62	409318.75
3738343.1	0.00232 (12111324)	0.00294 (12111324)	0.00342 (12111324)	0.00368 (12111324)	0.00368 (12111324)
3738301.2	0.00288 (12111324)	0.00344 (12111324)	0.00378 (12111324)	0.00383 (12111324)	0.00362 (12111324)
3738259.3	0.00345 (12111324)	0.00387 (12111324)	0.00399 (12111324)	0.00381 (12111324)	0.00341 (12111324)
3738217.4	0.00396 (12111324)	0.00416 (12111324)	0.00401 (12111324)	0.00361 (12111324)	0.00304 (12111324)
3738175.5	0.00433 (12111324)	0.00423 (12111324)	0.00383 (12111324)	0.00323 (12111324)	0.00260c(14013124)
3738133.5	0.00447 (12111324)	0.00407 (12111324)	0.00344 (12111324)	0.00283c(14013124)	0.00276c(14013124)
3738091.6	0.00435 (12111324)	0.00368 (12111324)	0.00311c(14013124)	0.00302c(14013124)	0.00285c(14013124)
3738049.7	0.00395 (12111324)	0.00343c(14013124)	0.00331c(14013124)	0.00311c(14013124)	0.00285c(14013124)

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3738007.8 |      0.00381c(14013124)      0.00366c(14013124)      0.00342c(14013124)
    0.00310c(14013124)      0.00290 (16120224)
3737965.9 |      0.00408c(14013124)      0.00377c(14013124)      0.00339c(14013124)
    0.00314 (16120224)      0.00284 (16120224)
3737923.9 |      0.00419c(14013124)      0.00373 (16120224)      0.00341 (16120224)
    0.00304 (16120224)      0.00264 (16120224)
3737882.0 |      0.00414 (16120224)      0.00372 (16120224)      0.00324 (16120224)
    0.00301m(15010524)      0.00309m(15010524)
3737840.1 |      0.00406 (16120224)      0.00346 (16120224)      0.00356m(15010524)
    0.00358m(15010524)      0.00354m(15010524)
3737798.2 |      0.00417m(15010524)      0.00421m(15010524)      0.00415m(15010524)
    0.00401m(15010524)      0.00382m(15010524)
3737756.3 |      0.00498m(15010524)      0.00479m(15010524)      0.00452m(15010524)
    0.00421m(15010524)      0.00389m(15010524)
3737714.3 |      0.00547m(15010524)      0.00504m(15010524)      0.00459m(15010524)
    0.00414m(15010524)      0.00372m(15010524)
3737672.4 |      0.00554m(15010524)      0.00491m(15010524)      0.00434m(15010524)
    0.00381m(15010524)      0.00336m(15010524)
3737630.5 |      0.00514m(15010524)      0.00444m(15010524)      0.00383m(15010524)
    0.00332m(15010524)      0.00289m(15010524)
3737588.6 |      0.00443m(15010524)      0.00428 (14120424)      0.00416 (14120424)
    0.00405 (14120424)      0.00392 (14120424)
3737546.7 |      0.00640 (15012824)      0.00604 (15012824)      0.00574 (15012824)
    0.00543 (15012824)      0.00515 (15012824)
3737504.7 |      0.00855 (15012824)      0.00791 (15012824)      0.00733 (15012824)
    0.00682 (15012824)      0.00636 (15012824)
3737462.8 |      0.01015 (15012824)      0.00925 (15012824)      0.00847 (15012824)
    0.00781 (15012824)      0.00723 (15012824)
3737420.9 |      0.01062 (15012824)      0.00967 (15012824)      0.00884 (15012824)
    0.00814 (15012824)      0.00752 (15012824)
3737379.0 |      0.00984 (15012824)      0.00903 (15012824)      0.00835 (15012824)
    0.00773 (15012824)      0.00718 (15012824)
3737337.1 |      0.01164 (12021724)      0.01030 (12021724)      0.00916 (12021724)
    0.00819 (12021724)      0.00736 (12021724)
3737295.1 |      0.01252 (12021724)      0.01129 (12021724)      0.01020 (12021724)
    0.00923 (12021724)      0.00838 (12021724)
3737253.2 |      0.01225 (12021724)      0.01133 (12021724)      0.01045 (12021724)
    0.00963 (12021724)      0.00886 (12021724)
3737211.3 |      0.01166 (13020424)      0.01047 (12021724)      0.00992 (12021724)
    0.00936 (12021724)      0.00878 (12021724)
3737169.4 |      0.01209 (13020424)      0.01098 (13020424)      0.00987 (13020424)
    0.00881 (13020424)      0.00818 (12021724)
3737127.5 |      0.01501 (13020424)      0.01354 (13020424)      0.01010 (13020424)
    0.00932 (13020424)      0.00851 (13020424)
3737085.5 |      0.01033 (16012124)      0.00993 (13020424)      0.01279 (13020424)
    0.01247 (13020424)      0.00864 (13020424)
3737043.6 |      0.00948 (16012124)      0.00918 (16012124)      0.00866 (16012124)
    0.01099 (16012124)      0.01111 (13020424)
3737001.7 |      0.00888c(13122324)      0.00826 (16012124)      0.00815 (16012124)
    0.00785 (16012124)      0.01014 (16012124)
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3738343.1 | 0.00345 (12111324)   0.00306 (12111324)   0.00258 (12111324)
    0.00240c(14013124)   0.00244c(14013124)
3738301.2 | 0.00322 (12111324)   0.00272 (12111324)   0.00258c(14013124)
    0.00257c(14013124)   0.00251c(14013124)
3738259.3 | 0.00287 (12111324)   0.00232 (12111324)   0.00219c(14013124)
    0.00211c(14013124)   0.00246c(14013124)
3738217.4 | 0.00243 (12111324)   0.00235c(14013124)   0.00226c(14013124)

    0.00213c(14013124)   0.00203 (16120224)
3738175.5 | 0.00254c(14013124)   0.00243c(14013124)   0.00228c(14013124)
    0.00217 (16120224)   0.00207 (16120224)
3738133.5 | 0.00263c(14013124)   0.00245c(14013124)   0.00232 (16120224)
    0.00220 (16120224)   0.00205 (16120224)
3738091.6 | 0.00264c(14013124)   0.00249 (16120224)   0.00234 (16120224)
    0.00216 (16120224)   0.00196 (16120224)
3738049.7 | 0.00268 (16120224)   0.00249 (16120224)   0.00227 (16120224)
    0.00203 (16120224)   0.00181m(15010524)
3738007.8 | 0.00266 (16120224)   0.00239 (16120224)   0.00211 (16120224)
    0.00207m(15010524)   0.00213m(15010524)
3737965.9 | 0.00251 (16120224)   0.00229m(15010524)   0.00237m(15010524)
    0.00241m(15010524)   0.00242m(15010524)
3737923.9 | 0.00266m(15010524)   0.00271m(15010524)   0.00272m(15010524)
    0.00270m(15010524)   0.00264m(15010524)
3737882.0 | 0.00310m(15010524)   0.00307m(15010524)   0.00299m(15010524)
    0.00288m(15010524)   0.00275m(15010524)
3737840.1 | 0.00343m(15010524)   0.00329m(15010524)   0.00312m(15010524)
    0.00294m(15010524)   0.00275m(15010524)
3737798.2 | 0.00359m(15010524)   0.00335m(15010524)   0.00311m(15010524)
    0.00286m(15010524)   0.00263m(15010524)
3737756.3 | 0.00356m(15010524)   0.00324m(15010524)   0.00294m(15010524)
    0.00266m(15010524)   0.00240m(15010524)
3737714.3 | 0.00333m(15010524)   0.00297m(15010524)   0.00265m(15010524)
    0.00237m(15010524)   0.00212m(15010524)
3737672.4 | 0.00296m(15010524)   0.00261m(15010524)   0.00231m(15010524)
    0.00204m(15010524)   0.00199 (14120424)
3737630.5 | 0.00283 (14120424)   0.00279 (14120424)   0.00274 (14120424)
    0.00270 (14120424)   0.00263 (14120424)
3737588.6 | 0.00379 (14120424)   0.00365 (14120424)   0.00351 (14120424)
    0.00338 (14120424)   0.00326 (14120424)
3737546.7 | 0.00489 (15012824)   0.00464 (15012824)   0.00443 (15012824)
    0.00423 (15012824)   0.00403 (15012824)
3737504.7 | 0.00597 (15012824)   0.00560 (15012824)   0.00527 (15012824)
    0.00497 (15012824)   0.00470 (15012824)
3737462.8 | 0.00672 (15012824)   0.00627 (15012824)   0.00587 (15012824)
    0.00552 (15012824)   0.00520 (15012824)
3737420.9 | 0.00698 (15012824)   0.00651 (15012824)   0.00608 (15012824)
    0.00571 (15012824)   0.00537 (15012824)
3737379.0 | 0.00671 (15012824)   0.00629 (15012824)   0.00590 (15012824)
    0.00555 (15012824)   0.00523 (15012824)
3737337.1 | 0.00664 (12021724)   0.00610 (15011924)   0.00564 (15011924)
    0.00524 (15011924)   0.00487 (15011924)
3737295.1 | 0.00761 (12021724)   0.00695 (12021724)   0.00633 (12021724)
    0.00582 (12021724)   0.00533 (12021724)
3737253.2 | 0.00817 (12021724)   0.00754 (12021724)   0.00696 (12021724)
    0.00642 (12021724)   0.00595 (12021724)
3737211.3 | 0.00824 (12021724)   0.00771 (12021724)   0.00721 (12021724)
    0.00674 (12021724)   0.00630 (12021724)
3737169.4 | 0.00783 (12021724)   0.00747 (12021724)   0.00709 (12021724)

```
    0.00672 (12021724)      0.00636 (12021724)
 3737127.5 |      0.00772 (13020424)      0.00696 (13020424)      0.00664 (12021724)
    0.00640 (12021724)      0.00615 (12021724)
 3737085.5 |      0.00805 (13020424)      0.00744 (13020424)      0.00683 (13020424)
    0.00624 (13020424)      0.00570 (12021724)
 3737043.6 |      0.00793 (13020424)      0.00751 (13020424)      0.00706 (13020424)
    0.00659 (13020424)      0.00611 (13020424)
 3737001.7 |      0.00959 (13020424)      0.00720 (13020424)      0.00694 (13020424)
    0.00662 (13020424)      0.00627 (13020424)
 3736959.8 |      0.00929 (16012124)      0.00906 (16012124)      0.00651 (13020424)
    0.00636 (13020424)      0.00616 (13020424)
 3736917.9 |      0.00640 (16012124)      0.00857 (16012124)      0.00812 (16012124)
    0.00585 (13020424)      0.00580 (13020424)
 3736875.9 |      0.00575 (16012124)      0.00578 (16012124)      0.00775 (16012124)
    0.00735 (16012124)      0.00528 (16012124)
 3736834.0 |      0.00575c(13122324)      0.00513 (16012124)      0.00522 (16012124)
    0.00694 (16012124)      0.00510 (16012124)
 3736792.1 |      0.00626m(13010324)      0.00543c(13122324)      0.00474c(13122324)
    0.00472 (16012124)      0.00617 (16012124)
 3736750.2 |      0.00686m(13010324)      0.00589m(13010324)      0.00513c(13122324)
    0.00453c(13122324)      0.00519 (12112824)
 3736708.3 |      0.00729m(13010324)      0.00642m(13010324)      0.00555m(13010324)
    0.00486c(13122324)      0.00433c(13122324)
 *** AERMOD - VERSION 23132  ***   *** C:\Lakes\AERMOD View\24-073_Coast St
Con\24-073_Coast St Con.isc     ***        06/03/25
 *** AERMET - VERSION  16216 ***   ***
                      ***        20:32:06

                                   PAGE  62
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                               *** THE   1ST HIGHEST 24-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                   INCLUDING SOURCE(S):     PAREA1      , A0000001
, A0000002    , A0000003    , A0000004    ,
                A0000005    , A0000006    , A0000007    , A0000008    , A0000009
, A0000010    , A0000011    , A0000012    ,
                A0000013    , A0000014    , A0000015    , A0000016    , A0000017
, A0000018    , A0000019    ,

                                        *** DISCRETE CARTESIAN RECEPTOR POINTS
***

                                     ** CONC OF PM_10    IN MICROGRAMS/M**3
                **

      X-COORD (M)  Y-COORD (M)        CONC     (YYMMDDHH)              X-COORD (M)
Y-COORD (M)        CONC     (YYMMDDHH)
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - -
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```
        408366.38   3737485.43        0.51246c (13020524)               408430.14
3737461.14        0.28900c (14013124)
        408181.97   3737466.67        0.09293c (12121024)               408150.06
3737412.73        0.07848c (14120524)
        408109.61   3737456.33        0.06031c (14120524)               408217.52
3737471.69        0.13412c (12121024)
        408016.80   3737435.48        0.04268c (14120524)               408279.89
3737472.78        0.24974c (12121024)
        408798.65   3737545.01        0.01167m (15010524)               408676.12
3737499.78        0.02055  (15012824)
        407927.20   3737488.08        0.02632c (12010324)               407852.89
3737488.76        0.02158c (12010324)
        408566.64   3737551.51        0.03483c (14013124)               408261.37
3737558.76        0.07933  (15012924)
        408120.70   3737439.75        0.06929c (14120524)               408512.12
3737495.11        0.06021m (15010524)
        408510.14   3737484.42        0.06651m (15010524)               408511.38
3737471.75        0.06746m (15010524)
        408511.63   3737457.34        0.08448  (15012824)               408356.31
3737407.88        0.55761c (12121724)
        408511.63   3737446.65        0.09498  (15012824)               408511.13
3737433.23        0.11440  (12021724)
        408327.23   3737479.20        0.31092c (12122824)               408329.72
3737416.58        0.52262c (12120524)
        408387.62   3737478.21        0.58062c (13020524)               408407.50
3737476.47        0.37847  (12021324)
        408293.50   3737546.37        0.09182  (15012924)               408183.24
3737542.99        0.07435c (12121024)
        408402.13   3737553.87        0.12401  (14120824)               408440.68
3737412.33        0.30355c (12112024)
        408407.34   3737393.62        0.57740c (12011724)               408359.39
3737391.57        0.48016c (12121724)
        408512.32   3737400.05        0.11980  (12021724)               408481.62
3737390.11        0.14807  (13020424)
        408443.74   3737538.89        0.10921  (12021324)               408503.64
3737538.89        0.05844c (14013124)
        408367.16   3737603.86        0.07339  (12112624)               408324.78
3737606.24        0.06912c (12120624)
        408547.34   3737413.04        0.09021  (12021724)               408327.55
3737398.88        0.38724  (13011724)
 *** AERMOD - VERSION 23132  ***   *** C:\Lakes\AERMOD View\24-073_Coast St
Con\24-073_Coast St Con.isc     ***        06/03/25
 *** AERMET - VERSION  16216 ***   ***
                      ***        20:32:06

                                  PAGE  63
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                               *** THE   6TH HIGHEST 24-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
```

INCLUDING SOURCE(S): PAREA1 , A0000001
, A0000002 , A0000003 , A0000004 ,
A0000005 , A0000006 , A0000007 , A0000008 , A0000009
, A0000010 , A0000011 , A0000012 ,
A0000013 , A0000014 , A0000015 , A0000016 , A0000017
, A0000018 , A0000019 ,

*** NETWORK ID: UCART1 ; NETWORK TYPE:
GRIDCART ***

** CONC OF PM_10 IN MICROGRAMS/M**3
**

Y-COORD (METERS)	X-COORD (METERS)			
	407512.33	407565.46	407618.59	407671.72	407724.85
3738343.1	0.00109 (15021724)	0.00118 (13013024)	0.00110c(13020124)	0.00111 (14112824)	0.00107 (12121224)
3738301.2	0.00121c(13093024)	0.00122c(13093024)	0.00121c(13093024)	0.00110 (12110624)	0.00132 (12121224)
3738259.3	0.00136 (16011824)	0.00125c(13093024)	0.00135 (15021724)	0.00126c(13093024)	0.00122 (14112824)
3738217.4	0.00164 (15011324)	0.00145 (16011824)	0.00134 (15021724)	0.00151 (15021724)	0.00131c(13093024)
3738175.5	0.00210 (12121224)	0.00178 (15011324)	0.00154 (16011824)	0.00152 (14021824)	0.00158c(13020124)
3738133.5	0.00219c(12122824)	0.00230 (12121224)	0.00194 (15011324)	0.00165 (16011824)	0.00173 (15021724)
3738091.6	0.00268c(13020124)	0.00248c(12122824)	0.00253 (12121224)	0.00212 (15011324)	0.00177 (16011824)
3738049.7	0.00274c(13020124)	0.00281c(13020124)	0.00281c(13020124)	0.00273c(13020124)	0.00232 (15011324)
3738007.8	0.00273c(13020124)	0.00287c(13020124)	0.00296c(13020124)	0.00296c(13020124)	0.00288c(13020124)
3737965.9	0.00265c(13020124)	0.00287 (15012924)	0.00302 (16011824)	0.00317 (16011824)	0.00318 (16011824)
3737923.9	0.00249c(13020124)	0.00275c(13020124)	0.00311 (15012924)	0.00362c(12121024)	0.00356 (16011824)
3737882.0	0.00292c(16011224)	0.00265b(16011424)	0.00294c(16010624)	0.00338 (15012924)	0.00458c(12121024)
3737840.1	0.00335c(13010924)	0.00355 (13013024)	0.00331c(16011224)	0.00325c(16010624)	0.00375 (16011824)
3737798.2	0.00338c(15121524)	0.00435c(15020424)	0.00401c(13010924)	0.00431c(16011224)	0.00378c(16011224)
3737756.3	0.00450 (16021124)	0.00419 (16021124)	0.00430c(15020424)	0.00549c(13010924)	0.00494 (13013024)
3737714.3	0.00519c(12121424)	0.00508 (15011324)	0.00577 (16021124)		

```
    0.00540 (16021124)      0.00573c(15020424)
 3737672.4 |      0.00661c(12121424)      0.00673c(12121424)      0.00679c(12121424)
    0.00672c(12121424)      0.00768 (16021124)
 3737630.5 |      0.00683c(16011224)      0.00767c(16011224)      0.00828c(12122824)
    0.00888c(12121424)      0.00912c(12121424)
 3737588.6 |      0.00749c(13012224)      0.00783c(13012224)      0.00818c(13012224)
    0.00901c(16011224)      0.01039c(16011224)
 3737546.7 |      0.00816c(12121024)      0.00935c(12120724)      0.00998c(12120724)
    0.01087c(12121424)      0.01193c(13012224)
 3737504.7 |      0.00931c(13010924)      0.01037c(13010924)      0.01140c(12120724)
    0.01247c(12120724)      0.01372c(12120724)
 3737462.8 |      0.00800c(13121224)      0.00873c(13121224)      0.00960c(13121224)
    0.01065c(13121224)      0.01203c(13010924)
 3737420.9 |      0.00885c(12120724)      0.00963c(12120724)      0.01057c(12120724)
    0.01168c(12120724)      0.01299c(12120724)
 3737379.0 |      0.00780 (16121424)      0.00865c(12010324)      0.00953 (12010224)
    0.01077 (12010224)      0.01222c(13012224)
 3737337.1 |      0.00861 (15010824)      0.00955 (15010824)      0.01066 (12010224)
    0.01179 (12011224)      0.01329c(15010224)
 3737295.1 |      0.00897 (12122724)      0.00985 (12122724)      0.01083 (12122724)
    0.01221 (15010824)      0.01309 (13013124)
 3737253.2 |      0.00891 (12122724)      0.01250 (12122724)      0.01378 (15010824)
    0.01411 (15010824)      0.01414 (15010824)
 3737211.3 |      0.00835 (13010824)      0.00874 (15010824)      0.00906 (15010824)
    0.01000 (13010824)      0.01034 (13010824)
 3737169.4 |      0.00734 (16121424)      0.00794 (13010824)      0.00809 (13010824)
    0.00939 (12012624)      0.01158 (13011624)
 3737127.5 |      0.00671 (12010924)      0.00755 (12012624)      0.00920 (12012624)
    0.00932 (13011624)      0.00971 (16120124)
 3737085.5 |      0.00745 (12020224)      0.00770 (13011624)      0.00756 (16120124)
    0.00886 (13012824)      0.00874c(12010424)
 3737043.6 |      0.00635 (13011624)      0.00715 (16120124)      0.00752c(12010424)
    0.00784 (15120324)      0.00898 (15121124)
 3737001.7 |      0.00647 (13012824)      0.00646 (15120324)      0.00703 (15120324)
    0.00819 (15121124)      0.00946 (16120124)
 3736959.8 |      0.00593 (15120324)      0.00646 (13011724)      0.00749 (15121124)
    0.00833 (16120124)      0.00775 (12020124)
 3736917.9 |      0.00602 (14011424)      0.00689 (15121124)      0.00734c(13010424)
    0.00695 (12020124)      0.00792 (15122924)
 3736875.9 |      0.00636 (15121124)      0.00643c(13010424)      0.00626 (12020124)
    0.00701 (15122924)      0.00708 (16112324)
 3736834.0 |      0.00566c(13010424)      0.00570 (12020124)      0.00625 (15122924)
    0.00628 (16112324)      0.00591 (16021024)
 3736792.1 |      0.00517 (16120124)      0.00563 (15122924)      0.00561 (16112324)
    0.00528 (16021024)      0.00530 (13112224)
 3736750.2 |      0.00509 (15122924)      0.00506 (16112324)      0.00477c(15111924)
    0.00508 (13112224)      0.00482 (13112224)
 3736708.3 |      0.00458 (16112324)      0.00451c(15111924)      0.00477 (16021024)
    0.00471 (13112224)      0.00483 (16021024)
 *** AERMOD - VERSION 23132  ***   *** C:\Lakes\AERMOD View\24-073_Coast St
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 *** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

                              *** THE   6TH HIGHEST 24-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP: ALL   ***
                                 INCLUDING SOURCE(S):   PAREA1   , A0000001
, A0000002   , A0000003   , A0000004   ,
                A0000005   , A0000006   , A0000007   , A0000008   , A0000009
, A0000010   , A0000011   , A0000012   ,
                A0000013   , A0000014   , A0000015   , A0000016   , A0000017
, A0000018   , A0000019   ,

                                  *** NETWORK ID: UCART1   ; NETWORK TYPE:
GRIDCART ***

                                       ** CONC OF PM_10   IN MICROGRAMS/M**3
                 **

  Y-COORD | X-COORD (METERS)
  (METERS) | 407777.98   407831.11   407884.24
      407937.37   407990.50
 -
- -

 3738343.1 | 0.00129 (15021724)   0.00137 (15012024)   0.00133 (13021924)
     0.00127c(12100324)   0.00159c(12100324)
 3738301.2 | 0.00127 (12020724)   0.00134 (15012024)   0.00143 (15012024)
     0.00129 (15012024)   0.00153 (15121824)
 3738259.3 | 0.00131 (12121224)   0.00151 (15021724)   0.00147 (15012024)
     0.00143 (15012024)   0.00148c(12100324)
 3738217.4 | 0.00164 (12121224)   0.00154 (12020724)   0.00158 (15021724)
     0.00167 (13021924)   0.00138c(12100324)
 3738175.5 | 0.00136c(13093024)   0.00165 (12121224)   0.00181 (15021724)
     0.00169 (13021924)   0.00152 (15012024)
 3738133.5 | 0.00161c(13020124)   0.00190 (14112824)   0.00188 (12020724)
     0.00192 (15021724)   0.00211 (13021924)
 3738091.6 | 0.00193c(13020124)   0.00160c(13020124)   0.00210 (12121224)
     0.00222 (15021724)   0.00216 (13021924)
 3738049.7 | 0.00199 (15021724)   0.00197c(13020124)   0.00216 (14112824)
     0.00235 (12020724)   0.00239 (15021724)
 3738007.8 | 0.00255 (15011324)   0.00234 (14021824)   0.00200c(13020124)
     0.00276 (12121224)   0.00281 (15021724)
 3737965.9 | 0.00303 (16011824)   0.00279c(13020124)   0.00275 (15021724)
     0.00256 (13013024)   0.00301 (12020724)
 3737923.9 | 0.00358 (16011824)   0.00342c(12122824)   0.00299 (16011824)
     0.00317c(15020424)   0.00366 (15021724)

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3737882.0 |      0.00403 (16011824)      0.00408 (16011824)      0.00404c(12122824)
    0.00338 (15021724)      0.00330c(15020424)
3737840.1 |      0.00560 (15012924)      0.00461 (16011824)      0.00471 (16011824)
    0.00481c(12122824)      0.00421 (15021724)
3737798.2 |      0.00420 (16011824)      0.00631 (15012924)      0.00590c(12121024)
    0.00552 (16011824)      0.00583c(12122824)
3737756.3 |      0.00509c(16011224)      0.00474 (16011824)      0.00718 (15012924)
    0.00793c(12121024)      0.00662 (12121224)
3737714.3 |      0.00697c(13010924)      0.00697c(16011224)      0.00611c(16011224)
    0.00828 (15012924)      0.01098c(12121024)
3737672.4 |      0.00723 (16021124)      0.00799c(15020424)      0.00917c(13010924)
    0.00884c(16011224)      0.00967 (15012924)
3737630.5 |      0.00924c(12121424)      0.01035 (15011324)      0.01017 (16021124)
    0.01182c(15020424)      0.01271c(13010924)
3737588.6 |      0.01197c(16011224)      0.01283c(12121424)      0.01343c(12121424)
    0.01422 (15011324)      0.01538 (16021124)
3737546.7 |      0.01280c(13012224)      0.01377c(13012224)      0.01535c(16011224)
    0.01908c(12010324)      0.02114c(12121424)
3737504.7 |      0.01512c(12120724)      0.01712c(14120524)      0.01896c(14120524)
    0.02124c(14120524)      0.02522c(12121424)
3737462.8 |      0.01390c(13010924)      0.01624c(13010924)      0.01917c(13010924)
    0.02320c(13010924)      0.02880c(13010924)
3737420.9 |      0.01451c(12120724)      0.01640c(12120724)      0.01877c(12120724)
    0.02185c(12120724)      0.02601c(12120724)
3737379.0 |      0.01405 (15010824)      0.01625 (12010224)      0.01895 (12010224)
    0.02288c(15010224)      0.02715 (12122724)
3737337.1 |      0.01497 (12010224)      0.01718c(12010424)      0.01976 (15010824)
    0.02241 (13013124)      0.02525 (12122724)
3737295.1 |      0.01429 (12122724)      0.01553 (13010824)      0.01729 (15010824)
    0.02296 (13010824)      0.02411 (12020224)
3737253.2 |      0.01404 (16121424)      0.01643 (12010924)      0.01935 (12010924)
    0.02213 (13011624)      0.02476 (16120124)
3737211.3 |      0.01440 (12010924)      0.01603 (12020224)      0.01630 (14011424)
    0.01919 (13012824)      0.02278 (15120324)
3737169.4 |      0.01159 (13011624)      0.01286 (16120124)      0.01350c(12010424)
    0.01897 (15121124)      0.01887 (16120124)
3737127.5 |      0.01060 (13012824)      0.01167 (13011724)      0.01380 (15121124)
    0.01530 (16120124)      0.01830 (12012624)
3737085.5 |      0.01010 (14011424)      0.01208 (15121124)      0.01276 (16120124)
    0.01450 (15122924)      0.01388 (15121124)
3737043.6 |      0.01068 (15121124)      0.01074c(13010424)      0.01217 (15122924)
    0.01196 (15121124)      0.01033 (16012524)
3737001.7 |      0.00904c(13010424)      0.01042 (15122924)      0.01043 (15121124)
    0.00896 (15121124)      0.01068c(12011124)
3736959.8 |      0.00902 (15122924)      0.00921 (15121124)      0.00805 (15121124)
    0.00885 (16021024)      0.00943c(12121724)
3736917.9 |      0.00804 (16112324)      0.00729 (15121124)      0.00722 (16012524)
    0.00844 (12020124)      0.00689 (13011724)
3736875.9 |      0.00663 (15121124)      0.00577 (13112224)      0.00690c(12011124)
    0.00667 (13011724)      0.00594c(13120924)
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 3736834.0 |      0.00554 (13112224)      0.00636 (16021024)      0.00624 (12020124)
     0.00552 (16020224)      0.00586 (16020224)
 3736792.1 |      0.00537 (16012524)      0.00603 (12020124)      0.00488 (13011724)
     0.00469c(13120924)      0.00521c(15121024)
 3736750.2 |      0.00513 (16021024)      0.00476 (13011724)      0.00457 (16112324)
     0.00489 (16020224)      0.00503c(13121124)
 3736708.3 |      0.00463 (13011724)      0.00410 (16020224)      0.00379c(13120924)
     0.00441 (16020224)      0.00563c(13121124)
 *** AERMOD - VERSION 23132  ***   *** C:\Lakes\AERMOD View\24-073_Coast St
Con\24-073_Coast St Con.isc     ***        06/03/25
 *** AERMET - VERSION  16216 ***   ***
                       ***        20:32:06

                                  PAGE  65
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                               *** THE   6TH HIGHEST 24-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                  INCLUDING SOURCE(S):     PAREA1      , A0000001
, A0000002    , A0000003    , A0000004    ,
                A0000005    , A0000006    , A0000007    , A0000008    , A0000009
, A0000010    , A0000011    , A0000012    ,
                A0000013    , A0000014    , A0000015    , A0000016    , A0000017
, A0000018    , A0000019    ,

                                   *** NETWORK ID: UCART1   ;  NETWORK TYPE:
GRIDCART ***

                                        ** CONC OF PM_10    IN MICROGRAMS/M**3
                  **

  Y-COORD  |                                                 X-COORD (METERS)
  (METERS) |       408043.63              408096.76              408149.89
      408203.02              408256.15
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - - -

 3738343.1 |      0.00174c(12100324)      0.00184 (12112624)      0.00234 (15121824)
     0.00173m(15030324)      0.00190c(13020624)
 3738301.2 |      0.00185 (13021924)      0.00179 (13021924)      0.00243 (15121824)
     0.00173m(15030324)      0.00201c(12120624)
 3738259.3 |      0.00179c(12100324)      0.00198 (13021924)      0.00252 (15121824)
     0.00209 (14112824)      0.00219 (15122224)
 3738217.4 |      0.00178c(12100324)      0.00218 (13021924)      0.00260 (15121824)
     0.00256 (14112824)      0.00228 (15122224)
 3738175.5 |      0.00175 (15121824)      0.00230 (15121824)      0.00267 (15121824)
     0.00271 (15121824)      0.00238 (15121824)
 3738133.5 |      0.00164 (15121824)      0.00217 (13110524)      0.00273 (15121824)
     0.00285 (15121824)      0.00249 (15122224)
 3738091.6 |      0.00174 (15012924)      0.00219 (15121824)      0.00276 (15121824)
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    0.00299 (15121824)      0.00264 (14112824)
3738049.7 |      0.00263 (15012924)      0.00210 (16122324)      0.00277 (15121824)
    0.00314 (15121824)      0.00300 (15121824)
3738007.8 |      0.00284 (13021924)      0.00231 (16122324)      0.00275 (15121824)
    0.00351 (13021924)      0.00324 (15121824)
3737965.9 |      0.00309 (15021724)      0.00332 (15012924)      0.00295 (16122324)
    0.00412 (13021924)      0.00350 (15121824)
3737923.9 |      0.00371 (15021724)      0.00389 (13021924)      0.00335 (16122324)
    0.00413 (13110524)      0.00414 (13021924)
3737882.0 |      0.00399 (12020724)      0.00420 (15021724)      0.00433 (15012924)
    0.00430 (16122324)      0.00512 (13021924)
3737840.1 |      0.00456 (14112824)      0.00518 (15021724)      0.00566 (13021924)
    0.00512 (16122324)      0.00594 (13110524)
3737798.2 |      0.00539 (15021724)      0.00579 (12121224)      0.00613 (15021724)
    0.00611 (16122324)      0.00680c(13111524)
3737756.3 |      0.00718c(12122824)      0.00690c(15020424)      0.00785 (15021724)
    0.00901 (13021924)      0.00830 (16122324)
3737714.3 |      0.00821 (12121224)      0.00899c(12122824)      0.00916 (12121224)
    0.01012 (13021924)      0.01077 (16122324)
3737672.4 |      0.01580c(12121024)      0.01063c(12121024)      0.01161c(12122824)
    0.01354 (15021724)      0.01646 (13021924)
3737630.5 |      0.01162c(16011224)      0.02134 (15012924)      0.01595c(12121024)
    0.01685c(12120624)      0.02021 (13021924)
3737588.6 |      0.01921c(15020424)      0.01923c(13010924)      0.02880 (15012924)
    0.02600c(12121024)      0.02901 (15021724)
3737546.7 |      0.02291c(12121424)      0.02629 (16021124)      0.03390c(16011224)
    0.04220 (15012924)      0.04754c(12121024)
3737504.7 |      0.02897c(13012224)      0.03734c(12121424)      0.04742c(12010324)
    0.05741 (16021124)      0.08399 (13013024)
3737462.8 |      0.03537c(12120724)      0.04532c(12121024)      0.06087c(13012224)
    0.08420c(13012224)      0.14085 (16021124)
3737420.9 |      0.03171c(12120724)      0.04107 (16121424)      0.05740 (16121424)
    0.08520c(12010324)      0.14076 (13011624)
3737379.0 |      0.03485 (13011624)      0.04439c(14120524)      0.05425 (13013124)
    0.07547 (13012824)      0.11824 (13011724)
3737337.1 |      0.02904 (15010824)      0.03853 (13012824)      0.04927 (13011624)
    0.06127c(12010424)      0.08086 (15121124)
3737295.1 |      0.02903 (13012824)      0.03295 (13012824)      0.04065 (15121124)
    0.05089 (15121124)      0.05902 (12020124)
3737253.2 |      0.02818 (15120324)      0.03053 (15121124)      0.03548 (15121124)
    0.03943 (16012524)      0.03799c(15121024)
3737211.3 |      0.02709c(13010424)      0.02691 (15121124)      0.02471 (16021024)
    0.02648 (13011724)      0.03958c(15121024)
3737169.4 |      0.02128 (15121124)      0.01977 (15121124)      0.02325c(12121724)
    0.01973c(15121024)      0.03735c(15121024)
3737127.5 |      0.01640 (15121124)      0.01883c(12011124)      0.01716 (13011724)
    0.02203c(13121124)      0.03425c(14012024)
3737085.5 |      0.01363 (16021024)      0.01561 (13011724)      0.01241 (16020224)
    0.02275c(15121024)      0.03269c(14012024)
3737043.6 |      0.01280 (12020124)      0.01054 (13011724)      0.01324c(13121124)
```

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** THE 6TH HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): PAREA1 , A0000001 , A0000002 , A0000003 , A0000004 , A0000005 , A0000006 , A0000007 , A0000008 , A0000009 , A0000010 , A0000011 , A0000012 , A0000013 , A0000014 , A0000015 , A0000016 , A0000017 , A0000018 , A0000019 ,

*** NETWORK ID: UCART1 ; NETWORK TYPE: GRIDCART ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

Y-COORD (METERS)	X-COORD (METERS)				
	408309.28	408362.41	408415.54	408468.67	408521.80
3738343.1	0.00170 (16012724)	0.00177b(13112124)	0.00167b(13112124)	0.00234 (14120824)	0.00236 (15122224)
3738301.2	0.00181b(13112124)	0.00190b(13112124)	0.00180m(15030324)	0.00274 (14120824)	0.00246 (15122224)

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3738259.3 |      0.00193b(13112124)      0.00205b(13112124)      0.00192b(13112124)
    0.00320 (14120824)      0.00255 (12112624)
3738217.4 |      0.00207b(13112124)      0.00221b(13112124)      0.00213c(16020824)
    0.00345 (15122224)      0.00260 (12112624)
3738175.5 |      0.00232 (12020724)      0.00240b(13112124)      0.00234 (12121824)
    0.00367 (15122224)      0.00275 (15122224)
3738133.5 |      0.00278 (12020724)      0.00262b(13112124)      0.00269 (14120824)
    0.00391 (15122224)      0.00285 (15122224)
3738091.6 |      0.00302m(15030324)      0.00287b(13112124)      0.00324 (14120824)
    0.00417 (15122224)      0.00295 (15122224)
3738049.7 |      0.00318c(12120624)      0.00310m(15030324)      0.00392 (14120824)
    0.00446 (15122224)      0.00336 (12022424)
3738007.8 |      0.00402c(12120624)      0.00337c(13020524)      0.00479 (14120824)
    0.00479 (15122224)      0.00400 (12022424)
3737965.9 |      0.00496 (15122224)      0.00396b(13112124)      0.00591 (14120824)
    0.00535 (12021324)      0.00460c(13020624)
3737923.9 |      0.00543 (15122224)      0.00449b(13112124)      0.00731 (15122224)
    0.00653 (12112624)      0.00472c(13020624)
3737882.0 |      0.00595 (15122224)      0.00516b(13112124)      0.00822 (15122224)
    0.00692 (12112624)      0.00548c(12102224)
3737840.1 |      0.00657 (15122224)      0.00601b(13112124)      0.00936 (15122224)
    0.00733 (12112624)      0.00654c(12102224)
3737798.2 |      0.00781c(13111524)      0.00721 (12020724)      0.01079 (15122224)
    0.00901 (12022424)      0.00774c(12102224)
3737756.3 |      0.00971c(13020624)      0.00968 (12020724)      0.01264 (15122224)
    0.01113c(13020624)      0.00903c(12102224)
3737714.3 |      0.01150 (13021924)      0.01344 (12020724)      0.01725 (12021324)
    0.01358c(12102224)      0.01094 (12042324)
3737672.4 |      0.01659 (13021924)      0.01926c(12101824)      0.02607 (12021324)
    0.01767c(12102224)      0.01298c(12070424)
3737630.5 |      0.02463c(13111524)      0.02709c(12120624)      0.03490c(13020624)
    0.02287c(12070424)      0.01705c(14013124)
3737588.6 |      0.03624c(13111524)      0.04472c(12101824)      0.04610 (12112624)
    0.03172c(12070424)      0.02052 (12050324)
3737546.7 |      0.05936 (13021924)      0.08088c(12101824)      0.07687c(12102224)
    0.04440 (14101424)      0.02362 (16050924)
3737504.7 |      0.10531c(12121024)      0.18762c(13111524)      0.15397c(16020824)
    0.06017c(12092624)      0.02988c(12092624)
3737462.8 |      0.25886c(16011224)      0.47304c(14102324)      0.34479 (13102224)
    0.09196c(12110924)      0.04317c(12110924)
3737420.9 |      0.29596 (12020224)      0.43637c(16121324)      0.48081c(12011724)
    0.14281m(13121024)      0.07191m(13121024)
3737379.0 |      0.18235 (12012624)      0.31127c(14012224)      0.28805 (16121224)
    0.14867c(12112024)      0.07672 (16122924)
3737337.1 |      0.10570c(13121124)      0.16660c(12121724)      0.16111 (13021424)
    0.11559 (15012324)      0.06538 (16012124)
3737295.1 |      0.08986c(14012024)      0.10511c(14021224)      0.09995c(16020424)
    0.08737c(14011524)      0.06003c(12011824)
3737253.2 |      0.07763c(14010824)      0.07111c(14010824)      0.06961c(14012124)
    0.07129c(12020624)      0.05263 (16121224)
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 3737211.3 |      0.05752c(12011124)      0.05157c(14010824)      0.05313c(14011024)
     0.05465c(12020624)      0.04551 (16121224)
 3737169.4 |      0.04533c(13120924)      0.04056c(14011624)      0.04030 (15020224)
     0.04026c(12011824)      0.03979c(14010324)
 3737127.5 |      0.03787c(14012124)      0.03309c(14011624)      0.03371c(16010424)
     0.03056c(12011724)      0.03620c(12020624)
 3737085.5 |      0.03032c(13121124)      0.02795 (15122424)      0.02855c(16121324)
     0.02381c(14011624)      0.02953c(16020424)
 3737043.6 |      0.02429c(13121124)      0.02400 (15122424)      0.02441 (14010724)
     0.02175c(14011624)      0.02394c(12020624)
 3737001.7 |      0.02184c(14021224)      0.02096 (15122424)      0.02066b(15011624)
     0.01979 (15020224)      0.01943c(12011724)
 3736959.8 |      0.01979c(14021224)      0.01835 (15121824)      0.01755 (15020224)
     0.01756c(14011024)      0.01544c(12011724)
 3736917.9 |      0.01798c(14021224)      0.01624c(14011624)      0.01533 (14010724)
     0.01620c(14012124)      0.01294c(13112824)
 3736875.9 |      0.01613c(14010824)      0.01461c(14011624)      0.01367 (15020224)
     0.01487 (15020224)      0.01241 (15020224)
 3736834.0 |      0.01412c(14010824)      0.01327c(14011624)      0.01220 (15020224)
     0.01359 (15020224)      0.01188 (15020224)
 3736792.1 |      0.01249c(14010824)      0.01208c(14011624)      0.01098 (15020224)
     0.01220c(16010424)      0.01130 (15020224)
 3736750.2 |      0.01107c(14010824)      0.01106c(14011624)      0.00991 (15020224)
     0.01135c(16010424)      0.01050c(14011024)
 3736708.3 |      0.00986c(14010824)      0.01017c(14011624)      0.00906c(14021224)
     0.01048 (15020224)      0.00967c(14011624)
 *** AERMOD - VERSION 23132  ***   *** C:\Lakes\AERMOD View\24-073_Coast St
Con\24-073_Coast St Con.isc     ***        06/03/25
 *** AERMET - VERSION  16216 ***   ***
                      ***        20:32:06

                                 PAGE  67
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                              *** THE   6TH HIGHEST 24-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                 INCLUDING SOURCE(S):     PAREA1      , A0000001
, A0000002    , A0000003    , A0000004    ,
                A0000005    , A0000006    , A0000007    , A0000008    , A0000009
, A0000010    , A0000011    , A0000012    ,
                A0000013    , A0000014    , A0000015    , A0000016    , A0000017
, A0000018    , A0000019    ,

                                  *** NETWORK ID: UCART1   ;  NETWORK TYPE:
GRIDCART ***

                                       ** CONC OF PM_10    IN MICROGRAMS/M**3
                **

  Y-COORD  |                                                X-COORD (METERS)
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  (METERS) |       408574.93               408628.06               408681.19
      408734.32               408787.45
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    0.01219 (13020424)      0.00876 (13020424)
 3737379.0 |      0.04866m(13121024)      0.03467 (15011524)      0.02417 (15012824)
    0.01791 (13122624)      0.01274 (14120424)
 3737337.1 |      0.05343 (13122624)      0.03431 (16122924)      0.02602m(13121024)
    0.02154m(13121024)      0.01768 (15011524)
 3737295.1 |      0.03971 (15010624)      0.03525 (15021324)      0.02419 (14011324)
    0.02055 (16122924)      0.01680m(13121024)
 3737253.2 |      0.03753 (12012524)      0.02856 (15010624)      0.02397 (13020424)
    0.02063b(12020824)      0.01602 (16122924)
 3737211.3 |      0.03591 (15012324)      0.02649m(16012624)      0.02185 (15010624)
    0.01894 (15012324)      0.01689 (15021324)
 3737169.4 |      0.03287 (16121224)      0.02622c(13020124)      0.02061 (15021324)
    0.01745 (15010624)      0.01568 (15012324)
 3737127.5 |      0.02905 (16121224)      0.02446c(13020124)      0.01998c(13020124)
    0.01678 (15021324)      0.01437 (15010624)
 3737085.5 |      0.02720c(14012824)      0.02299b(12020824)      0.01983c(13020124)
    0.01564c(13020124)      0.01398 (15021324)
 3737043.6 |      0.02452c(14010324)      0.02065c(13010124)      0.01812 (16121224)
    0.01621c(13020124)      0.01287 (14021424)
 3737001.7 |      0.02272 (13021424)      0.01957c(14010324)      0.01691 (13021424)
    0.01537m(13010324)      0.01342c(13020124)
 3736959.8 |      0.01924c(16020424)      0.01858c(14010324)      0.01594c(13010124)
    0.01438 (16121224)      0.01328c(13020124)
 3736917.9 |      0.01652c(12020624)      0.01697c(14010324)      0.01506c(14010324)
    0.01342 (13021424)      0.01193c(14012824)
 3736875.9 |      0.01371c(12020624)      0.01589 (13021424)      0.01464c(14010324)
    0.01287c(12020624)      0.01091c(13020124)
 3736834.0 |      0.01157c(12011724)      0.01396c(16020424)      0.01379c(14010324)
    0.01223c(13010124)      0.01101 (13021424)
 3736792.1 |      0.00964c(12011724)      0.01223c(12011724)      0.01274c(16020424)
    0.01194c(14010324)      0.01054c(12020624)
 3736750.2 |      0.00876c(13112824)      0.01041c(12011824)      0.01190 (13021424)
    0.01148c(14010324)      0.01024c(13010124)
 3736708.3 |      0.00810c(13112824)      0.00905c(12011724)      0.01071c(12011724)
    0.01079c(14010324)      0.01000c(14010324)
 *** AERMOD - VERSION 23132  ***   *** C:\Lakes\AERMOD View\24-073_Coast St
Con\24-073_Coast St Con.isc     ***        06/03/25
 *** AERMET - VERSION  16216 ***   ***
                      ***        20:32:06

                                  PAGE  68
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                               *** THE   6TH HIGHEST 24-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                  INCLUDING SOURCE(S):     PAREA1      , A0000001
, A0000002    , A0000003    , A0000004    ,
                A0000005    , A0000006    , A0000007    , A0000008    , A0000009
, A0000010    , A0000011    , A0000012    ,
                A0000013    , A0000014    , A0000015    , A0000016    , A0000017
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, A0000018   , A0000019   ,

*** NETWORK ID: UCART1   ; NETWORK TYPE:
GRIDCART ***

** CONC OF PM_10   IN MICROGRAMS/M**3
**

Y-COORD (METERS)	X-COORD (METERS)				
	408840.58	408893.71	408946.84	408999.97	409053.10
3738343.1	0.00177 (12022424)	0.00112 (12122624)	0.00104 (12122624)	0.00107c(13082824)	0.00104c(13082824)
3738301.2	0.00162c(13020524)	0.00116 (12122624)	0.00113 (15011524)	0.00111c(13082824)	0.00097 (14120824)
3738259.3	0.00144c(13020524)	0.00122 (12022424)	0.00119c(13082824)	0.00114c(13082824)	0.00102 (15122224)
3738217.4	0.00135 (12122624)	0.00126 (12042324)	0.00124c(13082824)	0.00110 (15122224)	0.00117 (15122224)
3738175.5	0.00146 (12042324)	0.00135c(13082824)	0.00128c(13082824)	0.00128 (15122224)	0.00117 (12021324)
3738133.5	0.00155 (12111324)	0.00143 (12042324)	0.00137c(14013124)	0.00132 (12091024)	0.00128 (13102224)
3738091.6	0.00170 (12042324)	0.00149 (12042324)	0.00143 (12091024)	0.00131 (13102224)	0.00151 (15122224)
3738049.7	0.00171 (15122224)	0.00156 (12091024)	0.00160 (12021324)	0.00167 (13102224)	0.00155 (15122224)
3738007.8	0.00207c(14013124)	0.00179 (12091024)	0.00177 (12091024)	0.00181 (15122224)	0.00169c(13010124)
3737965.9	0.00196 (12042324)	0.00200 (12091024)	0.00215 (13102224)	0.00183 (15122224)	0.00206c(13010124)
3737923.9	0.00229 (13011624)	0.00230 (13102224)	0.00220 (15122224)	0.00221c(13010124)	0.00222 (13102224)
3737882.0	0.00249 (12091024)	0.00268 (15122224)	0.00238c(13010124)	0.00237 (13102224)	0.00198 (13102224)
3737840.1	0.00297 (13102224)	0.00269 (15122224)	0.00255 (13102224)	0.00218 (12111324)	0.00169 (16123024)
3737798.2	0.00317 (13011624)	0.00277 (13102224)	0.00233 (12111324)	0.00194 (16123024)	0.00155 (13011624)
3737756.3	0.00330c(13010124)	0.00253 (12111324)	0.00202 (13011624)	0.00169 (13011024)	0.00156 (13011024)
3737714.3	0.00278 (12111324)	0.00231 (15122224)	0.00208 (13011024)	0.00188 (13011024)	0.00172c(13111924)
3737672.4	0.00293 (13011024)	0.00255 (16123024)	0.00216 (13020824)	0.00212 (12020924)	0.00208 (13020824)
3737630.5	0.00313 (16121624)	0.00283c(12110524)	0.00254 (12020924)	0.00226c(14013124)	0.00225c(12110524)

3737588.6 | 0.00382 (16121624)   0.00318c(12110924)   0.00279 (16121624)
    0.00241c(12110524)   0.00214c(12110524)
3737546.7 | 0.00431 (16121624)   0.00353 (16121624)   0.00297 (12020924)
    0.00261c(12110924)   0.00227 (15011924)
3737504.7 | 0.00548 (12021724)   0.00481 (12021724)   0.00426 (12021724)
    0.00380 (12021724)   0.00333m(15010524)
3737462.8 | 0.00638 (13020824)   0.00537 (13020824)   0.00459 (13020824)
    0.00398 (13020824)   0.00350 (13020824)
3737420.9 | 0.00653 (13020424)   0.00499 (13020424)   0.00390 (13020424)
    0.00337 (13020824)   0.00297 (13020824)
3737379.0 | 0.01104 (14120424)   0.00907 (13020424)   0.00705 (13020424)
    0.00556 (13020424)   0.00446 (13020424)
3737337.1 | 0.01379 (15011524)   0.01082 (15011524)   0.00856 (15011524)
    0.00682 (15011524)   0.00548 (15011524)
3737295.1 | 0.01480m(13121024)   0.01240 (16012124)   0.01119 (15011524)
    0.00924 (15011524)   0.00764 (15011524)
3737253.2 | 0.01414 (16122924)   0.01209 (16122924)   0.01095m(13121024)
    0.00992m(13121024)   0.00825 (15011924)
3737211.3 | 0.01328 (12112824)   0.01169 (16122924)   0.01055 (16122924)
    0.00927 (16122924)   0.00851m(13121024)
3737169.4 | 0.01383 (13020424)   0.01161 (12112824)   0.01178 (12112824)
    0.01136 (15011524)   0.00825 (16122924)
3737127.5 | 0.01256 (16012124)   0.01105 (12112824)   0.01017 (12112824)
    0.00876 (14011324)   0.00893 (12112824)
3737085.5 | 0.01214 (15010624)   0.01012 (16012124)   0.00940 (12112824)
    0.00910b(12020824)   0.00757 (14011324)
3737043.6 | 0.01188 (15021324)   0.01044 (15010624)   0.00831 (15010624)
    0.00809 (12112824)   0.00790 (12112824)
3737001.7 | 0.01093 (14021424)   0.01027 (15021324)   0.00911 (15010624)
    0.00740 (15010624)   0.00702 (12112824)
3736959.8 | 0.01109 (12012524)   0.00951 (15010624)   0.00900 (15021324)
    0.00806 (15010624)   0.00666 (15010624)
3736917.9 | 0.01072 (15012324)   0.00930 (12012524)   0.00847 (15010624)
    0.00797 (15021324)   0.00721 (15010624)
3736875.9 | 0.01028m(13010324)   0.00983 (12012524)   0.00807c(13020124)
    0.00760 (15010624)   0.00713 (15021324)
3736834.0 | 0.01009 (16121224)   0.00941c(12011824)   0.00840 (12012524)
    0.00692c(13020124)   0.00689c(12011724)
3736792.1 | 0.00927 (12022224)   0.00857 (16121224)   0.00767c(12011824)
    0.00725 (12012524)   0.00623c(13122324)
3736750.2 | 0.00925 (13021424)   0.00866 (16121224)   0.00761 (12022224)
    0.00719 (15012324)   0.00632 (14021424)
3736708.3 | 0.00883c(12020624)   0.00846 (16121224)   0.00778c(13020124)
    0.00706c(12011824)   0.00664 (12012524)

```
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                              *** THE   6TH HIGHEST 24-HR AVERAGE CONCENTRATION
VALUES FOR SOURCE GROUP:  ALL      ***
                                 INCLUDING SOURCE(S):     PAREA1      , A0000001
, A0000002    , A0000003    , A0000004    ,
                  A0000005    , A0000006    , A0000007    , A0000008    , A0000009
, A0000010    , A0000011    , A0000012    ,
                  A0000013    , A0000014    , A0000015    , A0000016    , A0000017
, A0000018    , A0000019    ,

                                  *** NETWORK ID: UCART1   ;  NETWORK TYPE:
GRIDCART ***

                                       ** CONC OF PM_10    IN MICROGRAMS/M**3
                  **

  Y-COORD  |                                                  X-COORD (METERS)
  (METERS) |       409106.23              409159.36              409212.49
      409265.62              409318.75
 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - - -

 3738343.1 |      0.00084 (13082624)      0.00092c(13082824)      0.00088 (15122224)
     0.00085 (15122224)      0.00080 (15122224)
 3738301.2 |      0.00096 (13011624)      0.00096 (15122224)      0.00094 (15122224)
     0.00089 (16120224)      0.00085c(13010124)
 3738259.3 |      0.00106 (15122224)      0.00097 (13102224)      0.00099 (15122224)
     0.00106 (12091024)      0.00107c(13010124)
 3738217.4 |      0.00104 (15011524)      0.00111 (15122224)      0.00113 (12091024)
     0.00111c(13010124)      0.00130c(13010124)
 3738175.5 |      0.00125 (12091024)      0.00122 (12091024)      0.00116c(13010124)
     0.00137c(13010124)      0.00154c(13010124)
 3738133.5 |      0.00132 (12091024)      0.00123 (12091024)      0.00144c(13010124)
     0.00162c(13010124)      0.00173 (13102224)
 3738091.6 |      0.00134 (12091024)      0.00151c(13010124)      0.00171c(13010124)
     0.00181 (13102224)      0.00157 (12111324)
 3738049.7 |      0.00160c(13010124)      0.00181c(13010124)      0.00189 (13102224)
     0.00164 (12111324)      0.00114 (12111324)
 3738007.8 |      0.00193c(13010124)      0.00199 (13102224)      0.00173 (12111324)
     0.00128m(15010524)      0.00118 (13102224)
 3737965.9 |      0.00210 (13102224)      0.00181 (13102224)      0.00150 (13102224)
     0.00127 (16123024)      0.00120 (13011624)
 3737923.9 |      0.00189 (13102224)      0.00154 (13102224)      0.00141 (16123024)
     0.00121 (13011624)      0.00099 (13011624)
 3737882.0 |      0.00158 (13102224)      0.00149 (13011624)      0.00121 (13011624)
     0.00103c(13111924)      0.00106c(13111924)
 3737840.1 |      0.00152 (13011624)      0.00122 (13011624)      0.00117c(13111924)
     0.00120c(13111924)      0.00111c(12110524)
 3737798.2 |      0.00134c(13111924)      0.00134c(13111924)      0.00127c(12110524)
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    0.00130 (12020924)      0.00130c(13111924)
3737756.3 |      0.00151 (16123024)      0.00149c(13111924)      0.00145c(13111924)
    0.00133c(14013124)      0.00116 (13020824)
3737714.3 |      0.00164c(13111924)      0.00155c(13111924)      0.00135 (16120224)
    0.00132m(13121024)      0.00126c(13111924)
3737672.4 |      0.00167 (16120224)      0.00149c(13111924)      0.00148 (15012824)
    0.00156 (15012824)      0.00162c(12110524)
3737630.5 |      0.00208c(12110524)      0.00191c(12110524)      0.00175c(12110524)
    0.00161c(12110524)      0.00147c(12110524)
3737588.6 |      0.00191c(12110524)      0.00171c(12110524)      0.00160m(13121024)
    0.00150m(13121024)      0.00141m(13121024)
3737546.7 |      0.00218 (15011924)      0.00207 (15011924)      0.00197 (15011924)
    0.00188 (15011924)      0.00179 (15011924)
3737504.7 |      0.00281m(15010524)      0.00241m(15010524)      0.00208m(15010524)
    0.00189m(13121024)      0.00174m(13121024)
3737462.8 |      0.00310 (13020824)      0.00278 (13020824)      0.00250 (13020824)
    0.00227 (13020824)      0.00208 (13020824)
3737420.9 |      0.00265 (13020824)      0.00238 (13020824)      0.00215 (13020824)
    0.00196 (13020824)      0.00179 (13020824)
3737379.0 |      0.00363 (13020424)      0.00298 (13020424)      0.00247 (13020424)
    0.00222 (15022424)      0.00210 (15022424)
3737337.1 |      0.00475 (14120424)      0.00444 (14120424)      0.00390 (13020424)
    0.00327 (13020424)      0.00275 (13020424)
3737295.1 |      0.00624 (13122624)      0.00528 (15011524)      0.00442 (15011524)
    0.00372 (15011524)      0.00313 (15011524)
3737253.2 |      0.00792 (15011524)      0.00679 (15011524)      0.00571 (13122624)
    0.00479 (13122624)      0.00403 (13122624)
3737211.3 |      0.00789m(13121024)      0.00679 (16012124)      0.00605 (15011924)
    0.00596 (15011924)      0.00521 (13122624)
3737169.4 |      0.00743 (16122924)      0.00686m(13121024)      0.00646m(13121024)
    0.00586 (16012124)      0.00491 (16012124)
3737127.5 |      0.00951 (15011524)      0.00766 (14011324)      0.00614 (16122924)
    0.00568m(13121024)      0.00541m(13121024)
3737085.5 |      0.00651 (16122924)      0.00635 (16122924)      0.00801 (15011524)
    0.00672 (14011324)      0.00523 (16122924)
3737043.6 |      0.00715m(13010324)      0.00623c(13122324)      0.00552 (16122924)
    0.00628 (15011524)      0.00680 (14011324)
3737001.7 |      0.00699 (12112824)      0.00645 (15021324)      0.00565 (14011324)
    0.00479 (16122924)      0.00560 (12112824)
3736959.8 |      0.00629 (15012324)      0.00619 (12112824)      0.00563 (13020424)
    0.00501 (15021324)      0.00466c(13122324)
3736917.9 |      0.00604 (15010624)      0.00560 (16012124)      0.00552 (12112824)
    0.00523b(12020824)      0.00478 (15021324)
3736875.9 |      0.00651 (15010624)      0.00552 (15010624)      0.00484 (16012124)
    0.00493 (12112824)      0.00492 (12112824)
3736834.0 |      0.00643 (15021324)      0.00593 (15010624)      0.00508 (15010624)
    0.00441 (15021124)      0.00443 (12112824)
3736792.1 |      0.00617c(12011724)      0.00584 (15021324)      0.00543 (15010624)
    0.00469 (15010624)      0.00408 (15021124)
3736750.2 |      0.00577c(13122324)      0.00563c(12011724)      0.00534 (15021324)
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 3738343.1 | 0.00082c(13010124)   0.00099c(13010124)   0.00114c(13010124)
    0.00128c(13010124)   0.00139c(13010124)
 3738301.2 | 0.00103c(13010124)   0.00119c(13010124)   0.00133c(13010124)
    0.00145c(13010124)   0.00128 (12111324)
 3738259.3 | 0.00124c(13010124)   0.00140c(13010124)   0.00152c(13010124)
    0.00134 (12111324)   0.00098 (12111324)
 3738217.4 | 0.00146c(13010124)   0.00159c(13010124)   0.00139 (12111324)
    0.00102 (12111324)   0.00073 (12111324)
 3738175.5 | 0.00166 (13102224)   0.00145 (12111324)   0.00104 (12111324)
    0.00077 (16123024)   0.00089m(15010524)
 3738133.5 | 0.00151 (12111324)   0.00107 (12111324)   0.00090m(15010524)
    0.00096 (16123024)   0.00099 (13011624)
 3738091.6 | 0.00111 (12111324)   0.00106m(15010524)   0.00104 (16123024)
    0.00099 (13011624)   0.00084 (13011624)
 3738049.7 | 0.00117 (13102224)   0.00114 (16123024)   0.00099 (13011624)
    0.00083 (13011624)   0.00077c(13101424)
 3738007.8 | 0.00119 (13011624)   0.00099 (13011624)   0.00082 (13011624)
    0.00081c(13101424)   0.00082c(13111924)

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3737965.9 |      0.00099 (13011624)      0.00086c(13101424)      0.00087c(13111924)
    0.00091c(13111924)      0.00085 (16123024)
3737923.9 |      0.00094c(13111924)      0.00097c(13111924)      0.00096 (16123024)
    0.00090c(12110524)      0.00090c(14013124)
3737882.0 |      0.00109c(13111924)      0.00099c(12110524)      0.00102 (12020924)
    0.00092m(13121024)      0.00089c(15111924)
3737840.1 |      0.00114 (12020924)      0.00108c(14013124)      0.00099 (16120224)
    0.00094c(15111924)      0.00091c(15111924)
3737798.2 |      0.00110m(13121024)      0.00103c(15111924)      0.00099c(15111924)
    0.00096c(14012924)      0.00094c(14012924)
3737756.3 |      0.00115 (13020824)      0.00114 (13020824)      0.00110c(13111924)
    0.00102c(13111924)      0.00096c(14012924)
3737714.3 |      0.00122 (14120424)      0.00121m(13121024)      0.00117m(13121024)
    0.00114 (15012824)      0.00117 (15012824)
3737672.4 |      0.00151c(12110524)      0.00140c(12110524)      0.00130c(12110524)
    0.00121c(12110524)      0.00112c(12110524)
3737630.5 |      0.00135c(12110524)      0.00123c(12110524)      0.00117m(13121024)
    0.00110m(13121024)      0.00105m(13121024)
3737588.6 |      0.00132m(13121024)      0.00124m(13121024)      0.00117m(13121024)
    0.00111m(13121024)      0.00104m(13121024)
3737546.7 |      0.00170 (12020924)      0.00153m(15010524)      0.00137m(15010524)
    0.00124m(15010524)      0.00113m(15010524)
3737504.7 |      0.00159m(13121024)      0.00147m(13121024)      0.00136 (12020924)
    0.00129 (12020924)      0.00123 (12020924)
3737462.8 |      0.00190m(13121024)      0.00174m(13121024)      0.00159m(13121024)
    0.00146m(13121024)      0.00139 (15122324)
3737420.9 |      0.00170 (15122324)      0.00164 (15122324)      0.00158 (15122324)
    0.00153 (15122324)      0.00148 (15122324)
3737379.0 |      0.00200 (15022424)      0.00190 (15022424)      0.00181 (15022424)
    0.00173 (15022424)      0.00166 (15022424)
3737337.1 |      0.00233 (13020424)      0.00199 (13020424)      0.00190 (15022424)
    0.00184 (15022424)      0.00178 (15022424)
3737295.1 |      0.00264 (15011524)      0.00253 (14120424)      0.00242 (14120424)
    0.00217 (13020424)      0.00187 (13020424)
3737253.2 |      0.00364 (15011524)      0.00312 (15011524)      0.00268 (15011524)
    0.00232 (15011524)      0.00202c(12121024)
3737211.3 |      0.00446 (13122624)      0.00383 (13122624)      0.00329 (13122624)
    0.00283 (13122624)      0.00258 (15012824)
3737169.4 |      0.00464 (15011924)      0.00461 (15011924)      0.00414 (13122624)
    0.00361 (13122624)      0.00316 (13122624)
3737127.5 |      0.00512 (16012124)      0.00437 (16012124)      0.00377c(13111424)
    0.00369 (15011924)      0.00368 (15011924)
3737085.5 |      0.00479m(13121024)      0.00461m(13121024)      0.00442m(13121024)
    0.00391 (16012124)      0.00358c(13111424)
3737043.6 |      0.00487 (16122924)      0.00454 (16122924)      0.00418 (16122924)
    0.00399m(13121024)      0.00385m(13121024)
3737001.7 |      0.00549 (15011524)      0.00438 (14011324)      0.00425 (12021724)
    0.00399 (16122924)      0.00369 (16122924)
3736959.8 |      0.00517 (16122924)      0.00459 (12112824)      0.00411 (16122924)
    0.00382 (14011324)      0.00368 (12021724)
```

3736917.9 | 0.00447 (14011324) 0.00435 (16122924) 0.00464 (12112824)
0.00363 (15011524) 0.00364 (16122924)
3736875.9 | 0.00441 (13020424) 0.00401 (14011324) 0.00383 (14020724)
0.00395 (16122924) 0.00333 (12112824)
3736834.0 | 0.00447 (12112824) 0.00378 (13020424) 0.00370 (15021324)
0.00362 (14020724) 0.00298 (16122924)
3736792.1 | 0.00399 (12112824) 0.00408 (12112824) 0.00354b(12020824)
0.00346m(13010324) 0.00339 (14020724)
3736750.2 | 0.00378 (15021124) 0.00361 (12112824) 0.00372 (12112824)
0.00341b(12020824) 0.00327 (14011324)
3736708.3 | 0.00403 (15010624) 0.00352 (15021124) 0.00326 (15021124)
0.00341 (12112824) 0.00329b(12020824)

*** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

*** THE 6TH HIGHEST 24-HR AVERAGE CONCENTRATION VALUES FOR SOURCE GROUP: ALL ***
INCLUDING SOURCE(S): PAREA1 , A0000001 , A0000002 , A0000003 , A0000004 ,
A0000005 , A0000006 , A0000007 , A0000008 , A0000009 , A0000010 , A0000011 , A0000012 ,
A0000013 , A0000014 , A0000015 , A0000016 , A0000017 , A0000018 , A0000019 ,

*** DISCRETE CARTESIAN RECEPTOR POINTS ***

** CONC OF PM_10 IN MICROGRAMS/M**3 **

X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)	X-COORD (M)	Y-COORD (M)	CONC	(YYMMDDHH)
408366.38	3737485.43	0.31227c	(12101824)	408430.14	3737461.14	0.22114	(14120424)
408181.97	3737466.67	0.07159c	(13012224)	408150.06	3737412.73	0.05796	(15010824)
408109.61	3737456.33	0.04787c	(12120724)	408217.52	3737471.69	0.09505c	(14120524)
408016.80	3737435.48	0.03037	(12011224)	408279.89	3737472.78	0.15276	(16021124)
408798.65	3737545.01	0.00510	(16121624)	408676.12	3737499.78	0.00994	(16121624)
407927.20	3737488.08	0.02290c	(12121024)	407852.89			

3737488.76   0.01856c (12120724)
        408566.64   3737551.51   0.01556b (12041124)   408261.37
3737558.76   0.03748 (15021724)
        408120.70   3737439.75   0.04879 (12011224)   408512.12
3737495.11   0.03606 (16121624)
        408510.14   3737484.42   0.04162 (16120224)   408511.38
3737471.75   0.04665c (12110924)
        408511.63   3737457.34   0.04927c (12110924)   408356.31
3737407.88   0.42853c (15121024)
        408511.63   3737446.65   0.05699 (13020424)   408511.13
3737433.23   0.07177m (13121024)
        408327.23   3737479.20   0.22672c (13010924)   408329.72
3737416.58   0.40775c (15010224)
        408387.62   3737478.21   0.41889c (12070424)   408407.50
3737476.47   0.32086 (16101124)
        408293.50   3737546.37   0.05342 (15021724)   408183.24
3737542.99   0.03849c (13010924)
        408402.13   3737553.87   0.07972c (13020624)   408440.68
3737412.33   0.25529 (16122924)
        408407.34   3737393.62   0.40115c (16121324)   408359.39
3737391.57   0.38288 (15121824)
        408512.32   3737400.05   0.08335m (13121024)   408481.62
3737390.11   0.13175 (12021724)
        408443.74   3737538.89   0.06413c (12070424)   408503.64
3737538.89   0.03014 (16050924)
        408367.16   3737603.86   0.03392 (15042124)   408324.78
3737606.24   0.03177c (13020524)
        408547.34   3737413.04   0.05688 (13122624)   408327.55
3737398.88   0.31456c (12011124)

 *** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

                                       *** THE SUMMARY OF MAXIMUM PERIOD (43848 HRS) RESULTS ***

                                    ** CONC OF PM_10   IN MICROGRAMS/M**3
             **

                      NETWORK
GROUP ID   AVERAGE CONC   RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG) OF TYPE GRID-ID
- - - -

```
ALL       1ST HIGHEST VALUE IS       0.12670 AT (  408387.62,  3737478.21,    16.97,
   16.97,    0.00)  DC
          2ND HIGHEST VALUE IS       0.12435 AT (  408362.41,  3737462.82,    17.00,
   17.00,    0.00)  GC  UCART1
          3RD HIGHEST VALUE IS       0.10445 AT (  408407.50,  3737476.47,    16.66,
   16.66,    0.00)  DC
          4TH HIGHEST VALUE IS       0.10164 AT (  408415.54,  3737462.82,    16.60,
   16.60,    0.00)  GC  UCART1
          5TH HIGHEST VALUE IS       0.08038 AT (  408366.38,  3737485.43,    17.00,
   17.00,    0.00)  DC
          6TH HIGHEST VALUE IS       0.06275 AT (  408415.54,  3737420.90,    16.50,
   16.50,    0.00)  GC  UCART1
          7TH HIGHEST VALUE IS       0.06263 AT (  408362.41,  3737420.90,    16.50,
   16.50,    0.00)  GC  UCART1
          8TH HIGHEST VALUE IS       0.05946 AT (  408430.14,  3737461.14,    16.69,
   16.69,    0.00)  DC
          9TH HIGHEST VALUE IS       0.04413 AT (  408415.54,  3737504.74,    16.70,
   16.70,    0.00)  GC  UCART1
         10TH HIGHEST VALUE IS       0.04091 AT (  408329.72,  3737416.58,    16.71,
   16.71,    0.00)  DC


 *** RECEPTOR TYPES:  GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR
↑ *** AERMOD - VERSION 23132  ***   *** C:\Lakes\AERMOD View\24-073_Coast St
Con\24-073_Coast St Con.isc     ***        06/03/25
 *** AERMET - VERSION  16216 ***   ***
                       ***        20:32:06

                                  PAGE  73
 *** MODELOPTs:    RegDFAULT  CONC  ELEV  RURAL  ADJ_U*

                                                *** THE SUMMARY OF HIGHEST  1-HR
RESULTS ***


                                    ** CONC OF PM_10    IN MICROGRAMS/M**3
             **

                                                        DATE
                                          NETWORK
GROUP ID                             AVERAGE CONC     (YYMMDDHH)             RECEPTOR
(XR, YR, ZELEV, ZHILL, ZFLAG)    OF TYPE  GRID-ID
- - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - -
- - - - - - - - - - - - - - - - - - - - - - - -

ALL      HIGH   1ST HIGH VALUE IS       8.62577  ON 12020208: AT (  408329.72,
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3737416.58,   16.71,   16.71,   0.00) DC

 *** RECEPTOR TYPES: GC = GRIDCART
                      GP = GRIDPOLR
                      DC = DISCCART
                      DP = DISCPOLR

 *** MODELOPTs: RegDFAULT CONC ELEV RURAL ADJ_U*

                                                *** THE SUMMARY OF HIGHEST 24-HR RESULTS ***

                                    ** CONC OF PM_10   IN MICROGRAMS/M**3
             **

                                                      DATE
                                         NETWORK
GROUP ID   AVERAGE CONC   (YYMMDDHH)   RECEPTOR (XR, YR, ZELEV, ZHILL, ZFLAG)   OF TYPE GRID-ID
- - - -

```
A Total of            0 Fatal Error Message(s)
A Total of            2 Warning Message(s)
A Total of         2285 Informational Message(s)

A Total of        43848 Hours Were Processed

A Total of         1588 Calm Hours Identified

A Total of          697 Missing Hours Identified (  1.59 Percent)


   ******** FATAL ERROR MESSAGES ********
              ***  NONE  ***


   ********   WARNING MESSAGES   ********
ME W186     573       MEOPEN: THRESH_1MIN 1-min ASOS wind speed threshold used
    0.50
ME W187     573       MEOPEN: ADJ_U* Option for Stable Low Winds used in AERMET


   ***********************************
   *** AERMOD Finishes Successfully ***
   ***********************************
```

APPENDIX C – ESTIMATION OF PROJECT CONSTRUCTION DPM EMISSIONS

Basic Operational HRA Setup

Information Needed to Generate Emissions

Site Plan showing onsite trip distribution for trucks and cars
Trip generation Table with offsite trip distribution for trucks and cars
Operational Year
Land Use - refrigerated vs non-refrigerated
TRU usage (number of trucks and TRU size using TRUs and number of hours in opertion while at
Use of fire pumps, standby emergency generator, forklifts, and yard trucks (number, size, and
Emission factors: EMFAC2021, OFFROAD2021 (2017), CalEEMod
Idle time assumed to be 15 minutes

AERMOD Setup to Generate Ground-level Concentrations

Use site plan to delineate the locations of the onsite truck routes, offsite truck routesm fire pum
fork lifts, and yard trucks
Obtain the necessary meteorological data
Overlay site plan onto Google Earth and screen capture the site plan noting the Google x and
bottom left and upper right coordinates
Import the Google site plan into AERMOD
Layout the onsite and offsite truck routes on the imported site plan as line area sources
Locate the truck idling locations at the loading docks and define as a series of point sources to
over the entire length of the loading docks
Locate the fire pumps and generators as point sources
Locate the forklifts and yard trucks as area or volume sources
Set the AERMOD averaging times as 1-hour and Period
Enter the annual average DPM emissions for each source
Deploy a gridded network of receptors to cover the receptor locations that could be impacted
along the offsite travel routes, locations of nearest sensitive receptors, locations of the nea

Area Sources:				
Project Site:				
	Release:	5 meters	16.4042	
Release Heights:				Idling Source
Line Sources		3.11 meters	10.2034	
	Vehicle Height	3.11 meters	10.2034	
	Vehicle Width	meters		
	Emission Rate:			
				Idling Truck Source
Idle Trucks				
	Release	3.66	12.0079	
	Emission Rate			
	Gas Exit Temp	366.483		

Stack Diam	0.1		
Gas Exit Velocity	51.7		
Flow Rate	0.4061		
FirePump/Generator	2.256	meters	7.40157
Emission Rate:	4.13E-05		
Gas Exit Temp	749.261		
Stack Diam	0.104		
Gas Exit Velocity	43.587		
Flow Rate	0.3676		

Gold tabs are [raw] information inputs

Blue tabs are model inputs

Pink tabs are Air Qualtiy Calculation tabs

Unmitigated and over threshold

d y corners of the screen capture

arest worker receptors

24-073 Coast St Garden Grove Apartments
Emission Assumptions

2026 operational year
DPM Emissions

1) Vehicle Emissions

(a) Truck and Auto Traffic	EMFAC2021	Orange County (SC)	
(b) Location	SCAQMD	Garden Grove	
(c) Truck Mix			
Project Trip Generation Memo			
(e) Truck Idle time:	0	minutes (truck idling)	
(e.2) Total Dock Doors	0	How Many Modeled?	3 for LHDT, MHDT, and HHDT diesel trucks)
(f) Emission factors for	DPM	emissions	
(g) Emissions calculated for	2026	Calculated with 2025 emissions for conservative estimate.	

2) Refrigerated Land Uses

Percentage of Buildings used for Refrigeration (applies to DSL LHDT, MHDT and HHDT)

Land Use 1	0%	ASSUMPTION based on the % of building space devoted to cold storage	
	0		0
TRU Onsite Operating Time	**0**	hours - ASSUMPTION	

3) Traffic Allocation

1) Onsite travel emssions generated from vehicles traveling to building loading docks
2) Onsite idling emissions generated only for heavy duty diesel trucks
3) Offsite travel trips allocated in accordance with the Traffic Impact Memorandum

Land Use 1- Residential	61,297	100%
- -	0	0%
Total	61,297	100%

4) Emission Source Configuration

1) Vehicle traffic represented by a line source
2) Onsite idling represented as a series of point sources to accommodate the effects of building downwash

5) Venicle Trip Lengths

Onsite Travel Links

	Travel Distance (m)	Trip Distance (mi)	% of Truck Travel
Onsite 1: Onsite route	45	0.027961704	100%

Off site Travel Links (Construction Run)

	Travel Distance (m)	Travel Distance (mi)	% of Truck Travel
Offsite 1: East on Coast St > W on Garden Grove Blvd > S Beach Blvd > I- 22	994.5	0.617953651	100%

*analyzed as two lanes to be conservative

6) Other Input Parameters

Facility Operations for Warehouses (hr/day):	24
Annual Operations (days/year)	365

24-073 Coast St Garden Grove Apartments

Construction DPM Emissions
Data Source: CalEEMod Project Output

Work Schedule	**8**	**hrs/day**	**5**	**days per week**	
Onsite DPM Construction Emissionsss	acres: 0.54		23522.49409	SF	
			Building Area:		
Size of the Construction Area:	2,185	m2	61,297.000	SF	
Unit Emission Rate:	0.000457601	g/m2-sec	unmitigated		0.28

Activity	Start Date	End Date	Daily Max Onsite PM10E DPM Emissions lb/day	Work Days days	DPM Emissions (lbs)	DPM Emissions (tons)	
Site Preparation	7/16/2025	7/17/2025	**0.3540**	**1**	0.35	0.000177	**These numbers have been updated per Chapman PM10E CalEEMod. Please review where they come from <----- everything looks**
Grading	7/18/2025	7/20/2025	**0.7883**	**2**	1.58	0.000788	
Building Construction	7/21/2025	12/8/2025	**0.3114**	**100**	31.14	0.015569	
Paving	12/9/2025	12/16/2025	**0.2308**	**5**	1.15	0.000577	
Architectural Coating	12/17/2025	12/30/2025	**0.0366**	**10**	0.37	0.000183	
			1.7211	118	34.588	0.293	

Year	Annual DPM Emissions (tons/year)	# Construction Work Days	Average Daily DPM Emissions lbs	Average Hourly DPM Emissions (g/sec)	Average Hourly DPM Area Emission (g/m2-sec)		g/sec	g/m2-sec
2025	0.017294	118	0.2931	0.0015	7.042E-07	→	**1.5E-03**	**7.04E-07**
					0.002			

Offsite DPM Construction Emissionsss

Activity	Start Date	End Date	Work Days	Daily Max Onsite PM10E Offsite DPM Haul Truck (lb/day)	Offsite DPM Haul Truck (pounds)	Offsite DPM Haul Truck tons	Daily Max Onsite PM10E Offsite DPM Vendor Truck (lb/day)	Offsite DPM Vendor Truck (pounds)	Offsite DPM Vendor Trucks (tons)	Daily Max Onsite PM10E Offsite DPM Worker Vehicles (lb/day)	Offsite DPM Worker Vehicles (pounds)	Offsite DPM Worker Vehicles (tons)		
Site Preparation	7/16/2025	7/17/2025	1	0.0000	0	0	0.0000	0	0	0.0000	0	0	**0.0000**	**These numbers have been updated per Chapman PM10E CalEEMod. Please review where they come from <-----**
Grading	7/18/2025	7/20/2025	2	0.0000	0	0	0.0000	0	0	0.0000	0	0	**0.0000**	
Building Construction	7/21/2025	12/8/2025	100	0.0000	0	0	0.0008	0.08	0.00004	0.0000	0	0	**0.0008**	
Paving	12/9/2025	12/16/2025	5	0.0000	0	0	0.0000	0	0	0.0000	0	0	**0.0000**	
Architectural Coating	12/17/2025	12/30/2025	10	0.0000	0	0	0.0000	0	0	0.0000	0	0	**0.0000**	
			118	0.0000	0.0000	0.0000	0.0008	0.0800	0.0000	0.0000	0.0000	0.0000		

Offsite DPM Emissions (at the CalEEMOd Default Trip Distances)

Year	# of Construction Days	Haul Trucks AnnualEmissions (tons/year)	Haul Trucks Average Daily (lb/day)	Haul Trucks Average Hourly (lb/hr)	Haul Trucks Average Hourly (g/sec)	Vendor Trucks AnnualEmissions (tons/year)	Vendor Trucks Average Daily (lb/day)	Vendor Trucks Average Hourly (lb/hr)	Vendor Trucks Average Hourly (g/sec)	Worker Vehicles Annual Emissions (tons/year)	Worker Vehicles Average Daily (lb/day)	Worker Vehicles Average Hourly (lb/hr)	Worker Vehicles Average Hourly (g/sec)	
2025	118	0	0	0	0	0.00004	0.0006779 66	8.47458E-05	1.06874E-05	0	0	0	0	#REF!

CalEEMod Construction Vehicle Trip Length

Vehicle	Distance (miles)
Haul Truck	20
Vendor Truck	10.2
Worker	18.5

Onsite Travel Links

	Travel Distance (m)	Trip Distance (mi)	% of Truck Travel
Onsite 1: Onsite route	45	0.027961704	100%

Off site Travel Links (Operational Run)

	Travel Distance (m)	Travel Distance (mi)	% of Truck Travel
Offsite 1: East on Coast St > W on Garden Grove Blvd > S Beach Blvd > I- 22	994.5	0.617953651	100%

Offsite Scaled DPM Emissions to AERMOD Trip Distance

Year	Haul Trucks (g/sec)	Vendor Trucks (g/sec)	Worker Vehicles (g/sec)	Total (g/sec)	Total (lb/hr)	Total (lb/day)
2025 (From CalEEMOd)	0.000E+00	1.069E-05	0.000E+00			
Onsite 1: Onsite route	0.000E+00	2.930E-08	0.000E+00	2.930E-08	2.323E-07	1.859E-06
2025 (Scaled for Distance and Distribution)						
Offsite 1: East on Coast St > W on Garden Grove Blvd > S Beach Blvd > I- 22	0.000E+00	6.475E-07	0.000E+00	6.475E-07	5.134E-06	4.107E-05
0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
0	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00	0.000E+00
-	-	-	-	-	-	-

Hauling has no 2026

Weighted Average Emissions	
Route 1	**6.475E-07 g/sec**
Route 2	**0.000E+00 g/sec**
Route 3	**0.000E+00 g/sec**
Onsite	**2.930E-08 g/sec**

Activity	Work Days	On-Site Maximum Daily DPM Emissions[1] (pounds/day)	Off-Site Maximum Daily DPM Emissions[1] (pounds/day)	Total Average Daily Construction Emissions (pounds/day)
	2025			
Site Preparation	1	0.35	0.0000	
Grading	2	0.79	0.0000	
Building Construction	100	0.31	0.0008	
Paving	5	0.23	0.0000	
Architectural Coating	10	0.04	0.0000	
	Average Daily Construction Emissions 2025	0.79	0.0008	**0.79**
			2025 Maximum Daily Construction Emissions (pounds/day)	**0.79**

24-073 Coast St Garden Grove Apartments

Annual DPM Concentrations at Maximum Impacted Sensitive and Worker Receptor

Onsite Unit Emission Source Rate

Size of Construction Area	2,185 m2
Unit EmissionRate:	0.000457601 g/m2-sec

Inputs:

Actual Onsite Emission Source

Year	**Average Hourly Emission Rate (g/m2-sec)**	**Weighted Avg (g/m2-sec)**	
2025	7.04186E-07	**Area Source:**	**g/sec**
		7.04E-07	1.54E-03

Offsite Unit Emission Source:

	Average Hourly Emission Rate (g/sec)	Line Sources (g/sec)	
Onsite		2.92978E-08	g/sec
Offsite 1: East on Coast St > W on Garden Grove Blvd > S Beach Blvd > I- 22		6.47481E-07	g/sec
0		0	g/sec
0		0	g/sec

Results:

Max=School	0.11
Max=Residential	0.08
Max^	0.11
Max=Worker	0.006

Note:
(1) Based on a unit emission rate

5mph

APPENDIX D – ESTIMATION OF CONSTRUCTION HEALTH RISK

Coast St Con HRA

Exposure Durations During Construction

	Start	End	Days	% Year	
Calendar Construction Days	7/1/2025	12/30/2025	182	0.50	
3rd Trimester (2025)	7/16/2025	10/14/2025	90	0.25	
0-1 year (2025)	10/15/2025	12/30/2025	76	0.21	
				0.45	0.20
					5.457534

Coast St Con HRA **Unmitigated**

Updated 5.30.2025

Annual DPM Concentrations at Maximum Impacted Sensitive and Worker Receptor

Onsite Unit Emission Source Rate

Size of Construction Area	61,297	m2
Unit EmissionRate:	1.6314E-05	g/m2-sec

Inputs:

Actual Onsite Emission Source

Year	**Average Hourly Emission Rate (g/m2-sec)**	**Weighted Avg (g/m2-sec)**	
2025	4.54939E-07	**Area Source:**	**g/sec**
		4.39E-07	4.11E-02

Offsite Unit Emission Source:

Year	**Average Hourly Emission Rate (g/sec)**		New 60mi Inputs (g/sec)	
		Onsite	5.50E-08	g/sec
		Offsite 1: East on Coast St > W on Garden Grove Blvd > S Beach Blvd > Intersection	2.04948E-06	g/sec
				g/sec
				g/sec

Results:

Max School=	0.0052
Max Residential=	0.04091
Max Sensitive Receptor=	0.04091
Max Worker=	0.1267

Health Risk Totals:

Receptor	**Cancer Risk (per million)**		**Exceeds Significance Threshold?**
	Maximum Lifetime Proposed Project Risk	**Significance Threshold**	
Maximum Impacted Sensitive Receptor – Infant to Adult (30 years)	1.39	10	No
Maximum Impacted Sensitive Receptor – Adult	0.05	10	No
Maximum Impacted Worker Receptor	0.14	10	No
Receptor	**Chronic Non-Cancer Hazard Index**		**Exceeds Significance Threshold?**
	Maximum Lifetime Proposed Project Risk	**Significance Threshold**	
Maximum Impacted Sensitive Receptor – Infant to Adult (30 years)	0.008	1	No
Maximum Impacted Sensitive Receptor – Adult	0.008	1	No
Maximum Impacted Worker Receptor	0.025340	1	No

Coast St Con HRA No Mitigation

Cancer Risk Calculation - Location of Max Risk

SCAQMD Guidance	**Residential**	**30-year Exposure**	**Total Cancer risk**	**HI**
			1.3913	0.0082

Maximum Period DPM Concentration **4.09E-02** ug/m3

Year	**Year**	**Maximum DPM (ug/m3)**	**CPF (mg/kg-day)^-1**	**95% DBR (l/kg-day)**	**ED (years)**	**EF (days)**	**AT (years)**	**TAH (%)**	**ASF**	**Operational Risk (risk/million)**
3rd Trimester	2025	0.04091	1.1	361	0.25	250	25550	1.00	10	0.391948
1	2025	0.04091	1.1	1,090	0.21	250	25550	1.00	10	0.999352

Coast St Con HRA No Mitigation

Cancer Risk Calculation - Location of Max Risk

SCAQMD Guidance	**Residential**	**30-year Exposure**	**Adult**	**Total Cancer risk**
				0.048973

Maximum Period DPM Concentration **0.04091** ug/m3

Year	**Year**	**Maximum DPM (ug/m3)**	**CPF (mg/kg-day)^-1**	**DBR (l/kg-day)**	**ED (years)**	**EF (days)**	**AT (years)**	**TAH (%)**	**ASF**	**Operational Risk (risk/million)**
1	2025	0.04091	1.1	335	0.45	250	25550	0.73	1	0.05

Coast St Con HRA No Mitigation

Cancer Risk Calculation - Location of Max Risk

SCAQMD Guidance	**Worker**	**25-year Exposure**						**Total Cancer risk**	
								0.14	0.025

Maximum Period DPM Concentration **0.1267** ug/m3

Year	**Year**	**Maximum DPM (ug/m3)**	**CPF (mg/kg-day)^-1**	**DBR (l/kg-day)**	**ED (years)**	**EF (days)**	**AT (years)**	**ASF**	**Operational Risk (risk/million)**
1	2025	0.12670	1.1	230	0.45	250	25550	1	0.14

Appendix F: Preliminary Water Quality Management Plan

City of Garden Grove, California

PRELIMINARY WATER QUALITY MANAGEMENT PLAN (PWQMP)

Project Name:

34-UNIT APARTMENT

13040 COAST ST, GARDEN GROVE

APN: 097-011-03

Prepared by:

DONG ENGINEERING, INC.

7661 GARDEN GROVE BLVD., GARDEN GROVE, CA 92841

TEL: (714) 617-5979, EMAIL: INFO@DONGENGINEERING.COM

4/23/2025

PRELIMINARY WATER QUALITY MANAGEMENT PLAN (PWQMP)

Project Name:

34-UNIT APARTMENT

Prepared for:

LOC TRAN

13040 Coast St,

Garden Grove, CA 92844

214-682-5559

Prepared by:

DONG ENGINEERING, INC.

7661 Garden Grove Blvd.,

Garden Grove, CA 92841

Tel: (714) 617-5979

Engineer: Truong Dong. Registration No. C75466 Exp: 03/31/2026

April 23, 2025

Project Owner's Certification			
Permit/Application No.		Grading Permit No.	
Tract/Parcel Map No.	1075	Building Permit No.	
CUP, SUP, and/or APN (Specify Lot Numbers if Portions of Tract)		13040 COAST ST, Garden Grove, CA 92844	

This Preliminary Water Quality Management Plan (PWQMP) has been prepared for West St. Investments LLC by Dong Engineering, Inc. The WQMP is intended to comply with the requirements of the local NPDES Stormwater Program requiring the preparation of the plan, and condition numbers 40, 41, 49 and/or Site Development Permit/ Application number, requiring the preparation of a Water Quality Management Plan.

The undersigned, while it owns the subject property, is responsible for the implementation of the provisions of this plan , including the ongoing operation and maintenance of all best management practices (BMPs), and will ensure that this plan is amended as appropriate to reflect up-to-date conditions on the site consistent with the current Orange County Drainage Area Management Plan (DAMP) and the intent of the non-point source NPDES Permit for Waste Discharge Requirements for the County of Orange, Orange County Flood Control District and the incorporated Cities of Orange County within the Santa Ana Region. Once the undersigned transfers its interest in the property, its successors-in-interest shall bear the aforementioned responsibility to implement and amend the WQMP. An appropriate number of approved and signed copies of this document shall be available on the subject site in perpetuity.

Each Project WQMP will be stored within the City's files, and will continue with the property after the completion of the construction phase, and the City will require that the terms, conditions and requirements be recorded with the County Recorder's office by the property owner or any successive owner as authorized by the Final Water Quality Ordinance. The City will require the Final Project WQMP to include a Notice of Transfer Responsibility Form, which serves to notify the City that a change in ownership has occurred and notify the new owner of its responsibility to continue implementing the Final Project WQMP.

The final Project WQMP must include calculations to support the structural integrity of the selected LID or treatment control BMP as appropriate and be prepared by or under the direction of a California Registered Civil Engineer and affixed with their stamp.

Owner:			
Title	LOC TRAN		
Company			
Address	13040 Coast St, Garden Grove, CA 92844		
Email	tran.tpi@gmail.com		
Telephone#	214-682-5559		
Signature		Date	4/23/2025

Contents

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Section II	**Project Description**	**3**
Section III	**Site Description**	**8**
Section IV	**Best Management Practices (BMPs)**	**10**
Section V	**Inspection/Maintenance Responsibility for BMPs**	**26**
Section VI	**Site Plan and Drainage Plan**	**27**
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Attachments

Attachment A	**Educational Materials**
Attachment B	**Operation and Maintenance Manual**
Attachment C	**Reference Maps**
Attachment D	**Geotechnical Investigation Report**
Attachment E	**WQMP Plot Plan**
Attachment F	**BMPs Fact Sheet**

Section I: Discretionary Permit(s) and Water Quality Conditions

Provide discretionary permit and water quality information. Refer to Section 2.1 in the Technical Guidance Document (TGD) available from the Orange County Stormwater Program (ocwatersheds.com).

Project Information			
Permit/Application No.		Tract/Parcel Map No.	
Additional Information/Comments:	This Preliminary WQMP is prepared to assess project impacts for Water Quality as required by the OCTGD and CEQA for entitlement review.		
Water Quality Conditions			
Water Quality Conditions (list verbatim)	40. Prior to the issuance of any grading or building permits, the applicant shall submit to the City for review and approval a Water Quality Management Plan that: a. Addresses Site Design BMPs based upon the geotechnical report recommendations and findings such as infiltration minimizing impervious areas, maximizing permeability, minimizing directly connected impervious areas, creating reduced or "zero discharge" areas, and conserving natural areas. b. Incorporates the applicable Routine Source Control BMPs as defined in the DAMP. c. Incorporates structural and Treatment Control BMPs as defined in the DAMP. The BMP Exhibit from the approved WQMP shall be included as a sheet in all plan sets submitted for plan check and all BMPs shall be depicted on these plans. Grading and building plans must be consistent with the approved BMP exhibit. d. Generally describes the long-term operation and maintenance requirements for the Treatment Control BMPs. e. Identifies the entity that will be responsible for long-term operation and maintenance of the Treatment Control BMPs. f. Describes the mechanism for funding the long-term operation and maintenance of the Treatment Control BMPs.		

	41. Prior to grading or building permit closeout and/or the issuance of a certificate of use or a certificate of occupancy, the applicant shall: a. Demonstrate that all structural best management practices (BMPs) described in the Project WQMP have been constructed and installed in conformance with approved plans and specifications. b. Demonstrate that applicant is prepared to implement all non-structural BMPs described in the Project WQMP. c. Demonstrate that an adequate number of copies of the approved Project WQMP are available onsite. d. Submit for review and approval by the City an Operations and Maintenance (O&M) Plan for all structural BMPs. 49. Prior to issuance of a grading permit, the applicant shall provide a hydrological analysis with scaled map and calculations and hydraulic calculations to size storm drains per the Orange County RDMD standards. Parkway culverts shall be designed per Orange County Standard Plan 1309, Type 8 or City of Garden Grove Standard Plan 8-209. 8MP's shall be sized per the requirements of the latest Technical Guidance Documents.
Watershed-Based Plan Conditions	
Provide applicable conditions from watershed - based plans including WIHMPs and TMDLS.	
	There are currently no approved WIHMPs or TMDLs for the Anaheim Bay- Huntington Harbor Watershed.

Section II: Project Description

II.1. Project Description

Provide a detailed project description including:

- Project areas;
- Land uses;
- Land cover;
- Design elements;
- A general description not broken down by drainage management areas (DMAs).

Include attributes relevant to determining applicable source controls. *Refer to Section 2.2 in the TGD for information that must be included in the project description.*

Description of Proposed Project		
Development Category (From Model WQMP, Table 7.11-2; or -3):	This project is Preliminary Water Quality Management Plan (PWQMP) category #8: All significant redevelopment projects, where significant redevelopment is defined as the addition or replacement of 5,000 or more square feet of impervious surface on an already developed site.	
Project Area (ft2): 21,088	Number of Dwelling Units: 1	SIC Code: 1522
Narrative Project Description: (Use as much space as necessary.)	**Existing condition:**	
	The existing site includes 1 preschool building structure, asphalt concrete, concrete walkway, concrete gutter and landscapes. The whole site will be demolished for new construction.	
	Proposed condition:	
	- The proposed site includes: Proposed building structure with 14,992 sf building/garage footprint. Driveways and walkway: 3,143 sf Landscapes area: 2,953 sf	

Project Area	Pervious		Impervious	
	Area (sq ft)	Percentage	Area (sq ft)	Percentage
Pre-Project Conditions	1,653	7.84	19,435	92.16
Post-Project Conditions	2,953	14	18,135	86
Drainage Patterns/Connections	The post-development runoff will be conveyed and treat to the maximum extend practical via biofiltration areas so storm water will be filtered by biofiltration basin (Modular Wetland System). After that stormwater will be discharged into Coast Street via sump pump device. The Drainage Management Area is subdivided into 1 drainage areas as A and their associate runoff patterns as follows:			
	+ DMA-A: Storm water will be captured via onsite storm drain facilities and surface drainage, then conveyed to a biofiltration device (modular wetlands system) where the DCV will be treated. Excess storm runoff will flow to sump pump then discharged to the street, following its existing drainage path.			

II.2. Potential Stormwater Pollutants

Determine and list expected stormwater pollutants based on land uses and site activities. *Refer to Section 2.2.2 and Table 2.1 in the TGD for guidance.*

Pollutants of Concern			
Pollutant	Check One for each: E=Expected to be of concern N=Not Expected to be of concern		Additional Information and Comments
Suspended-Solid/ Sediment	☑ E	☐ N	Driveway, roof-top and landscaped areas are expected to be coomon sources of sediment due to wear.
Nutrients	☑ E	☐ N	Nutrients including nitrogen, phosphorous, and other compounds can be anticipated to be generated by or organic litter, fertilizers, sewage and sediment.
Heavy Metals	☐ E	☑ N	Heavy metals are not anticipated in residential as described in Table 2.1 of Technical Guidance document (TGD).
Pathogens (Bacteria/Virus)	☑ E	☐ N	Bird, pet waste and garbage.
Pesticides	☑ E	☐ N	Landscape areas.
Oil and Grease	☑ E	☐ N	Potential sources of oil and grease include motor vehicle.
Toxic Organic Compounds	☐ E	☑ N	Toxic Organic Compounds are not anticipated in residential as described in Table 2.1 of TGD.
Trash and Debris	☑ E	☐ N	These sources include common litter, biodegradable organic matter such as leaves, from landscaping area.

II.3. Hydrologic Conditions of Concern

Determine if streams located downstream from the project area are determined to be potentially susceptible to hydromodification impacts. Refer to Section 2.2.3.1 in the TGD for NOC or Section 2.2.3.2 for <SOC>.

- ☑ No - See map.
- ☐ Yes – Describe applicable hydrologic conditions of concern below. *Refer to Section 2.2.3 in the Technical Guidance Document (TGD).*

II.4. Post Development Drainage Characteristics

The post-development runoff will be conveyed and treat to the maximum extend practical via biofiltration areas so storm water will be filtered by biofiltration basin (Modular Wetland System). After that stormwater will be discharged into Coast Street via sump pump device. The Drainage Management Area is subdivided into 1 drainage areas as A and their associate runoff patterns as follows:

+ DMA-A: Storm water will be captured via onsite storm drain facilities and surface drainage, then conveyed to a biofiltration device (modular wetlands system) where the DCV will be treated. Excess storm runoff will flow to sump pump then discharged to the street, following its existing drainage path.

II.5. Property Ownership/Management

The project owned by West St. Investments LLC. The owner will be responsible for the long-term maintenance of the project's storm water facilities and conformance to this Preliminary Project Water Quality Management Plan (PWQMP) after construction is complete.

Section III: Site Description

III.1. Physical Setting

Name of Planned Community/Planning Area (if applicable)	R1 - Single Family Residence
Location/Address	13040 COAST ST
	Garden Grove, CA 92844
Land Use	Medium Density Residential
Zoning	R-3
Acreage of Project Site	0.484
Predominant Soil Type	Soil Type B (Per Hydrologic Soil Map)

III.2. Site Characteristics

Site Characteristics	
Precipitation Zone	0.8” per Orange County Rainfall zones Map (Figure XVI-1 in attachment C) of the TGD.
Topography	The site is a flat area
Drainage Patterns/Connections	The Drainage Management Area is subdivided into 1 drainage areas as A and their associate runoff patterns as follows:
	+ DMA-A: Storm water will be captured via onsite storm drain facilities and surface drainage, then conveyed to a biofiltration device (modular wetlands system) where the DCV will be treated. Excess storm runoff will flow to sump pump then discharged to the street, following its existing drainage path.

Soil Type, Geology, and Infiltration Properties	According to the infiltration study constraint maps, Section XVI-2 of the T.G.D., the project is located in hydrological soil Group B. A Geotechnical Study conducted on the project site indicates the soil to be silt loams or loams. Group B consists of moderately deep to deep, moderately well to well drained soils and have a moderate rate of infiltration. Existing impervious area/ pervious area: 92.16% / 7.84%. Proposed impervious area/ pervious area: 86% / 14%. Infiltration rate: 0% (See Attachment D)
Hydrogeologic (Groundwater) Conditions	Groundwater is not expected to be encountered on this site.
Geotechnical Conditions (relevant to infiltration)	Based on the fact that it appears to have no clay or possibly expansive silt, in our opinion, the soil is non expansive.
Off-Site Drainage	There is no off-site drainage that enters the project.
Utility and Infrastructure Information	There is no existing sub-surface utilities located in the project area.

III.3. Watershed Description

Receiving Waters	Los Alamitos channel (C03).
303(d) Listed Impairments	Metals, pesticides, toxicity, pathogens and other organics (from combined 2006 & 2010 list)
Applicable TMDLs	There is currently no approved WIHMP for the Anaheim Bay Watershed.
Pollutants of Concern for the Project	Nutrients, Pathogens, pesticides.
Environmentally Sensitive and Special Biological Significant Areas	There is no Environmentally Sensitive and Special Biological Significant Areas within the Anaheim Bay Watershed.

Section IV: Best Management Practices (BMPs)

IV.1. Project Performance Criteria

Describe project performance criteria. Several steps must be followed in order to determine what performance criteria will apply to a project. These steps include:

- If the project has an approved WIHMP or equivalent, then any watershed specific criteria must be used and the project can evaluate participation in the approved regional or sub-regional opportunities. The local Permittee planning or NPDES staff should be consulted regarding the existence of an approved WIHMP or equivalent.
- Determine applicable hydromodification control performance criteria. *Refer to Section 7.II-2.4.2.2 of the Model WQMP.*
- Model WQMP.
- 7.II-3.2.2 of the Model WQMP.
- Calculate the LID design storm capture volume for the project. *Refer to Section 7.II -2.4.3 of the Model WQMP.*

(NOC Permit Area only) Is there an approved WIHMP or equivalent for the project area that includes more stringent LID feasibility criteria or if there are opportunities identified for implementing LID on regional or sub-regional basis?	☐ YES	☐ NO
If yes, describe WIHMP feasibility criteria or regional/sub-regional LID opportunities.	N/A	

Project Performance Criteria	
If HCOC exists, list applicable hydromodification control performance criteria (Section 7.II-2.4.2.2 in MWQMP)	No HCOC
List applicable LID performance criteria (Section 7.II-2.4.3 from MWQMP)	Priority Projects must infiltrate, harvest and use, evapotranspire, or biotreat/biofilter, the 85th percentile, 24-hour storm event (Design Capture Volume).

List applicable treatment control BMP performance criteria (Section 7.II-3.2.2 from MWQMP)	LID performance criteria also fully satisfies treatment control performance criteria.

IV.2. Site Design and Drainage

- A narrative of site design practices utilized or rationale for not using practices;
- A narrative of how site is designed to allow BMPs to be incorporated to the MEP
- A table of DMA characteristics and list of LID BMPs proposed in each DMA.
- Reference to the WQMP plot plan.
- Calculation of Design Capture Volume (DCV) for each drainage area.
- A listing of GIS coordinates for LID and Treatment Control BMPs (unless not required by local jurisdiction).

Refer to Section 2.4.2 in the TGD.

DMA-A will have Biofiltration Basin (BMP#1) to treat storm water.
Area: 21,818 SF
BMP size: 25 SF
BMP Location: 33'46'22, 117'59'22

Table 2.7: Infiltration BMP Feasibility Work sheet

	Infeasibility Criteria	Yes	No
1	**Would Infiltration BMPs pose significant risk for groundwater related concerns?** Refer to Appendix VIII (Worksheet I) for guidance on groundwater-related infiltration feasibility criteria.		X
Provide basis: Summarize findings of studies provide reference to studies, calculation, map, data sources, etc. Provide narrative discussion of study/data source applicability.			
2	**Would Infiltration BMPs pose significant risk of increasing risk of geotechnical hazards that cannot be mitigated to an acceptable level?** (Yes if the answer to any of the following questions is yes, as established by a geotechnical expert): ● The BMP can only be located less than 50 feet away from slops steeper than 15 percent ● The BMP can only be located less than eight feet from building foundations or an alternative setback. ● A study prepared by a geotechnical professional or an available watershed study substantiates that stormwater infiltration would potentially result in significantly increased risk of geotechnical hazards that cannot be mitigated to acceptable level.		X
Provide basis: Summarize findings of studies provide reference to studies, calculation, map, data sources, etc. Provide narrative discussion of study/data source applicability.			
3	**Would infiltration of the DCV from drainage area violate downstream water right?**		X
Provide basis: Summarize findings of studies provide reference to studies, calculation, map, data sources, etc. Provide narrative discussion of study/data source applicability.			
	Particial Infeasibility Criteria	Yes	No
4	**Is proposed infiltration facility located on HSG D soils** or the site geotechnical investigation identifies presence of soil characteristics with support categorization as D soils?		X
Provide basis: Summarize findings of studies provide reference to studies, calculation, map, data sources, etc. Provide narrative discussion of study/data source applicability.			
5	**Is measured infiltration rate below proposed facility less than 0.3 inches per hour?** This calculation shall be based on the methods described in Appendix VII	X	

Provide basis: Summarize findings of studies provide reference to studies, calculation, map, data sources, etc. Provide narrative discussion of study/data source applicability.			
6	**Would reduction of over predeveloped conditions cause impairments to downstream beneficial uses, such as change of seasonality of ephemeral washes or increased discharge of contamminated groundwater to surface waters?**		X
Provide citation to applicable study and summarize findings relative to the amount of infiltration that permissible: Summarize findings of studies provide reference to studies, calculation, map, data sources, etc. Provide narrative discussion of study/data source applicability.			
7	**Would an increase in infiltration over predeveloped conditions cause impairments to downstream beneficial uses, such as change of seasonality of ephemeral washes or increase discharge of contaminated groundwater to surface waters?**		X
Provide citation to applicable study and summarize findings relative to the amount of infiltration that permissible: Summarize findings of studies provide reference to studies, calculation, map, data sources, etc. Provide narrative discussion of study/data source applicability.			
Infiltration Sreening Result (check box corresponding to result):			
8	Is there substantial evidence that infitration from the project would result in a significant increase in I&I to the sanitary sewer that cannot be sufficiently mitigated? (See Appendix XVII) Provide narrative discussion and supporting envidence: Summarize findings of studies provide reference to studies, calculation, map, data sources, etc. Provide narrative discussion of study/data source applicability.	NO	
9	If any answer from row 1-3 is yes: infiltration of any volume is not feasible within the DMA or equivalent. Provide basis: Summarize findings of infeasibility screening.	NO	
10	If any answer from row 4-7 is yes: infiltration is permissible but is not presumed to be feasible for the entire DCV. Criteria for designing biotreatment BMPs to achieve the maximum feasible infiltration and ET shall apply. Provide basis: Summarize findings of infeasibility screening.	Use Biofiltration basin to treat stormwater instead of Infiltration Basin	
11	If answer to row 1 through 11 are no, infiltration of the full DCV is potentially feasible, BMPs must be designed to infiltrate the full DCV to the maximum extent practicable.	NO	

Harvest and Use Infeasibility

Harvest and use infeasibility criteria include:

* If inadequate demand exists for the use of the harvested rainwater. See Appendix X for guidance on determining harvested water demand and applicable feasibility

* If the use of harvested water for the type of demand on the project violates codes or ordinances most applicable to stormwater harvesting in effect at the time of project application and a waiver of these codes and/ or ordinances cannot be obtained. It is noted that codes and ordinances most applicable to stormwater harvesting may change

IV.3. LID BMP Selection and Project Conformance Analysis

Each sub-section below documents that the proposed design features conform to the applicable project performance criteria via check boxes, tables, calculations, narratives, and/or references to worksheets. *Refer to Section 2.4.2.3 in the TGD for selecting LID BMPs and Section 2.4.3 in the TGD for conducting conformance analysis with project performance criteria.*

IV.3.1. Hydrologic Source Controls (HSCs)

If required HSCs are included, fill out applicable check box forms. If the retention criteria are otherwise met with other LID BMPs, include a statement indicating HSCs not required.

Name	Included?
Localized on-lot infiltration	☐
Impervious area dispersion (e.g. roof top disconnection)	☐
Street trees (canopy interception)	☐
Residential rain barrels (not actively managed)	☐
Green roofs/Brown roofs	☐
Blue roofs	☐
Impervious area reduction (e.g. permeable pavers, site design)	☐
Other:	☐
Other:	☐
Other:	☐
Other:	☐
Other:	☐
Other:	☐
Other:	☐
Other:	☐

IV.3.2. Infiltration BMPs

Identify infiltration BMPs to be used in project. If design volume cannot be met state why BMPs cannot be met

Name	Included?
Bioretention without underdrains	☐
Rain gardens	☐
Porous landscaping	☐
Infiltration planters	☐
Retention swales	☐

Infiltration trenches	☐
Infiltration basins	☐
Drywells	☐
Subsurface infiltration galleries	☐
French drains	☐
Permeable asphalt	☐
Permeable concrete	☐
Permeable concrete pavers	☐
Other:	☐
Other:	☐

Show calculations below to demonstrate if the LID Design Strom Capture Volume can be met with infiltration BMPs. If not document how much can be met with infiltration and document why it is not feasible to meet the full volume with infiltration BMPs.

	Area	**Impevious**
DMA -A	*sq-ft*	*sq-ft*
	21,088	18,135

*** Modular Wetlands System Calculations (DMA-A):**				
Step 1: Determine the Bioretention Design Capture Volume				
1	Enter design capture storm depth from Figure III.1, d	d=	0.80	inches
2	Enter the effect of provided HSCs, d_{HSC} (inches)	d_{HSC}		inches
3	Calculate the remainder of the design capture storm depth, $d_{remainder}$ (inches) (Line 1 – Line 2)	$d_{remainder}$=	0.80	inches
4	Enter Project area tributary to BMP (s), A (acres)	A=	0.484	acres
5	Enter Project Imperviousness, imp (unitless)	imp=	0.86	
6	Calculate runoff coefficient, C= (0.75 x imp) + 0.15	C=	0.79	
7	Calculate runoff volume, V_{design}= (C x $d_{remainder}$ x A x 43560 x (1/12))	V_{design}	1,117.6	cubic feet

The Modular Wetlands System Linear 4 x 4 (MWS-L-4-4-V) is used to treat the water for drainage area A. *See attachment F for treatment flow and volume sizing of Stormwater Biofiltration System.*

IV.3.3. Evapotranspiration, Rainwater Harvesting BMPs

If the full Design Storm Capture Volume cannot be met with infiltration BMPs, describe any evapotranspiration, rainwater harvesting BMPs.

Name	Included?
All HSCs; *See Section IV.3.1*	☐
Surface-based infiltration BMPs	☐
Biotreatment BMPs	☐
Above-ground cisterns and basins	☐
Underground detention	☐
Other:	☐
Other:	☐
Other:	☐

Show calculations below to demonstrate if the LID Design Strom Capture Volume can be met with evapotranspiration, rainwater harvesting BMPs in combination with infiltration BMPs. If not document how much can be met with either infiltration BMPs, evapotranspiration rainwater harvesting BMPs, or a combination, and document why it is not feasible to meet the full volume with either of these BMPs categories.

No Evapotranspiration/Rainwater Harvesting BMPs have been used

IV.3.4. Biotreatment BMPs

If the full Design Storm Capture Volume cannot be met with infiltration BMPs , and /or evapotranspiration and rainwater harvesting BMPs, describe biotreatment BMPs. Include sections for selection, suitability, sizing, and infeasibility, as applicable. <Delete or leave blank if not used>

Name	Included?
Bioretention with underdrains	☐
Stormwater planter boxes with underdrains	☐
Rain gardens with underdrains	☐
Constructed wetlands	☐
Vegetated swales	☐
Vegetated filter strips	☐
Proprietary vegetated biotreatment systems	☐
Wet extended detention basin	☐
Dry extended detention basins	☐
Modular Wetland System	☑
Other:	☐

Show calculations below to demonstrate if the LID Design Strom Capture Volume can be met with infiltration, evapotranspiration, rainwater harvesting and/or biotreatment BMPs. If not document how much can be met with either infiltration BMPs, evapotranspiration, rainwater harvesting BMPs, or a combination, and document why it is not feasible to meet the full volume with either of these BMPs categories.

No Biotreatment BMPs have been used

IV.3.5. Hydromodification Control BMPs

Describe hydromodification control BMPs. See Section 5 TGD. Include sections for selection, suitability, sizing, and infeasibility, as applicable. Detail compliance with Prior Conditions of Approval.

Hydromodification Control BMPs	
BMP Name	**BMP Description**
HCOC does not exist; Hydromodification Control BMPs do not apply	

IV.3.6. Regional/Sub-Regional LID BMPs

Describe regional/sub-regional LID BMPs in which the project will participate. *Refer to Section 7.II-2.4.3.2 of the Model WQMP.*

Regional/Sub-Regional LID BMPs
Smart growth goals, water conservation and groundwater recharge.

IV.3.7. Treatment Control BMPs

Treatment control BMPs can only be considered if the project conformance analysis indicates that it is not feasible to retain the full design capture volume with LID BMPs. Describe treatment control BMPs including sections for selection, sizing, and infeasibility, as applicable.

Treatment Control BMPs	
BMP Name	**BMP Description**
No Treatment Control BMPs Used.	

IV.3.8. Non-structural Source Control BMPs

Fill out non-structural source control check box forms or provide a brief narrative explaining if non-structural source controls were not used.

Non-Structural Source Control BMPs				
Identifier	**Name**	**Check One**		**If not applicable, state brief reason**
		Included	**Not Applicable**	
N1	Education for Property Owners, Tenants and Occupants	☑	☐	
N2	Activity Restrictions	☑	☐	
N3	Common Area Landscape Management	☑	☐	
N4	BMP Maintenance	☑	☐	
N5	Title 22 CCR Compliance (How development will comply)	☐	☑	No hazardous waste are expected to be anticipated
N6	Local Industrial Permit Compliance	☐	☑	Proposed residential project.
N7	Spill Contingency Plan	☐	☑	No spills are expected to be
N8	Underground Storage Tank Compliance	☐	☑	This is a residential project
N9	Hazardous Materials Disclosure Compliance	☐	☑	No storage of hazardous materials onsite
N10	Uniform Fire Code Implementation	☐	☑	No stockpile or storage of hazardous materials onsite.
N11	Common Area Litter Control	☑	☐	
N12	Employee Training	☑	☐	Owner
N13	Housekeeping of Loading Docks	☐	☑	This is a residential project, no loading docks.
N14	Common Area Catch Basin Inspection	☑	☐	
N15	Street Sweeping Private Streets and Parking Lots	☑	☐	
N16	Retail Gasoline Outlets	☐	☑	No gasoline outlets are proposed

IV.3.9. Structural Source Control BMPs

Fill out structural source control check box forms or provide a brief narrative explaining if Structural source controls were not used.

Non-Structural Source Control BMPs				
Identifier	**Name**	**Check One**		**If not applicable, state brief reason**
		Included	**Not Applicable**	
S1	Provide storm drain system stenciling and signage	☐	☑	No public SD.
S2	Design and construct outdoor material storage areas to reduce pollution introduction	☐	☑	No proposed outdoor storage.
S3	Design and construct trash and waste storage areas to reduce pollution introduction	☑	☐	
S4	Use efficient irrigation systems & landscape design, water conservation, smart controllers, and source control	☑	☐	
S5	Protect slopes and channels and provide energy dissipation	☐	☑	This is a flatland project.
	Incorporate requirements applicable to individual priority project categories (from SDRWQCB NPDES Permit)	☐	☐	N/A
S6	Dock areas	☐	☑	This is a residential project.
S7	Maintenance bays	☐	☑	This is a residential project.
S8	Vehicle wash areas	☐	☑	This is a residential project.
S9	Outdoor processing areas	☐	☑	This is a residential project.
S10	Equipment wash areas	☐	☑	This is a residential project.
S11	Fueling areas	☐	☑	This is a residential project.
S12	Hillside landscaping	☐	☑	This is a flatland project.
S13	Wash water control for food preparation areas	☐	☑	No food preparation proposed.

S14	Community car wash racks	☐	☑	No proposed community car washing areas.

IV.4. Alternative Compliance Plan (If Applicable)

IV.4.1. Water Quality Credits

Determine if water quality credits are applicable for the project. *Refer to Section 3.1 of the Model WQMP for description of credits and Appendix VI of the TGD for calculation methods for applying water quality credits.*

Description of Proposed Project		
Project Types that Qualify for Water Quality Credits (Select all that apply):		
☐ Redevelopment projects that reduce the overall impervious footprint of the project site.	☐ Brownfield redevelopment, meaning redevelopment, expansion, or reuse of real property which may be complicated by the presence or potential presence of hazardous substances, pollutants or contaminants, and which have the potential to contribute to adverse ground or surface WQ if not redeveloped.	☐ Higher density development projects which include two distinct categories (credits can only be taken for one category): those with more than seven units per acre of development (lower credit allowance); vertical density developments, for example, those with a Floor to Area Ratio (FAR) of 2 or those having more than 18 units per acre (greater credit allowance).
☐ Mixed use development, such as a combination of residential, commercial, industrial, office, institutional, or other land uses which incorporate design principles that can demonstrate environmental benefits that would not be realized through single use projects (e.g. reduced vehicle trip traffic with the potential to reduce sources of water or air pollution).	☐ Transit-oriented developments, such as a mixed use residential or commercial area designed to maximize access to public transportation; similar to above criterion, but where the development center is within one half mile of a mass transit center (e.g. bus, rail, light rail or commuter train station). Such projects would not be able to take credit for both categories, but may have greater credit assigned	☐ Redevelopment projects in an established historic district, historic preservation area, or similar significant city area including core City Center areas (to be defined through mapping).

☐ Developments with dedication of undeveloped portions to parks, preservation areas and other pervious uses.	☐ Developments in a city center area.	☐ Developments in historic districts or historic preservation areas.	☐ Live-work developments, a variety of developments designed to support residential and vocational needs together – similar to criteria to mixed use development; would not be able to take credit for both categories.	☐ In-fill projects, the conversion of empty lots and other underused spaces into more beneficially used spaces, such as residential or commercial areas.
Calculation of Water Quality Credits (if applicable)	N/A			

IV.4.2. Alternative Compliance Plan Information

Describe an alternative compliance plan (if applicable). Include alternative compliance obligations (i.e., gallons, pounds) and describe proposed alternative compliance measures. *Refer to Section 7.II 3.0 in the WQMP.*

N/A

Section V: Inspection/Maintenance Responsibility for BMPs

Fill out information in table below. Prepare and attach an Operation and Maintenance Plan. Identify the funding mechanism through which BMPs will be maintained. Inspection and maintenance records must be kept for a minimum of five years for inspection by the regulatory agencies. *Refer to Section 7.II 4.0 in the Model WQMP* .

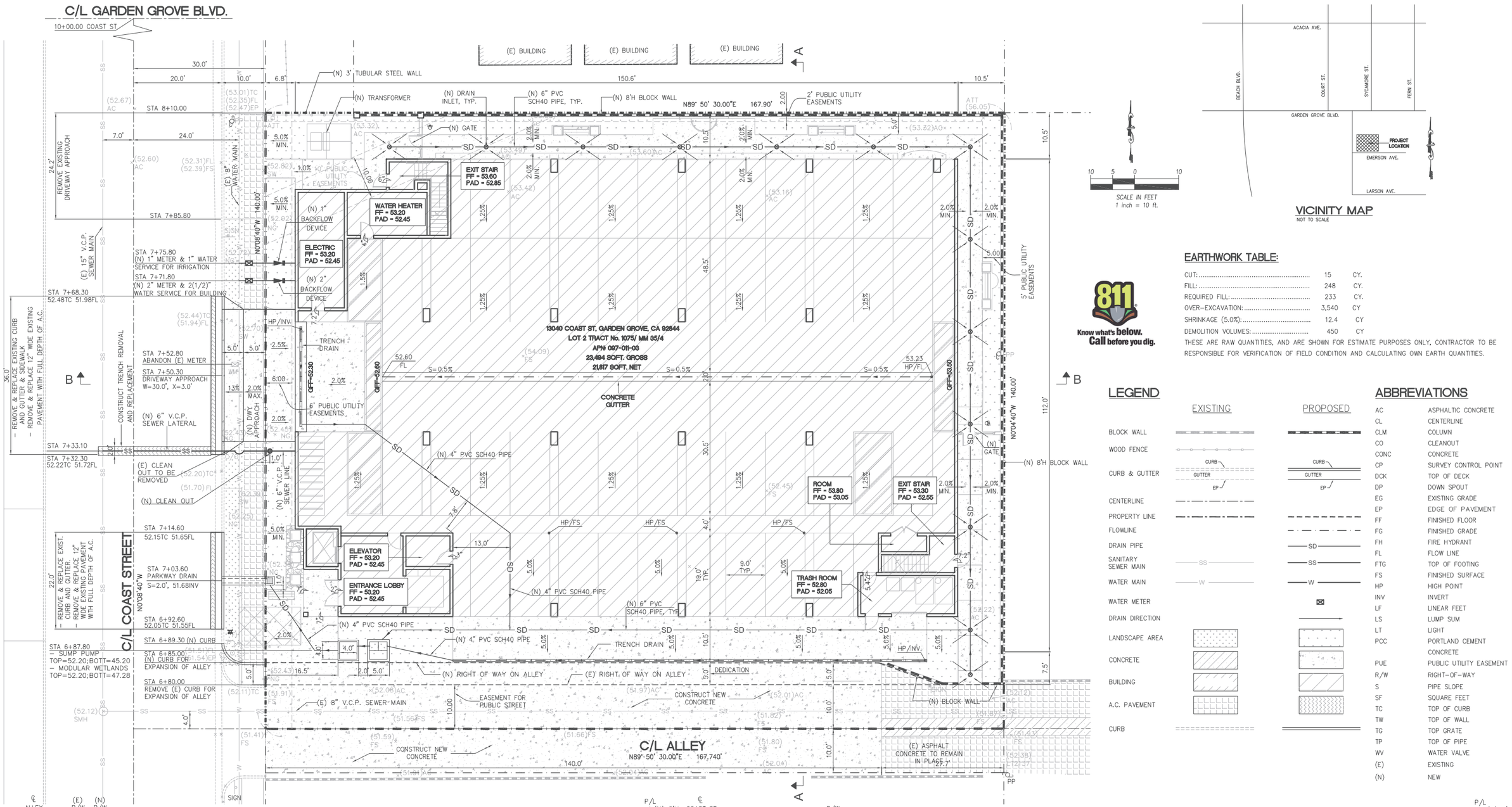
BMP Inspection/Maintenance			
BMP	**Reponsible Party(s)**	**Inspection/ Maintenance Activities Required**	**Minimum Frequency of Activities**
Biofiltration (Modular Wetlands System)	Owner	Owner to remove any trash and tree debris to continue to filter rainwater.	Regular maintenance before rainy season. Not less than twice per year.
Landscape management	Owner	Manage landscaping in accordance with the state of California Conservation in Landscaping Act, with management guidelines for use of fertilizers and pesticides.	Regular maintenance should be conduct weekly
Storm drain system	Owner	Owner to regularly inspect the storm drain system. Trash/debris to be cleared on a monthly basis.	Monthly
Trash	Owner	Inspection and removal of debris, litter, and trash. Ensure all lids are closed and any trash/debris located on the ground are removed and disposed properly. Ensure closure is secure.	Weekly

Section VI: BMP Exhibit (Site Plan)

VI.1. Site Plan and Drainage Plan

Include a site plan and drainage plan sheet set containing the following minimum information:

- Project location
- Site boundary
- Land uses and land covers, as applicable
- Suitability/feasibility constraints
- Structural BMP locations
- Drainage delineations and flow information
- Drainage connections
- BMP details



VICINITY MAP

NOT TO SCALE

EARTHWORK TABLE:

CUT:	15	CY.
FILL:	248	CY.
REQUIRED FILL:	233	CY.
OVER-EXCAVATION:	3,540	CY
SHRINKAGE (5.0%):	12.4	CY
DEMOLITION VOLUMES:	450	CY

THESE ARE RAW QUANTITIES, AND ARE SHOWN FOR ESTIMATE PURPOSES ONLY, CONTRACTOR TO BE RESPONSIBLE FOR VERIFICATION OF FIELD CONDITION AND CALCULATING OWN EARTH QUANTITIES.

811 Know what's below. Call before you dig.

LEGEND

	EXISTING	PROPOSED
BLOCK WALL		
WOOD FENCE		
CURB & GUTTER	CURB / GUTTER / EP	CURB / GUTTER / EP
CENTERLINE		
PROPERTY LINE		
FLOWLINE		
DRAIN PIPE		SD
SANITARY SEWER MAIN	SS	SS
WATER MAIN	W	W
WATER METER		
DRAIN DIRECTION		
LANDSCAPE AREA		
CONCRETE		
BUILDING		
A.C. PAVEMENT		
CURB		

ABBREVIATIONS

AC	ASPHALTIC CONCRETE
CL	CENTERLINE
CLM	COLUMN
CO	CLEANOUT
CONC	CONCRETE
CP	SURVEY CONTROL POINT
DCK	TOP OF DECK
DP	DOWN SPOUT
EG	EXISTING GRADE
EP	EDGE OF PAVEMENT
FF	FINISHED FLOOR
FG	FINISHED GRADE
FH	FIRE HYDRANT
FL	FLOW LINE
FTG	TOP OF FOOTING
FS	FINISHED SURFACE
HP	HIGH POINT
INV	INVERT
LF	LINEAR FEET
LS	LUMP SUM
LT	LIGHT
PCC	PORTLAND CEMENT CONCRETE
PUE	PUBLIC UTILITY EASEMENT
R/W	RIGHT-OF-WAY
S	PIPE SLOPE
SF	SQUARE FEET
TC	TOP OF CURB
TW	TOP OF WALL
TG	TOP GRATE
TP	TOP OF PIPE
WV	WATER VALVE
(E)	EXISTING
(N)	NEW

REVISIONS

NO.	INIT.	DATE	DESCRIPTION	APP'D	DATE

BENCH MARK:
1G-147-70, NAVD88; ELEVATION: 66.528', YEAR LEVELED: 2005.
DESCRIPTION: DESCRIBED BY OCS 2002 - FOUND 3 3\4" OCS ALUMINUM BENCHMARK DISK STAMPED "1G-147-70", SET IN THE TOP OF A 6 IN. BY 6 IN. CONCRETE POST. MONUMENT IS LOCATED IN THE NORTHWESTERLY CORNER OF THE INTERSECTION OF GARDEN GROVE BOULEVARD AND MAGNOLIA STREET, 142 FT. NORTHERLY OF THE NORTH CURB ALONG GARDEN GROVE BOULEVARD AND 53 WESTERLY OF THE CENTERLINE OF MAGNOLIA STREET. MONUMENT IS SET LEVEL WITH THE SIDEWALK.

OWNER OR DEVELOPER:
OWNER: LOC TRAN.
ADDRESS: 13040 COAST ST, GARDEN GROVE, CA 92844
TEL: (214) 682-5559.

SOILS ENGINEER:
ALTA CALIFORNIA GEOTECHNICAL INC
ADDRESS: 170 NORTH MAPLE STREET, CORONA, CA 92880
TEL: (951) 509-7090.
PROJECT NO.: 1-0521, REPORT DATED: MAY 1, 2024.
PREPARED BY: SCOTT A.GRAY, GE 2857.

PREPARED BY:
DONG ENGINEERING, INC.
ADDRESS: 7661 GARDEN GROVE BLVD., GARDEN GROVE, CA 92841.
TEL: (714) 617-5979.
EMAIL: INFO@DONGENGINEERING.COM

REGISTERED PROFESSIONAL ENGINEER — TRONG DONG — C75486 — EXP. 03/31/2026 — CIVIL — STATE OF CALIFORNIA

DATE SIGNED: 4/24/25

PRELIM GRADING PLAN

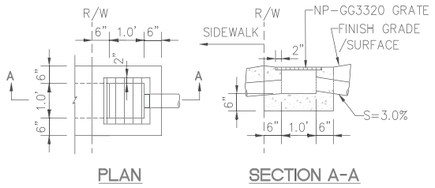
SITE ADDRESS: 13040 COAST ST, GARDEN GROVE, CA 92844

G-

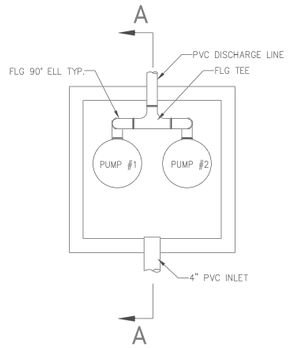
SHEET 1 OF 3

SCALE: AS NOTED | DRAWN BY: GC | CHECKED BY: TD

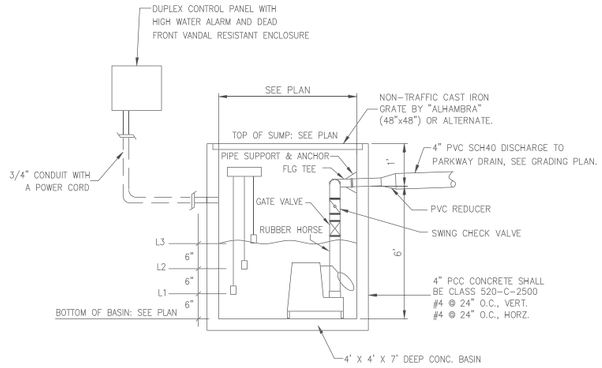
CITY OF GARDEN GROVE



DETAIL A: INLET BOX STRUCTURE
SCALE: NTS

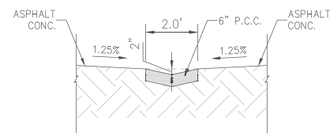


PLAN VIEW
SCALE: NTS



SECTION A-A
SCALE: NTS

DETAIL B: SUMP PUMP DETAIL
SCALE: NTS



DETAIL C: 24" WIDE CONCRETE GUTTER
NTS

NDS
WE PUT WATER IN ITS PLACE

TECHNICAL SPECIFICATIONS

5 Inch Pro Series Drain Kit With Metal Grate

Part #: 864GMTL (Includes 2 Galvanized Steel Grates , #800-Channel (1qty.), #813-End Outlet (1qty.), and #812-End Cap (1qty.)
Material: Channel (Polyolefin) Grates (Galvanized Steel)
Color: Light Gray / Galvanized Steel
Fits: 3" (Hub) and 4" (Spigot) Sewer/Drain Pipe
Rebar tie clips for easier installation: Fits #4 Rebar

Grate Opening: 0.45"x 4"

Open Surface Area: 19.32 sq. inch per linear ft.

Head Pressure / Flow Rate:
Head (inches) - Max Flow
1" = 83.58 GPM per foot
0.5" = 59.10 GPM per foot
Weight per unit: 7.70 lbs.
Screw: #829 Stainless Steel Screw, 4 per grate.
UV Inhibitors

Class B
- Loads of 61-175 psi.
- Recommended for medium-duty pneumatic tire traffic, autos and light trucks at speeds less than 20 m.p.h.

Note: Some installations may require a concrete collar to meet load rating. Loads are based on a resulting product in concrete. Product must be installed using NDS instructions.

ADA Compliance

NDS provides a full selection of grates that are compliant with the provisions with Disabilities Act: The ADA Accessibility Guidelines for Buildings and Facilities Section 4.5.4 requires that grates and their gaps have "openings no greater than 1/2" (13 mm) in one dimension."

We are pleased to provide grates that comply with these requirements, so that no individual need be limited from accessing the area safely and confidently.

To see if a grate is ADA compliant, please check the description of the product in our Grate Technical Catalog or check that load these requirements are marked "ADA compliant."

Like to find out more about ADA compliance and NDS? Email us your question and we'll be happy to help.

ADA COMPLIANT

851 N. Harvard Avenue
Lindsay, CA 93247
800.726.1994

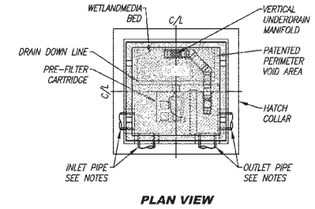
Visit ndspro.com for specs, detail drawings, and case studies

NDS WE PUT WATER IN ITS PLACE

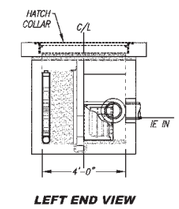
DETAIL D: 5 INCH DRAIN CHANNEL
NTS

SITE SPECIFIC DATA			
PROJECT NUMBER			
PROJECT NAME			
PROJECT LOCATION			
STRUCTURE ID			
TREATMENT REQUIRED			
TREATMENT FLOW (CFS)			0.052
PRETREATMENT LOADING RATE (GPM/SF)			3.0 GPM/S
WETLAND MEDIA LOADING RATE (GPM/SF)			1.0
PEAK BYPASS REQUIRED (CFS) - IF APPLICABLE			
PIPE DATA	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	53.42	PVC	6"
INLET PIPE 2	53.42	PVC	6"
OUTLET PIPE	52.20	PVC	8"
	PRETREATMENT	BIOFILTRATION	DISCHARGE
RIM ELEVATION	56.00	56.00	56.00
SURFACE LOAD	PEDESTRIAN		
NOTES:			

* PRELIMINARY ONLY - NOT FOR CONSTRUCTION



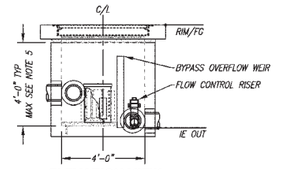
PLAN VIEW



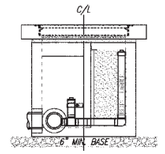
LEFT END VIEW

INSTALLATION NOTES

1. CONTRACTOR TO PROVIDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS REQUIRED TO OFFLOAD AND INSTALL THE SYSTEM AND APPURTENANCES IN ACCORDANCE WITH THIS DRAWING AND THE MANUFACTURER'S SPECIFICATIONS, UNLESS OTHERWISE STATED IN MANUFACTURER'S CONTRACT.
2. UNIT MUST BE INSTALLED ON LEVEL BASE. MANUFACTURER RECOMMENDS A MINIMUM 6" LEVEL ROCK BASE UNLESS SPECIFIED BY THE PROJECT ENGINEER. CONTRACTOR IS RESPONSIBLE FOR VERIFYING PROJECT ENGINEER'S RECOMMENDED BASE SPECIFICATIONS.
3. CONTRACTOR TO SUPPLY AND INSTALL ALL EXTERNAL CONNECTING PIPES. ALL PIPES MUST BE FLUSH WITH INSIDE SURFACE OF CONCRETE (PIPES CANNOT INTRUDE BEYOND FLUSH). INVERT OF OUTFLOW PIPE MUST BE FLUSH WITH DISCHARGE CHAMBER FLOOR. ALL PIPES SHALL BE SEALED WATERTIGHT PER MANUFACTURER'S STANDARD CONNECTION DETAIL.
4. CONTRACTOR RESPONSIBLE FOR CONTACTING CONTECH FOR ACTIVATION OF UNIT. MANUFACTURER'S WARRANTY IS VOID WITHOUT PROPER ACTIVATION BY A CONTECH REPRESENTATIVE.
5. VERTICAL HEIGHT VARIES BASED ON SITE SPECIFIC REQUIREMENTS.



ELEVATION VIEW



RIGHT END VIEW

MODULAR WETLANDS

PROPRIETARY AND CONFIDENTIAL:
THE INFORMATION CONTAINED IN THIS DOCUMENT IS THE SOLE PROPERTY OF CONTECH AND ITS COMPANIES. THIS DOCUMENT, NOR ANY PART THEREOF, MAY BE USED, REPRODUCED OR MODIFIED IN ANY MANNER WITH OUT THE WRITTEN CONSENT OF CONTECH.

CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com

MWS-L-4-4-V-UG
STORMWATER BIOFILTRATION SYSTEM
STANDARD DETAIL

DETAIL E: BIOFILTRATION SYSTEMS
NTS

REVISIONS

NO.	INIT.	DATE	DESCRIPTION	APP'D	DATE

BENCH MARK:
1G-147-70, NAVD88; ELEVATION: 66.528', YEAR LEVELED: 2005.
DESCRIPTION: DESCRIBED BY OCS 2002 - FOUND 3 3\4" OCS ALUMINUM BENCHMARK DISK STAMPED "1G-147-70", SET IN THE TOP OF A 6 IN. BY 6 IN. CONCRETE POST. MONUMENT IS LOCATED IN THE NORTHWESTERLY CORNER OF THE INTERSECTION OF GARDEN GROVE BOULEVARD AND MAGNOLIA STREET, 142 FT. NORTHERLY OF THE NORTH CURB ALONG GARDEN GROVE BOULEVARD AND 53 WESTERLY OF THE CENTERLINE OF MAGNOLIA STREET. MONUMENT IS SET LEVEL WITH THE SIDEWALK.

OWNER OR DEVELOPER:
OWNER: LOC TRAN.
ADDRESS: 13040 COAST ST, GARDEN GROVE, CA 92844
TEL: (214) 682-5559.

SOILS ENGINEER:
ALTA CALIFORNIA GEOTECHNICAL INC
ADDRESS: 170 NORTH MAPLE STREET, CORONA, CA 92880
TEL: (951) 509-7090.
PROJECT NO.: 1-0521, REPORT DATED: MAY 1, 2024.
PREPARED BY: SCOTT A.GRAY, GE 2857.

PREPARED BY:
DONG ENGINEERING, INC.
ADDRESS: 7661 GARDEN GROVE BLVD., GARDEN GROVE, CA 92841.
TEL: (714) 617-5979.
EMAIL: INFO@DONGENGINEERING.COM

REGISTERED PROFESSIONAL ENGINEER
TRUONG DONG
C75466
EXP. 03/31/2026
CIVIL
STATE OF CALIFORNIA

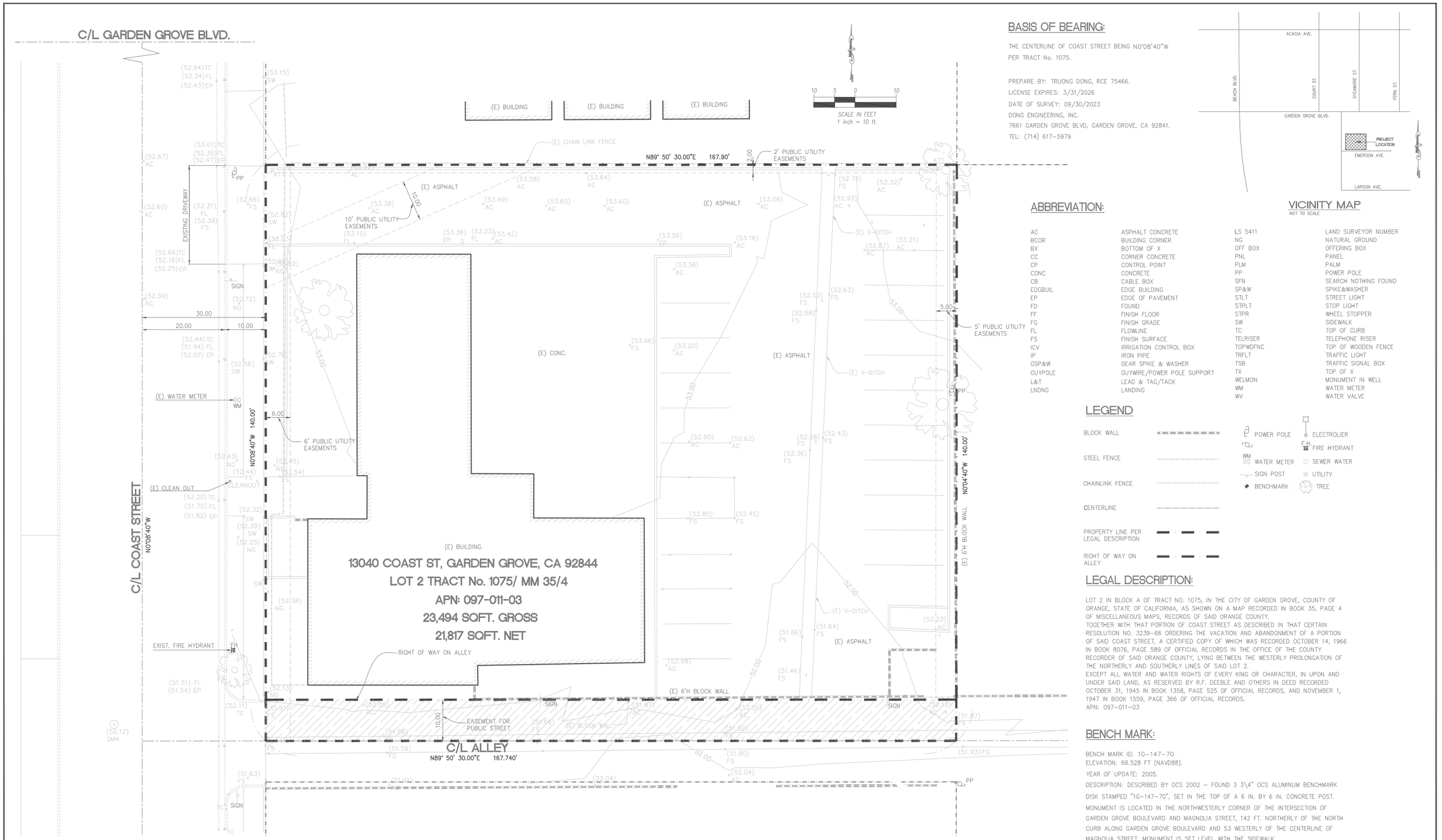
DATE SIGNED: 4/23/25

PRELIM DETAILS
SITE ADDRESS: 13040 COAST ST, GARDEN GROVE, CA 92844

G-
SHEET 2 OF 3

SCALE: AS NOTED | DRAWN BY: GC | CHECKED BY: TD

CITY OF GARDEN GROVE



BASIS OF BEARING:

THE CENTERLINE OF COAST STREET BEING N0°08'40"W PER TRACT No. 1075.

PREPARE BY: TRUONG DONG, RCE 75466.
LICENSE EXPIRES: 3/31/2026
DATE OF SURVEY: 09/30/2023
DONG ENGINEERING, INC.
7661 GARDEN GROVE BLVD, GARDEN GROVE, CA 92841.
TEL: (714) 617-5979.

VICINITY MAP

NOT TO SCALE

ABBREVIATION:

AC	ASPHALT CONCRETE	LS 5411	LAND SURVEYOR NUMBER
BCOR	BUILDING CORNER	NG	NATURAL GROUND
BX	BOTTOM OF X	OFF BOX	OFFERING BOX
CC	CORNER CONCRETE	PNL	PANEL
CP	CONTROL POINT	PLM	PALM
CONC	CONCRETE	PP	POWER POLE
CB	CABLE BOX	SFN	SEARCH NOTHING FOUND
EDGBUIL	EDGE BUILDING	SP&W	SPIKE&WASHER
EP	EDGE OF PAVEMENT	STLT	STREET LIGHT
FD	FOUND	STPLT	STOP LIGHT
FF	FINISH FLOOR	STPR	WHEEL STOPPER
FG	FINISH GRADE	SW	SIDEWALK
FL	FLOWLINE	TC	TOP OF CURB
FS	FINISH SURFACE	TELRISER	TELEPHONE RISER
ICV	IRRIGATION CONTROL BOX	TOPWDFNC	TOP OF WOODEN FENCE
IP	IRON PIPE	TRFLT	TRAFFIC LIGHT
GSP&W	GEAR SPIKE & WASHER	TSB	TRAFFIC SIGNAL BOX
GUYPOLE	GUYWIRE/POWER POLE SUPPORT	TX	TOP OF X
L&T	LEAD & TAG/TACK	WELMON	MONUMENT IN WELL
LNDNG	LANDING	WM	WATER METER
		WV	WATER VALVE

LEGEND

BLOCK WALL
STEEL FENCE
CHAINLINK FENCE
CENTERLINE
PROPERTY LINE PER LEGAL DESCRIPTION
RIGHT OF WAY ON ALLEY

POWER POLE
ELECTROLIER
FH FIRE HYDRANT
WM WATER METER
SEWER WATER
SIGN POST
UTILITY
BENCHMARK
TREE

LEGAL DESCRIPTION:

LOT 2 IN BLOCK A OF TRACT NO. 1075, IN THE CITY OF GARDEN GROVE, COUNTY OF ORANGE, STATE OF CALIFORNIA, AS SHOWN ON A MAP RECORDED IN BOOK 35, PAGE 4 OF MISCELLANEOUS MAPS, RECORDS OF SAID ORANGE COUNTY.
TOGETHER WITH THAT PORTION OF COAST STREET AS DESCRIBED IN THAT CERTAIN RESOLUTION NO. 3239-66 ORDERING THE VACATION AND ABANDONMENT OF A PORTION OF SAID COAST STREET, A CERTIFIED COPY OF WHICH WAS RECORDED OCTOBER 14, 1966 IN BOOK 8076, PAGE 589 OF OFFICIAL RECORDS IN THE OFFICE OF THE COUNTY RECORDER OF SAID ORANGE COUNTY, LYING BETWEEN THE WESTERLY PROLONGATION OF THE NORTHERLY AND SOUTHERLY LINES OF SAID LOT 2.
EXCEPT ALL WATER AND WATER RIGHTS OF EVERY KING OR CHARACTER, IN UPON AND UNDER SAID LAND, AS RESERVED BY R.F. DEEBLE AND OTHERS IN DEED RECORDED OCTOBER 31, 1945 IN BOOK 1358, PAGE 525 OF OFFICIAL RECORDS, AND NOVEMBER 1, 1947 IN BOOK 1559, PAGE 366 OF OFFICIAL RECORDS.
APN: 097-011-03

BENCH MARK:

BENCH MARK ID: 1G-147-70
ELEVATION: 66.528 FT (NAVD88).
YEAR OF UPDATE: 2005.
DESCRIPTION: DESCRIBED BY OCS 2002 – FOUND 3 3\4" OCS ALUMINUM BENCHMARK DISK STAMPED "1G-147-70", SET IN THE TOP OF A 6 IN. BY 6 IN. CONCRETE POST. MONUMENT IS LOCATED IN THE NORTHWESTERLY CORNER OF THE INTERSECTION OF GARDEN GROVE BOULEVARD AND MAGNOLIA STREET, 142 FT. NORTHERLY OF THE NORTH CURB ALONG GARDEN GROVE BOULEVARD AND 53 WESTERLY OF THE CENTERLINE OF MAGNOLIA STREET. MONUMENT IS SET LEVEL WITH THE SIDEWALK.

(FOR REFERENCE ONLY)

REVISIONS

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TEL: (951) 509-7090.
PROJECT NO.: 1-0521, REPORT DATED: MAY 1, 2024.
PREPARED BY: SCOTT A.GRAY, GE 2857.

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EMAIL: INFO@DONGENGINEERING.COM

REGISTERED PROFESSIONAL ENGINEER
TRUONG DONG
C75466
EXP. 03/31/2026
CIVIL
STATE OF CALIFORNIA

DATE SIGNED: 4/23/25

TOPOGRAPHIC SURVEY

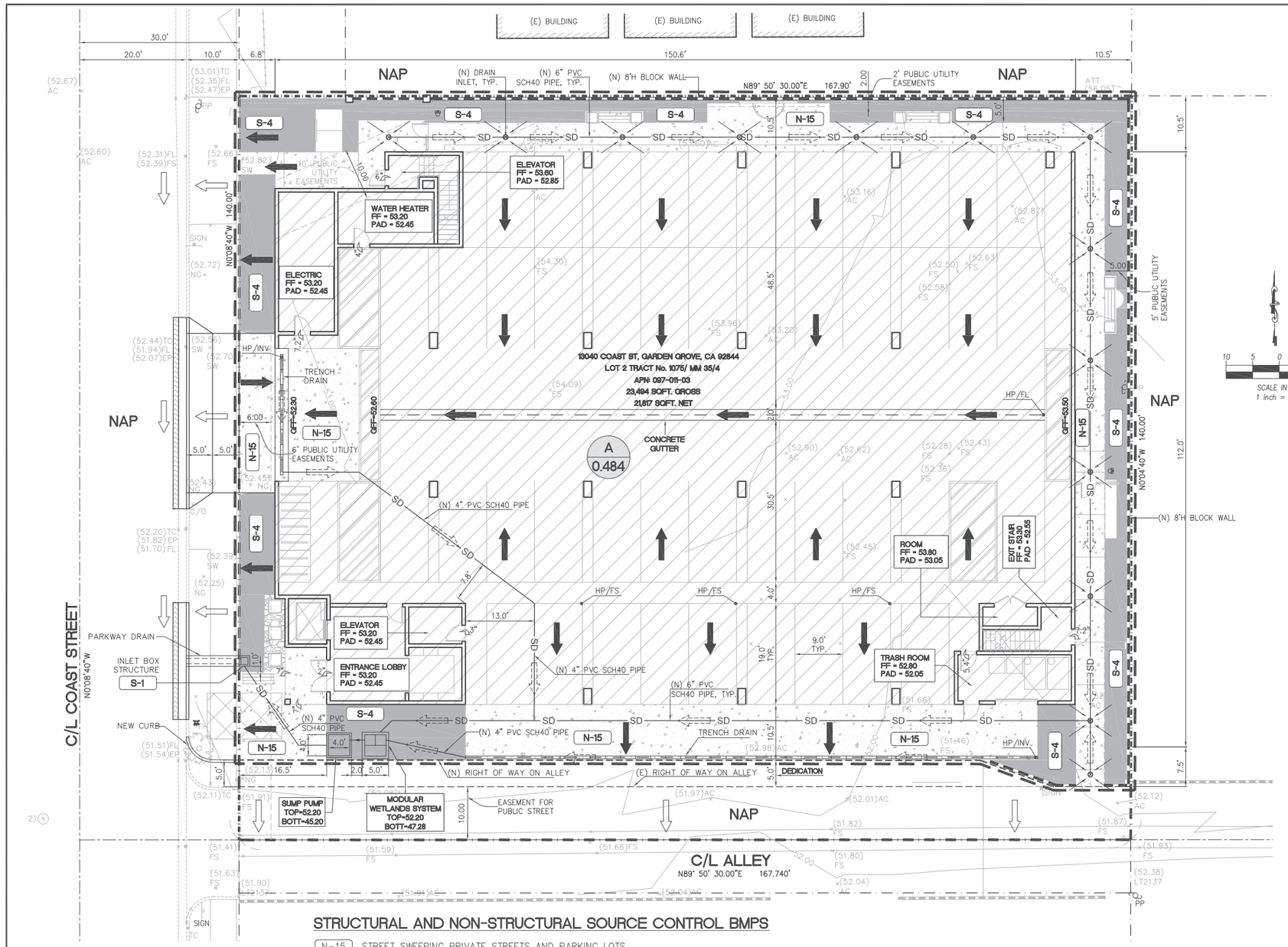
SITE ADDRESS: 13040 COAST ST, GARDEN GROVE, CA 92844

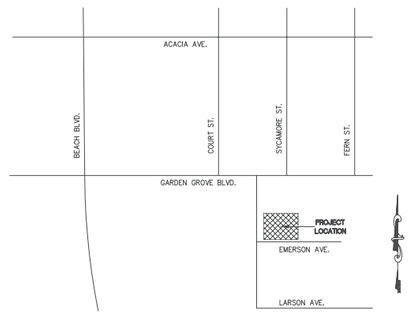
G-

SHEET 3 OF 3

SCALE: AS NOTED | DRAWN BY: GC | CHECKED BY: TD

CITY OF GARDEN GROVE





VICINITY MAP
NOT TO SCALE

10 5 0 10
SCALE IN FEET
1 inch = 10 ft.

LEGEND

	EXISTING	PROPOSED
BLOCK WALL		
WOOD FENCE		
CURB & GUTTER	CURB / GUTTER / EP	CURB / GUTTER / EP
CENTERLINE		
PROPERTY LINE		
FLOWLINE		
DRAIN PIPE		SD
DRAIN DIRECTION TO DRAIN INLET		
LANDSCAPE AREA		
CONCRETE		
BUILDING		
NOT A PART		NAP
DIRECTION OF ONSITE SURFACE FLOW		
DIRECTION OF OFFSITE SURFACE FLOW		
DIRECTION OF PIPE		
DRAINAGE AREA BOUNDARY		
DRAINAGE AREA		X / XX DRAINAGE AREA DESIGNATION / AREA IN ACRES

STRUCTURAL AND NON-STRUCTURAL SOURCE CONTROL BMPS

N-15	STREET SWEEPING PRIVATE STREETS AND PARKING LOTS.
S-1	CATCH BASIN STENCILING.
S-3	TRASH AND WASTE STORAGE AREAS.
S-4	FILTRATION: SURFACE RUNOFF SHALL BE DIRECTED TO LANDSCAPE AREAS WHEREVER PRACTICAL.
S-4	COMMON AREA EFFICIENT IRRIGATION.
S-4	COMMON AREA RUNOFF-MINIMIZING LANDSCAPE DESIGN.
	BIOFILTRATION DEVICE (MODULAR WETLANDS SYSTEM)

DMI	LATITUDE	LONGITUDE
MODULAR WETLANDS SYSTEM	33°46'22"N	117°59'23"W
SUMP PUMP	33°46'22"N	117°59'23"W
INLET BOX STRUCTURE	33°46'22"N	117°59'23"W

IMPERVIOUS AREA = 3,143 SF
PERVIOUS AREA = 2,953 SF
BUILDING AREA = 14,992 SF
TOTAL AREA = 21,088 SF/0.484 ACRES

NOTES:

- THIS PLAN PRESENTS METHODS FOR FULFILLING THE REQUIREMENTS FOR THE ORANGE COUNTY CLEAN WATER PROGRAM STORMWATER QUALITY CONTROL REQUIREMENTS.

REVISIONS

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REGISTERED PROFESSIONAL ENGINEER
TRUONG TOMMY DONG
C75466
EXP. 03/31/2026
CIVIL
STATE OF CALIFORNIA

DATE SIGNED: 4/24/25

PRELIM WQMP PLAN

SITE ADDRESS: 13040 COAST ST, GARDEN GROVE, CA 92844

G-

SHEET 1 OF 1

SCALE: AS NOTED | DRAWN BY: GC | CHECKED BY: TD

CITY OF GARDEN GROVE

VI.2. Electronic Data Submittal

The minimum requirement is to provide submittal of PDF exhibits in addition to hard copies. Format must not require specialized software to open.

If the local jurisdiction requires specialized electronic document formats (CAD, GIS) to be submitted, this section will be used to describe the contents (e.g., layering, nomenclature, georeferencing, etc.) of these documents so that they may be interpreted efficiently and accurately.

Section VII: Educational Materials

Refer to the Orange County Stormwater Program (ocwatersheds.com) for a library of materials available. For the copy submitted to the Permittee, only attach the educational materials specifically applicable to the project. Other materials specific to the project may be included as well and must be attached.

Education Materials			
Residential Material (http://www.ocwatersheds.com)	**Check If Applicable**	**Business Material (http://www.ocwatersheds.com)**	**Check If Applicable**
The Ocean Begins at Your Front Door	☑	Tips for the Automotive Industry	☐
Tips for Car Wash Fund-raisers	☐	Tips for Using Concrete and Mortar	☐
Tips for the Home Mechanic	☐	Tips for the Food Service Industry	☐
Homeowners Guide for Sustainable Water Use	☐	Proper Maintenance Practices for Your Business	☐
Household Tips	☑	**Other Material**	**Check If Attached**
Proper Disposal of Household Hazardous Waste	☑		
Recycle at Your Local Used Oil Collection Center (North County)	☐		☐
Recycle at Your Local Used Oil Collection Center (Central County)	☐		☐
Recycle at Your Local Used Oil Collection Center (South County)	☐		☐
Tips for Maintaining a Septic Tank System	☐		☐
Responsible Pest Control	☑		☐
Sewer Spill	☐		☐
Tips for the Home Improvement Projects	☐		☐
Tips for Horse Care	☐		☐

Tips for Landscaping and Gardening	☑		☐
Tips for Pet Care	☑		☐
Tips for Pool Maintenance	☐		☐
Tips for Residential Pool, Landscape and Hardscape Drains	☐		☐
Tips for Projects Using Paint	☐		☐

The Ocean Begins at Your Front Door

Follow these simple steps to help reduce water pollution:

Household Activities

- Do not rinse spills with water. Use dry cleanup methods such as applying cat litter or another absorbent material, sweep and dispose of in the trash. Take items such as used or excess batteries, oven cleaners, automotive fluids, painting products and cathode ray tubes, like TVs and computer monitors, to a Household Hazardous Waste Collection Center (HHWCC).
- For a HHWCC near you call (714) 834-6752 or visit www.oclandfills.com.
- Do not hose down your driveway, sidewalk or patio to the street, gutter or storm drain. Sweep up debris and dispose of it in the trash.

Automotive

- Take your vehicle to a commercial car wash whenever possible. If you wash your vehicle at home, choose soaps, cleaners, or detergents labeled non-toxic, phosphate- free or biodegradable. Vegetable and citrus-based products are typically safest for the environment.
- Do not allow washwater from vehicle washing to drain into the street, gutter or storm drain. Excess washwater should be disposed of in the sanitary sewer (through a sink or toilet) or onto an absorbent surface like your lawn.
- Monitor your vehicles for leaks and place a pan under leaks. Keep your vehicles well maintained to stop and prevent leaks.
- Never pour oil or antifreeze in the street, gutter or storm drain. Recycle these substances at a service station, a waste oil collection center or used oil recycling center. For the nearest Used Oil Collection Center call 1-800-CLEANUP or visit www.1800cleanup.org.

Pool Maintenance

- Pool and spa water must be dechlorinated and free of excess acid, alkali or color to be allowed in the street, gutter or storm drain.
- When it is not raining, drain dechlorinated pool and spa water directly into the sanitary sewer.
- Some cities may have ordinances that do not allow pool water to be disposed of in the storm drain. Check with your city.

Landscape and Gardening

- Do not over-water. Water your lawn and garden by hand to control the amount of water you use or set irrigation systems to reflect seasonal water needs. If water flows off your yard onto your driveway or sidewalk, your system is over-watering. Periodically inspect and fix leaks and misdirected sprinklers.
- Do not rake or blow leaves, clippings or pruning waste into the street, gutter or storm drain. Instead, dispose of waste by composting, hauling it to a permitted landfill, or as green waste through your city's recycling program.
- Follow directions on pesticides and fertilizer, (measure, do not estimate amounts) and do not use if rain is predicted within 48 hours.
- Take unwanted pesticides to a HHWCC to be recycled. For locations and hours of HHWCC, call (714) 834-6752 or visit www.oclandfills.com.

Trash

- Place trash and litter that cannot be recycled in securely covered trash cans.
- Whenever possible, buy recycled products.
- Remember: Reduce, Reuse, Recycle.

Pet Care

- Always pick up after your pet. Flush waste down the toilet or dispose of it in the trash. Pet waste, if left outdoors, can wash into the street, gutter or storm drain.
- If possible, bathe your pets indoors. If you must bathe your pet outside, wash it on your lawn or another absorbent/permeable surface to keep the washwater from entering the street, gutter or storm drain.
- Follow directions for use of pet care products and dispose of any unused products at a HHWCC.

Common Pollutants

Home Maintenance

- Detergents, cleaners and solvents
- Oil and latex paint
- Swimming pool chemicals
- Outdoor trash and litter

Lawn and Garden

- Pet and animal waste
- Pesticides
- Clippings, leaves and soil
- Fertilizer

Automobile

- Oil and grease
- Radiator fluids and antifreeze
- Cleaning chemicals
- Brake pad dust

The Ocean Begins at Your Front Door

Never allow pollutants to enter the street, gutter or storm drain!

Did You Know?

- Most people believe that the largest source of water pollution in urban areas comes from specific sources such as factories and sewage treatment plants. In fact, the largest source of water pollution comes from city streets, neighborhoods, construction sites and parking lots. This type of pollution is sometimes called “non-point source” pollution.
- There are two types of non-point source pollution: stormwater and urban runoff pollution.
- Stormwater runoff results from rainfall. When rainstorms cause large volumes of water to rinse the urban landscape, picking up pollutants along the way.
- Urban runoff can happen any time of the year when excessive water use from irrigation, vehicle washing and other sources carries trash, lawn clippings and other urban pollutants into storm drains.

Where Does It Go?

- Anything we use outside homes, vehicles and businesses – like motor oil, paint, pesticides, fertilizers and cleaners – can be blown or washed into storm drains.
- A little water from a garden hose or rain can also send materials into storm drains.
- Storm drains are separate from our sanitary sewer systems; unlike water in sanitary sewers (from sinks or toilets), water in storm drains is not treated before entering our waterways.

Sources of Non-Point Source Pollution

- Automotive leaks and spills.
- Improper disposal of used oil and other engine fluids.
- Metals found in vehicle exhaust, weathered paint, rust, metal plating and tires.
- Pesticides and fertilizers from lawns, gardens and farms.
- Improper disposal of cleaners, paint and paint removers.
- Soil erosion and dust debris from landscape and construction activities.
- Litter, lawn clippings, animal waste, and other organic matter.
- Oil stains on parking lots and paved surfaces.

The Effect on the Ocean

Non-point source pollution can have a serious impact on water quality in Orange County. Pollutants from the storm drain system can harm marine life as well as coastal and wetland habitats. They can also degrade recreation areas such as beaches, harbors and bays.

Stormwater quality management programs have been developed throughout Orange County to educate and encourage the public to protect water quality, monitor runoff in the storm drain system, investigate illegal dumping and maintain storm drains.

Support from Orange County residents and businesses is needed to improve water quality and reduce urban runoff pollution. Proper use and disposal of materials will help stop pollution before it reaches the storm drain and the ocean.

For More Information

Orange County Stormwater Program

California Environmental Protection Agency
www.calepa.ca.gov

- **Air Resources Board**
  www.arb.ca.gov
- **Department of Pesticide Regulation**
  www.cdpr.ca.gov
- **Department of Toxic Substances Control**
  www.dtsc.ca.gov
- **Integrated Waste Management Board**
  www.ciwmb.ca.gov
- **Office of Environmental Health Hazard Assessment**
  www.oehha.ca.gov
- **State Water Resources Control Board**
  www.waterboards.ca.gov

Earth 911 - Community-Specific Environmental Information 1-800-cleanup or visit www.1800cleanup.org

Health Care Agency's Ocean and Bay Water Closure and Posting Hotline
(714) 433-6400 or visit www.ocbeachinfo.com

Integrated Waste Management Dept. of Orange County (714) 834-6752 or visit www.oclandfills.com for information on household hazardous waste collection centers, recycling centers and solid waste collection

O.C. Agriculture Commissioner
(714) 447-7100 or visit www.ocagcomm.com

Stormwater Best Management Practice Handbook
Visit www.cabmphandbooks.com

UC Master Gardener Hotline
(714) 708-1646 or visit www.uccemg.com

The Orange County Stormwater Program has created and moderates an electronic mailing list to facilitate communications, take questions and exchange ideas among its users about issues and topics related to stormwater and urban runoff and the implementation of program elements. To join the list, please send an email to ocstormwaterinfo-join@list.ocwatersheds.com

Aliso Viejo	(949)	425-2535
Anaheim Public Works Operations	(714)	765-6860
Brea Engineering	(714)	990-7666
Buena Park Public Works	(714)	562-3655
Costa Mesa Public Services	(714)	754-5323
Cypress Public Works	(714)	229-6740
Dana Point Public Works	(949)	248-3584
Fountain Valley Public Works	(714)	593-4441
Fullerton Engineering Dept.	(714)	738-6853
Garden Grove Public Works	(714)	741-5956
Huntington Beach Public Works	(714)	536-5431
Irvine Public Works	(949)	724-6315
La Habra Public Services	(562)	905-9792
La Palma Public Works	(714)	690-3310
Laguna Beach Water Quality	(949)	497-0378
Laguna Hills Public Services	(949)	707-2650
Laguna Niguel Public Works	(949)	362-4337
Laguna Woods Public Works	(949)	639-0500
Lake Forest Public Works	(949)	461-3480
Los Alamitos Community Dev.	(562)	431-3538
Mission Viejo Public Works	(949)	470-3056
Newport Beach, Code & Water Quality Enforcement	(949)	644-3215
Orange Public Works	(714)	532-6480
Placentia Public Works	(714)	993-8245
Rancho Santa Margarita	(949)	635-1800
San Clemente Environmental Programs	(949)	361-6143
San Juan Capistrano Engineering	(949)	234-4413
Santa Ana Public Works	(714)	647-3380
Seal Beach Engineering	(562)	431-2527 x317
Stanton Public Works	(714)	379-9222 x204
Tustin Public Works/Engineering	(714)	573-3150
Villa Park Engineering	(714)	998-1500
Westminster Public Works/Engineering	(714)	898-3311 x446
Yorba Linda Engineering	(714)	961-7138
Orange County Stormwater Program	(877)	897-7455

Orange County 24-Hour
Water Pollution Problem Reporting Hotline
1-877-89-SPILL (1-877-897-7455)

On-line Water Pollution Problem Reporting Form
www.ocwatersheds.com

Printed on Recycled Paper

Clean beaches and healthy creeks, rivers, bays and ocean are important to Orange County. However, many common activities can lead to water pollution if you're not careful. Fertilizers, pesticides and other chemicals that are left on yards or driveways can be blown or washed into storm drains that flow to the ocean. Overwatering lawns can also send materials into storm drains. Unlike water in sanitary sewers (from sinks and toilets), water in storm drains is not treated before entering our waterways.

You would never pour gardening products into the ocean, so don't let them enter the storm drains. Follow these easy tips to help prevent water pollution.

For more information, please call the **Orange County Stormwater Program** at **1-877-89-SPILL** (1-877-897-7455) or visit **www.ocwatersheds.com**

UCCE Master Gardener Hotline: (714) 708-1646

To report a spill, call the **Orange County 24-Hour Water Pollution Problem Reporting Hotline 1-877-89-SPILL** (1-877-897-7455).

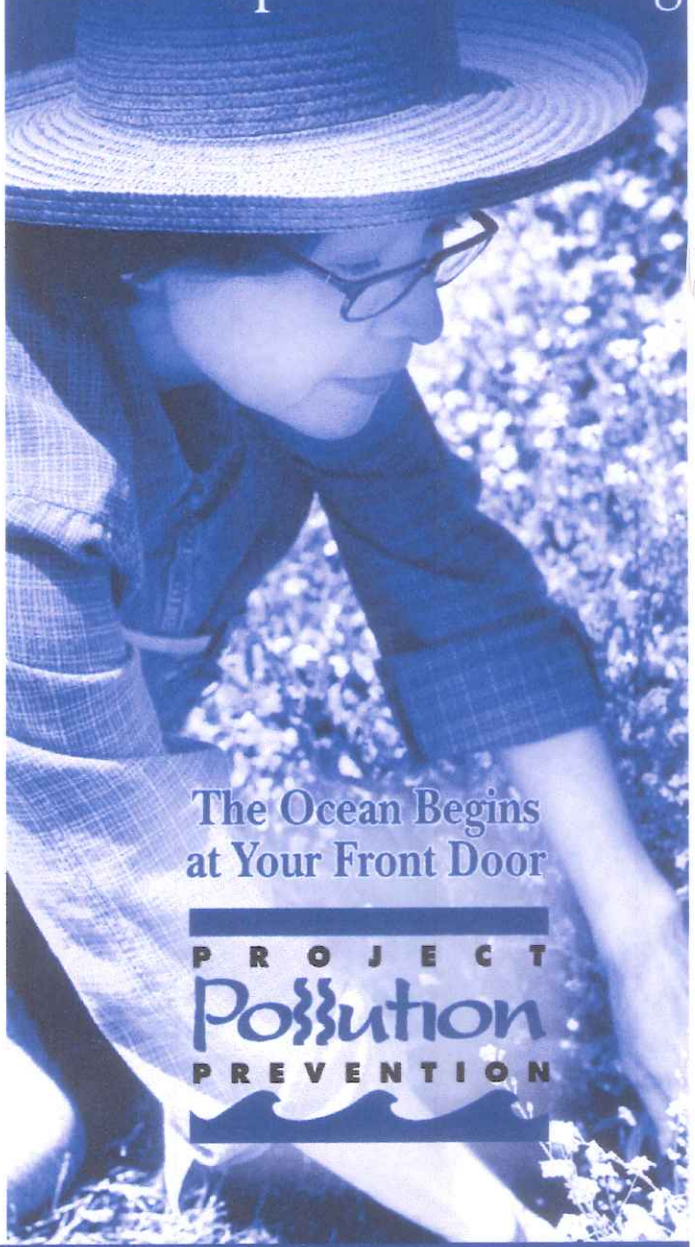
For emergencies, dial 911.

The tips contained in this brochure provide useful information to help prevent water pollution while landscaping or gardening. If you have other suggestions, please contact your city's stormwater representatives or call the Orange County Stormwater Program.

Printed on Recycled Paper

Help Prevent Ocean Pollution:

Tips for Landscape & Gardening



The Ocean Begins at Your Front Door

PROJECT Pollution PREVENTION

Tips for Landscape & Gardening

Never allow gardening products or polluted water to enter the street, gutter or storm drain.

General Landscaping Tips

- Protect stockpiles and materials from wind and rain by storing them under tarps or secured plastic sheeting.
- Prevent erosion of slopes by planting fast-growing, dense ground covering plants. These will shield and bind the soil.
- Plant native vegetation to reduce the amount of water, fertilizers, and pesticide applied to the landscape.

- Never apply pesticides or fertilizers when rain is predicted within the next 48 hours.

Garden & Lawn Maintenance

- Do not overwater. Use irrigation practices such as drip irrigation, soaker hoses or micro spray systems. Periodically inspect and fix leaks and misdirected sprinklers.
- Do not rake or blow leaves, clippings or pruning waste into the street, gutter or storm drain. Instead, dispose of green waste by composting, hauling it to a permitted landfill, or recycling it through your city's program.

- Use slow-release fertilizers to minimize leaching, and use organic fertilizers.
- Read labels and use only as directed. Do not over-apply pesticides or fertilizers. Apply to spots as needed, rather than blanketing an entire area.
- Store pesticides, fertilizers and other chemicals in a dry covered area to prevent exposure that may result in the deterioration of containers and packaging.

- Rinse empty pesticide containers and re-use rinse water as you would use the product. Do not dump rinse water down storm drains. Dispose of empty containers in the trash.
- When available, use non-toxic alternatives to traditional pesticides, and use pesticides specifically designed to control the pest you are targeting. For more information, visit **www.ipm.ucdavis.edu**.
- If fertilizer is spilled, sweep up the spill before irrigating. If the spill is liquid, apply an absorbent material such as cat litter, and then sweep it up and dispose of it in the trash.
- Take unwanted pesticides to a Household Hazardous Waste Collection Center to be recycled. Locations are provided below.

Household Hazardous Waste Collection Centers

Anaheim:	1071 N. Blue Gum St.
Huntington Beach:	17121 Nichols St.
Irvine:	6411 Oak Canyon
San Juan Capistrano:	32250 La Pata Ave.

For more information, call (714) 834-6752 or visit www.oclandfills.com

The Pollution Solution

Several residential activities can result in water pollution. Among these activities are car washing and hosing off driveways and sidewalks. Both activities can waste water and result in excess runoff. Water conservation methods described in this pamphlet can prevent considerable amounts of runoff and conserve water. By taking your car to a commercial car wash and by sweeping driveways and sidewalks, you can further prevent the transport of pollutants to Orange County waterways. Here are some of the common pollutants for which you can be part of the solution:

1 Pesticides and Fertilizer

- **Pollution:** The same pesticides that are designed to be toxic to pests can have an equally lethal impact on our marine life. The same fertilizer that promotes plant growth in lawns and gardens can also create nuisance algae blooms, which remove oxygen from the water and clog waterways when it decomposes.
- **Solution:** Never use pesticides or fertilizer within 48 hours of an anticipated rainstorm. Use only as much as is directed on the label and keep it off driveways and sidewalks.

2 Dirt and Sediment

- **Pollution:** Dirt or sediment can impede the flow of the stormwater and negatively impact stream habitat as it travels through waterways and deposits downstream. Pollutants can attach to sediment, which can then be transported through our waterways.
- **Solution:** Protect dirt stockpiles by covering them with tarps or secure plastic sheets to prevent wind or rain from allowing dirt or sediment to enter the storm drain system.

3 Metals

- **Pollution:** Metals and other toxins present in car wash water can harm important plankton, which forms the base of the aquatic food chain.
- **Solution:** Take your car to a commercial car wash where the wash water is captured and treated at a local wastewater treatment plant.

DID YOU KNOW?

Did you know that most of the pollution found in our waterways is not from a single source, but from a "non-point" source meaning the accumulation of pollution from residents and businesses throughout the community

4 Pet Waste

- **Pollution:** Pet waste carries bacteria through our watersheds and eventually will be washed out to the ocean. This can pose a health risk to swimmers and surfers.
- **Solution:** Pick up after your pets!

5 Trash and Debris

- **Pollution:** Trash and debris can enter waterways by wind, littering and careless maintenance of trash receptacles. Street sweeping collects some of this trash; however, much of what isn't captured ends up in our storm drain system where it flows untreated out to the ocean.
- **Solution:** Don't litter and make sure trash containers are properly covered. It is far more expensive to clean up the litter and trash that ends up in our waterways than it is to prevent it in the first place. Come out to one of Orange County's many locations for Coastal and Inner-Coastal Cleanup Day, which is held in September.

6 Motor Oil / Vehicle Fluids

- **Pollution:** Oil and petroleum products from our vehicles are toxic to people, wildlife and plants.
- **Solution:** Fix any leaks from your vehicle and keep the maintenance up on your car. Use absorbent material such as cat litter on oil spills, then sweep it up and dispose of it in the trash. Recycle used motor oil at a local Household Hazardous Waste Collection Center.

A TEAM EFFORT

The Orange County Stormwater Program has teamed with the Municipal Water District of Orange County (MWDOC) and the University of California Cooperative Extension Program (UCCE) to develop this pamphlet.

Low Impact Development (LID) and sustainable water use prevents water pollution and conserves water for drinking and reuse. Reducing your water use and the amount of water flowing from your home protects the environment and saves you money.

Thank you for making water protection a priority!

For more information, please visit
www.ocwatersheds.com/publiced/

www.mwdoc.com

www.uccemg.com

To report a spill, call the Orange County 24-Hour Water Pollution Prevention Reporting Hotline at 1-877-89-SPILL \(1-877-897-7455)

Special Thanks to
The City of Los Angeles Stormwater Program for the use of its artwork

The Metropolitan Water District of Southern California for the use of the California-Friendly Plant and Native Habitat photos

Homeowners Guide for Sustainable Water Use

Low Impact Development, Water Conservation & Pollution Prevention

The Ocean Begins at Your Front Door

RUNOFF, RAINWATER AND REUSE

Where Does Water Runoff Go?

Stormwater, or water from rainfall events, and runoff from outdoor water use such as sprinklers and hoses flows from homes directly into catch basins and the storm drain system. After entering the storm drain, the water flows untreated into streams, rivers, bays and ultimately the Pacific Ocean. Runoff can come from lawns, gardens, driveways, sidewalks and roofs. As it flows over hard, impervious surfaces, it picks up pollutants. Some pollutants carried by the water runoff include trash, pet waste, pesticides, fertilizer, motor oil and more.

Water Conservation

Pollution not only impairs the water quality for habitat and recreation, it can also reduce the water available for reuse. Runoff allowed to soak into the ground is cleaned as it percolates through the soil, replenishing depleted groundwater supplies. Groundwater provides approximately 50% of the total water for drinking and other indoor household activities in north and central Orange County. When land is covered with roads, parking lots, homes, etc., there is less land to take in the water and more hard surfaces over which the water can flow.

In Orange County, 60-70% of water used by residents and businesses goes to irrigation and other outdoor uses. Reusing rainwater to irrigate our lawn not only reduces the impact of water pollution from runoff, but it also is a great way to conserve our precious water resources and replenish our groundwater basin.

What is Low Impact Development (LID)?

Low Impact Development (LID) is a method of development that seeks to maintain the natural hydrologic character of an area. LID provides a more sustainable and pollution-preventative approach to water management.

New water quality regulations require implementation of LID in larger new developments and encourage implementation of LID and other sustainable practices in existing residential areas. Implementing modifications to your lawn or garden can reduce pollution in our environment, conserve water and reduce your water bill.

Permeable pavement allows water runoff to infiltrate through the soil and prevents most pollutants from reaching the storm drain system.

OPTIONS FOR RAINWATER HARVESTING AND REUSE

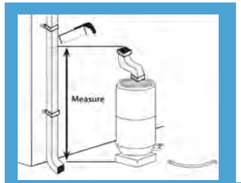
Rainwater harvesting is a great way to save money, prevent pollution and reduce potable water use. To harvest your rainwater, simply redirect the runoff from roofs and downspouts to rain barrels. Rain gardens are another option; these reduce runoff as well as encourage infiltration.

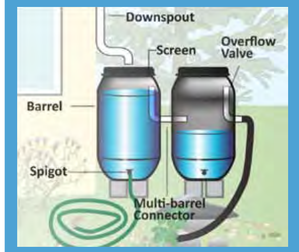
Downspout Disconnection/Redirection

Disconnecting downspouts from pipes running to the gutter prevents runoff from transporting pollutants to the storm drain. Once disconnected, downspouts can be redirected to rain gardens or other vegetated areas, or be connected to a rain barrel.

Rain Barrels

Rain barrels capture rainwater flow from roofs for reuse in landscape irrigation. Capacity of rain barrels needed for your home will depend on the amount of roof area and rainfall received. When purchasing your rain barrel, make sure it includes a screen, a spigot to siphon water for use, an overflow tube to allow for excess water to run out and a connector if you wish to connect multiple barrels to add capacity of water storage.





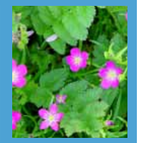
Mosquito growth prevention is very important when installing a rain barrel. The best way to prevent mosquito breeding is to eliminate entry points by ensuring all openings are sealed tightly. If these methods are unsuccessful, products are available to kill mosquito larvae, but that are harmless to animals and humans. Regular application of these products is essential. Please visit the Orange County Vector Control website for more information at www.ocvcd.org/mosquitoes3.php.

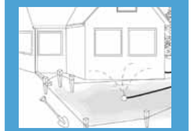
Rain Gardens

Rain gardens allow runoff to be directed from your roof downspout into a landscaped area. Vegetation and rocks in the garden will slow the flow of water to allow for infiltration into the soil. Plants and soil particles will absorb pollutants from the roof runoff. By utilizing a native plant palate, rain gardens can be maintained all year with minimal additional irrigation. These plants are adapted to the semi-arid climate of Southern California, require less water and can reduce your water bill.

Before modifying your yard to install a rain garden, please consult your local building and/or planning departments to ensure your garden plan follows pertinent building codes and ordinances. Besides codes and ordinances, some home owner associations also have guidelines for yard modifications. If your property is in hill areas or includes engineered slopes, please seek professional advice before proceeding with changes.

For information on how to disconnect a downspout or to install and maintain a rain barrel or rain garden at your home, please see the Los Angeles Rainwater Harvesting Program, A Homeowner's "How-To" Guide, November 2009 at www.larainwaterharvesting.org/





OTHER WATER CONSERVATION AND POLLUTION PREVENTION TECHNIQUES

Native Vegetation and Maintenance

"California Friendly" plants or native vegetation can significantly reduce water use. These plants often require far less fertilizers and pesticides, which are two significant pollutants found in Orange County waterways. Replacing water "thirsty" plants and grass types with water efficient natives is a great way to save water and reduce the need for potentially harmful pesticides and fertilizer.

Please see the California Friendly Garden Guide produced by the Metropolitan Water District of Southern California and associated Southern California Water Agencies for a catalog of California friendly plants and other garden resources at www.bewaterwise.com/Gardensoft.

Weed Free Yards

Weeds are water thieves. They often reproduce quickly and rob your yard of both water and nutrients. Weed your yard by hand if possible. If you use herbicides to control the weeds, use only the amount recommended on the label and never use it if rain is forecast within the next 48 hours.

Soil Amendments

Soil amendments such as green waste (e.g. grass clippings, compost, etc.) can be a significant source of nutrients and can help keep the soil near the roots of plants moist. However, they can cause algal booms if they get into our waterways, which reduces the amount of oxygen in the water and impacts most aquatic organisms. It is important to apply soil amendments more than 48 hours prior to predicted rainfall.

IRRIGATE EFFICIENTLY

Smart Irrigation Controllers

Water runoff from sprinklers left on too long will carry pollutants into our waterways.

Smart Irrigation Controllers have internal clocks as well as sensors that will turn off the sprinklers in response to environmental changes. If it is raining, too windy or too cold, the smart irrigation control sprinklers will automatically shut off.

Check with your local water agency for available rebates on irrigation controllers and smart timers.

- Aim your sprinklers at your lawn, not the sidewalk – By simply adjusting the direction of your sprinklers you can save water, prevent water pollution from runoff, keep your lawn healthy and save money.
- **Set a timer for your sprinklers** – lawns absorb the water they need to stay healthy within a few minutes of turning on the sprinklers. Time your sprinklers; when water begins running off your lawn, you can turn them off. Your timer can be set to water your lawn for this duration every time.
- **Water at Sunrise** – Watering early in the morning will reduce water loss due to evaporation. Additionally, winds tend to die down in the early morning so the water will get to the lawn as intended.
- **Water by hand** – Instead of using sprinklers, consider watering your yard by hand. Hand-watering ensures that all plants get the proper amount of water and you will prevent any water runoff, which wastes water and carries pollutants into our waterways.
- **Fix leaks** - Nationwide, households waste one trillion gallons of water a year to leaks – that is enough water to serve the entire state of Texas for a year. If your garden hose is leaking, replace the nylon or rubber hose washer and ensure a tight connection. Fix broken sprinklers immediately.

Clean beaches and healthy creeks, rivers, bays and ocean are important to Orange County. However, many common activities can lead to water pollution if you're not careful. Pet waste and pet care products can be washed into the storm drains that flow to the ocean. Unlike water in sanitary sewers (from sinks and toilets), water in storm drains is not treated before entering our waterways.

You would never put pet waste or pet care products into the ocean, so don't let them enter the storm drains. Follow these easy tips to help prevent water pollution.

For more information,
please call the
Orange County Stormwater Program
at **(714) 567-6363**
or visit
www.ocwatersheds.com

To report a spill,
call the
Orange County 24-Hour Water Pollution Problem Reporting Hotline
at **(714) 567-6363**.

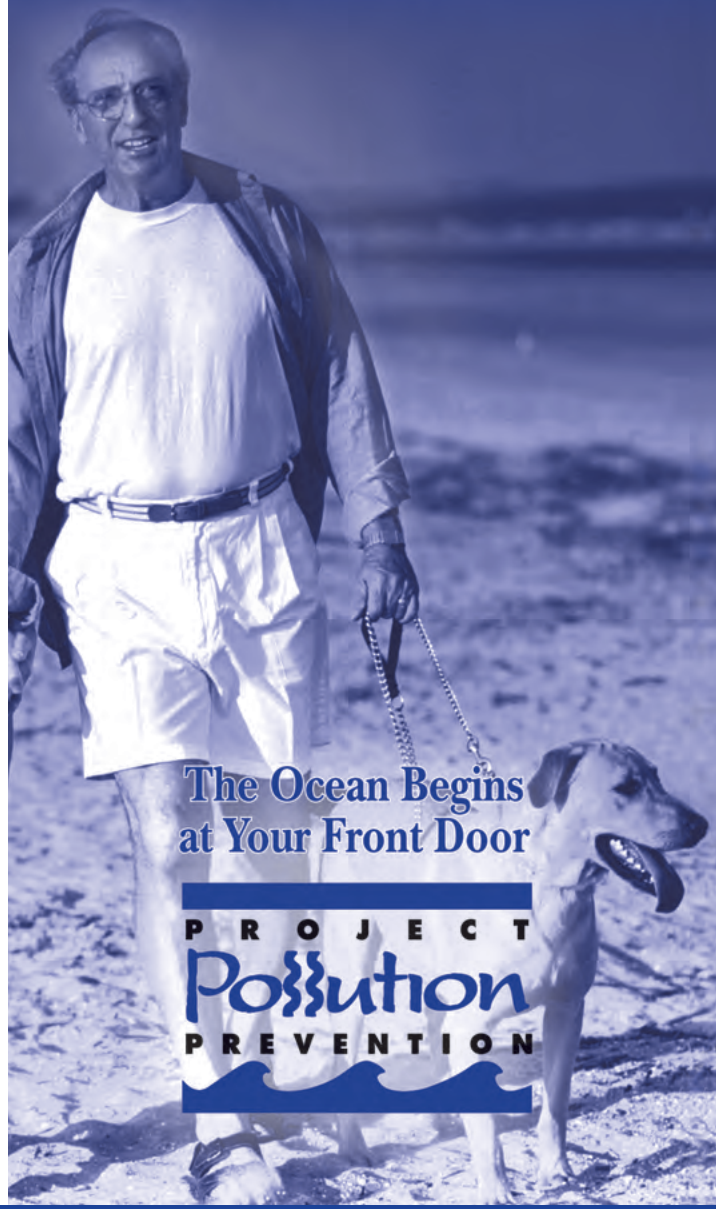
For emergencies, dial 911.

The tips contained in this brochure provide useful information to help prevent water pollution while caring for your pet. If you have other suggestions, please contact your city's stormwater representatives or call the Orange County Stormwater Program.

Printed on Recycled Paper

Help Prevent Ocean Pollution:

Tips for Pet Care



Tips for Pet Care

Never let any pet care products or washwater run off your yard and into the street, gutter or storm drain.

Washing Your Pets

Even biodegradable soaps and shampoos can be harmful to marine life and the environment.

- If possible, bathe your pets indoors using less-toxic shampoos or have your pet professionally groomed. Follow instructions on the products and clean up spills.

- If you bathe your pet outside, wash it on your lawn or another absorbent/ permeable surface to keep the washwater from running into the street, gutter or storm drain.

Flea Control

- Consider using oral or topical flea control products.

- If you use flea control products such as shampoos, sprays or collars, make sure to dispose of any unused products at a Household Hazardous Waste Collection Center. For location information, call **(714) 834-6752**.

Why You Should Pick Up After Your Pet

It's the law! Every city has an ordinance requiring you to pick up after your pet. Besides being a nuisance, pet waste can lead to water pollution, even if you live inland. During rainfall, pet waste left outdoors can wash into storm drains. This waste flows directly into our waterways and the ocean where it can harm human health, marine life and the environment.

As it decomposes, pet waste demands a high level of oxygen from water. This decomposition can contribute to killing marine life by reducing the amount of dissolved oxygen available to them.

Have fun with your pets, but please be a responsible pet owner by taking care of them and the environment.

- Take a bag with you on walks to pick up after your pet.

- Dispose of the waste in the trash or in a toilet.

PROJECT Pollution PREVENTION

Do your part to prevent water pollution in our creeks, rivers, bays and ocean.

Clean beaches and healthy creeks, rivers, bays, and ocean are important to Orange County. However, many common household activities can lead to water pollution if you're not careful.

Remember the Water in Your Storm Drain is Not Treated BEFORE It Enters Our Waterways

Litter, oil, chemicals and other substances that are left on your yard or driveway can be blown or washed into storm drains that flow to the ocean. Over-watering your lawn and washing your car can also flush materials into the storm drains. Unlike water in sanitary sewers (from sinks and toilets), water in storm drains is not treated.

You would never pour soap, fertilizers or oil into the ocean, so don't let them enter streets, gutters or storm drains. Follow the easy tips in this brochure to help prevent water pollution.

For more information, please call the **Orange County Stormwater Program** at **1-877-89-SPILL** (1-877-897-7455) or visit **www.ocwatersheds.com**

To report a spill, call the **Orange County 24-Hour Water Pollution Problem Reporting Hotline 1-877-89-SPILL** (1-877-897-7455).

For emergencies, dial 911.

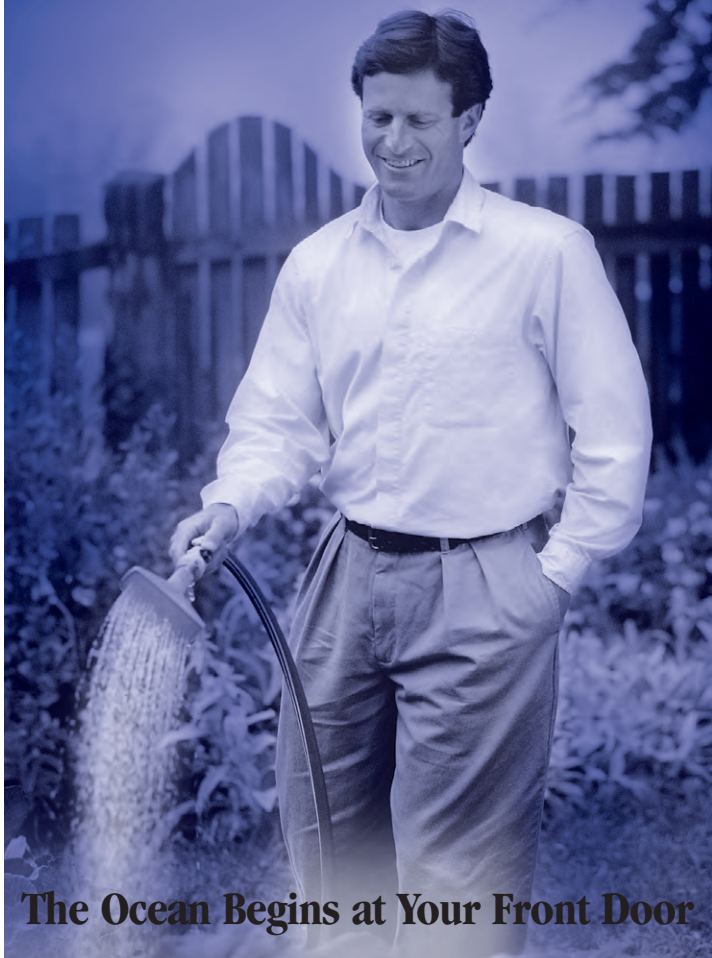
The tips contained in this brochure provide useful information to help prevent water pollution while performing everyday household activities. If you have other suggestions, please contact your city's stormwater representatives or call the Orange County Stormwater Program.

GENUINE RECYCLED PAPER
50% PRE-CONSUMER AND 15% POST-CONSUMER

RECYCLE USED OIL

Help Prevent Ocean Pollution:

Household Tips



The Ocean Begins at Your Front Door

PROJECT Pollution PREVENTION

Pollution Prevention

Household Activities

- **Do not rinse spills with water!** Sweep outdoor spills and dispose of in the trash. For wet spills like oil, apply cat litter or another absorbent material, then sweep and bring to a household hazardous waste collection center (HHWCC).
- Securely cover trash cans.
- Take household hazardous waste to a household hazardous waste collection center.
- Store household hazardous waste in closed, labeled containers inside or under a cover.
- Do not hose down your driveway, sidewalk or patio. Sweep up debris and dispose of in trash.
- Always pick up after your pet. Flush waste down the toilet or dispose of in the trash.
- Bathe pets indoors or have them professionally groomed.

Household Hazardous Wastes include:

- ▲ **Batteries**
- ▲ **Paint thinners, paint strippers and removers**
- ▲ **Adhesives**
- ▲ **Drain openers**
- ▲ **Oven cleaners**
- ▲ **Wood and metal cleaners and polishes**
- ▲ **Herbicides and pesticides**
- ▲ **Fungicides/wood preservatives**
- ▲ **Automotive fluids and products**
- ▲ **Grease and rust solvents**
- ▲ **Thermometers and other products containing mercury**
- ▲ **Fluorescent lamps**
- ▲ **Cathode ray tubes, e.g. TVs, computer monitors**
- ▲ **Pool and spa chemicals**

Gardening Activities

- Follow directions on pesticides and fertilizers, (measure, do not estimate amounts) and do not use if rain is predicted within 48 hours.
- Water your lawn and garden by hand to control the amount of water you use. Set irrigation systems to reflect seasonal water needs. If water flows off your yard and onto your driveway or sidewalk, your system is over-watering.
- Mulch clippings or leave them on the lawn. If necessary, dispose in a green waste container.
- Cultivate your garden often to control weeds.

Washing and Maintaining Your Car

- Take your car to a commercial car wash whenever possible.
- Choose soaps, cleaners, or detergents labeled "non-toxic," "phosphate free" or "biodegradable." Vegetable and citrus-based products are typically safest for the environment, **but even these should not be allowed into the storm drain.**
- Shake floor mats into a trash can or vacuum to clean.
- Do not use acid-based wheel cleaners and "hose off" engine degreasers at home. They can be used at a commercial facility, which can properly process the washwater.
- **Do not dump washwater onto your driveway, sidewalk, street, gutter or storm drain.** Excess washwater should be disposed of in the sanitary sewers (through a sink, or toilet) or onto an absorbent surface like your lawn.
- Use a nozzle to turn off water when not actively washing down automobile.
- Monitor vehicles for leaks and place pans under leaks. Keep your car well maintained to stop and prevent leaks.
- Use cat litter or other absorbents and sweep to remove any materials deposited by vehicles. Contain sweepings and dispose of at a HHWCC.
- Perform automobile repair and maintenance under a covered area and use drip pans or plastic sheeting to keep spills and waste material from reaching storm drains.
- **Never pour oil or antifreeze in the street, gutter or storm drains.** Recycle these substances at a service station, HHWCC, or used oil recycling center. For the nearest Used Oil Collection Center call 1-800-CLEANUP or visit www.ciwmb.ca.gov/UsedOil.

For locations and hours of Household Hazardous Waste Collection Centers in Anaheim, Huntington Beach, Irvine and San Juan Capistrano, call (714)834-6752 or visit www.oclandfills.com.

Do your part to prevent water pollution in our creeks, rivers, bays and ocean.

Clean beaches and healthy creeks, rivers, bays and ocean are important to Orange County. However, not properly disposing of household hazardous waste can lead to water pollution. Batteries, electronics, paint, oil, gardening chemicals, cleaners and other hazardous materials cannot be thrown in the trash. They also must never be poured or thrown into yards, sidewalks, driveways, gutters or streets. Rain or other water could wash the materials into the storm drain and eventually into our waterways and the ocean. In addition, hazardous waste must not be poured in the sanitary sewers (sinks and toilets).

NEVER DISPOSE OF HOUSEHOLD HAZARDOUS WASTE IN THE TRASH, STREET, GUTTER, STORM DRAIN OR SEWER.

For more information, please call the **Orange County Stormwater Program** at **1-877-89-SPILL** (1-877-897-7455) or visit **www.ocwatersheds.com**

To Report Illegal Dumping of Household Hazardous Waste call 1-800-69-TOXIC

To report a spill, call the **Orange County 24-Hour Water Pollution Problem Reporting Hotline 1-877-89-SPILL** (1-877-897-7455)**.**

For emergencies, dial 911.

RECYCLE USED OIL

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Help Prevent Ocean Pollution:

Proper Disposal of Household Hazardous Waste

The Ocean Begins at Your Front Door

PROJECT Pollution PREVENTION

ORANGE COUNTY

Pollution Prevention

Leftover household products that contain corrosive, toxic, ignitable, or reactive ingredients are considered to be "household hazardous waste" or "HHW." HHW can be found throughout your home, including the bathroom, kitchen, laundry room and garage.

WHEN POSSIBLE, USE NON-HAZARDOUS OR LESS-HAZARDOUS PRODUCTS.

Disposal of HHW down the drain, on the ground, into storm drains, or in the trash is illegal and unsafe.

Proper disposal of HHW is actually easy. Simply drop them off at a Household Hazardous Waste Collection Center (HHWCC) for free disposal and recycling. Many materials including anti-freeze, latex-based paint, motor oil and batteries can be recycled. Some centers have a "Stop & Swap" program that lets you take partially used home, garden, and automobile products free of charge. There are four HHWCCs in Orange County:

Anaheim:.....1071 N. Blue Gum St
Huntington Beach:.....17121 Nichols St
Irvine:..... 6411 Oak Canyon
San Juan Capistrano:... 32250 La Pata Ave

Centers are open Tuesday-Saturday, 9 a.m.-3 p.m. Centers are closed on rainy days and major holidays. For more information, call **(714) 834-6752** or visit **www.oclandfills.com.**

Common household hazardous wastes

- Batteries
- Paint and paint products
- Adhesives
- Drain openers
- Household cleaning products
- Wood and metal cleaners and polishes
- Pesticides
- Fungicides/wood preservatives
- Automotive products (antifreeze, motor oil, fluids)
- Grease and rust solvents
- Fluorescent lamps
- Mercury (thermometers & thermostats)
- All forms of electronic waste including computers and microwaves
- Pool & spa chemicals
- Cleaners
- Medications
- Propane (camping & BBQ)
- Mercury-containing lamps
- Television & monitors (CRTs, flatscreens)

Tips for household hazardous waste

- Never dispose of HHW in the trash, street, gutter, storm drain or sewer.
- Keep these materials in closed, labeled containers and store materials indoors or under a cover.
- When possible, use non-hazardous products.
- Reuse products whenever possible or share with family and friends.
- Purchase only as much of a product as you'll need. Empty containers may be disposed of in the trash.
- HHW can be harmful to humans, pets and the environment. Report emergencies to 911.

Clean beaches and healthy creeks, rivers, bays and ocean are important to Orange County. However, many common activities such as pest control can lead to water pollution if you're not careful. Pesticide treatments must be planned and applied properly to ensure that pesticides do not enter the street, gutter or storm drain. Unlike water in sanitary sewers (from sinks and toilets), water in storm drains is not treated before entering our waterways.

You would never dump pesticides into the ocean, so don't let it enter the storm drains. Pesticides can cause significant damage to our environment if used improperly. If you are thinking of using a pesticide to control a pest, there are some important things to consider.

For more information,
please call
University of California Cooperative
Extension Master Gardeners at
(714) 708-1646
or visit these Web sites:
www.uccemg.org
www.ipm.ucdavis.edu

For instructions on collecting a specimen sample visit the Orange County Agriculture Commissioner's website at:
http://www.ocagcomm.com/ser_lab.asp

To report a spill, call the
Orange County 24-Hour
Water Pollution Problem
Reporting Hotline
at 1-877-89-SPILL (1-877-897-7455).

For emergencies, dial 911.

Information From:
Cheryl Wilen, Area IPM Advisor; Darren Haver, Watershed Management Advisor; Mary Louise Flint, IPM Education and Publication Director; Pamela M. Geisel, Environmental Horticulture Advisor; Carolyn L. Unruh, University of California Cooperative Extension staff writer. Photos courtesy of the UC Statewide IPM Program and Darren Haver.

Funding for this brochure has been provided in full or in part through an agreement with the State Water Resources Control Board (SWRCB) pursuant to the Costa-Machado Water Act of 2000 (Prop. 13).

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Help Prevent Ocean Pollution:

Responsible Pest Control

Tips for Pest Control

Key Steps to Follow:

Step 1: Correctly identify the pest (insect, weed, rodent, or disease) and verify that it is actually causing the problem.

Three life stages of the common lady beetle, a beneficial insect.

This is important because beneficial insects are often mistaken for pests and sprayed with pesticides needlessly.

Consult with a Certified Nursery Professional at a local nursery or garden center or send a sample of the pest to the Orange County Agricultural Commissioner's Office.

Determine if the pest is still present – even though you see damage, the pest may have left.

Step 2: Determine how many pests are present and causing damage.

Small pest populations may be controlled more safely using non-pesticide techniques. These include removing food sources, washing off leaves with a strong stream of water, blocking entry into the home using caulking and replacing problem plants with ones less susceptible to pests.

Integrated Pest Management (IPM) usually combines several least toxic pest control methods for long-term prevention and management of pest problems without harming you, your family, or the environment.

UC CE University of California Cooperative Extension

Step 3: If a pesticide must be used, choose the least toxic chemical.

Obtain information on the least toxic pesticides that are effective at controlling the target pest from the UC Statewide Integrated Pest Management (IPM) Program's Web site at www.ipm.ucdavis.edu.

Seek out the assistance of a Certified Nursery Professional at a local nursery or garden center when selecting a pesticide. Purchase the smallest amount of pesticide available.

Apply the pesticide to the pest during its most vulnerable life stage. This information can be found on the pesticide label.

Step 4: Wear appropriate protective clothing.

Follow pesticide labels regarding specific types of protective equipment you should wear. Protective clothing should always be washed separately from other clothing.

Step 5: Continuously monitor external conditions when applying pesticides such as weather, irrigation, and the presence of children and animals.

Never apply pesticides when rain is predicted within the next 48 hours. Also, do not water after applying pesticides unless the directions say it is necessary.

Apply pesticides when the air is still; breezy conditions may cause the spray or dust to drift away from your targeted area.

In case of an emergency call 911 and/or the regional poison control number at (714) 634-5988 or (800) 544-4404 (CA only).

For general questions you may also visit www.calpoison.org.

Step 6: In the event of accidental spills, sweep up or use an absorbent agent to remove any excess pesticides. Avoid the use of water.

Be prepared. Have a broom, dust pan, or dry absorbent material, such as cat litter, newspapers or paper towels, ready to assist in cleaning up spills.

Contain and clean up the spill right away. Place contaminated materials in a doubled plastic bag. All materials used to clean up the spill should be properly disposed of according to your local Household Hazardous Waste Disposal site.

Step 7: Properly store and dispose of unused pesticides.

Purchase Ready-To-Use (RTU) products to avoid storing large concentrated quantities of pesticides.

Store unused chemicals in a locked cabinet.

Unused pesticide chemicals may be disposed of at a Household Hazardous Waste Collection Center.

Empty pesticide containers should be triple rinsed prior to disposing of them in the trash.

Household Hazardous Waste Collection Center
(714) 834-6752
www.oclandfills.com

PROJECT Pollution PREVENTION

Clean beaches and healthy creeks, rivers, bays and ocean are important to Orange County. However, many common activities such as painting can lead to water pollution if you're not careful. Paint must be used, stored and disposed of properly to ensure that it does not enter the street, gutter or storm drain. Unlike water in sanitary sewers (from sinks and toilets), water in storm drains is not treated before entering our waterways.

You would never dump paint into the ocean, so don't let it enter the storm drains. Follow these easy tips to help prevent water pollution.

For more information,
please call the
Orange County Stormwater Program
at **1-877-89-SPILL** (1-877-897-7455)
or visit
www.ocwatersheds.com

To report a spill,
call the
Orange County 24-Hour Water Pollution Problem Reporting Hotline
at **1-877-89-SPILL** (1-877-897-7455).

For emergencies, dial 911.

The tips contained in this brochure provide useful information to help prevent water pollution while using, storing and disposing of paint. If you have other suggestions, please contact your city's stormwater representatives or call the Orange County Stormwater Program.

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Help Prevent Ocean Pollution:

Tips for Projects Using Paint

Tips for Projects Using Paint

Paint can cause significant damage to our environment. Whether you hire a contractor or do it yourself, it is important to follow these simple tips when purchasing, using, cleaning, storing and disposing of paint.

Purchasing Paint

- Measure the room or object to be painted, then buy only the amount needed.
- Whenever possible, use water-based paint since it usually does not require hazardous solvents such as paint thinner for cleanup.

Painting

- Use only one brush or roller per color of paint to reduce the amount of water needed for cleaning.
- Place open paint containers or trays on a stable surface and in a position that is unlikely to spill.
- Always use a tarp under the area or object being painted to collect paint drips and contain spills.

Cleaning

- Never clean brushes or rinse paint containers in the street, gutter or storm drain.
- For oil-based products, use as much of the paint on the brushes as possible. Clean brushes with thinner. To reuse thinner, pour it through a fine filter (e.g. nylon, metal gauze or filter paper) to remove solids such as leftover traces of paint.
- For water-based products, use as much of the paint on the brushes as possible, then rinse in the sink.
- Collect all paint chips and dust. Chips and dust from marine paints or paints containing lead, mercury or tributyl tin are hazardous waste. Sweep up and dispose of at a Household Hazardous Waste Collection Center (HHWCC).

Storing Paint

- Store paint in a dry location away from the elements.
- Store leftover water-based paint, oil-based paint and solvents separately in original or clearly marked containers.
- Avoid storing paint cans directly on cement floors. The bottom of the can will rust much faster on cement.
- Place the lid on firmly and store the paint can upside-down to prevent air from entering. This will keep the paint usable longer. Oil-based paint is usable for up to 15 years. Water-based paint remains usable for up to 10 years.

Alternatives to Disposal

- Use excess paint to apply another coat, for touch-ups, or to paint a closet, garage, basement or attic.
- Give extra paint to friends or family. Extra paint can also be donated to a local theatre group, low-income housing program or school.
- Take extra paint to an exchange program such as the **"Stop & Swap"** that allows you to drop off or pick up partially used home care products free of charge. **"Stop & Swap"** programs are available at most HHWCCs.
- For HHWCC locations and hours, call **(714) 834-6752** or visit **www.oclandfills.com**.

Disposing of Paint

- Never put wet paint in the trash.

For water-based paint:

- If possible, brush the leftover paint on cardboard or newspaper. Otherwise, allow the paint to dry in the can with the lid off in a well-ventilated area protected from the elements, children and pets. Stirring the paint every few days will speed up the drying.
- Large quantities of extra paint should be taken to a HHWCC.
- Once dried, paint and painted surfaces may be disposed of in the trash. When setting a dried paint can out for trash collection, leave the lid off so the collector will see that the paint has dried.

For oil-based paint:

- Oil-based paint is a household hazardous waste. All leftover paint should be taken to a HHWCC.

Aerosol paint:

- Dispose of aerosol paint cans at a HHWCC.

Spills

- Never hose down pavement or other impermeable surfaces where paint has spilled.
- Clean up spills immediately by using an absorbent material such as cat litter. Cat litter used to clean water-based paint spills can be disposed of in the trash. When cleaning oil-based paint spills with cat litter, it must be taken to a HHWCC.
- Immediately report spills that have entered the street, gutter or storm drain to the County's 24-Hour Water Pollution Problem Reporting Hotline at **(714) 567-6363** or visit **www.ocwatersheds.com** to fill out an incident reporting form.

PROJECT Pollution PREVENTION

ATTACHMENT B

Operation and Maintenance (O & M) Plan

BMP Operation and Maintenance

BMP	Reponsible Party(s)	Inspection/ Maintenance Activities Required	Minimum Frequency of Activities
N1. Education for Property Owners, Tenants and Occupants	Owner	The owner will insure that all tenants will be given a copy of the recorded WQMP which will contain a section outlining the environmental awareness education materials. The owner will establish requirements for the implementation of a community awareness program that informs tenants of the impacts of dumping oil, paints, solvents or other potentially harmful chemicals into the storm drain; the proper use and management of fertilizers, pesticides and herbicides in home landscaping and gardening practices; the impacts of littering and improper watering. Environmental awareness education materials, including, but not limited to those included in the Appendix of this WQMP, shall be provided to all tenants at the signing of the lease, and periodically thereafter by the owner.	At the signing of the lease, and periodically thereafter by the owner.
N2. Activity Restrictions	Owner	Surface water quality activities will also be conducted in conformance with the WQMP as it relates to the handling and disposal of contaminants. Wash water from private vehicle washing will be prohibited from entering the storm drain system. Driveway and parking areas will not be cleaned using wash water that is not collected. Vehicle maintenance and repair will not be permitted.	Twice a year

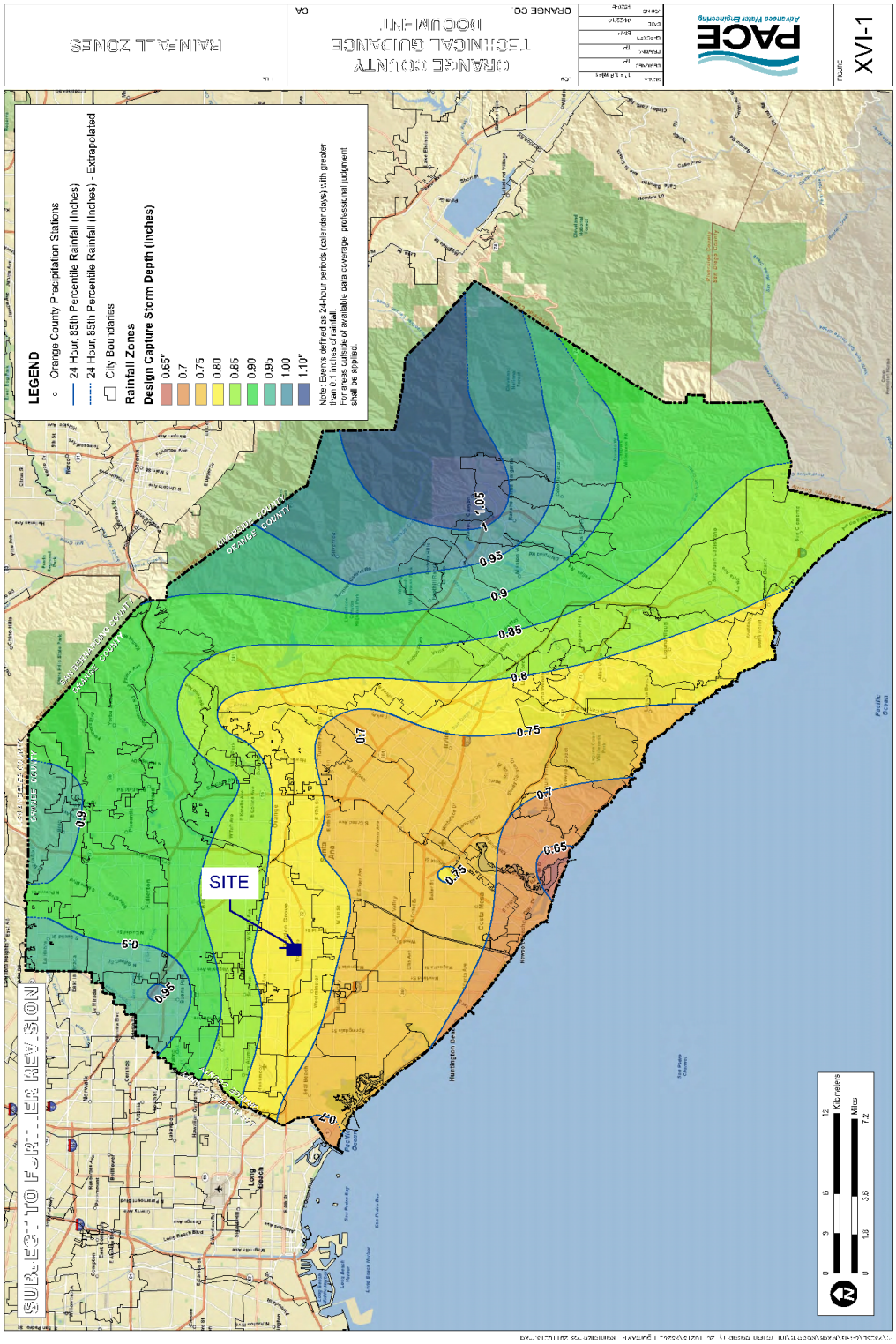
N3. Common area landscape management	Owner	Management programs will be designed and established by the owner, which will own and maintain all common areas within the project site. These programs will include how to mitigate the potential dangers of fertilizer and pesticide usage. Ongoing maintenance will be consistent with the City Landscape Requirements, the County Water Conservation Resolution (Ordinance. No.3802) and the State of California Model Water-Efficient Landscape Ordinance. Fertilizer and Pesticide usage shall be consistent with County Management Guidelines for use of Fertilizers and Pesticides.	At the signing of the lease, and periodically thereafter by the owner.
N4. BMP Maintenance	Owner	As indicated in (N2) above, the owner is being responsible for implementation of each applicable non-structural BMP as well as scheduling inspection and maintenance cleaning of all applicable structural BMP facilities. The owner, through the landscape maintenance contractor, will be responsible for inspection and maintenance activities in landscape areas. Debris and other water pollutants will be controlled, contained and disposed of in a proper manner by the maintenance contractor.	Twice a year
N11. Common Area Litter Control	Owner	The owner through the site maintenance contractor, will be required to maintain weekly sweeping and trash pick-up within the project area. Daily inspection will be made of trash receptacles to make sure lids are closed and pick-up of any excess trash on the ground has occurred. Owner shall be responsible for common area litter. Responsibility shall include the emptying of trash receptacles. Noting or disposal violations by tenants, and reporting such violations to the owner for investigation, as appropriate.	Twice a year

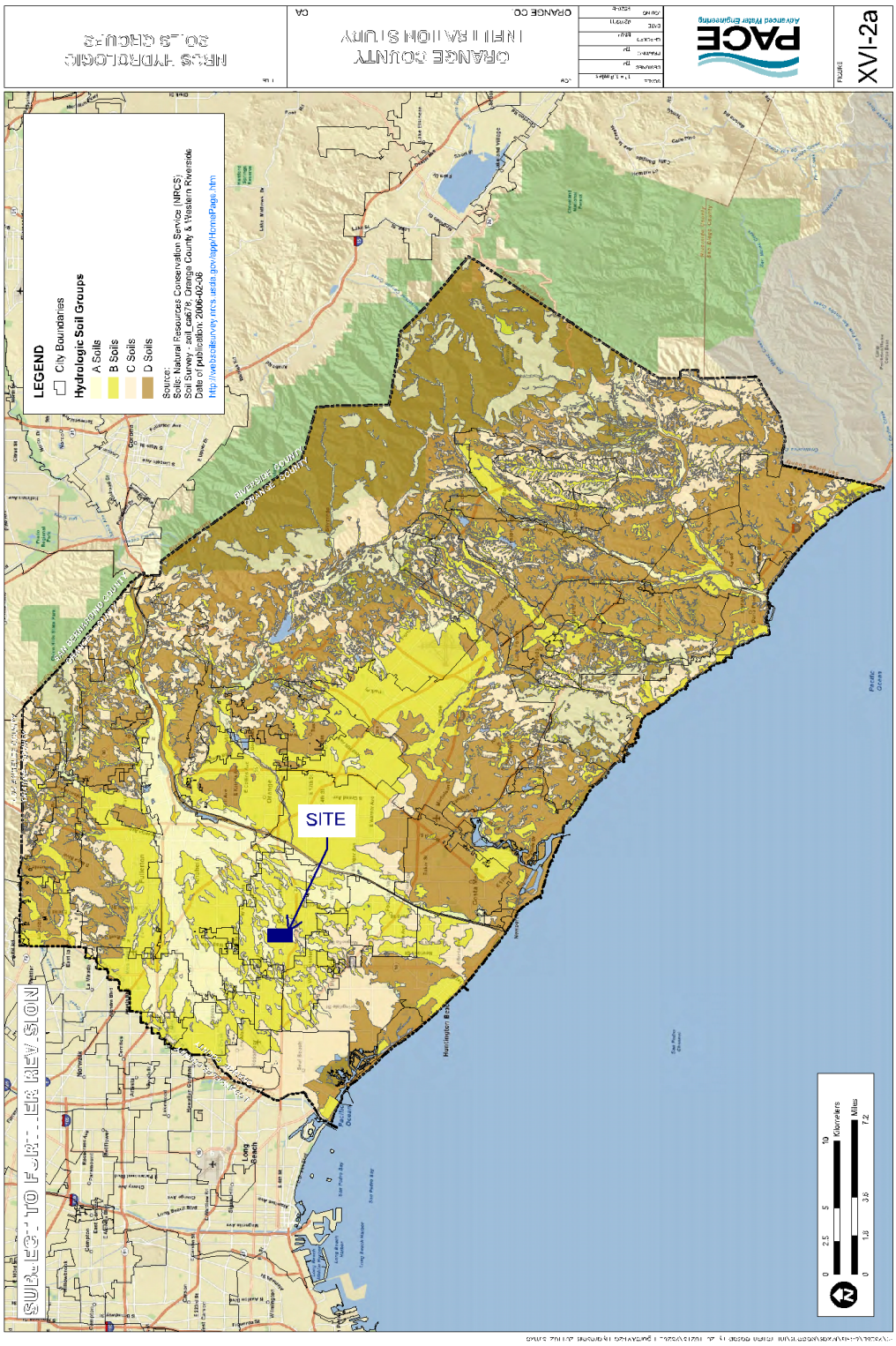
N14. Common Area Catch Basin Inspection	Owner	Area drains, swales and infiltration systems shall be inspected prior to October 1st of each year and after large storm events. If necessary, drains shall be cleaned prior to any succeeding rain events.	Twice a year
N15. Street Sweeping Private streets and Parking Lots	Owner	The access roads and drive aisles shall be swept on a regular basic to remove debris. Street and parking lot shall be swept monthly at minimum.	Weekly
Use Efficient Irrigation Systems & Landscape Design	Owner	-Employ rain-triggered shutoff devices to prevent irrigation after precipitation. -Design irrigation systems to each landscape area's specific water requirements. -Include design featuring flow reducers or shutoff valves triggered by a pressure drop to control water loss in the event of broken sprinkler heads or lines. -Implement landscape plans consistent with County or City water conservation resolutions, which may include provision of water sensors, programmable irrigation times (for short cycles), etc. -Design timing and application methods of irrigation water to minimize the runoff of excess irrigation water into the storm water drainage system. -Group plants with similar water requirements in order to reduce excess irrigation runoff and promote surface filtration. Choose plants with low irrigation requirements (for example, native or drought tolerant species). To maintain water efficiency in operations and maintenance, recommend contractors be trained in water-efficient irrigation practice through manufacture's guidance documents. The landscape plan shall be consistent with County Water Conservation Resolution or city equivalent.	

		irrigation controllers which have enough programs to break up all irrigation stations into hydrozones. If practical and feasible, rain shutoff devices shall be employed to prevent irrigation after significant precipitation. Irrigation systems shall be designed so areas which have different water use requirements are not mixed on the same station (hydrozones/smart timers). Landscape irrigation including but limited to such provisions as water sensors, programmable irrigation times will be used. Irrigation systems should be repaired and/or replaced as needed by owner.	

ATTACHMENT C

Reference Maps




XVI-2a
LEGEND
City Boundaries
Hydrologic Soil Groups
A Soils
B Soils
C Soils
D Soils
SITE
Kilometers
Miles

ATTACHMENT D

Geotechnical Investigation Report

ALTA CALIFORNIA
GEOTECHNICAL INC.

170 North Maple Street, Suite 108
Corona, CA 92880
www.altageotechnical.com

WEST STREET INVESTMENT, LLC
PO Box 17036
Anaheim, CA 92817

May 1, 2024
Project No. 1-0521

Attention: Mr. Loc Tran

Subject: **GEOTECHNICAL INVESTIGATION**
13040 Coast Street
City of Garden Grove, County of Orange, California

References: Appendix A

Dear Mr. Tran:

Alta California Geotechnical, Inc. (Alta) is pleased to present this geotechnical investigation for the proposed development located at 13040 Coast Street, located in the City of Garden Grove, Orange County, California. This report is based upon a recent subsurface investigation conducted by Alta, laboratory testing, a review of published geologic maps, and Alta's staff's experience with similar projects in this vicinity.

Alta's review of the data indicates that the proposed development is feasible, from a geotechnical perspective, provided that the recommendations presented in this report are incorporated into the grading and improvement plans and implemented during site development.

Included in this report are:

- Discussion of the site geotechnical conditions.
- Recommendations for remedial and site grading, including unsuitable soil removals.
- Geotechnical site construction recommendations.
- Liquefaction analysis.
- Foundation design parameters.

If you have any questions or should you require any additional information, please contact the undersigned at (951) 509-7090. Alta appreciates the opportunity to provide geotechnical consulting services for your project.

Sincerely,
Alta California Geotechnical, Inc.

YOUSSEF F. HIJAZI
Engineering Geology Associate

LOGAN MARQUETTE
Civil Engineering Associate

Reviewed By:

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Vice President

Distribution: (1) Addressee

YFH:LM:SAG:TJM -1-0521, May 1, 2024 (Geotechnical Investigation, 13040 Coast St, Garden Grove)

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1.0 INTRODUCTION

This report presents Alta's findings, conclusions, and geotechnical recommendations for the proposed development located at 13040 Coast Street, in the City of Garden Grove, County of Orange, California.

1.1 Purpose

The purpose of this report is to examine the existing onsite geotechnical conditions and assess the impacts that the geotechnical conditions may have on the proposed development. This report is suitable for use in developing grading plans and engineer's cost estimates.

1.2 Scope of Work

Alta's *Scope of Work* for this geotechnical investigation included the following:

- Reviewing the referenced reports and aerial imagery (Appendix A).
- Site geologic mapping.
- Drilling, logging, and sampling three (3) hollow-stem auger borings to a maximum depth of 51.5-feet below the existing surface (Appendix B).
- Conducting laboratory testing on samples obtained during our investigation (Appendix C).
- Conducting two (2) infiltration tests in two (2) additional borings at a maximum depth of 5.0-feet.
- Commission of two (2) cone penetrometer tests.
- Conducting a liquefaction analysis.
- Evaluating engineering geologic and geotechnical engineering data, including laboratory data, to develop recommendations for site remedial grading including specialized grading techniques for unsuitable soil removals along the property boundaries, import soil, foundations, and utilities.
- Preparing this report and accompanying exhibits.

1.3 Report Limitations

The conclusions and recommendations presented in this report are based on the field and laboratory information generated during this investigation, and a review of the referenced reports. The information contained in this report is intended to be used for development of grading plans and preliminary construction cost estimates.

2.0 PROJECT DESCRIPTION

2.1 Site Location and Background

The rectangular-shaped, approximately 0.5-acre site is bounded to the west by Coast Street, to the south by Emerson Avenue, and to the north and east by existing properties. The site is currently occupied by a single existing structure on the western portion of the site and associated parking.

Historic aerial photographs are available as far back as 1953 and indicate that the site was originally vacant. By 1972, the single structure in the western portion of the property was constructed paved. The site has remained largely unchanged since (Historic Aerials, 2024).

2.2 Proposed Development

Alta anticipates that the existing structure and pavement will be demolished, and the site will be redeveloped to support residential development and associated improvements. Alta anticipates that conventional cut-and-fill grading techniques will be used to develop the site. This grading will support residential structures consisting of wood frame construction with shallow foundations and reinforced concrete slabs-on-grade, and associated improvements.

3.0 SITE INVESTIGATION

3.1 Investigation and Laboratory Testing

Alta conducted a subsurface investigation on March 28th and March 29th 2024, consisting of the drilling, logging and select sampling of three (3) hollow-stem auger borings up to a maximum depth of 51.5 feet, and conducting two (2) infiltration tests in two (2) additional borings up to a maximum depth of 5.0 feet. Cone penetrometer testing was conducted on two (2) locations. The locations of the exploratory borings are shown on enclosed Plate 1 and the boring logs are presented in Appendix B.

Laboratory testing was performed on ring and bulk samples obtained during the field investigation. A brief description of the laboratory test procedures and the test results are presented in Appendix C.

3.2 Infiltration Testing

It is Alta's understanding that the project may utilize infiltration systems for storm water disposal. Details of the system are not known at this time.

Infiltration testing was undertaken using two (2) borings to 3.0- and 5.0-ft. bgs (P-1 and P-2). The testing was performed in general accordance with the County of Orange Technical Guidance Document. The test wells were presoaked at least 24 hours prior to testing. During testing, the water level readings were recorded every 30 minutes until the readings stabilized.

The data was then adjusted to provide an infiltration rate utilizing the Porchet Method. The resulting infiltration rate is presented in Table 3-1. The results do not include a factor of safety. Recommendations for infiltration BMP design are presented in Section 6.2.

Table 3-1 Summary of Infiltration Testing (No Factor of Safety)		
Test Designation	P-1	P-2
Approximate Depth of Test	3.0 ft	5.0 ft
Final Time Interval	30 minutes	30 minutes
Radius of Test Hole	4 inches	4 inches
Tested Infiltration Rate	0 in/hr	0 in/hr

4.0 GEOLOGIC CONDITIONS

4.1 Geologic and Geomorphic Setting

Regionally, the subject site is located in the Peninsular Ranges geomorphic province, which characterizes the southwest portion of southern California where right lateral major active fault zones predominately trend northwest-southeast. The Peninsular Ranges province is composed of plutonic and metamorphic rock, with lesser amounts of Tertiary volcanic and sedimentary rock, Quaternary drainage in-fills and sedimentary veneers.

4.2 Stratigraphy

Based on our literature review and subsurface investigation, the site is underlain by artificial fill and young alluvium. The geologic units are briefly described below.

4.2.1 Artificial fill - Undocumented (map symbol afu)

The artificial fill present within the site consists mainly of dark brown to brown silty sand with clay and sandy silt in a slightly moist and medium dense/very stiff to dense condition. The unit was logged to a depth of 5.0 feet below the ground surface. The artificial fill overlays the young alluvium.

4.2.2 Young alluvium (map symbol Qya)

The young alluvium observed at the site consists mainly of light brown, tannish brown, grey, and greyish brown sandy silt, silty sand, sand with

silt, sand, silt, and silt with sand in a slightly moist to wet and loose/stiff to dense/very stiff condition. The unit was logged to a depth of 51.5 feet below the ground surface.

4.3 Geologic Structure

4.3.1 Tectonic Framework

Jennings (1985) defined eight structural provinces within California that have been classified by predominant regional fault trends and similar fold structure. These provinces are in turn divided into blocks and sub-blocks that are defined by "major Quaternary faults." These blocks and sub-blocks exhibit similar structural features. Within this framework, the subject site is located within Structural Province I, which is controlled by the dominant northwest trend of the San Andreas Fault and is divided into two blocks, the Coast Range Block and the Peninsular Range Block. The Peninsular Range Block, on which this site is located, is characterized by a series of parallel, northwest trending faults that exhibit right lateral dip-slip movement. These faults are terminated by the Transverse Range block to the north and extend southward into the Baja Peninsula. These northwest trending faults divide the Peninsular Range block into eight sub-blocks. The site is located on the northwest portion of the Santa Ana Sub-block, one of the eight sub-blocks, which is bound on the east by the Elsinore fault zone and on the west by the Newport-Inglewood fault zone.

4.3.2 Regionally Mapped Active Faults

Several large, active fault systems including the Elsinore-Whittier and the Newport-Inglewood occur in the region surrounding the site. These fault systems have been studied extensively and in a large part control the geologic structure of southern California.

4.3.3 Geologic Structure

Based upon our site investigation and literature review, the surficial sediments are of Quaternary age, and are not folded or faulted.

4.4 Groundwater

Groundwater was encountered at depths of 8.75, 8.75, and 8.6 feet below the ground surface at three separate locations during our subsurface investigation. Based on state-provided information, the historic-high groundwater is approximately greater than 5.0 feet below the ground surface (CGS, 1997).

4.5 Earthquake Hazards

The subject site is located in southern California, which is a tectonically active area. The type and magnitude of seismic hazards affecting a site are dependent on the distance to the causative fault and the intensity and magnitude of the seismic event. The seismic hazard may be primary, such as surface rupture and/or ground shaking, or secondary, such as liquefaction and/or ground lurching.

4.5.1 Local and Regional Faulting

The site is located on the northwestern portion of the Santa Ana sub-block, where the Newport-Inglewood, San Joaquin Hills, Puente Hills, Elsinore, Palos Verdes, San Jose Faults surround the site approximately 5.5, 6.3, 7.1, 12.8, 14.8, and 19.4 miles away, respectively.

4.5.2 Surface Rupture

Active faults are not known to exist within the project and a review of Special Publication 42 indicates the site is not within a California State designated earthquake fault zone. Accordingly, the potential for fault surface rupture on the subject site is very low.

4.5.3 Seismicity

Ground shaking hazards caused by earthquakes along other active regional faults do exist. The 2022 California Building Code requires use-modified spectral accelerations and velocities for most structural designs. Seismic design parameters using soil profile types identified in the 2022 California Building Code are presented in Section 7.3.

4.5.4 Liquefaction

Seismic agitation of relatively loose saturated sands, silty sands, and some silts can result in a buildup of pore pressure. If the pore pressure exceeds the overburden stresses, a temporary quick condition known as liquefaction can occur. Liquefaction effects can manifest in several ways including: 1) loss of bearing; 2) lateral spread; 3) dynamic settlement; and 4) flow failure. Lateral spreading has typically been the most damaging mode of failure.

In general, the more recent that a sediment has been deposited, the more likely it will be susceptible to liquefaction. Other factors that must be considered are groundwater, confining stresses, relative density, and the intensity and duration of seismically induced ground shaking.

Groundwater was encountered during our subsurface investigation at depths of 8.75, 8.75, and 8.6 feet below the ground surface in borings B-1, B-2, and B-3, respectively. The regional groundwater map indicates that the historic-high groundwater level is approximately greater than 5.0 feet below the ground surface (CGS, 1997).

Alta performed a liquefaction analysis utilizing data from our subsurface investigation to determine the liquefaction potential of the young alluvium. A description of Alta's analysis and calculations are presented in

Appendix D of this report. A groundwater level of greater than 5.0 feet below existing ground surface was assumed. The results of our findings are discussed below under the headings of the specific types of liquefaction which can be manifested during seismic shaking. Conclusions regarding liquefaction are presented in Section 6.3.

- **Loss of Bearing:**
  Liquefaction can potentially cause bearing failure due to ground softening and near-failure in bearing. Based on the removal recommendations presented in this report, Alta anticipates that the potential for loss of bearing will be minimal.

- **Lateral Spreading:**
  The lateral displacement of surficial blocks of sediment can occur as a result of liquefaction in a subsurface layer. The most pervasive forms of lateral spreading typically involve sites located near a "free-face" (large slopes, channels, etc.), however, it has been noted that lateral spreading can occur on sites with gently sloping (1% or more) ground, such as the subject site.

  Determination of the potential for lateral spread is based on the presence of continuous potentially liquefiable soil layers underneath the structures, the presence of lateral confinement, and various analyses such as empirical modeling. Bartlett, Hansen and Youd (2002) states that surface manifestation of lateral spread is typically limited to sites with liquefiable soils within 10 meters (32 feet) of grade, and that sites underlain by soils with $(N1)_{60}$ values 15 and greater do not experience significant displacements from earthquakes with magnitudes less than 8.

  Given the flat nature of the site, the limited liquefiable layers with $(N1)_{60}$ values less than 15, our recommended unsuitable soil removals (Section 6.1.2) and our foundation design recommendations (Section 7.1), it is our opinion that the potential for lateral spread to occur onsite is considered within design tolerances of the proposed foundation systems, upon the completion of remedial grading.

- **Settlement:**
  Settlement due to seismic shaking can occur as a result of both liquefaction of saturated sediments or rearrangement of dry sand particles. Our liquefaction analysis was performed utilizing blow count data and laboratory test results to analyze the potential amount of settlement. A description of Alta's analysis and calculations are presented in Appendix D of this report. A discussion of settlement analysis results is presented in Section 6.3. Dynamic settlement design recommendations are presented in Section 7.1.

- **Flow Failure:**
  Due to the relatively flat nature of the site, and the relatively horizontal deposition of the underlying deposits, the potential for flow failure onsite is considered minimal.

4.5.5 Dry Sand Settlement

Dry sand settlement is the process of non-uniform settlement of the ground surface during a seismic event. Based on our subsurface investigation and our removal/recompaction recommendations, the potential for dry sand settlement is anticipated to be low and within foundation design tolerances. Design dynamic settlement parameters are presented in Table 7-1.

5.0 ENGINEERING PROPERTIES AND ANALYSIS

5.1 Materials Properties

Presented herein is a general discussion of the engineering properties of the onsite materials that will be encountered during construction of the proposed project. Descriptions of the soil (Unified Soil Classification System) are presented on the boring logs in Appendix B.

5.1.1 Excavation Characteristics

Based on the data provided from the subsurface investigations, it is our opinion that the onsite materials possess favorable excavation characteristics such that conventional earth moving equipment can be utilized.

5.1.2 Compressibility

The undocumented artificial fill and upper portions of the young alluvium onsite are considered compressible and unsuitable to support the proposed improvements. Recommended removal depths are presented in Section 6.1.2.

5.1.3 Moisture

The artificial fill and young alluvium that will require removal and recompaction as discussed in Section 6.1.2 are typically over-optimum.

5.1.4 Hydro-Consolidation

Hydro-consolidation is the effect of introducing water into soil that is prone to collapse. Upon loading and initial wetting, the soil structure and apparent strength are altered resulting in almost immediate settlement. That settlement can have adverse impacts on engineered structures, particularly in areas where it is manifested differentially. Differential settlements are typically associated with differential wetting, irregularities in the subsurface soil conditions, or irregular loading patterns.

Based on our laboratory testing (Appendix C), there is potential for hydro-collapse in the young alluvium onsite. Upon completion of unsuitable soil removals, the potential for hydro-collapse shall be minimal and within foundation tolerances.

5.1.5 Expansion Potential

Expansion index testing was performed on samples taken during our subsurface investigation. Based on the results, it is anticipated that the majority of materials onsite are "very low" to "low" in expansion potential (0≤EI≤50, Appendix C) when tested per ASTM D: 4829.

5.1.6 Earthwork Adjustments

The values presented in Table 5-1 are deemed appropriate for estimating purposes and may be used in an effort to balance earthwork quantities. As is the case with every project, contingencies should be made to adjust the earthwork balance when grading is in-progress and actual conditions are better defined.

TABLE 5-1
Earthwork Adjustment Factors

Geologic Unit	Adjustment Factor Range	Average
Young Alluvium	Shrink 13% to 15%	14%

5.1.7 Chemical Analyses

Chemical testing was performed on samples of material underlying the proposed site. Soluble sulfate test results indicate that the soluble sulfate concentrations of the soils tested are classified as negligible (Category S0) per ACI 318-14.

Negligible chloride levels were detected in the onsite soils. Based on laboratory results of soluble sulfate, chloride, and pH testing as presented in Appendix C, the onsite soils are classified as "non-corrosive" to buried metals and concrete (Caltrans, 2022). Additional discussions on corrosion are presented in Section 7.9. Corrosion tests results are presented in Appendix C.

5.2 Engineering Analysis

Presented below is a general discussion of the engineering analysis methods that were utilized to develop the conclusions and recommendations presented in this report.

5.2.1 Bearing Capacity and Lateral Earth Pressures

Ultimate bearing capacity values were obtained using the graphs and formula presented in NAVFAC DM-7.1. Allowable bearing was determined by applying a factor of safety of at least 3 to the ultimate bearing capacity. Static lateral earth pressures were calculated using Rankine methods for active and passive cases. If it is desired to use Coulomb forces, a separate analysis specific to the application can be conducted.

6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on Alta's findings during our subsurface investigation, the laboratory test results, and our staff's previous experience in the area, it is Alta's opinion that the development of the site is feasible from a geotechnical perspective. Presented below are recommendations that should be incorporated into site development and construction plans.

6.1 Remedial Grading Recommendations

All grading shall be accomplished under the observation and testing of the project geotechnical consultant in accordance with the recommendations contained herein and the City of Garden Grove criteria.

6.1.1 Site Preparation

Significant amounts of vegetation, construction debris, and other deleterious materials are unsuitable as structural fill material and should be disposed of off-site prior to commencing grading/construction. Any septic tanks, seepage pits or wells should be abandoned as per the County of Orange Department of Health Services.

Existing concrete should be removed prior to the placement of engineered fill. The demolished concrete may be incorporated into compacted, engineered fills after it is crushed to a maximum size of six (6) inches. Prior to placement as engineered fill any protruding steel rebar should be cut from the concrete pieces and disposed of offsite.

Existing asphaltic concrete should be removed prior to the placement of engineered fill. From a geotechnical perspective, this material may be incorporated into compacted, engineered fills after it is crushed to a maximum size of six (6) inches. The crushed asphalt should not be placed under residential structures, but rather, it can be placed in approved non-residential areas, such as streets, parking areas or open space. These recommendations should be verified by the environmental consultant.

6.1.2 Unsuitable Soil Removals

The undocumented artificial fill and upper portions of young alluvium are compressible and as such, are not suitable to support the proposed structures. As such, it is anticipated that, on average, the upper five (5) to six (6) feet of existing soils will require removal and recompaction, extending a minimum of five (5) feet horizontally outside the structures. This recommended removal combined with the foundation recommendations presented in Section 7.1 should provide suitable support for the proposed structures.

Footings for structures should be underlain by a minimum of two (2) feet of compacted fill. As such, for building pads where unsuitable soil removals do not provide the minimum depth of compacted fill, or where design grades and/or remedial grading activities create cut/fill transitions, the cut and shallow fill portions of the building pads should be over-excavated during grading and replaced with compacted fill.

The Project Geotechnical Consultant should observe the removal bottom prior to placing fill. If unsuitable soils are exposed upon the completion of the removals recommended above, additional removals may be required.

For fill areas in streets, in general, a minimum removal and recompaction of the upper two (2) feet is recommended, however all undocumented artificial fill shall be removed and recompacted. For cuts greater than two (2) feet in street areas, removals are not required so long as young alluvium are exposed. For cuts less than two (2) feet, the two (2) foot removal and recompaction applies.

Material removed as part of the unsuitable soil removals can be used as artificial fill, provided it is free of deleterious materials.

6.2 General Earthwork Recommendations

6.2.1 Compaction Standards

All fill and processed natural ground shall be compacted to a minimum relative compaction of 90 percent, as determined by ASTM Test Method: D-1557. Fill material should be moisture conditioned to optimum moisture or above, and as generally discussed in Alta's Earthwork Specification Section presented in Appendix F. Compaction shall be achieved with the use of sheepsfoot rollers or similar kneading type

equipment. Mixing and moisture conditioning will be required in order to achieve the recommended moisture conditions.

6.2.2 Groundwater/Seepage

It is anticipated that groundwater may be encountered during construction. Perched water conditions could also be encountered depending on the time of year construction occurs. Depending on the depth of utilities, groundwater may be encountered during infrastructure construction. Utilizing gravel/crushed rock as backfill for utility lines below groundwater should be considered.

6.2.3 Documentation of Removals

All removal/over-excavation bottoms should be observed and approved by the project Geotechnical Consultant prior to fill placement. Consideration should be given to surveying the removal bottoms and undercuts after approval by the geotechnical consultant and prior to the placement of fill. Staking should be provided in order to verify undercut locations and depths.

6.2.4 Treatment of Removal Bottoms

At the completion of removals/over-excavation, the exposed removal bottom should be ripped to a minimum depth of eight (8) inches, moisture-conditioned to above optimum moisture content and compacted in-place to the project standards.

6.2.5 Fill Placement

After removals, scarification, and compaction of in-place materials are completed, additional fill may be placed. Fill should be placed in eight-inch bulk maximum lifts, moisture conditioned to optimum moisture content or above, compacted and tested as grading/construction progresses until final grades are attained.

6.2.6 Moisture Conditioning

The moisture content of the upper in-situ soils varies, however the majority of these soils are over-optimum, as shown on the boring logs in Appendix B. Most soils will require mixing with drier soils prior to placement as compacted fill.

6.2.7 Mixing

Mixing of materials may be necessary to prevent layering of different soil types and/or different moisture contents. The mixing should be accomplished prior to and as part of compaction of each fill lift.

6.2.8 Import Soils

Import soils, if necessary, should consist of clean, structural quality, compactable materials similar to the on-site soils and should be free of trash, debris, or other objectionable materials. The project Geotechnical Consultant should be notified not less than 72 hours in advance of the locations of any soils proposed for import. Import sources should be sampled, tested, and approved by the project Geotechnical Consultant at the source prior to the importation of the soils to the site. The project Civil Engineer should include these requirements on plans and specifications for the project.

6.2.9 Utility Trenches

6.2.9.1 Excavation

Utility trenches should be supported, either by laying back excavations or shoring, in accordance with applicable OSHA standards. In general, existing site soils are classified as Soil Type “B” and "C" per OSHA standards. Upon completion of the recommended removals and recompaction, the artificial fill will be classified as Soil Type "B". The Project

Geotechnical Consulting should be consulted if geologic conditions vary from what is presented in this report.

6.2.9.2 Backfill

Trench backfill should be compacted to at least 90 percent of maximum dry density as determined by ASTM D-1557. Onsite soils will not be suitable for use as bedding material but will be suitable for use in backfill provided oversized materials are removed. No surcharge loads should be imposed above excavations. This includes spoil piles, lumber, concrete trucks, or other construction materials and equipment. Drainage above excavations should be directed away from the banks. Care should be taken to avoid saturation of the soils. Compaction should be accomplished by mechanical means. Jetting of native soils will not be acceptable.

Under-slab trenches should also be compacted to project specifications. If select granular backfill (SE > 30) is used, compaction by flooding will be acceptable.

6.2.10 Backcut Stability

Temporary backcuts, if required during unsuitable soil removals, should be made no steeper than 1:1 without review and approval of the geotechnical consultant. Flatter backcuts may be necessary where geologic conditions dictate and where minimum width dimensions are to be maintained.

Care should be taken during remedial grading operations in order to minimize risk of failure. Should failure occur, complete removal of the disturbed material will be required.

In consideration of the inherent instability created by temporary construction backcuts for removals, it is imperative that grading schedules are coordinated to minimize the unsupported exposure time of these excavations. Once started, these excavations and subsequent fill operations should be maintained to completion without intervening delays imposed by avoidable circumstances. In cases where five-day workweeks comprise a normal schedule, grading should be planned to avoid exposing at-grade or near-grade excavations through a non-work weekend. Where improvements may be affected by temporary instability, either on or offsite, further restrictions such as slot cutting, extending workdays, implementing weekend schedules, and/or other requirements considered critical to serving specific circumstances may be imposed.

6.3 Liquefaction

As discussed in Section 4.5.4 of this report, there is a potential for liquefaction to occur at the site during seismic shaking. More specifically, liquefaction could cause differential settlement. Typically, half to two thirds of that settlement should be considered differential (California Division of Mines and Geology, 2008, Special Publication 117a). If the analysis is based on multiple borings, seismic induced differential settlement may be determined as one-half the total settlement (City of Los Angeles, 2020). For lightly loaded, well-constructed structures underlain by a non-liquefiable layer over the liquefiable layers, such as will be developed at the site, the ultimate differential settlement across the structure may be more limited (Idriss and Boulinger, 2008).

In consideration of the proposed removal and recompaction of the soils below the proposed structures, the differential settlement shown in the liquefaction calculations, and the relatively uniform thickness of the liquefiable layers under the site, it is Alta's opinion that a dynamic differential settlement of 1.5-inches in 40 feet can be utilized in the design of the proposed structures onsite. It is recommended that the structures onsite be supported on a post-tensioned slab/foundation or mat slab system.

6.4 Storm Water Infiltration Systems

From a geotechnical perspective, allowing storm water to infiltrate the onsite soil in concentrated areas increases the potential for settlement, liquefaction, and water-related damage to structures/improvements, such as wet slabs or pumping subgrade, and should be avoided where possible. If infiltration systems are required on this site, care should be taken in designing systems that control the storm water as much as possible.

Preliminary infiltration testing was conducted at the site as part of this investigation, and the methodology is discussed in 3.2. The resulting infiltration rates for P-1 and P-2 were calculated to be 0-inches per hour. The results do not include a factor of safety.

Groundwater was encountered during our investigation at depths of 8.75, 8.75, and 8.6 feet below the ground surface in borings B-1, B-2, and B-3 respectively. The historic high ground water is approximately greater than 5.0 feet below the ground surface (CGS, 1997).

The WQMP designer should review the test results and determine if the proposed BMP system is appropriate for the site. The Project Geotechnical Consultant should review the final WQMP design prior to construction.

6.5 Boundary Conditions

The site is bounded to the west by Coast Street, to the south by Emerson Avenue, and to the north and east by existing structures. Construction of retaining/screen walls along these boundaries may require additional geotechnical recommendations concerning unsuitable soil removals and foundation design parameters. Boundary conditions for the project should be reviewed by the Project Geotechnical Consultant as the design progresses.

7.0 DESIGN CONSIDERATIONS

7.1 Structural Design

It is anticipated that multi-story wood-framed residential structures with slab on-grade and shallow foundations will be constructed. Upon the completion of rough grading, finish grade samples should be collected and tested in order to provide specific recommendations as they relate to the individual building pads. These test results and corresponding design recommendations should be presented in a final rough grading report. Final slab and foundation design recommendations should be made based upon specific structure sitings, loading conditions, and as-graded soil conditions.

It is anticipated that the majority of onsite soils will possess “very low” to “low” expansion potential when tested in general accordance with ASTM Test Method D: 4829. For budgeting purposes, the following foundation design requirements for a range of potential expansion characteristics are presented. Due to the potential for dynamic settlement onsite, it is recommended to utilize post-tensioned slabs for this project.

7.1.1 Foundation Design

Foundations may be preliminary designed based on the values presented in Table 7-1 below.

Table 7-1 Foundation Design Parameters*	
Allowable Bearing	2000 lbs/ft^2 (assuming a minimum embedment depth and width of 12 inches)
Lateral Bearing	250 lbs/ft^2 at a depth of 12 inches plus 250 lbs/ft^2 for each additional 12 inches of embedment to a maximum of 2000 lbs/ft^2.
Sliding Coefficient	0.30
Settlement	Static Settlement – 0.5 inch in 40 feet Dynamic Settlement – 1.5 inches in 40 feet

*These values may be increased as allowed by Code to resist transient loads such as wind or seismic. Building code and structural design considerations may govern depth and reinforcement requirements and should be evaluated.

7.1.2 Post-Tensioned Slabs/Foundation Design Recommendations

Post-tensioned slabs for the project may be designed utilizing the parameters presented in Tables 7-1 and 7-2. The parameters presented herein are based on methodology provided in the Design of Post-Tensioned Slabs-On-Ground, Third Edition, by the Post-Tensioning Institute, in accordance with the 2022 CBC.

TABLE 7-2 POST-TENSION SLAB DESIGN PARAMETERS						
Category	**Expansion Potential**	**Minimum Embedment***	**Edge Lift**		**Center Lift**	
			Em (ft)	**Ym (inch)**	**Em (ft)**	**Ym (inch)**
I	Very Low to Low	12 inches	5.4	0.61	9.0	0.26
Slab Subgrade Moisture						
Category I	Minimum 110% of optimum moisture to a depth of 12 inches prior to pouring concrete					
Embedment*						
The minimum footing embedments presented herein are based on expansion indexes. The structural engineer should determine minimum embedments based on the number of floors supported by the footings, the structural loading, and the requirements of the latest California Building Code. If mat slabs are utilized, alternate embedment depths can be provided.						
Moisture Barrier						
A moisture barrier should be provided in accordance with the recommendations presented in Section 7.2						
The parameters presented herein are based on procedures presented in the Design of Post-Tensioned Slabs-On-Ground, Third Edition. No corrections for vertical barriers at the edge of the slab, or for adjacent vegetation have been assumed. The design parameters are based on a Constant Suction Value of 3.9 pF.						

7.2 Moisture Barrier

A moisture and vapor retarding system should be placed below the slabs-on-grade in portions of the structure considered to be moisture sensitive and should be capable of effectively preventing the migration of water and reducing the transmission of water vapor to acceptable levels. Historically, a 10-mil plastic membrane, such as Visqueen, placed between two to four inches of clean sand, has been used for this purpose. The use of this system or other systems can be considered, at the discretion of the designer, provided the system reduces the vapor transmission rates to acceptable levels.

7.3 Seismic Design

The site classes were determined based on the referenced reports and published geologic maps in the area in general conformance with Chapter 20 of ASCE 7-16. Based on the density of the underlying soils, a Site Class of D (shear wave velocity of 259 m/s) was selected. The seismic design parameters were calculated using a program based on the USGS website and ASCE 7-16 procedures. The resulting values are presented in Table 7-3. These values are applicable providing the exceptions presented in Supplements 2 and 3 of ASCE 7-16 are utilized in the design of the structure. If the design does not include the exception methodology, then a site-specific analysis shall be conducted.

TABLE 7-3 Seismic Ground Motion Values 2022 CBC and ASCE 7-16	
Parameter	*Value*
Site Class	D
Site Latitude	33.7730
Site Longitude	-117.9895
Spectral Response Acceleration Parameter, S_S	1.403
Spectral Response Acceleration Parameter, S_1	0.498
Site Coefficient, F_a	1.0
Site Coefficient, F_v	1.8
MCE Spectral Response Acceleration Parameter, S_{MS}	1.403
MCE Spectral Response Acceleration Parameter, S_{M1}	0.896
Design Spectral Response Acceleration Parameter, S_{DS}	0.935
Design Spectral Response Acceleration Parameter, S_{D1}	0.598
Peak Ground Acceleration, PGA_M	0.661

7.4 Fence and Garden Walls

Block walls, if used, should be embedded a minimum of 2 feet below the lowest adjacent grade. Construction joints (not more than 20 feet apart) should be included in the block wall construction. Side yard walls should be structurally separated from the rear yard wall.

7.5 Footing Excavations

Soils from the footing excavations should not be placed in slab-on-grade areas unless properly compacted and tested. The excavations should be cleaned of all loose/sloughed materials and be neatly trimmed at the time of concrete placement. The Project Geotechnical Consultant should observe the footing

excavations prior to the placement of concrete to determine that the excavations are founded in suitably compacted material.

7.6 Retaining Walls

Retaining walls should be founded on engineered fill and should be backfilled with granular soils that allow for drainage behind the wall. Foundations may be designed in accordance with the recommendations presented in Table 7-1, above. Unrestrained walls, free to horizontally move 0.0005H (for dense cohesionless backfill), may be designed to resist lateral pressures imposed by a fluid with a unit weight determined in accordance with the Table 7-4 below. The table also presents design parameters for restrained (at-rest) retaining walls. These parameters may be used to design retaining walls that may be considered as restrained due to the method of construction or location (corner sections of unrestrained retaining walls).

TABLE 7-4
Equivalent Fluid Pressures for 90% Compacted Fill (Select Material)

Backfill	Active Pressure (psf/ft)	At-Rest Pressure (psf/ft)
Level	35	55

Per the requirements of the 2022 CBC, the seismic force acting on the retaining walls with backfill exceeding 6-feet in height may be resolved utilizing the formula $13.5H^2$ lb/lineal ft (H=height of the wall). This force acts at approximately 0.6H above the base of the wall. The seismic value can be converted as required by the retaining wall engineer. Retaining walls should be designed in general accordance with Section 1807A.2 of the 2022 CBC.

- Restrained retaining walls should be designed for “at-rest” conditions.
- The design loads presented in the above table are to be applied on the retaining wall in a horizontal fashion and as such friction between wall and retained soils should not be allowed in the retaining wall analyses.

- Additional allowances should be made in the retaining wall design to account for the influence of construction loads, temporary loads, and possible nearby structural footing loads.
- Select backfill should be granular, structural quality backfill with a Sand Equivalent of 20 or better and an ASCE Expansion Index of 20 or less. The backfill must encompass the full active wedge area. The upper one foot of backfill should be comprised of native on-site soils (see Plate A).
- The wall design should include waterproofing (where appropriate) and backdrains or weep holes for relieving possible hydrostatic pressures. The backdrain should be comprised of a 4-inch perforated PVC pipe in a 1 ft. by 1 ft., ¾-inch gravel matrix, wrapped with a geofabric. The backdrain should be installed with a minimum gradient of 2 percent and should be outletted to an appropriate location. For subterranean walls this may include drainage by sump pumps.
- No backfill should be placed against concrete until minimum design strengths are achieved.

It should be noted that the allowable bearing and lateral bearing values presented in Table 7-1 are based on level conditions at the toe. Modified design parameters can be presented for retaining walls with sloping condition at the toe. Other conditions should be evaluated on a case-by-case basis.

7.7 Exterior Slabs and Walkways

Exterior concrete slabs and walkways should be designed and constructed in consideration of the following recommendations.

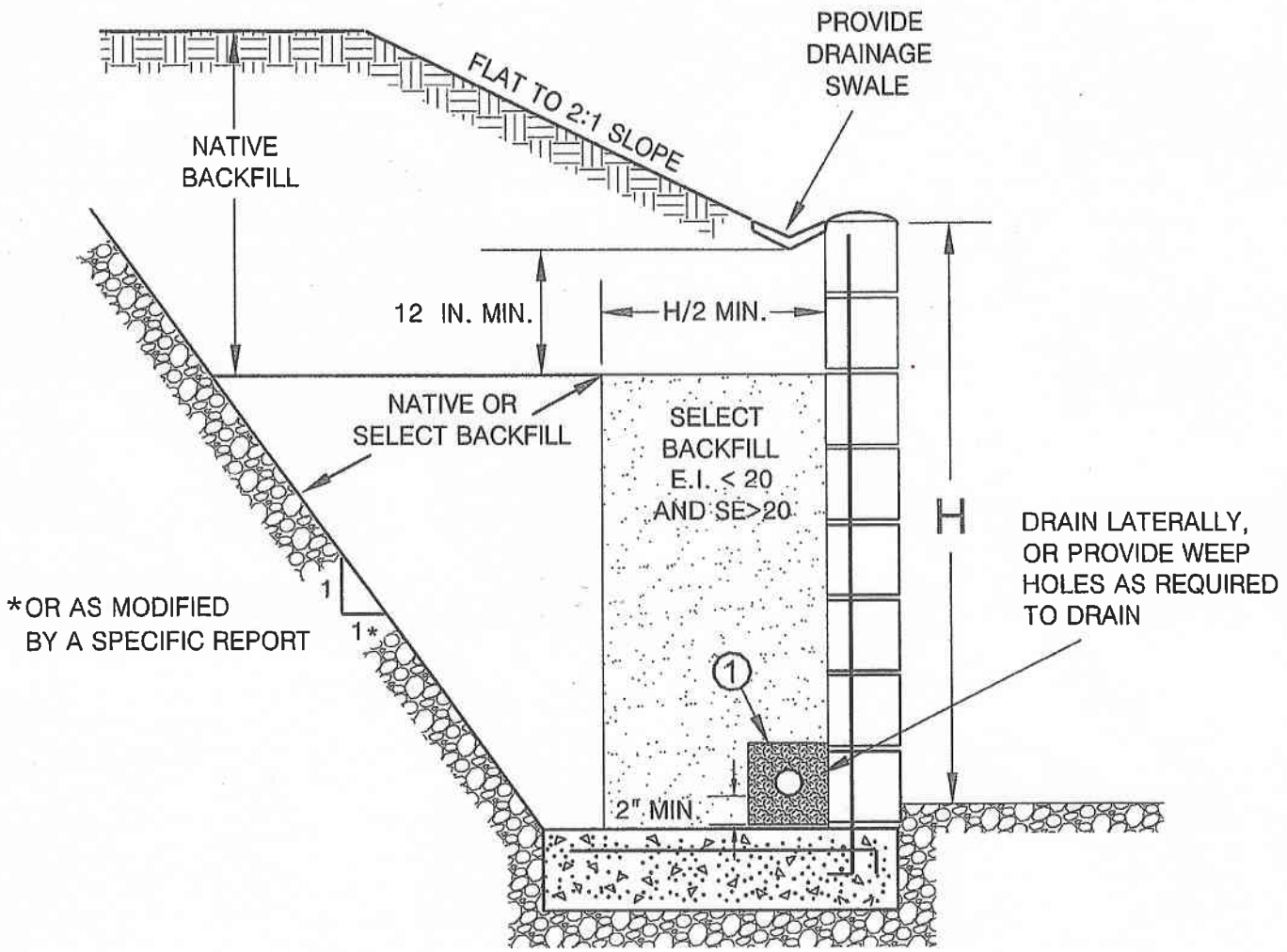
7.7.1 Subgrade Compaction

The subgrade below exterior concrete slabs should be compacted to a minimum of 90 percent relative compaction as determined by ASTM Test Method: D 1557.

7.7.2 Subgrade Moisture

The subgrade below concrete slabs should be moisture conditioned to a minimum of 110 percent of optimum moisture prior to concrete placement.

RETAINING WALL BACKFILL DETAIL



(1)

PIPE: 4-INCH PERFORATED PVC, SCHEDULE 40, SDR35 OR APPROVED ALTERNATE MINIMUM 8 PERFORATIONS (1/4-IN. DIA.) PER LINEAL FT. IN BOTTOM HALF OF PIPE

ROCK: MINIMUM VOLUME OF 1 CU. FT. OF 3/4-IN. MAX. ROCK PER. LINEAL FOOT OF PIPE, OR APPROVED ALTERNATE

FILTER FABRIC: MIRAFI 140 FILTER FABRIC OR APPROVED EQUIVALENT

7.7.3 Concrete Slab Thickness

Concrete flatwork and driveways should be designed utilizing four-inch minimum thickness.

7.7.4 Concrete Slab Reinforcement

Utilization of reinforcement for flatwork and driveways is subject to a cost/benefit analysis. Reinforcement will decrease the amount of cracking that may occur in flatwork, however, planning for occasional repairs may be more cost effective. Utilizing closely spaced control joints is likely more cost-effective than utilizing reinforcement. The majority of the soils onsite are classified as very low in expansion potential. Consideration should be given to reinforcing flatwork with irregular (non-square/rectangular) shapes.

7.7.5 Control Joints

Weakened plane joints should be installed on walkways at intervals of approximately eight feet (maximum) or less. Exterior slabs should be designed to withstand shrinkage of the concrete.

7.8 Concrete Design

As stated in Section 5.1.7, negligible concentrations of sulfates were detected in the onsite soils (Class S0). Therefore, the use of sulfate resistant concrete is not required per ACI 318-14 at this time. Post-grading conditions should be evaluated, and final recommendations made at that time.

7.9 Corrosion

Based on preliminary testing, the onsite soils are moderately corrosive to buried metal objects. Buried ferrous metals should be protected against the effects of corrosive soils in accordance with the manufacturer's recommendations. Typical measures may include using non-corrosive backfill, protective coatings, wrapping, plastic pipes, or a combination of these methods. A corrosion

engineer should be consulted if specific design recommendations are required by the improvement designer.

Per ACI 318-14, an exposure class of C1 would be applicable to metals encased in concrete (rebar in footings) due to being exposed to moisture from surrounding soils. Per Table 19.3.2.1 of ACI 318-14, the requirements for concrete with an exposure class of C1 are a minimum compressive strength of 2500 psi and a maximum water-soluble chloride ion content in concrete of 0.30 (percent by weight of cement).

7.10 Pavement Design

Pavement sections for the proposed streets shall be designed based on laboratory testing conducted on samples taken from the soil subgrade. Preliminarily, based on an assumed R-Value of 30, the pavement may be designed utilizing the sections presented in Table 7-5. These sections should be verified upon the completion of grading, based on R-Value testing. The ultimate pavement section design for public streets is under the City of Garden Grove's purview.

Table 7-5
Preliminary Pavement Sections

Traffic Index	Pavement Section Options OR	
5.0	3-inch AC on 6-inch AB	4-inch AC on 4-inch AB
5.5	3-inch AC on 7-inch AB	4-inch AC on 5-inch AB
6.0	3.5-inch AC on 7.5-inch AB	4-inch AC on 6.5-inch AB
AC-Asphalt Concrete AB-Caltrans Class II Base		

Construction of the streets should be accomplished in accordance with the current criteria of the City of Garden Grove. Prior to the placement of base material, the subgrade should be suitably moisture conditioned, processed and compacted to a minimum 95 percent of the laboratory maximum density (ASTM:

D 1557) to at least twelve (12) inches below subgrade. After subgrade compaction, the exposed grade should then be "proof"-rolled with heavy equipment to ensure the grade does not "pump" and is verified as non-yielding. Aggregate base material should be placed on the compacted subgrade and compacted in-place to a minimum 95 percent of the laboratory standard obtained per ASTM: D 1557.

7.11 Site Drainage

Positive drainage away from the proposed structures should be provided and maintained. Roof, pad, and lot drainage should be collected and directed away from the structures toward approved disposal areas through drainage terraces, gutters, down drains, and other devices. Design fine grade elevations should be maintained through the life of the structure or if design fine grade elevations are altered, adequate area drains should be installed in order to provide rapid discharge of water, away from structures.

8.0 LOT MAINTENANCE

Ongoing maintenance of the improvements is essential to the long-term performance of structures. As such, the owners must implement certain maintenance procedures. The attached " Maintenance and Improvement Considerations" presented in the Appendix E may be included as part of the sales packet to educate the owners in issues related to drainage, maintenance, improvements, etc. The following recommendations should also be implemented.

8.1 Lot Drainage

Roof, pad, and lot drainage should be collected and directed away from structures and slopes and toward approved disposal areas. Design fine grade elevations should be maintained throughout the life of the structure or if design fine grade elevations are altered, adequate area drains should be installed in order to provide rapid discharge of water, away from structures and slopes.

Residents should be made aware that they are responsible for maintenance and cleaning of all drainage terraces, down drains, and other devices that have been installed to promote structure and slope stability.

8.2 Burrowing Animals

Owners should undertake a program for the elimination of burrowing animals.

9.0 FUTURE PLAN REVIEWS

This report represents a geotechnical review of the site. As the project design for the project progresses, site specific geologic and geotechnical issues should be considered in the design and construction of the project. Consequently, future plan reviews may be necessary. These reviews may include reviews of:

- Grading Plans
- Foundation Plans
- Utility Plans

These plans should be forwarded to the project Geotechnical Consultant for review.

10.0 CLOSURE

10.1 Geotechnical Review

For the purposes of this report, multiple working hypotheses were established for the project, utilizing the available data and the most probable model is used for the analysis. Future information collected during the proposed grading operations is intended to evaluate the hypothesis and as such, some of the assumptions summarized in this report may need to be changed. Some modifications of the grading recommendations may become necessary, should the conditions encountered in the field differ from the conditions hypothesized in this report.

Plans and sections of the project specifications should be reviewed by Alta to evaluate conformance with the intent of the recommendations contained in this

report. If the project description or final design varies from that described in herein, Alta must be consulted regarding the applicability of the recommendations contained herein and whether any changes are required. Alta accepts no liability for any use of its recommendations if the project description or final design varies and Alta is not consulted regarding the alterations.

10.2 Limitations

This report is based on the following: 1) the project as presented on the attached plan; 2) the information obtained from Alta's laboratory testing included herein; and 3) from the information presented in the referenced reports. The findings and recommendations are based on the results of the subsurface investigation, laboratory testing, and office analysis combined with an interpolation and extrapolation of conditions between and beyond the subsurface excavation locations. However, the materials adjacent to or beneath those observed may have different characteristics than those observed, and no precise representations are made as to the quality or extent of the materials not observed. The results reflect an interpretation of the direct evidence obtained. Work performed by Alta has been conducted in a manner consistent with the level of care and skill ordinarily exercised by members of the geotechnical profession currently practicing in the same locality under similar conditions. No other representation, either expressed or implied, and no warranty or guarantee is included or intended.

The recommendations presented in this report are based on the assumption that an appropriate level of field review will be provided by a geotechnical consultant who is familiar with the design and site geologic conditions. That field review shall be sufficient to confirm that geotechnical and geologic conditions exposed during grading are consistent with the geologic representations and corresponding recommendations presented in this report.

The conclusions and recommendations included in this report are applicable to the specific design of this project as discussed in this report. They have no applicability to any other project or to any other location and any and all subsequent users accept any and all liability resulting from any use or reuse of the data, opinions, and recommendations without the prior written consent of Alta.

Alta has no responsibility for construction means, methods, techniques, sequences, procedures, safety precautions, programs in connection with the construction, acts or omissions of the CONTRACTOR or any other person performing any of the construction, or for the failure of any of them to carry out the construction in accordance with the final design drawings and specifications.

APPENDIX A

REFERENCES

APPENDIX A

Selected References

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APPENDIX B

Subsurface Investigation

APPENDIX B

Subsurface Investigation

Alta's subsurface investigation consisted of excavating, logging, and sampling three (3) hollow-stem auger borings. Details of the subsurface investigation are presented in Table B. The approximate location of the exploratory excavation is shown on the accompanying Plate 1 and the Geotechnical Logs are attached.

TABLE B
SURFACE INVESTIGATION DETAILS

Equipment	Range of Depths	Sampling Methods	Sample Locations
Hollow-stem auger	Up to 51.5 feet	1. Bulk 2. Ring Samples 3. SPT Samples	1. Bulk-Select Depths 2. Rings-Every 2.5 feet or 5 Feet 3. SPT-At Depths Below 10 Feet

UNIFIED SOIL CLASSIFICATION SYSTEM

Major Divisions		grf	ltr	Description
Coarse Grained Soils: More than 50% retained on No. 200 sieve	Gravel and Gravelly Soils: More than 50% of coarse fraction retained on No. 4 sieve		GW	Well-graded gravels or gravel sand mixtures, little or no fines
			GP	Poorly-graded gravels or gravel sand mixture, little or no fines
			GM	Silty gravels, gravel-sand-silt mixtures
			GC	Clayey gravels, gravel-sand-clay mixtures
	Sand and Sandy Soils: More than 50% of coarse fraction passes on No. 4 sieve		SW	Well-graded sands or gravelly sands, little or no fines
			SP	Poorly-graded sands or gravelly sands, little or no fines
			SM	Silty sands, sand-silt mixtures
			SC	Clayey sands, and-clay mixtures

Major Divisions		grf	ltr	
Fine Grained Soils: More than 50% passes on No. 200 sieve	Silts And Clays LL,<50		ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity
			CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
			OL	Organic silts and organic silt-clays of low plasticity
	Silts And Clays LL,<50		MH	Inorganic silts, micaceous or diatomaceous fine or silty soils, elastic silts
			VH	Inorganic clays of high plasticity, fat clays
			OH	Organic clays of medium to high plasticity
Highly Organic Soils			PT	Peat and other highly organic soils

BOUNDARY CLASSIFICATION: Soils possessing characteristics of two groups are designated by combinations of group symbols.

PARTICLE SIZE LIMITS

U.S. STANDARD SERIES SIEVE — CLEAR SQUARE SIEVE OPENINGS

200	40	10	4	3/4"	3"	12"

Silts and Clays	Sand			Gravel		Cobbles	Boulders
	Fine	Medium	Coarse	Fine	Coarse		

RELATIVE DENSITY

Sands and Gravels	Blows/Foot (SPT)
Very Loose	<4
Loose	4-10
Medium Dense	11-30
Dense	31-50
Very Dense	>50

CONSISTENCY CLASSIFICATION

Silts and Clays	Criteria
Very Soft	Thumb penetrates soil >1 in.
Soft	Thumb penetrates soil 1 in.
Firm	Thumb penetrates soil 1/4 in.
Stiff	Readily indented with thumbnail
Very Stiff	Thumbnail will not indent soil

HARDNESS

Bedrock
Soft
Moderately Hard
Hard
Very Hard

LABORATORY TESTS

Symbol	Test
DS	Direct Shear
DSR	Direct Shear (Remolded)
CON	Consolidation
SA	Sieve Analysis
MAX	Maximum Density
RV	Resistance (R) Value
EI	Expansion Index
SE	Sand Equivalent
AL	Atterberg Limits
CHEM	Chemical Analysis
HY	Hydrometer Analysis

SOIL MOISTURE

Increasing Visual Moisture Content

Dry - Dry to touch

Moist - Damp, but no visible free water

wet - Visible free water

SIZE PROPORTIONS

Trace - <5%

Few - 5 to 10%

Some - 15 to 25%

KEY TO EXPLORATORY BORING LOGS

ALTA CALIFORNIA GEOTECHNICAL INC.

PLATE B

GEOTECHNICAL BORING LOG

PROJECT NO.	1-0521	PROJECT NAME	13040 Coast Street		
DATE STARTED	3/28/24	GROUND ELEV.	53	BORING DESIG.	B-1
DATE FINISHED	3/28/24	GW DEPTH (FT)	9	LOGGED BY	LM
DRILLER	2R Drilling Inc.	DRIVE WT.	140 lbs.	NOTE	
TYPE OF DRILL RIG	8" Hollow Stem Auger	DROP	30 in.		

DEPTH (Feet)	ELEV	SAMPLE TYPE	BLOWS	LITHOLOGY	GROUP SYMBOL	GEOTECHNICAL DESCRIPTION	MOISTURE CONT (%)	DRY (pcf) DENSITY	SAT-URATION (%)	OTHER TESTS
					SM	**ASPHALT**: 5 inches of asphaltic concrete over 9 inches of aggregate base.				
	50	R	18			**ARTIFICIAL FILL - UNDOCUMENTED** (afu): SILTY SAND WITH CLAY, very fine to fine grained, brown, slightly moist, medium dense.	18.6	107	90	
5		R	17		SM	**YOUNG ALLUVIUM** (Qya): SILTY SAND, light brown, slightly moist, very stiff.	18.7	94	65	CON, HY
	45					@8.75 ft. GROUNDWATER ENCOUNTERED.				
10		R	18			@10.0 ft. very fine to medium grained, tannish brown, wet, medium dense.	23.0	98	89	
	40									
15		R	28							
	35									
20		R	49		SP	@20.0 ft. SAND WITH SILT, very fine to fine grained, grey, wet, dense.	17.6	107	86	
	30									
25		R	11				28.3	92	94	
						TOTAL DEPTH: 26.0 FEET. GROUNDWATER ENCOUNTERED AT 8.75 FEET. CAVING OBSERVED BELOW 8.0 FEET.				

SAMPLE TYPES:
- R RING (DRIVE) SAMPLE
- S SPT (SPLIT SPOON) SAMPLE
- B BULK SAMPLE
- T TUBE SAMPLE

▼ GROUNDWATER
► SEEPAGE
J: JOINTING C: CONTACT
B: BEDDING F: FAULT
S: SHEAR RS: RUPTURE SURFACE

Alta California Geotechnical, Inc.

P.N. 1-0521 PLATE B-1

GEOTECHNICAL BORING LOG

PROJECT NO.	1-0521	PROJECT NAME	13040 Coast Street		
DATE STARTED	3/28/24	GROUND ELEV.	54	BORING DESIG.	B-2
DATE FINISHED	3/28/24	GW DEPTH (FT)	9	LOGGED BY	LM
DRILLER	2R Drilling Inc.	DRIVE WT.	140 lbs.	NOTE	
TYPE OF DRILL RIG	8" Hollow Stem Auger	DROP	30 in.		

DEPTH (Feet)	ELEV	SAMPLE TYPE	BLOWS	LITHOLOGY	GROUP SYMBOL	GEOTECHNICAL DESCRIPTION	MOISTURE CONT (%)	DRY (pcf) DENSITY	SAT-URATION (%)	OTHER TESTS
					SM	**ASPHALT**: 4 inches of asphaltic concrete over 5 inches of aggregate base.				
						ARTIFICIAL FILL - UNDOCUMENTED (afu): SILTY SAND WITH CLAY, very fine to fine grained, brown, slightly moist, dense.				
	50	R B	30				9.7	114	57	MAX, EI, HY, CHEM
5		R	27		SM	**YOUNG ALLUVIUM** (Qya): SILTY SAND, very fine to fine grained, light brown, slightly moist, medium dense.	14.6	108	73	
	45					@8.75 ft. GROUNDWATER ENCOUNTERED				
10		R	18		SP	@10.0 ft. SAND WITH SILT, very fine to medium grained, tannish brown, wet, medium dense.	27.8	94	97	
	40									
15		S	2,4,6		SP	@15.0 ft. SAND, fine to medium grained, tannish brown, wet, loose.	23.2			
	35									
20		S	6,10,11			@20.0 ft. greyish brown, medium dense.	19.6			
	30									
25		S	2,2,3				21.3			
		S	5,6,11		SM	@27.5 ft. SILTY SAND, very fine to medium grained, greyish brown, wet, medium dense.	20.8			
	25									
30		S	3,6,6			@30.0 ft. very fine to fine grained.	23.4			
		S	3,5,5		ML	@32.5 ft. SANDY SILT, tannish brown, wet, stiff.	25.5			
	20									
35		S	3,5,8			@35.0 ft. brown, wet, stiff.	32.4			HY
		S	3,5,4				25.9			
	15					Continued;				

SAMPLE TYPES:
- R RING (DRIVE) SAMPLE
- S SPT (SPLIT SPOON) SAMPLE
- B BULK SAMPLE
- T TUBE SAMPLE

▼ GROUNDWATER
► SEEPAGE
J: JOINTING C: CONTACT
B: BEDDING F: FAULT
S: SHEAR RS: RUPTURE SURFACE

Alta California Geotechnical, Inc.

P.N. 1-0521 PLATE B-2

GEOTECHNICAL BORING LOG

PROJECT NO.	1-0521	PROJECT NAME	13040 Coast Street		
DATE STARTED	3/28/24	GROUND ELEV.	54	BORING DESIG.	B-2
DATE FINISHED	3/28/24	GW DEPTH (FT)	9	LOGGED BY	LM
DRILLER	2R Drilling Inc.	DRIVE WT.	140 lbs.	NOTE	
TYPE OF DRILL RIG	8" Hollow Stem Auger	DROP	30 in.		

DEPTH (Feet)	ELEV	SAMPLE TYPE	BLOWS	LITHOLOGY	GROUP SYMBOL	GEOTECHNICAL DESCRIPTION	MOISTURE CONT (%)	DRY (pcf) DENSITY	SAT-URATION (%)	OTHER TESTS
		S	3,5,5			Continued; **YOUNG ALLUVIUM** (Qya): SILT, brown, wet, stiff.	27.7			
		S	3,4,7		ML	@42.5 ft. SILT WITH SAND, grey, wet, stiff.	29.9			
45	10	S	4,6,6				24.0			
		S	6,7,8				34.5			
50	5	S	6,7,7		ML	@50.0 ft. SILT, brown, wet, stiff.	32.8			
						TOTAL DEPTH: 51.5 FEET. GROUNDWATER ENCOUNTERED AT 8.75 FEET. CAVING OBSERVED AT 8.0 FEET.				

SAMPLE TYPES:
R RING (DRIVE) SAMPLE
S SPT (SPLIT SPOON) SAMPLE
B BULK SAMPLE T TUBE SAMPLE

GROUNDWATER
SEEPAGE
J: JOINTING C: CONTACT
B: BEDDING F: FAULT
S: SHEAR RS: RUPTURE SURFACE

Alta California Geotechnical, Inc.

P.N. 1-0521 PLATE B-2

GEOTECHNICAL BORING LOG

PROJECT NO.	1-0521	PROJECT NAME	13040 Coast Street		
DATE STARTED	3/28/24	GROUND ELEV.	53	BORING DESIG.	B-3
DATE FINISHED	3/28/24	GW DEPTH (FT)	9	LOGGED BY	LM
DRILLER	2R Drilling Inc.	DRIVE WT.	140 lbs.	NOTE	
TYPE OF DRILL RIG	8" Hollow Stem Auger	DROP	30 in.		

DEPTH (Feet)	ELEV	SAMPLE TYPE	BLOWS	LITHOLOGY	GROUP SYMBOL	GEOTECHNICAL DESCRIPTION	MOISTURE CONT (%)	DRY (pcf) DENSITY	SAT-URATION (%)	OTHER TESTS
					ML	**ASPHALT**: 4 inches of asphaltic concrete; no aggregate base.				
						ARTIFICIAL FILL - UNDOCUMENTED (afu): SANDY SILT, dark brown, slightly moist, very stiff.				
	50	R	24				12.1	115	73	
5		R	20		SM	**YOUNG ALLUVIUM** (Qya): SILTY SAND, very fine to fine grained, brown, wet, medium dense.	14.4	112	80	CON, HY
	45					▼ @8.6 ft. GROUNDWATER ENCOUNTERED.				
10		R	24				21.2	98	82	
	40									
15		S	4,5,11			@15.0 ft. fine to medium grained, greyish brown.	19.7			
	35									
20		S	4,4,12		SP	@20.0 ft. SAND WITH SILT, fine to medium grained, brown, wet, medium dense.	22.3			
	30									
25		S	2,2,2				21.7			
	25									
30		S	2,3,2				26.3			
	20									
35		S	6,3,4		ML	@35.0 ft. SILT WITH SAND, brown, wet, stiff.	31.4			
	15					Continued;				

SAMPLE TYPES:
- R RING (DRIVE) SAMPLE
- S SPT (SPLIT SPOON) SAMPLE
- B BULK SAMPLE
- T TUBE SAMPLE

▼ GROUNDWATER
► SEEPAGE
J: JOINTING C: CONTACT
B: BEDDING F: FAULT
S: SHEAR RS: RUPTURE SURFACE

Alta California Geotechnical, Inc.

P.N. 1-0521 PLATE B-3

GEOTECHNICAL BORING LOG

PROJECT NO.	1-0521	PROJECT NAME	13040 Coast Street		
DATE STARTED	3/28/24	GROUND ELEV.	53	BORING DESIG.	B-3
DATE FINISHED	3/28/24	GW DEPTH (FT)	9	LOGGED BY	LM
DRILLER	2R Drilling Inc.	DRIVE WT.	140 lbs.	NOTE	
TYPE OF DRILL RIG	8" Hollow Stem Auger	DROP	30 in.		

DEPTH (Feet)	ELEV	SAMPLE TYPE	BLOWS	LITHOLOGY	GROUP SYMBOL	GEOTECHNICAL DESCRIPTION	MOISTURE CONT (%)	DRY (pcf) DENSITY	SAT-URATION (%)	OTHER TESTS
		S	3,5,5		ML	Continued; **YOUNG ALLUVIUM** (Qya): SANDY SILT, brown, wet, stiff.	26.4			HY, ATTR
45	10	S	2,3,4		ML	@45.0 ft. SILT WITH SAND, brown, wet, stiff.	28.8			
50	5	S	3,3,5		ML	@50.0 ft. SILT, brown, wet, stiff.	34.8			
						TOTAL DEPTH 51.5 FEET. GROUNDWATER ENCOUNTERED AT 8.6 FEET. CAVING OBSERVED AT 8.0 FEET.				

SAMPLE TYPES:
R RING (DRIVE) SAMPLE
S SPT (SPLIT SPOON) SAMPLE
B BULK SAMPLE T TUBE SAMPLE

GROUNDWATER
SEEPAGE
J: JOINTING C: CONTACT
B: BEDDING F: FAULT
S: SHEAR RS: RUPTURE SURFACE

Alta California Geotechnical, Inc.

P.N. 1-0521 PLATE B-3

GEOTECHNICAL BORING LOG

PROJECT NO.	1-0521	PROJECT NAME	13040 Coast Street		
DATE STARTED	3/28/24	GROUND ELEV.	53	BORING DESIG.	P-1
DATE FINISHED	3/28/24	GW DEPTH (FT)		LOGGED BY	LM
DRILLER	2R Drilling Inc.	DRIVE WT.	140 lbs.	NOTE	
TYPE OF DRILL RIG	8" Hollow Stem Auger	DROP	30 in.		

DEPTH (Feet)	ELEV	SAMPLE TYPE	BLOWS	LITHOLOGY	GROUP SYMBOL	GEOTECHNICAL DESCRIPTION	MOISTURE CONT (%)	DRY (pcf) DENSITY	SAT-URATION (%)	OTHER TESTS
	50				SM	**ASPHALT**: 4 inches of asphaltic concrete over 5 inches of aggregate base. **ARTIFICIAL FILL - UNDOCUMENTED** (afu): SILTY SAND WITH CLAY, very fine to fine grained, brown, slightly moist, dense. TOTAL DEPTH 4.0 FEET NO GROUNDWATER ENCOUNTERED NO CAVING OBSERVED				

SAMPLE TYPES:
- R RING (DRIVE) SAMPLE
- S SPT (SPLIT SPOON) SAMPLE
- B BULK SAMPLE
- T TUBE SAMPLE

GROUNDWATER
SEEPAGE
J: JOINTING C: CONTACT
B: BEDDING F: FAULT
S: SHEAR RS: RUPTURE SURFACE

Alta California Geotechnical, Inc.

P.N. 1-0521 PLATE B-4

GEOTECHNICAL BORING LOG

PROJECT NO.	1-0521	PROJECT NAME	13040 Coast Street		
DATE STARTED	3/28/24	GROUND ELEV.	54	BORING DESIG.	P-2
DATE FINISHED	3/28/24	GW DEPTH (FT)		LOGGED BY	LM
DRILLER	2R Drilling Inc.	DRIVE WT.	140 lbs.	NOTE	
TYPE OF DRILL RIG	8" Hollow Stem Auger	DROP	30 in.		

DEPTH (Feet)	ELEV	SAMPLE TYPE	BLOWS	LITHOLOGY	GROUP SYMBOL	GEOTECHNICAL DESCRIPTION	MOISTURE CONT (%)	DRY (pcf) DENSITY	SAT-URATION (%)	OTHER TESTS
					SM	**ASPHALT**: 4 inches of asphaltic concrete over 5 inches of aggregate base.				
						ARTIFICIAL FILL - UNDOCUMENTED (afu): SILTY SAND WITH CLAY, very fine to fine grained, brown, slightly moist, dense.				
	50									
5					SM	**YOUNG ALLUVIUM** (Qya): SILTY SAND, very fine to fine grained, light brown, slightly moist, medium dense.				
						TOTAL DEPTH 6.0 FEET NO GROUNDWATER ENCOUNTERED NO CAVING OBSERVED				

SAMPLE TYPES:
- R RING (DRIVE) SAMPLE
- S SPT (SPLIT SPOON) SAMPLE
- B BULK SAMPLE
- T TUBE SAMPLE

GROUNDWATER
SEEPAGE
J: JOINTING C: CONTACT
B: BEDDING F: FAULT
S: SHEAR RS: RUPTURE SURFACE

Alta California Geotechnical, Inc.

P.N. 1-0521 PLATE B-5

APPENDIX C

Laboratory Testing

LABORATORY TESTING

The following laboratory tests were performed on a representative sample in accordance with the applicable latest standards or methods from the ASTM, California Building Code (CBC) and California Department of Transportation.

Classification

Soils were classified with respect to the Unified Soil Classification System (USCS) in accordance with ASTM D-2487 and D-2488.

Particle Size Analysis

Modified hydrometer testing was conducted to aid in classification of the soil. The results of the particle size analysis are presented in Table C.

Maximum Density/Optimum Moisture

The maximum dry density and optimum moisture content of one representative bulk samples were evaluated in accordance with ASTM D-1557. The results are summarized in Table C.

Expansion Index Tests

One (1) expansion index test was performed to evaluate the expansion potential of typical on-site soil. Testing was carried out in general conformance with ASTM Test Method D-4829. The results are presented in Table C.

Consolidation Tests

Consolidation testing was performed on two (2) relatively “undisturbed” soil sample at its natural moisture content in accordance with procedures outlined in ASTM D-2435. The samples were placed in a consolidometer and loads were applied incrementally in geometric progression. The samples (2.42-inches in diameter and 1-inch in height) were permitted to consolidate under each load increment until the slope of the characteristic linear secondary compression portion of the thickness versus log of time plot was apparent. The percent consolidation for each load cycle was recorded as the ratio of the amount of vertical

compression to the original 1-inch height. The consolidation test results are shown on Plate C-1 and C-2.

Chemical Analyses

Chemical testing was performed on one select samples by Alta. The results of these tests (sulfate content, resistivity, chloride content and pH) are presented on Table C.

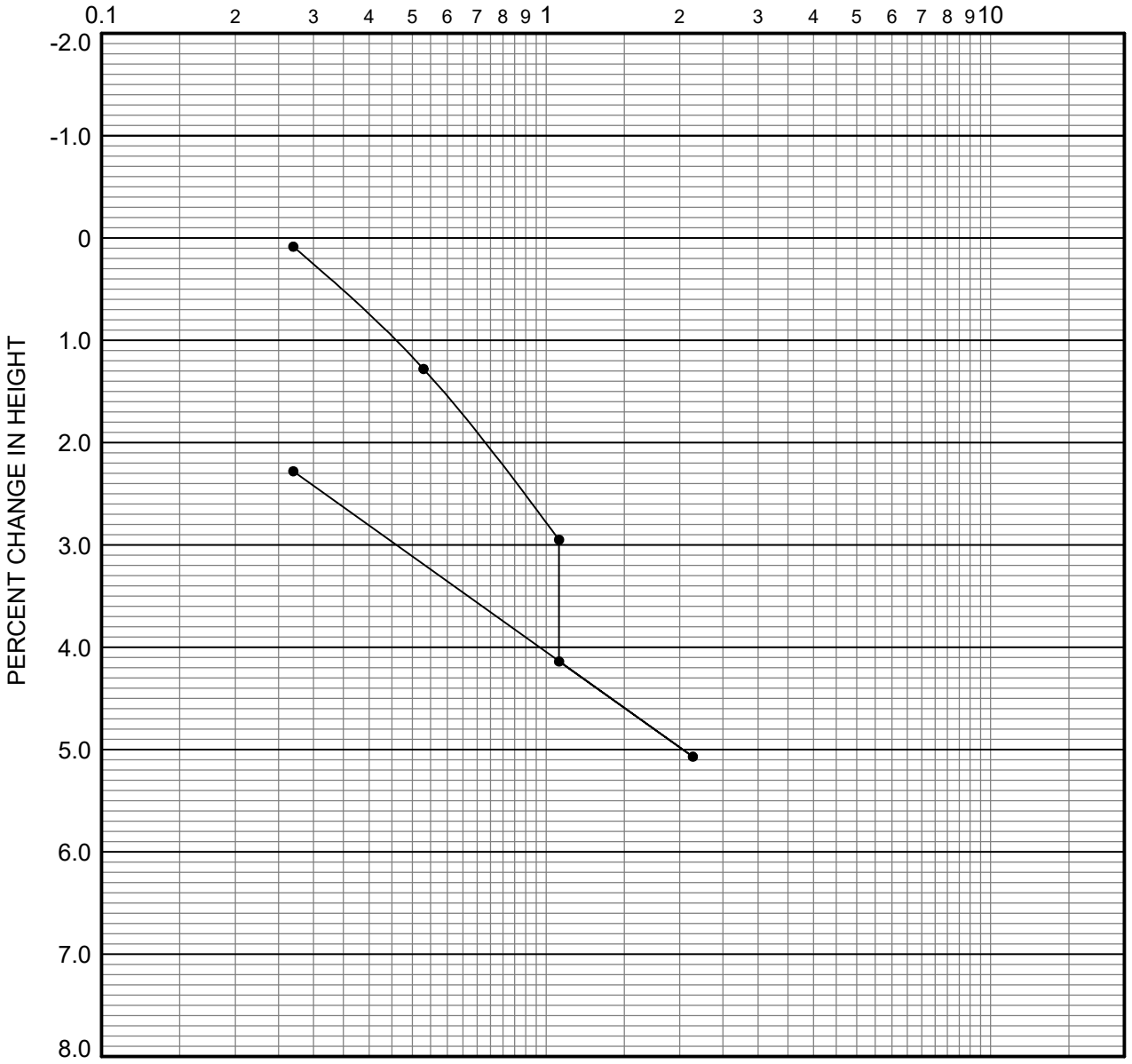
Atterberg Limits

Atterberg Limits testing was performed on two (2) select samples by Alta. The results of these tests are presented on Table C.

TABLE C
SUMMARY OF LABORATORY TEST DATA
P.N. 1-0521

BORING	DEPTH (FEET)	SOIL DESCRIPTION	GROUP SYMBOL	MAXIMUM DENSITY (PCF)	OPTIMUM MOISTURE CONTENT (%)	DIRECT SHEAR	PLUS NO.4 SEIVE (plus 4.76mm) (%)	SAND (4.76mm-0.075mm) (%)	SILT (0.075mm-0.005mm) (%)	CLAY (minus 0.005mm) (%)	EXPANSION INDEX UBC 18-2	CONSOL	OTHER TESTS REMARKS
B-1	5	Silty Sand (Qya)	SM				0	66	28	6		SEE PLATE C-1	
B-2	2.5	Silty Sand (afu)	SM	128.3	10.2		1	54	27	18	17		Sulf: 0.019% Chlr: 140 ppm pH: 8.2, Resis: 723 Ohm-cm
B-2	35	Sandy Silt (Qya)	ML				0	28	63	9			
B-3	5	Silty Sand (Qya)	SM				0	62	24	14		SEE PLATE C-2	
B-3	40	Sandy Silt (Qya)	ML				1	35	40	24			LL: 27, PL:21, PI:6

COMPRESSIVE STRESS IN TSF



boring	depth (ft.)	dry density (pcf)	in situ moist. (%)	in situ satur. (%)	-200 sieve (%)	group symbol	typical names
B-1	5.0	94	18.7	65	34	SM	Silty Sand (Qya)

REMARKS: WATER ADDED AT 1.07 TSF

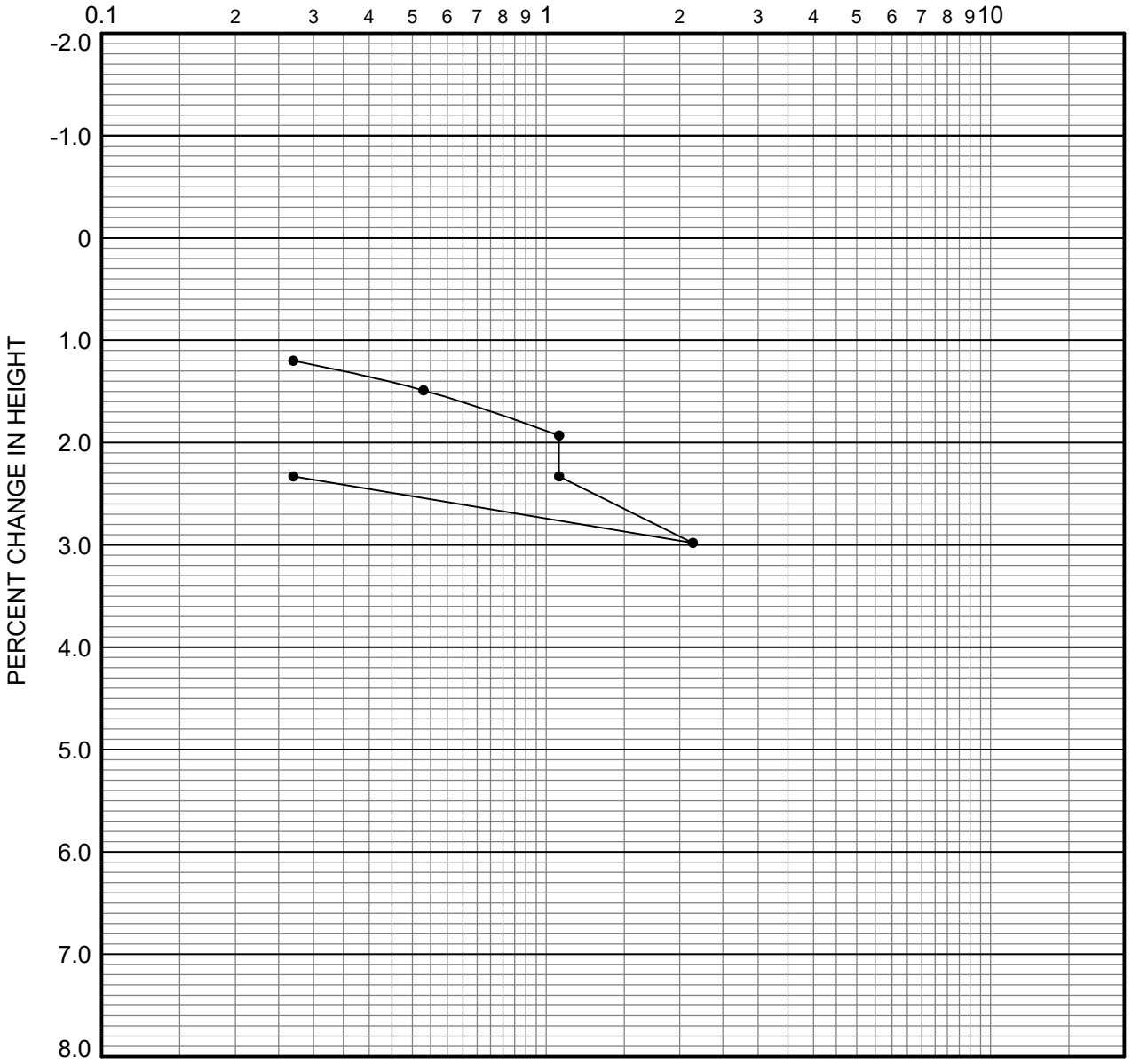
CONSOLIDATION CURVE

Alta California Geotechnical, Inc.

P.N. 1-0521

PLATE C-1

COMPRESSIVE STRESS IN TSF



boring	depth (ft.)	dry density (pcf)	in situ moist. (%)	in situ satur. (%)	-200 sieve (%)	group symbol	typical names
B-3	5.0	112	14.4	80	38	SM	Silty Sand (Qya)

REMARKS: WATER ADDED AT 1.07 TSF

CONSOLIDATION CURVE

Alta California Geotechnical, Inc.

P.N. 1-0521

PLATE C-2

APPENDIX D

Liquefaction Analysis

APPENDIX D

LIQUEFACTION ANALYSIS

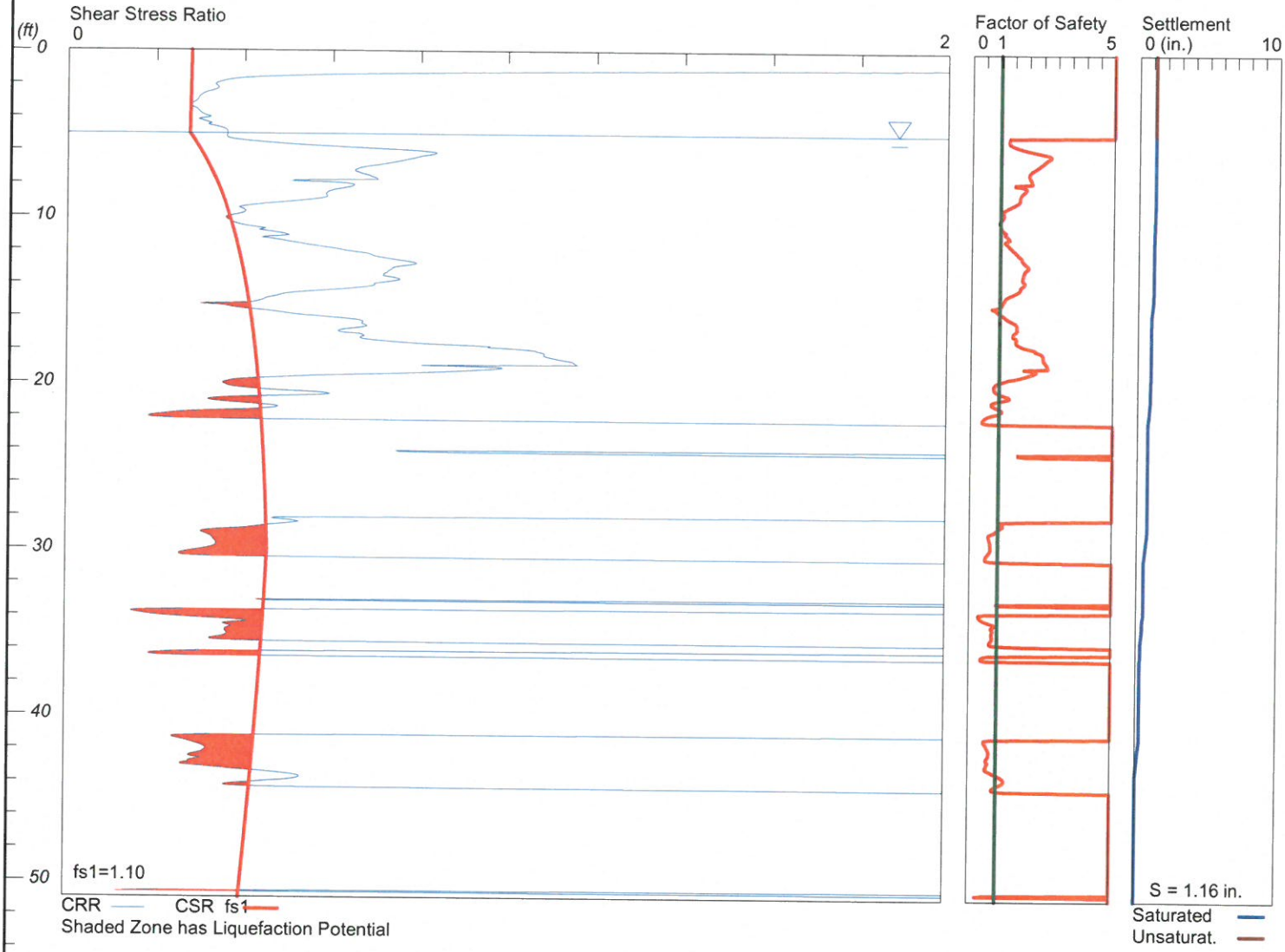
A liquefaction analysis was performed for the site based on CPT data obtained during our subsurface investigation. Our analysis was based on City of Garden Grove guidelines (City of Garden Grove, 2020) and utilized two methods. Method 1 utilized 2/3 of the PGA_M, the predominant earthquake magnitude assuming a 10% probability of exceedance in 50 years, and a factor of safety of 1.1. Method 2 utilized the PGA_M, the predominant earthquake magnitude assuming a 2% probability of exceedance in 50 years, and a factor of safety of 1.0. The results for Method 1 are presented on Plates D-1 and D-3, and the results for Method 2 are presented on Plates D-2 and D-4.

LIQUEFACTION ANALYSIS

Method 1

Hole No.=CPT-1 ***Water Depth=5 ft***

Magnitude=6.7
Acceleration=0.39g



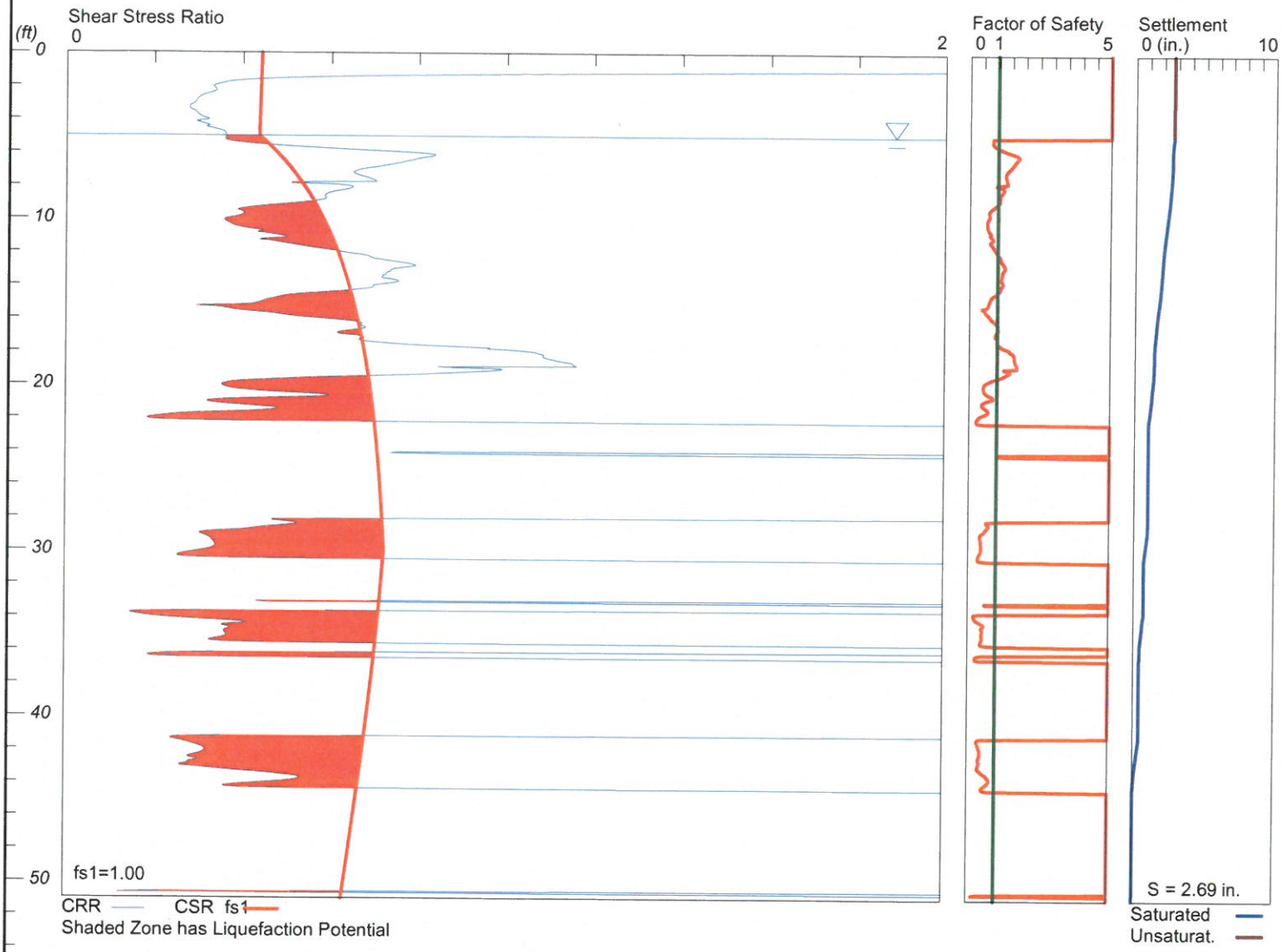
LiquefyPro CivilTech Software USA www.civiltech.com

LIQUEFACTION ANALYSIS

Method 2

Hole No.=CPT-1 Water Depth=5 ft

Magnitude=6.7
Acceleration=0.68g



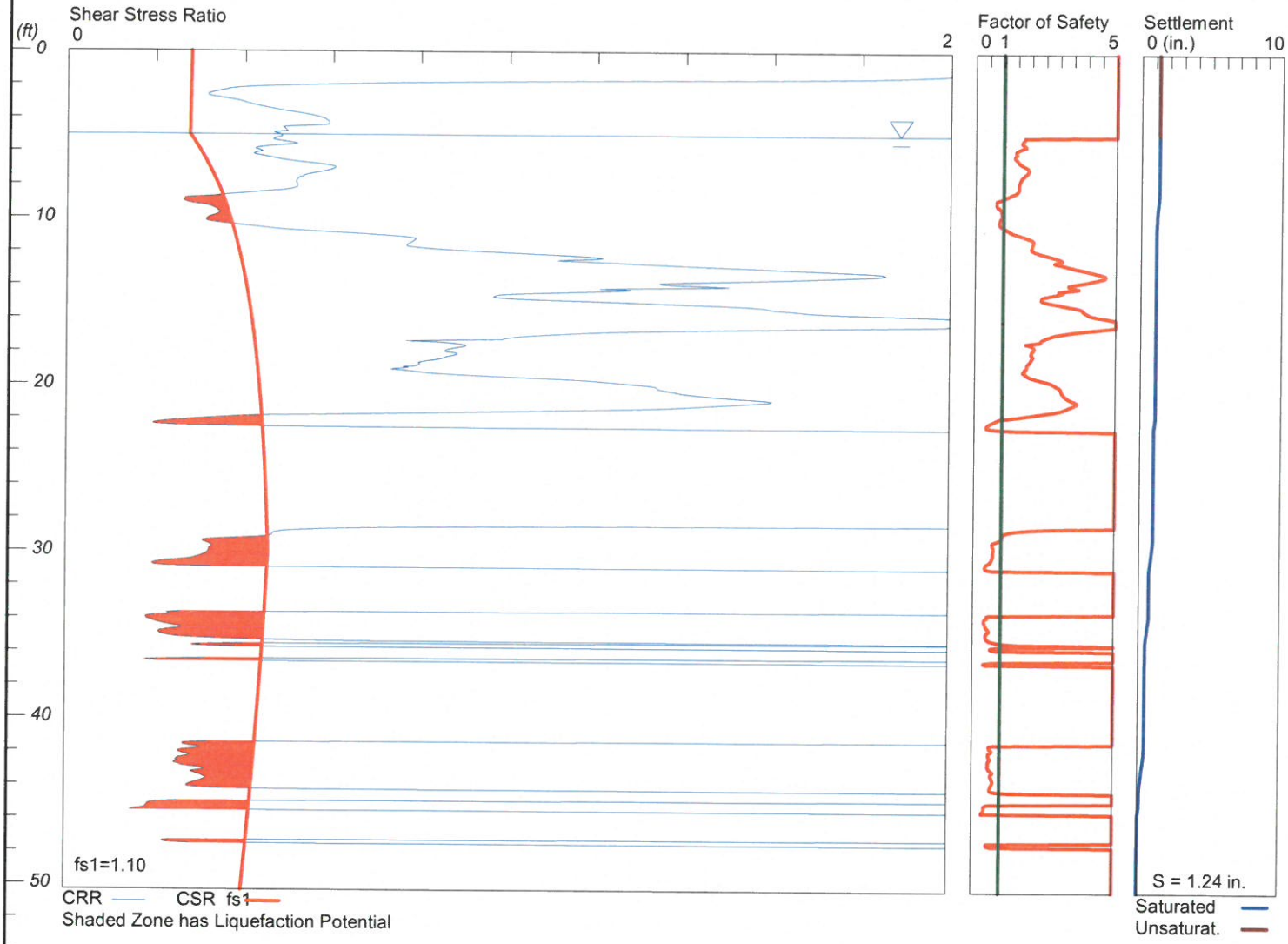
LiquefyPro CivilTech Software USA www.civiltech.com

LIQUEFACTION ANALYSIS

Method 1

Hole No.=CPT-2 Water Depth=5 ft

Magnitude=6.7
Acceleration=0.39g



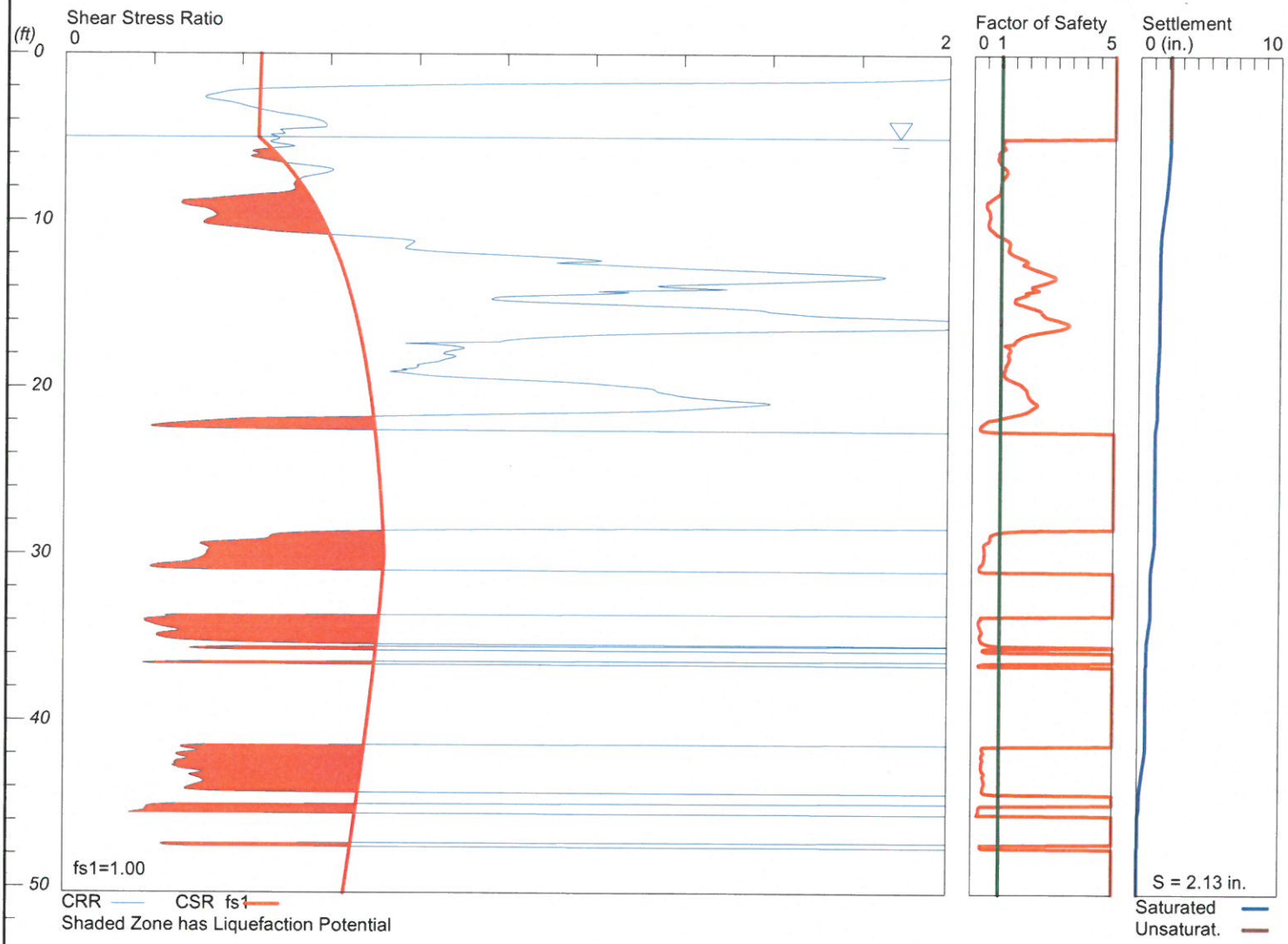
LiquefyPro CivilTech Software USA www.civiltech.com

LIQUEFACTION ANALYSIS

Method 2

Hole No.=CPT-2 Water Depth=5 ft

Magnitude=6.7
Acceleration=0.68g



LiquefyPro CivilTech Software USA www.civiltech.com

APPENDIX E

Maintenance and Improvement Considerations

MAINTENANCE AND IMPROVEMENT CONSIDERATIONS

General

Owners purchasing property must assume a certain degree of responsibility for improvements and for maintaining conditions around their home. Of primary importance from a geotechnical standpoint are maintaining drainage patterns and minimizing the soil moisture variation below all improvements. Such design, construction and owner maintenance provisions may include:

- Employing contractors for improvements who design and build in recognition of local building codes and specific site soils conditions.
- Establishing and maintaining positive drainage away from all foundations, walkways, driveways, patios, and other improvements.
- Avoiding the construction of planters adjacent to structural improvements. Alternatively, planter sides/bottoms can be sealed with an impermeable membrane and drained away from the improvements via subdrains into approved disposal areas.
- Sealing and maintaining construction/control joints within concrete slabs and walkways to reduce the potential for moisture infiltration into the subgrade soils.
- Utilizing landscaping schemes with vegetation that requires minimal watering. Watering should be done in a uniform manner, as equally as possible on all sides of the foundation, keeping the soil "moist" but not allowing the soil to become saturated.
- Maintaining positive drainage away from structures and providing roof gutters on all structures with downspouts that are designed to carry roof runoff directly into area drains or discharged well away from the foundation areas.
- Avoiding the placement of trees closer to the proposed structures than a distance of one-half the mature height of the tree.
- Observation of the soil conditions around the perimeter of the structure during extremely hot/dry or unusually wet weather conditions so that modifications can be made in irrigation programs to maintain relatively uniform moisture conditions.

Sulfates

Owners should be cautioned against the import and use of certain inorganic fertilizers, soil amendments, and/or other soils from offsite sources in the absence of specific information relating to their chemical composition. Some fertilizers have been known to leach sulfate compounds into soils and increase the sulfate concentrations to potentially detrimental levels.

Site Drainage

- The owners should be made aware of the potential problems that may develop when drainage is altered through construction of hardscape improvements. Ponded water, drainage over the slope face, leaking irrigation systems, overwatering, or other conditions which could lead to ground saturation must be avoided.
- No water should be allowed to flow over the slopes. No alteration of pad gradients should be allowed that would prevent pad and roof runoff from being directed to approved disposal areas.
- Drainage patterns have been established at the time of the fine grading should be maintained throughout the life of the structure. No alterations to these drainage patterns should be made unless designed by qualified professionals in compliance with local code requirements and site-specific soils conditions.

Slope Drainage

- Residents should be made aware of the importance of maintaining and cleaning all interceptor ditches, drainage terraces, down drains, and any other drainage devices, which have been installed to promote slope stability.
- Subsurface drainage pipe outlets may protrude through slope surfaces and/or wall faces. These pipes, in conjunction with the graded features, are essential to slope and wall stability and must be protected in-place. They should not be altered or damaged in any way.

Planting and Irrigation of Slopes

- Seeding and planting of the slopes should be planned to achieve, as rapidly as possible, a well-established and deep-rooted vegetal cover requiring minimal watering.
- It is the responsibility of the landscape architect to provide such plants initially and of the residents to maintain such planting. Alteration of such a planting scheme is at the resident's risk.
- The resident is responsible for proper irrigation and for maintenance and repair of properly installed irrigation systems. Leaks should be fixed immediately.

- Sprinklers should be adjusted to provide maximum uniform coverage with a minimum of water usage and overlap. Overwatering with consequent wasteful runoff and serious ground saturation must be avoided.
- If automatic sprinkler systems are installed, their use must be adjusted to account for seasonal and natural rainfall conditions.

Burrowing Animals

- Residents must undertake a program to eliminate burrowing animals. This must be an ongoing program in order to promote slope stability.

Owner Improvement

Owner improvements (pools, spas, patio slabs, retaining walls, planters, etc.) should be designed to account for the terrain of the project, as well as expansive soil conditions and chemical characteristics. Design considerations on any given lot may need to include provisions for differential bearing materials, ascending/descending slope conditions, bedrock structure, perched (irrigation) water, special geologic surcharge loading conditions, expansive soil stresses, and long-term creep/settlement.

All owner improvements should be designed and constructed by qualified professionals utilizing appropriate design methodologies, which account for the on-site soils and geologic conditions. Each lot and proposed improvement should be evaluated on an individual basis.

Setback Zones

Manufactured slopes maybe subject to long-term settlement and creep that can manifest itself in the form of both horizontal and vertical movement. These movements typically are produced as a result of weathering, erosion, gravity forces, and other natural phenomenon. A setback adjacent to slopes is required by most building codes, including the California Building Code. This zone is intended to locate and support the residential structures away from these slopes and onto soils that are not subject to the potential adverse effects of these natural phenomena.

The owner may wish to construct patios, walls, walkways, planters, swimming pools, spas, etc. within this zone. Such facilities may be sensitive to settlement and creep and should not be

constructed within the setback zone unless properly engineered. It is suggested that plans for such improvements be designed by a professional engineer who is familiar with grading ordinances and design and construction requirements. In addition, we recommend that the designer and contractor familiarize themselves with the site specific geologic and geotechnical conditions on the specific lot.

APPENDIX F

Earthwork Specifications

ALTA CALIFORNIA GEOTECHNICAL, INC.
EARTHWORK SPECIFICATIONS

These specifications present the generally accepted standards and minimum earthwork requirements for the development of the project. These specifications shall be the project guidelines for earthwork except where specifically superseded in preliminary geology and soils reports, grading plan review reports or by the prevailing grading codes or ordinances of the controlling agency.

A. GENERAL

1. The Contractor shall be responsible for the satisfactory completion of all earthwork in accordance with the project plans and specifications.

2. The project Geotechnical Engineer and Engineering Geologist, or their representatives, shall provide observation and testing services, and Geotechnical consultation for the duration of the project.

3. All clearing, grubbing, stripping and site preparation for the project shall be accomplished by the Contractor to the satisfaction of the Geotechnical Engineer/Engineering Geologist.

4. It is the Contractor's responsibility to prepare the ground surface to receive fill to the satisfaction of the Geotechnical Engineer and to place, spread, mix, moisture condition, and compact the fill in accordance with the job specifications and as required by the Geotechnical Engineer. The Contractor shall also remove all material considered by the Geotechnical Engineer to be unsuitable for use in the construction of engineered fills.

5. The Contractor shall have suitable and sufficient equipment in operation to handle the amount of fill being placed. When necessary, equipment will be shut down temporarily in order to permit the proper preparation of fills.

B. PREPARATION OF FILL AREAS

1. Excessive vegetation and all deleterious material should be disposed of offsite as required by the Geotechnical Engineer.

   Existing fill, soil, alluvium or rock materials determined by the Geotechnical Engineer as being unsuitable for placement in compacted fills shall be removed and hauled from the site. Where applicable, the Contractor may obtain the

approval of the Soils Engineer and the controlling authorities for the project to dispose of the above described materials, or a portion thereof, in designated areas onsite.

After removal of the deleterious materials have been accomplished, earth materials deemed unsuitable in their natural, in-place condition, shall be removed as recommended by the Geotechnical Engineer/Engineering Geologist.

2. Upon achieving a suitable bottom for fill placement, the exposed removal bottom shall be disced or bladed by the Contractor to the satisfaction of the Geotechnical Engineer. The prepared ground surfaces shall then be brought to the specified moisture content mixed as required, and compacted and tested as specified. In localities where it is necessary to obtain the approval of the controlling agency prior to placing fill, it will be the Contractor's responsibility to contact the proper authorities to visit the site.

3. Any underground structure such as cesspools, cisterns, mining shafts, tunnels, septic tanks, wells, pipelines or other structures not located prior to grading are to be removed or treated in a manner prescribed by the Geotechnical Engineer and/or the controlling agency for the project.

C. ENGINEERED FILLS

1. Any material imported or excavated on the property may be utilized as fill, provided the material has been determined to be suitable by the Geotechnical Engineer. Deleterious materials shall be removed from the fill as directed by the Geotechnical Engineer.

2. Rock or rock fragments less than twelve inches in the largest dimension may be utilized in the fill, provided they are not placed in concentrated pockets and the distribution of the rocks is approved by the Geotechnical Engineer.

3. Rocks greater than twelve inches in the largest dimension shall be taken offsite, or placed in accordance with the recommendations of the Geotechnical Engineer in areas designated as suitable for rock disposal.

4. All materials to be used as fill, shall be tested in the laboratory by the Geotechnical Engineer. Proposed import materials shall be approved by the Geotechnical Engineer 48 hours prior to importation.

5. The fill materials shall be placed by the Contractor in lifts, that when compacted, shall not exceed six inches. Each lift shall be spread evenly and shall be

thoroughly mixed to achieve a near uniform moisture condition and a uniform blend of materials.

All compaction shall be achieved at or above the optimum moisture content, as determined by the applicable laboratory standard. The Contractor will be notified if the fill materials are too wet or too dry to achieve the required compaction standard.

6. When the moisture content of the fill material is below the limit specified by the Geotechnical Engineer, water shall be added and the materials shall be blended until a uniform moisture content, within specified limits, is achieved. When the moisture content of the fill material is above the limits specified by the Geotechnical Engineer, the fill materials shall be aerated by discing, blading, mixed with dryer fill materials, or other satisfactory methods until the moisture content is within the specified limits.

7. Each fill lift shall be compacted to the minimum project standards, in compliance with the testing methods specified by the controlling governmental agency, and in accordance with recommendations of the Geotechnical Engineer.

   In the absence of specific recommendations by the Geotechnical Engineer to the contrary, the compaction standard shall be the most recent version of ASTM:D 1557.

8. Where a slope receiving fill exceeds a ratio of five-horizontal to one-vertical, the fill shall be keyed and benched through all unsuitable materials into sound bedrock or firm material, in accordance with the recommendations and approval of the Geotechnical Engineer.

9. Side hill fills shall have a minimum key width of 15 feet into bedrock or firm materials, unless otherwise specified in the soil report and approved by the Geotechnical Engineer in the field.

10. Drainage terraces and subdrainage devices shall be constructed in compliance with the ordinances of the controlling governmental agency and/or with the recommendations of the Geotechnical Engineer and Engineering Geologist.

11. The Contractor shall be required to maintain the specified minimum relative compaction out to the finish slope face of fill slopes, buttresses, and stabilization fills as directed by the Geotechnical Engineer and/or the governing agency for the project. This may be achieved by either overbuilding the slope and cutting

back to the compacted core; by direct compaction of the slope face with suitable equipment; or by any other procedure which produces the required result.

12. The fill portion of fill-over-cut slopes shall be properly keyed into rock or firm material; and the fill area shall be stripped of all soil or unsuitable materials prior to placing fill.

    The design cut portion of the slope should be made first and evaluated for suitability by the Engineering Geologist prior to placement of fill in the keyway above the cut slope.

13. Pad areas in cut or natural ground shall be approved by the Geotechnical Engineer. Finished surfaces of these pads may require scarification and recompaction, or over excavation as determined by the Geotechnical Engineer.

D. CUT SLOPES

1. The Engineering Geologist shall observe all cut slopes and shall be notified by the Contractor when cut slopes are to be started.

2. If, during the course of grading, unforeseen adverse or potentially adverse geologic conditions are encountered, the Engineering Geologist and Soil Engineer shall investigate, analyze and make recommendations to remediate these problems.

3. Non-erodible interceptor swales shall be placed at the top of cut slopes that face the same direction as the superjacent, prevailing drainage.

4. Unless otherwise specified in specific geotechnical reports, no cut slopes shall be excavated higher or steeper than that allowed by the ordinances of controlling governmental agencies.

5. Drainage terraces shall be constructed in compliance with the ordinances of the controlling governmental agencies, and/or in accordance with the recommendations of the Geotechnical Engineer or Engineering Geologist.

E. GRADING CONTROL

1. Fill placement shall be observed and tested by the Geotechnical Engineer and/or his representative during grading.

   Field density tests shall be made by the Geotechnical Engineer and/or his representative to evaluate the compaction and moisture compliance of each fill lift. Density tests shall be conducted at intervals not to exceed two feet of fill

height. Where sheepsfoot rollers are used, the fill may be disturbed to a depth of several inches. Density determinations shall be taken in the compacted material below the disturbed surface at a depth determined by the Geotechnical Engineer or his representative.

2. Where tests indicate that the density of any layer of fill, or portion thereof, is below the required relative compaction, or improper moisture content is in evidence, that particular layer or portion thereof shall be reworked until the required density and/or moisture content has been attained. Additional fills shall not be placed over an area until the previous lift of fill has been tested and found to meet the density and moisture requirements for the project and the previous lift is approved by the Geotechnical Engineer.

3. When grading activities are interrupted by heavy rains, fill operations shall not be resumed until field observations and tests by the Geotechnical Engineer indicate the moisture content and density of the fill are within the specified limits.

4. During construction, the Contractor shall properly grade all surfaces to maintain good drainage and prevent the ponding of water. The Contractor shall take remedial action to control surface water and to prevent erosion of graded areas until such time as a permanent drainage and erosion devices have been installed.

5. Observation and testing by the Geotechnical Engineer and/or his representative shall be conducted during filling and compacting operations in order that he will be able to state in his opinion that all cut and filled areas are graded in accordance with the approved specifications.

6. Upon the completion of grading activities and after the Geotechnical Engineer and Engineering Geologist have finished their observations of the work, final reports shall be submitted. No further excavation or fill placement shall be undertaken without prior notification of the Geotechnical Engineer and/or Engineering Geologist.

F. FINISHED SLOPES

All finished cut and fill slopes shall be planted and irrigated and/or protected from erosion in accordance with the project specifications, governing agencies, and/or as recommended by a landscape architect.

APPENDIX G

Grading Details

DETAIL FOR FILL SLOPE TOEING OUT ON FLAT ALLUVIATED CANYON

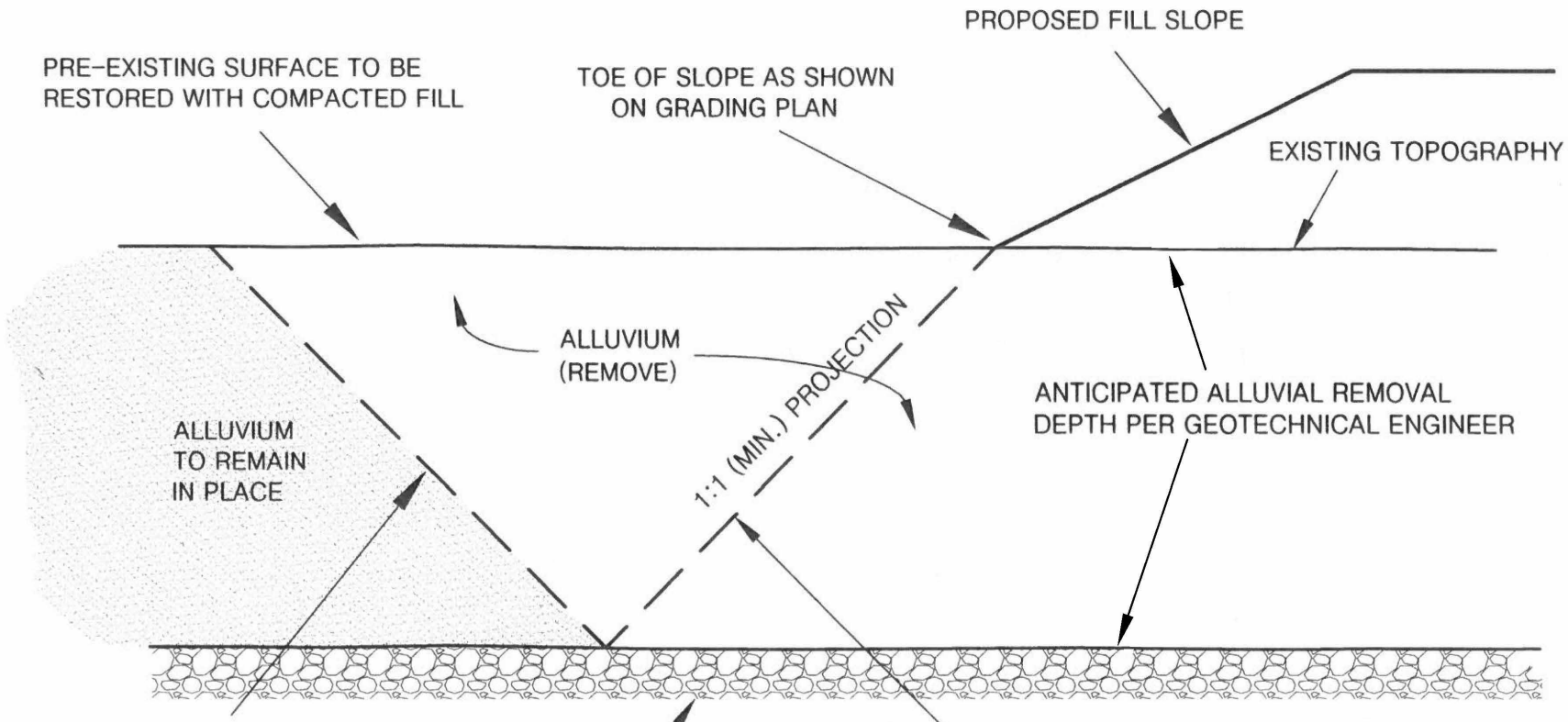


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PLATE G-1

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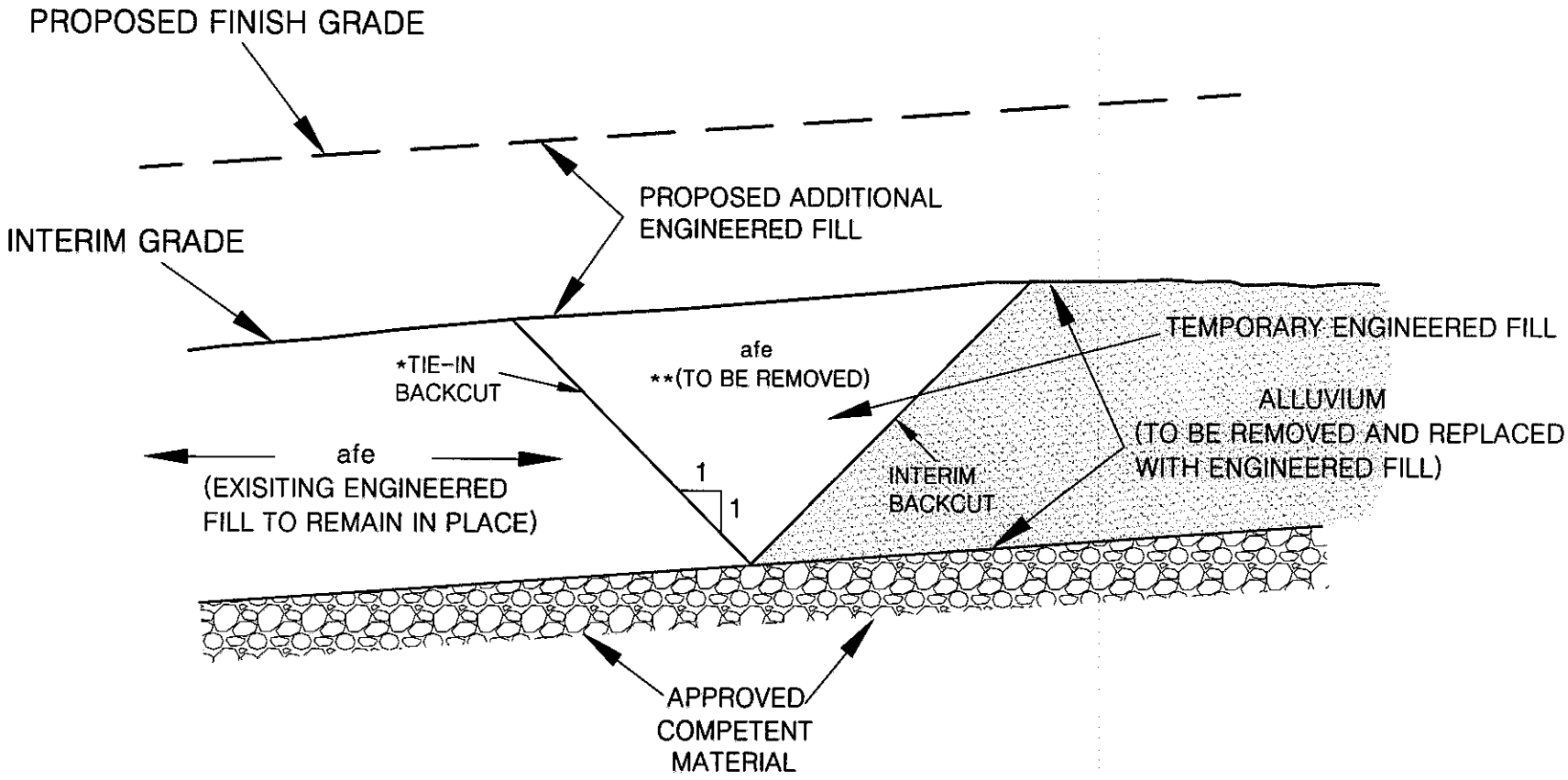
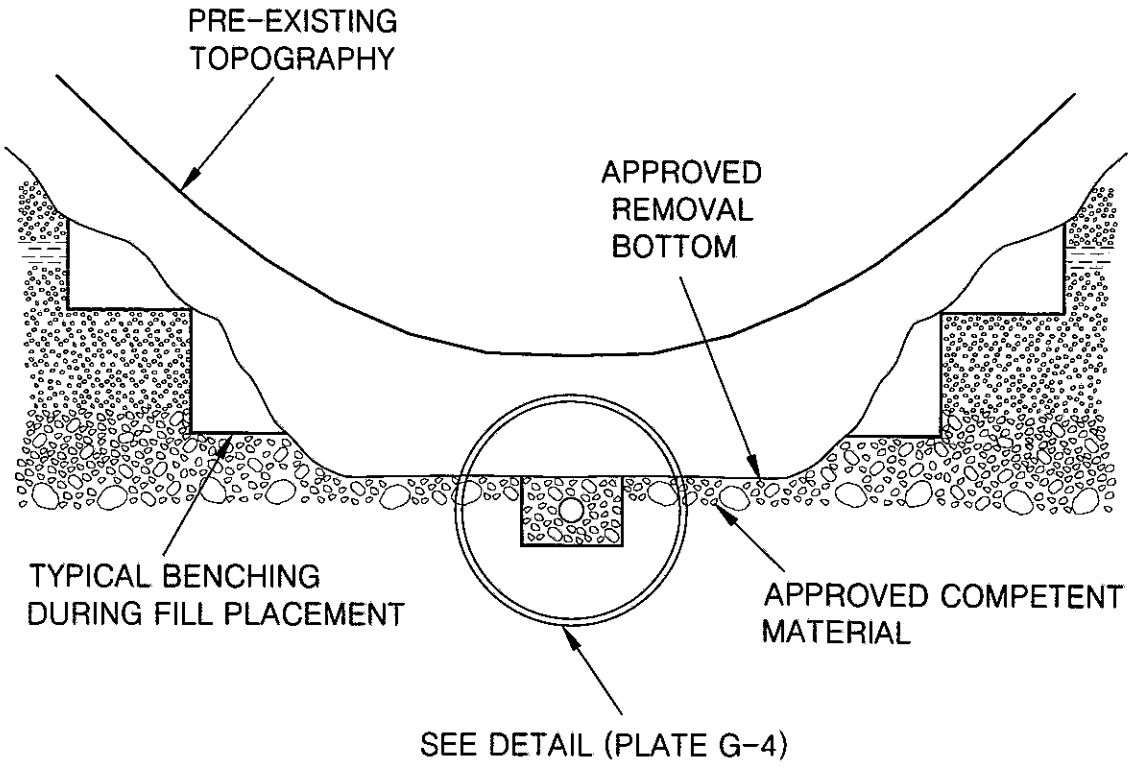
REMOVAL ADJACENT TO EXISTING FILL



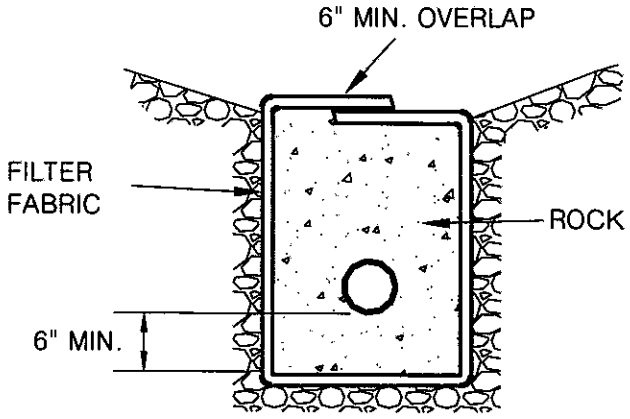
*INITIATE 1:1 TIE-IN BACKCUT TO INTERCEPT TOE OF INTERIM BACKCUT

**AS PART OF TIE-IN FOR ADDITIONAL ENGINEERED FILL

CANYON SUBDRAIN



CANYON SUBDRAIN DETAIL



PERFORATED PIPE SURROUNDED WITH ROCK AND FILTER FABRIC

ROCK: MIN. VOLUME OF 9 CU.FT. PER LINEAR FT. OF 3/4 IN. MAX. ROCK

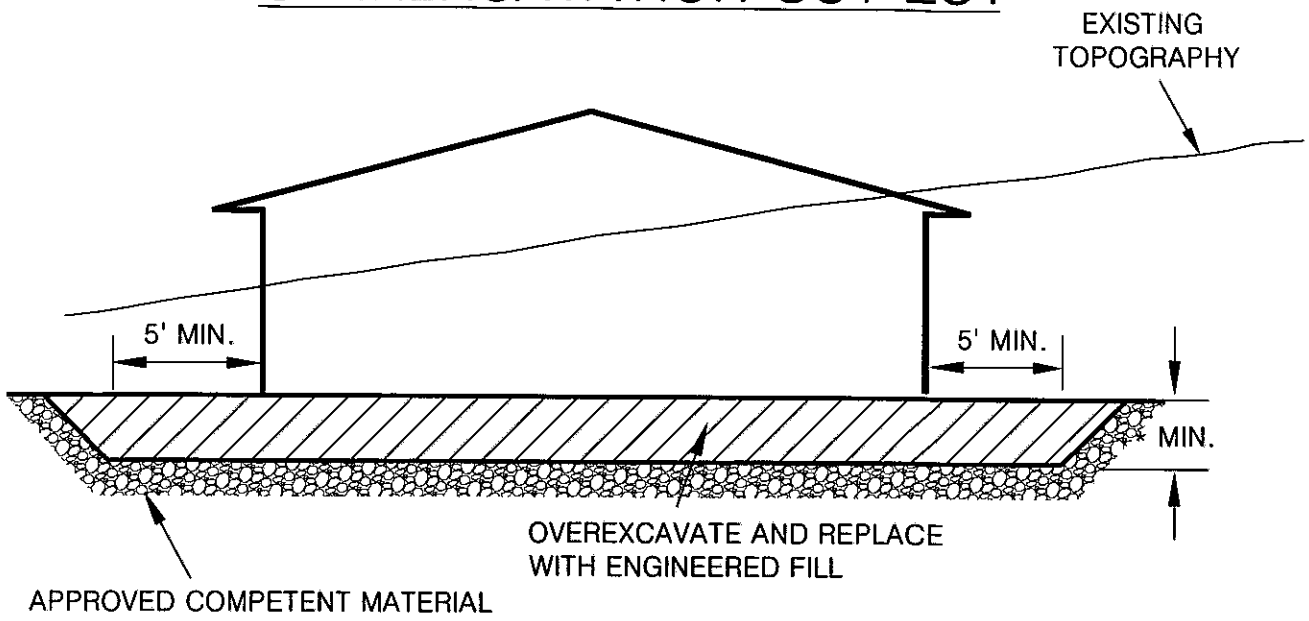
PIPE: 6 IN. ABS OR PVC PIPE WITH A MINIMUM OF 8 PERFORATIONS (1/4-IN. DIA.) PER LINEAL FT. IN BOTTOM HALF OF PIPE ASTM D2751, SDR 35, OR ASTM D3034 OR ASTM D1527, SCHD. 40 ASTM D1785, SCHD. 40

FILTER FABRIC: MIRAFI 140 FILTER FABRIC OR APPROVED EQUIVALENT

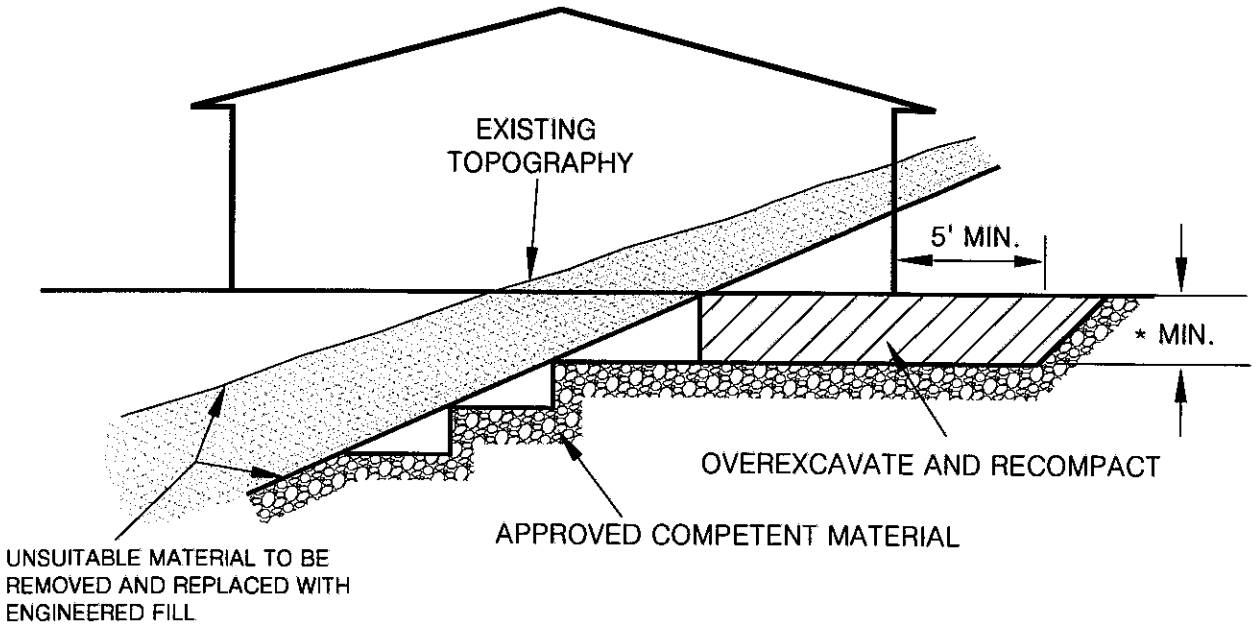
NOTES:

1. FOR CONTINUOUS RUN IN EXCESS OF 500. FT USE 8 IN. DIA. PIPE
2. ENGINEERED FILL PLACED BELOW DRAINS SHALL BE COMPACTED TO 93% OF THE LABORATORY MAXIMUM DRY DENSITY (ASTM:D1557)

OVEREXCAVATION CUT LOT



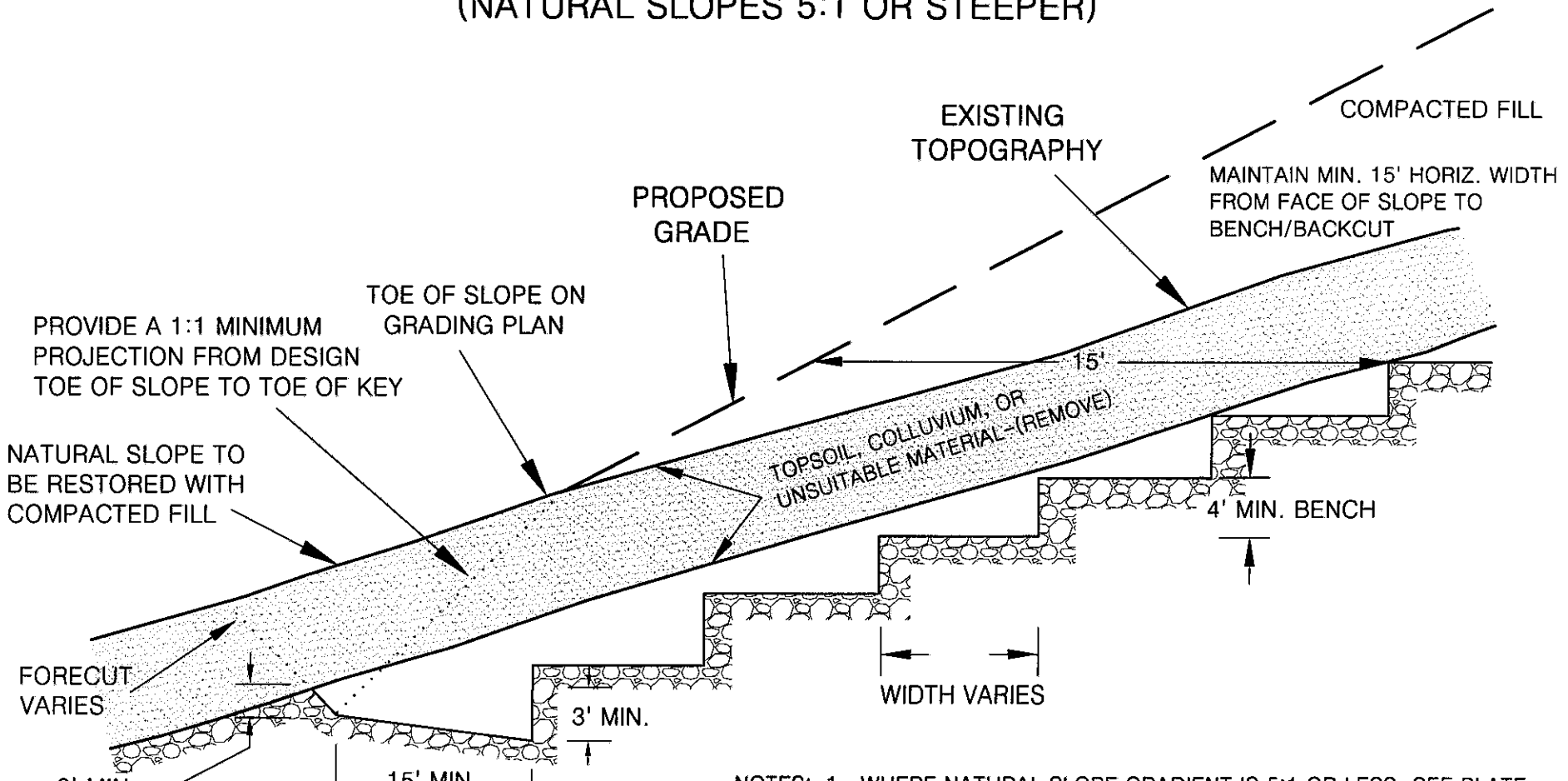
CUT-FILL LOT (TRANSITION)



*NOTE ALL BUILDING PADS SHALL BE OVER EXCAVATED TO A MINIMUM OF 1/3 OF THE MAXIMUM DEPTH OF FILL BELOW THE BUILDING PAD TO A MAXIMUM OF 17 FEET (SEE PLATE G-16)

SIDE HILL SLOPE FILL DETAIL

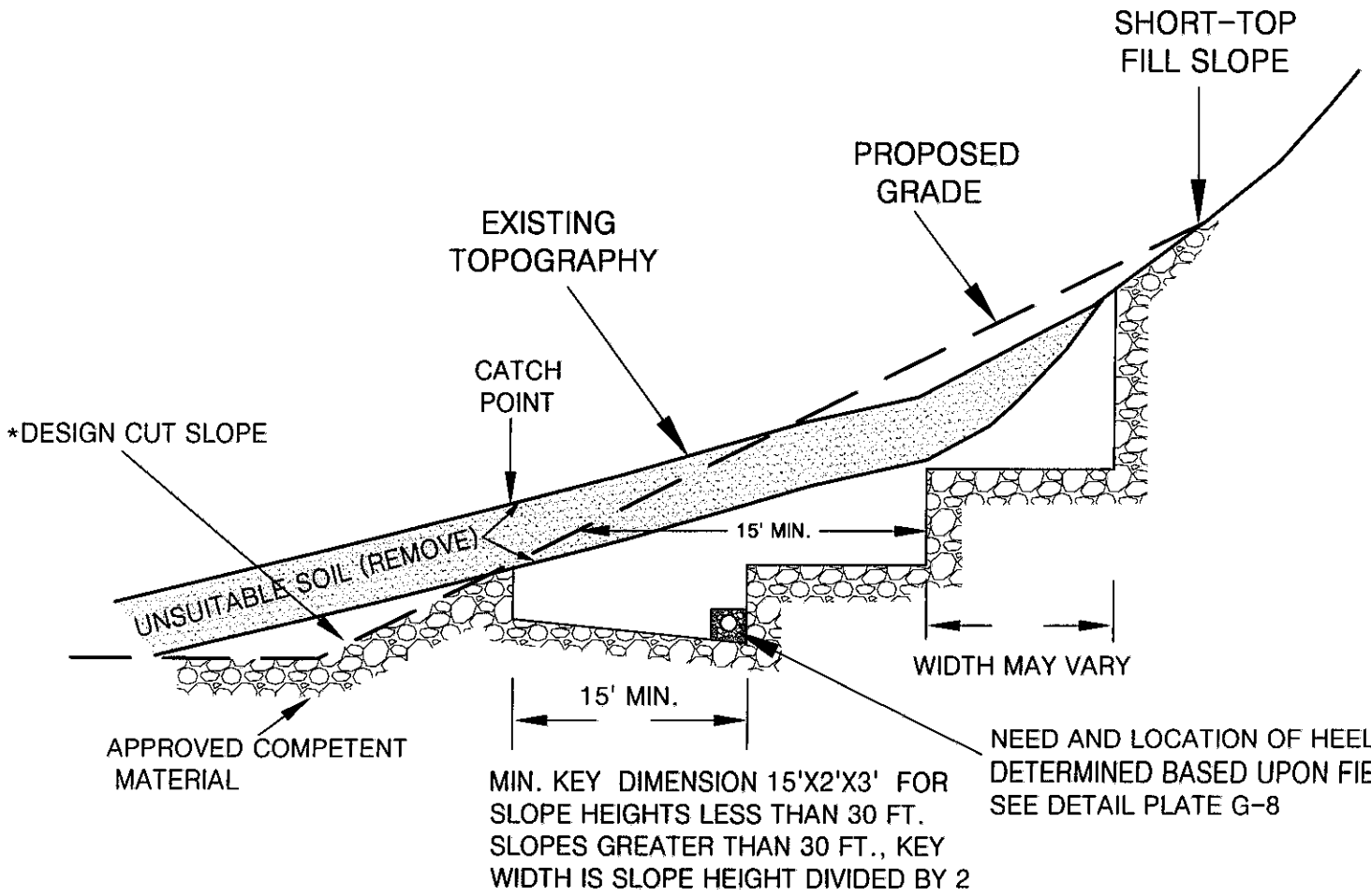
(NATURAL SLOPES 5:1 OR STEEPER)



NOTES:

1. WHERE NATURAL SLOPE GRADIENT IS 5:1 OR LESS, SEE PLATE G-1. WHERE THE NATURAL SLOPE APPROACHES OR EXCEEDS THE DESIGN SLOPE RATIO, SPECIAL RECOMMENDATIONS WILL BE PROVIDED BY THE GEOTECHNICAL ENGINEER.
2. THE NEED FOR AND PLACEMENT OF DRAINS WILL BE DETERMINED BY THE GEOTECHNICAL ENGINEER OR GEOLOGIST BASED UPON EXPOSED FIELD CONDITIONS.

FILL OVER CUT SLOPE DETAIL



*THE CUT PORTION OF THE SLOPE SHOULD BE EXCAVATED AND EVALUATED BY THE ENGINEERING GEOLOGIST/GEOTECHNICAL ENGINEER PRIOR TO CONSTRUCTING THE FILL SLOPE

STABILIZATION/BUTTRESS FILL BACKDRAIN

NOTE:

1. ASTM D2751, SDR 35, OR ASTM D3034 OR ASTM D1527, SCHD. 40 ASTM D1785, SCHD. 40
2. SOLID PIPE OUTLETS TO BE PROVIDED EVERY 100 FT. AND JOINED TO PERFORATED BACKDRAIN PIPE WITH "L" OR "T"s. MIN. 2% GRADIENT.
3. GRAVEL TRENCH TO BE FILLED WITH 3/4 IN. MAXIMUM ROCK
4. THE NECESSITY FOR UPPER TIER BACKDRAINS SHALL BE DETERMINED IN THE FIELD BY THE GEOTECHNICAL ENGINEER OR GEOLOGIST. UPPER TIER OUTLETS SHOULD DRAIN INTO PAVED TERRACE DRAINS.
5. ENGINEERED FILL PLACED BELOW DRAINS SHALL BE COMPACTED TO 93% OF THE LABORATORY MAXIMUM DRY DENSITY (ASTM:D1557)

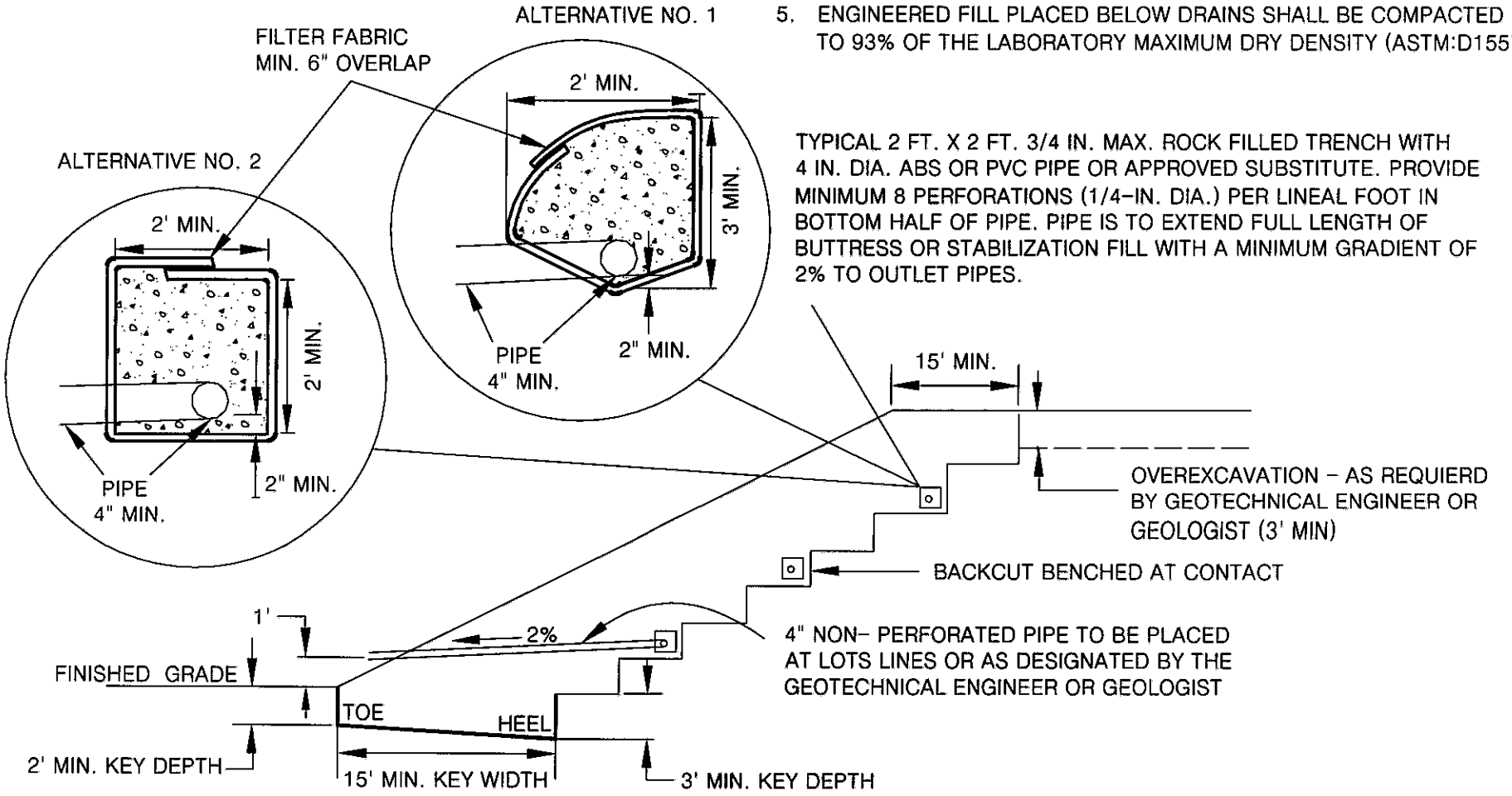


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PLATE G-8

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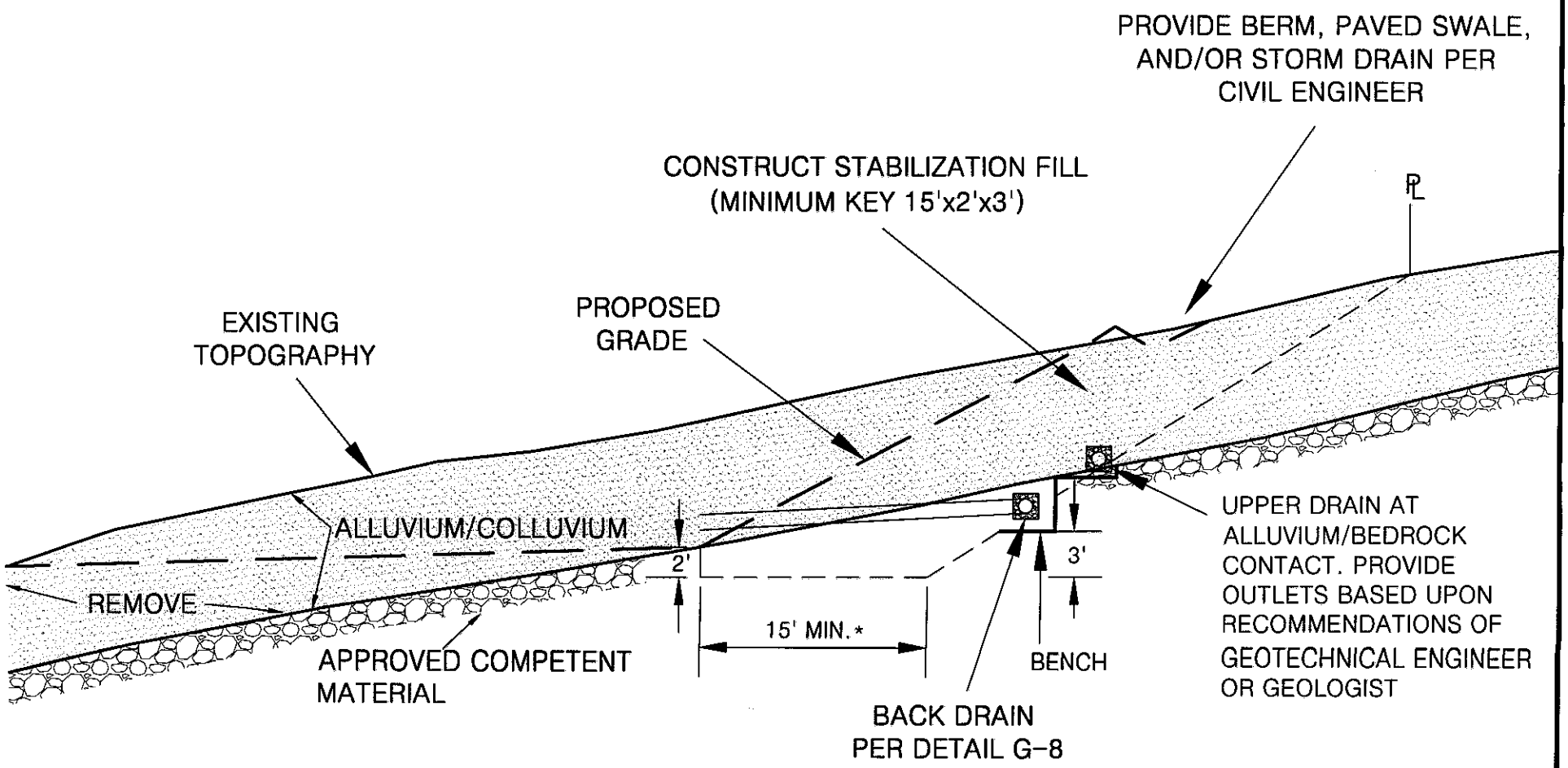
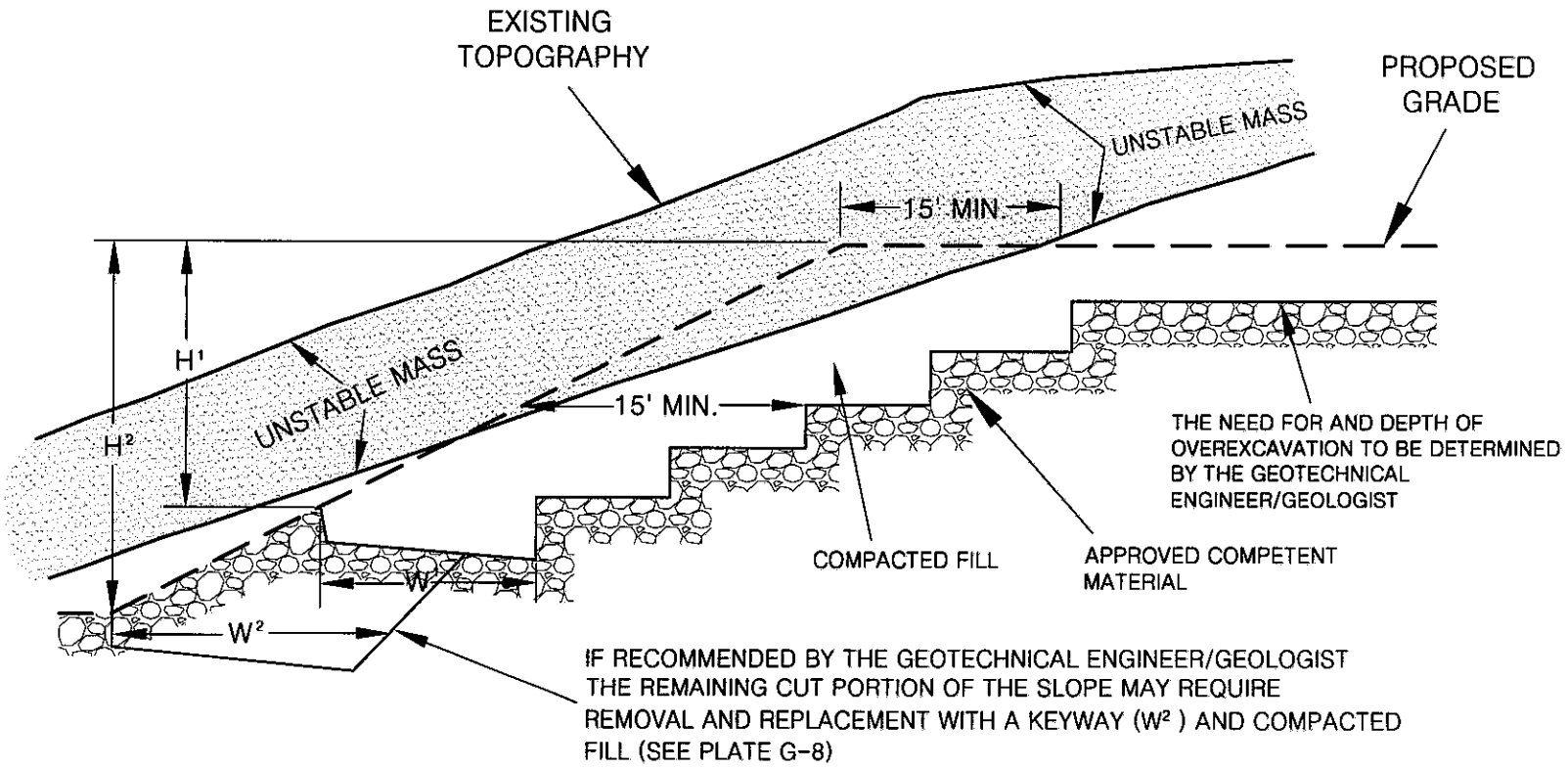
STABILIZATION FILL

(UPSLOPE ALLUVIATED AREA)



* FOR SLOPE HEIGHTS LESS THAN 30 FT. SLOPES GREATER THAN 30 FT., KEY WIDTH IS SLOPE HEIGHT DIVIDED BY 2

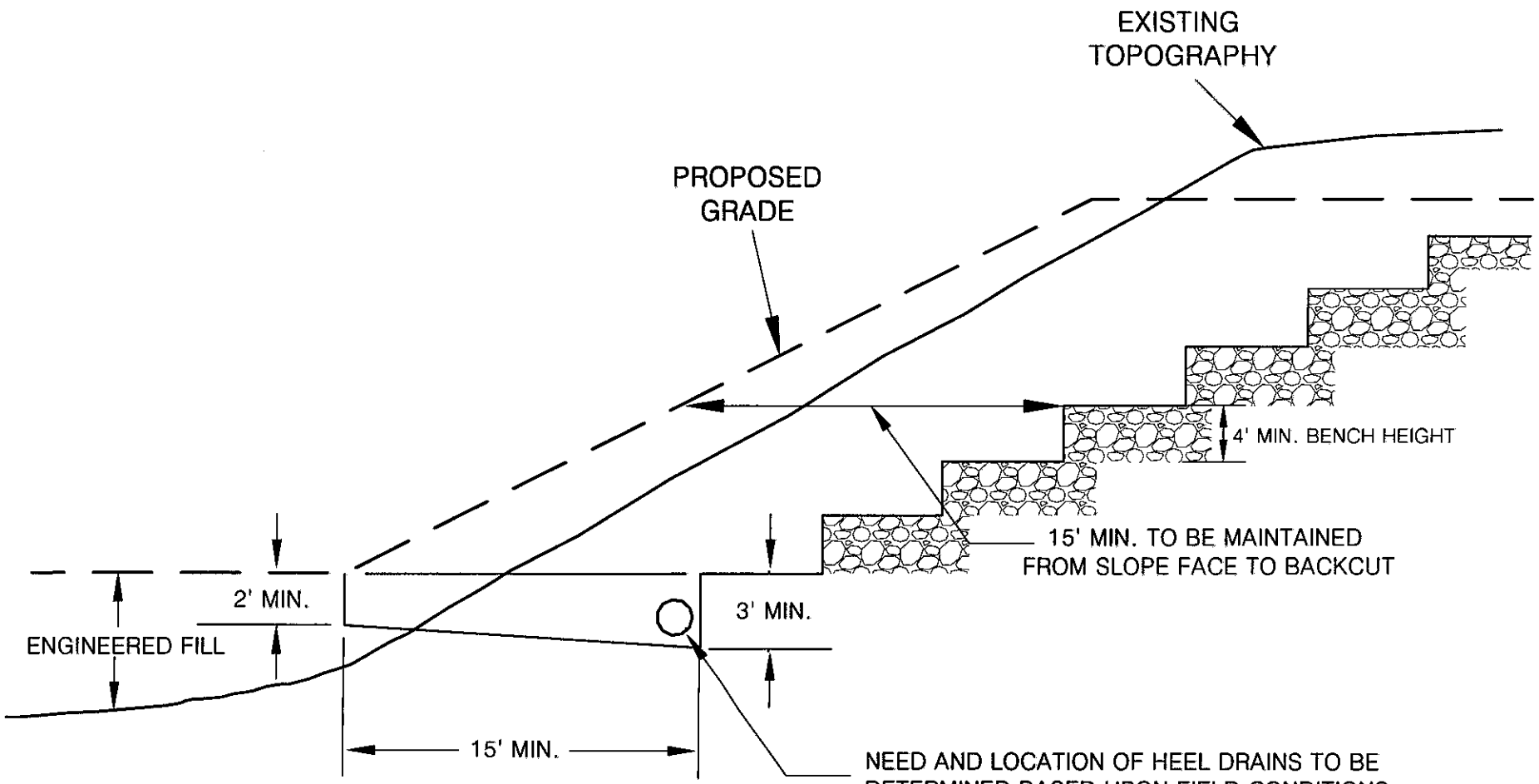
SELECTIVE GRADING DETAIL FOR STABILIZATION FILL
UNSTABLE MATERIAL EXPOSED IN PORTION OF CUT SLOPE



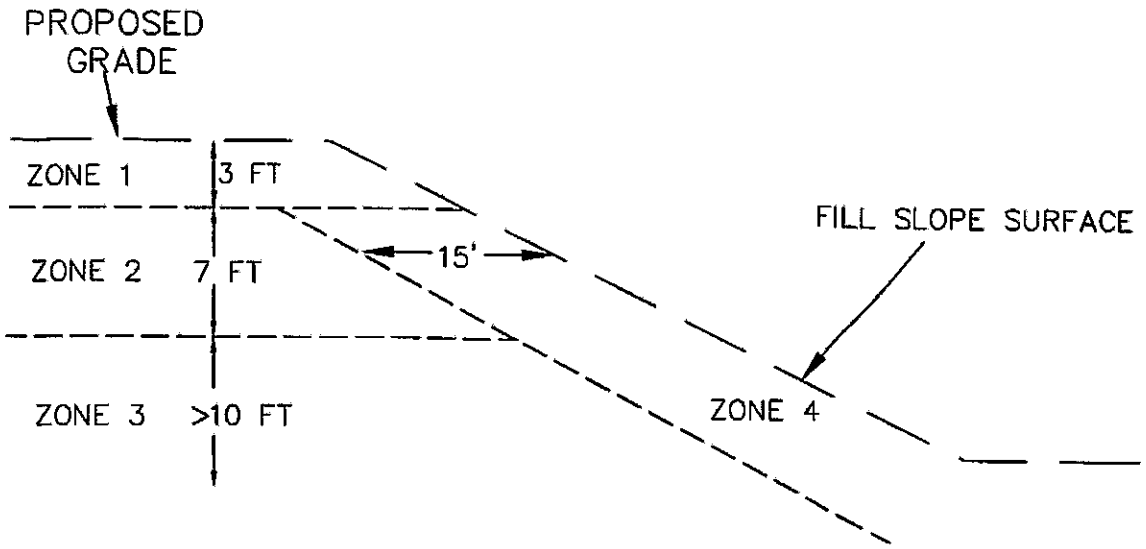
NOTES: 1. BACKDRAINS ARE NOT REQUIRED UNLESS SPECIFIED.

2. "W" SHALL BE EQUIPMENT WIDTH (15') FOR SLOPE HEIGHT LESS THAN 25 FEET. FOR SLOPES GREATER THAN 25 FEET, "W" SHALL BE DETERMINED BY THE PROJECT GEOTECHNICAL ENGINEER/GEOLOGIST. AT NO TIME SHALL "W" BE LESS THAN H/2.

SKIN FILL SLOPE OVER NATURAL GROUND



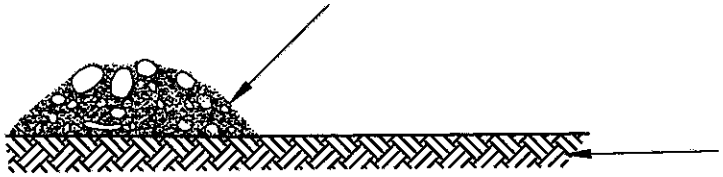
DETAIL FOR MAXIMUM PARTICLE DIMENSION



ZONE	DEPTH	PARTICLE MAX. DIMENSION	PLACEMENT METHOD
1	0-3 ft.	≤1.0 ft.	STANDARD OR CONVENTIONAL COMPACTION METHODS (SEE EARTHWORK SPECIFICATIONS)
2	3-10 ft.	≤2.0 ft.	ROCK BLANKETS (SEE PLATE G-13)
3	>10 ft.	≤8.0 ft.	ROCK BLANKETS (PLATE G-13) ROCK WINDROW (PLATE G-14) INDIVIDUAL ROCK BURIED (PLATE G-15)
4	15 HORIZONTAL FEET FROM FILL SLOPE FACE	≤1.0 ft.	STANDARD OR CONVENTIONAL COMPACTION METHODS (SEE EARTHWORK SPECIFICATIONS)

ROCK BLANKET DETAILS

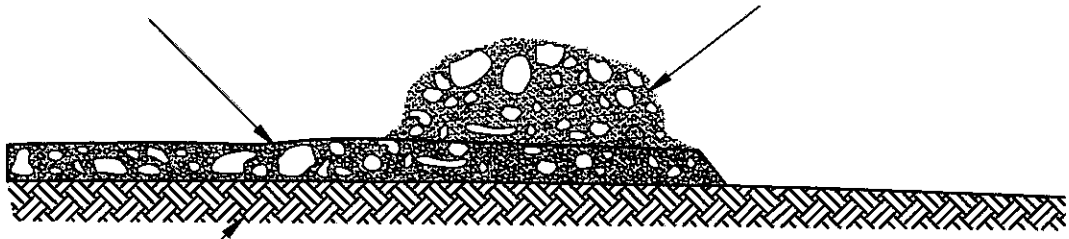
LOOSE PILE 1
LOOSE, DUMPED ROCK, GRAVEL AND SAND MIXTURE REMOVE FRAGMENTS LARGER THAT 2 FEET FOR ISOLATED BURIAL (PLATE G-15) OR WINDROW (PLATE G-10)



APPROVED BOTTOM, OR TOP OF PREVIOUSLY APPROVED BLANKET FILL

COMPACT PILE 1
SPREAD LOOSE PILE FORWARD WITH HEAVY TRACKED DOZER (D-8 OR LARGER). HEAVILY WATER, TRACK, AND APPLY ADDITIONAL SAND AND GRAVEL AS NECESSARY TO FILL VOIDS AND CREATE A DENSE MATRIX OF ROCK, COBBLES, GRAVEL AND SAND (2 FOOT MAXIMUM THICKNESS)

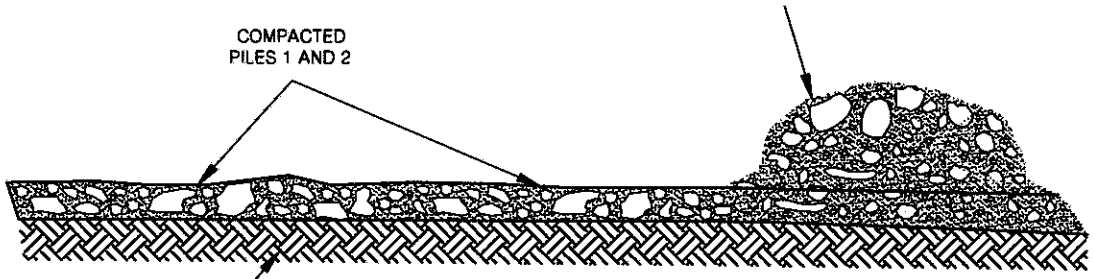
LOOSE PILE 2
DUMP SUCCESSIVE PILES OF LOOSE ROCK, GRAVEL AND SAND MIXTURE ON FORWARD EDGE OF PREVIOUSLY COMPACTED LIFT WITH TRUCKS AND/OR SCRAPERS. USE PREVIOUS LIFT TO ACCESS AND FURTHER COMPACT PILE 1.



APPROVED BOTTOM, OR TOP OF PREVIOUSLY APPROVED BLANKET FILL

LOOSE PILE 3
DUMP SUCCESSIVE PILES OF LOOSE ROCK, GRAVEL AND SAND MIXTURE ON FORWARD EDGE OF PREVIOUSLY COMPACTED LIFT WITH TRUCKS AND/OR SCRAPERS. USE PREVIOUS LIFT TO ACCESS AND FURTHER COMPACT EXISTING BLANKET.

COMPACTED PILES 1 AND 2

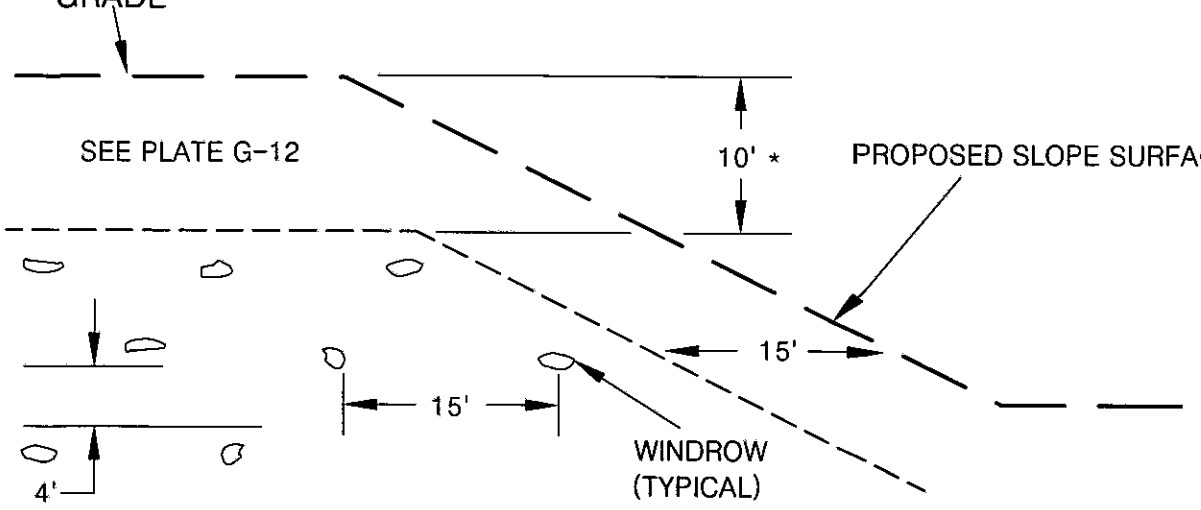


APPROVED BOTTOM, OR TOP OF PREVIOUSLY APPROVED BLANKET FILL

OBSERVATION TESTING AND APPROVAL PROCEDURES

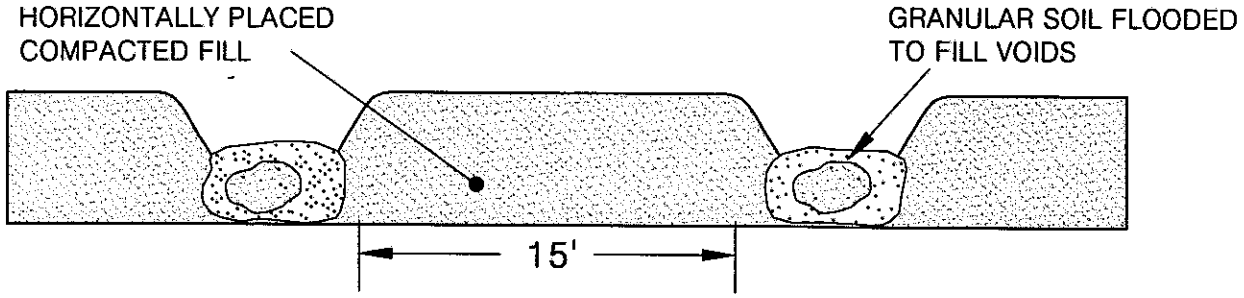
OBSERVE EQUIPMENT. SCRAPERS AND TRUCKS SHOULD BE FULLY SUPPORTED ON BLANKET WITHOUT SIGNIFICANT YIELDING. EXCAVATE TEST/OBSERVATION PITS TO CONFIRM EXISTENCE OF MIXTURE OF VARIOUS PARTICLE SIZES, WITHOUT SIGNIFICANT VOIDS, AND FORMING A DENSE, COMPACTED FILL MATRIX. TEST BY ASTM D1556, D2922 AND/OR D3017 WHEN APPROPRIATE. RECORD LIMITS AND ELEVATION OF BLANKET. ALL FILL AND COMPACTION OPERATIONS TO BE CONDUCTED UNDER THE OBSERVATION OF THE GEOTECHNICAL ENGINEER. SUBSEQUENT LIFTS TO BE APPLIED ONLY AFTER OBSERVATION AND CONFIRMATION OF SUITABILITY OF FILL AND RELEASE BY THE GEOTECHNICAL ENGINEER. BLANKETS TO BE CONSTRUCTED IN ACCORDANCE WITH PLATE G-12.

ROCK WINDROW DETAIL



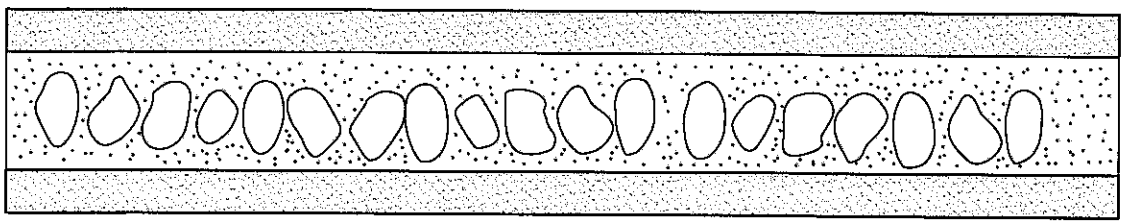
NOTE: OVERSIZED MATERIAL SHOULD BE REMOVED FROM THE 15' CLEAR ZONES WITH SPECIAL EQUIPMENT, SUCH AS A ROCK RAKE, PRIOR TO PLACING THE NEXT FILL LIFT.
*VARIANCES TO THE ABOVE ROCK HOLD DOWN MAY BE GRANTED SUBJECT TO APPROVAL BY THE OWNER, GEOTECHNICAL ENGINEER, AND GOVERNING AGENCY

TYPICAL WINDROW DETAIL (END VIEW)

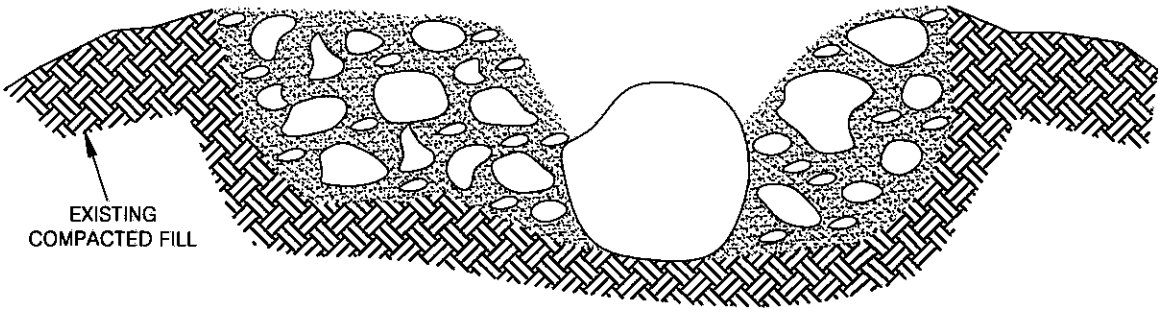


NOTE: COMPACTED FILL SHALL BE BROUGHT UP TO A HIGHER ELEVATION ALONG EACH WINDROW SO GRANULAR SOIL CAN BE FLOODED IN A "TRENCH CONDITION".

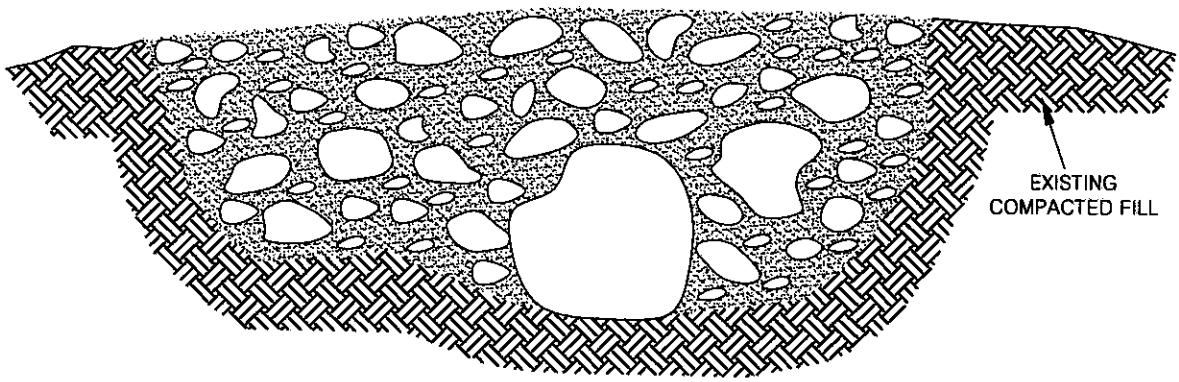
PROFILE VIEW



ISOLATED ROCK BURIAL DETAILS

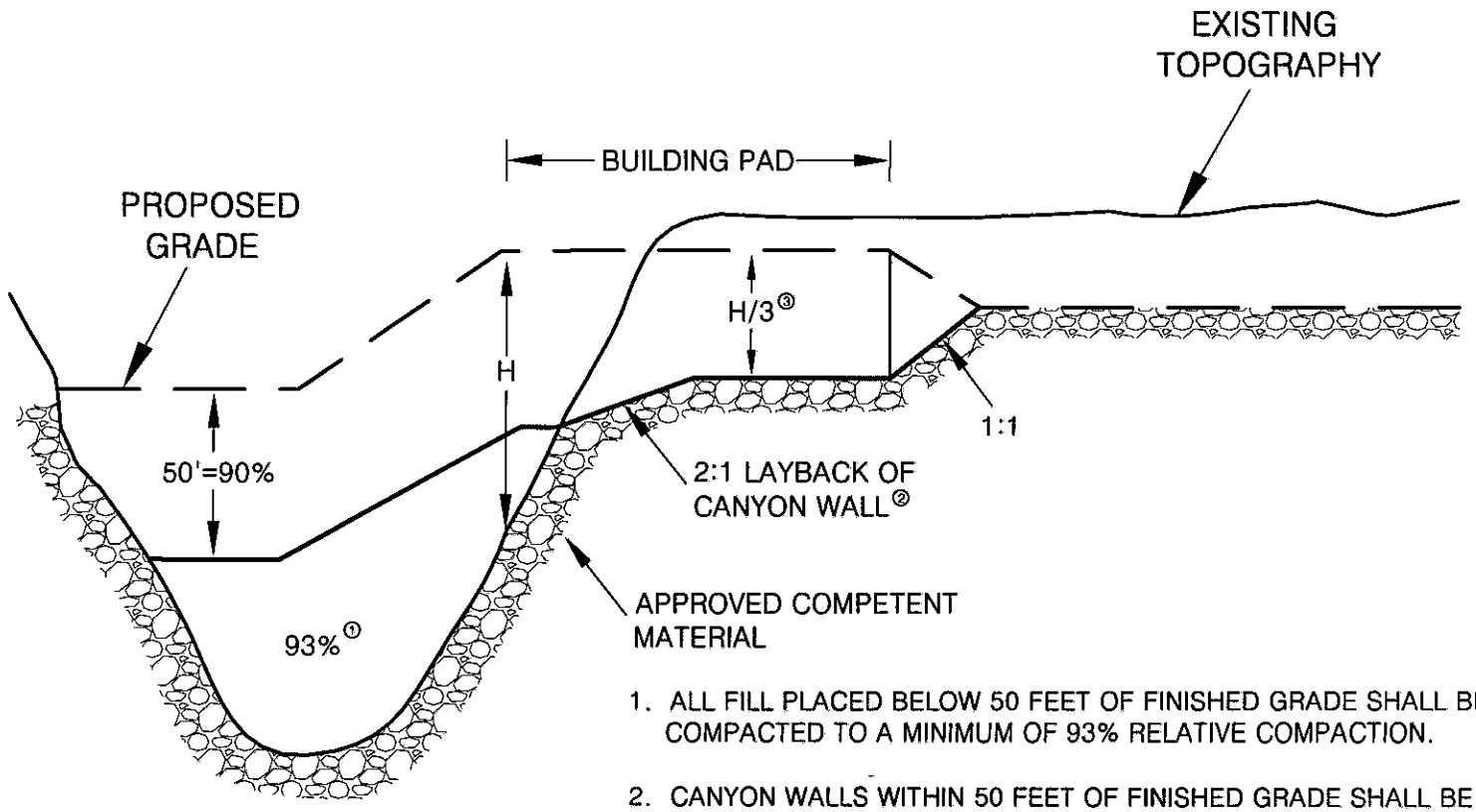


EXCAVATE HOLE INTO EXISTING FILL PRISM, PLACE BOULDER (< 8 feet in maximum dimension) INTO EXISTING COMPACTED FILL. SURROUND WITH SAND, GRAVEL, COBBLES AND WATER HEAVILY. TRACK WITH D8 OR LARGER EQUIPMENT UNTIL RESULTING FILL FULLY SUPPORTS EQUIPMENT. OBSERVE AND/OR TEST IN ACCORDANCE WITH ASTM D1556, D2922 OR D3017. ROCKS LARGER THAN 8 FEET SHALL BE FURTHER REDUCED IN SIZE BY SECONDARY BREAKING.



RELATIVE COMPACTION VS. DEPTH

CANYON WALL LAY BACK
DIFFERENTIAL FILL OVEREXCAVATION DETAILS



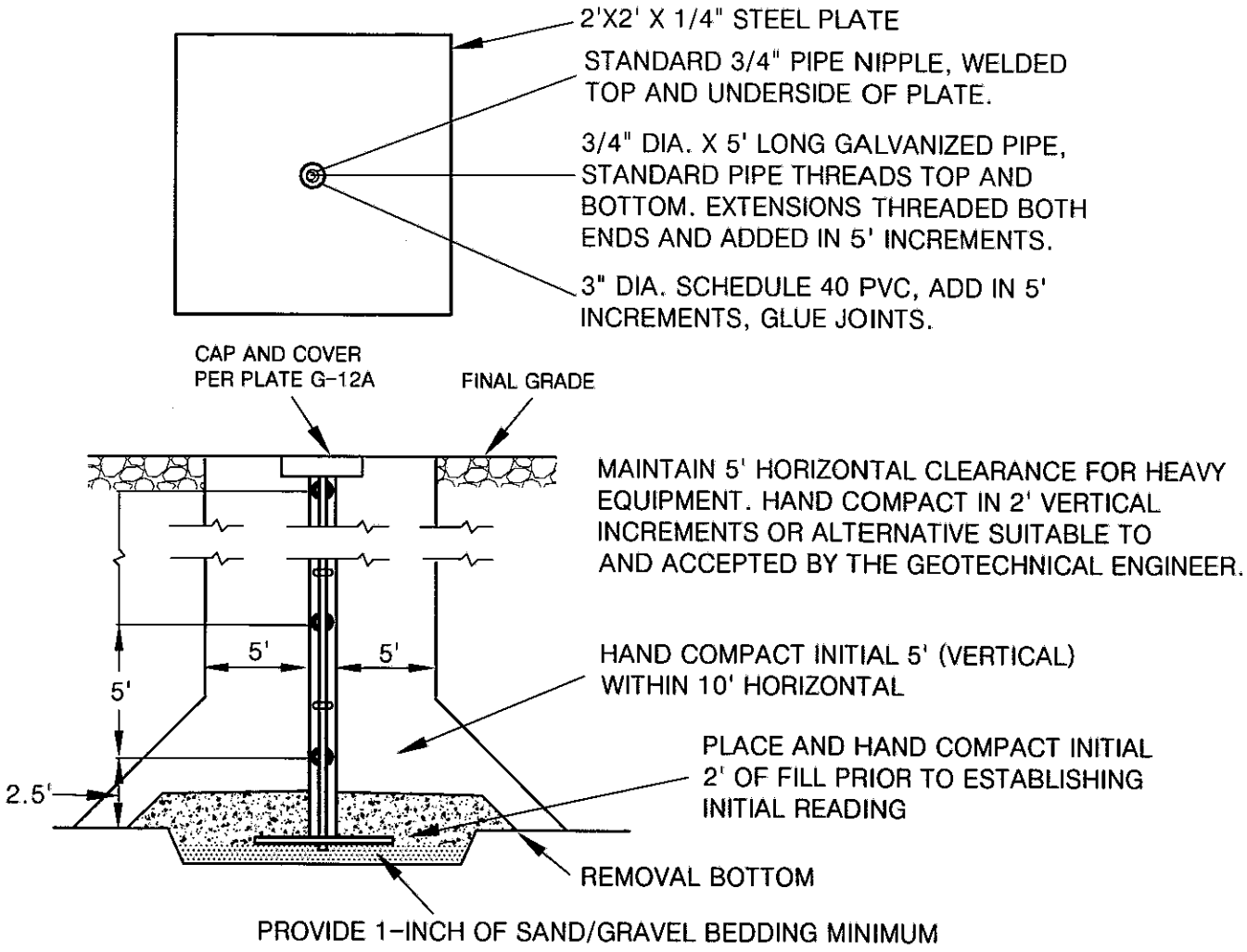
1. ALL FILL PLACED BELOW 50 FEET OF FINISHED GRADE SHALL BE COMPACTED TO A MINIMUM OF 93% RELATIVE COMPACTION.

2. CANYON WALLS WITHIN 50 FEET OF FINISHED GRADE SHALL BE LAID BACK TO A SLOPE RATIO OF 2:1 OR FLATTER.

3. ALL BUILDING PADS SHALL BE OVER EXCAVATED TO A MINIMUM OF 1/3 OF THE MAXIMUM DEPTH OF FILL BELOW THE BUILDING PAD TO A MAXIMUM OF 17 FEET.

4. IF THE 2:1 LAY BACK OF THE CANYON WALL IS IMPRACTICAL, THEN AS AN ALTERNATIVE THE INCREASED COMPACTION STANDARDS IN NOTE 1 SHOULD BE EXTENDED UP TO H/3 AND THE LAY BACK WILL NOT BE REQUIRED.

SETTLEMENT PLATE DETAIL



NOTES:

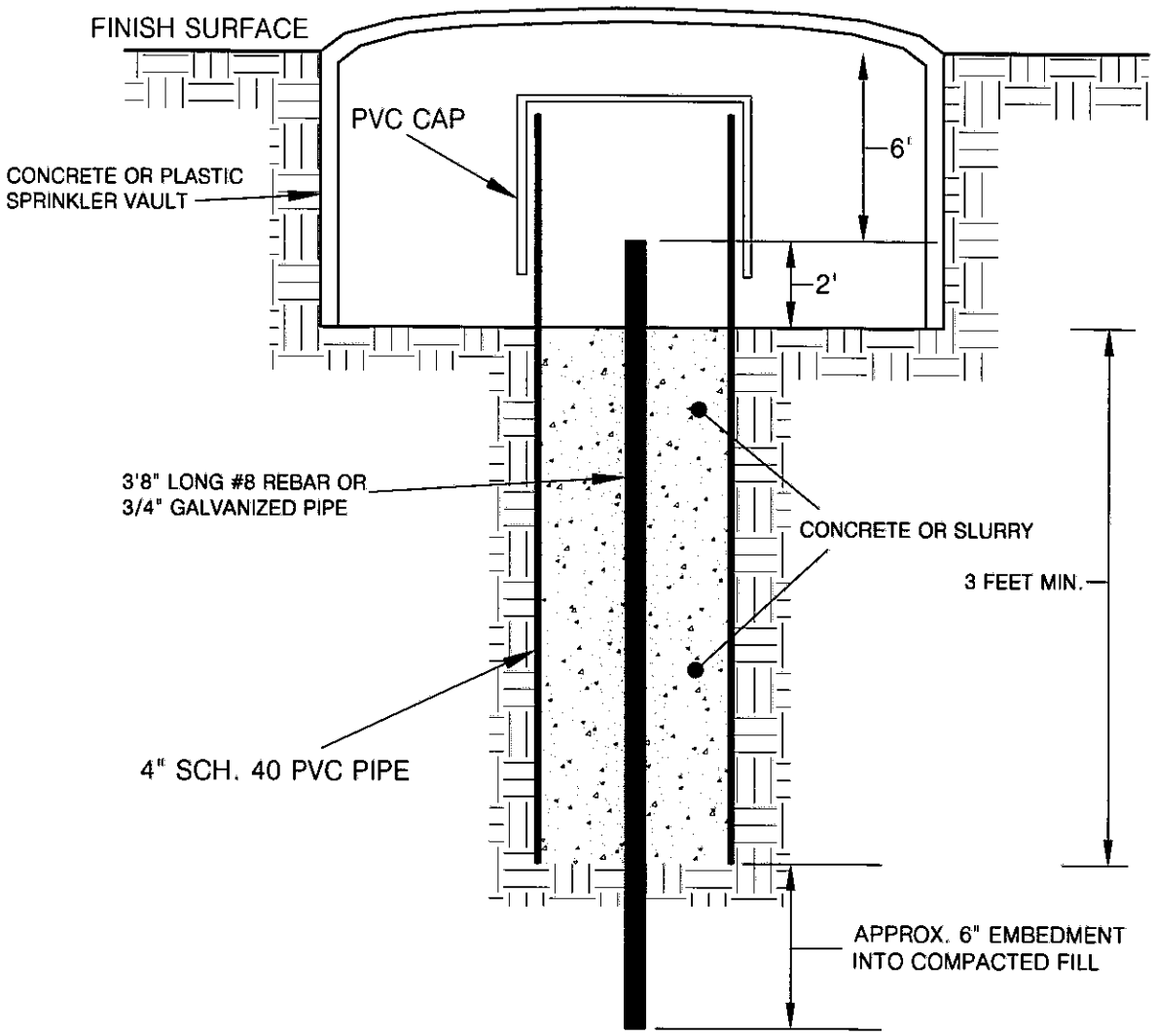
1) LOCATIONS OF SETTLEMENT PLATES SHALL BE CLEARLY MARKED AND READILY VISIBLE (RED FLAGGED) TO EQUIPMENT OPERATORS.

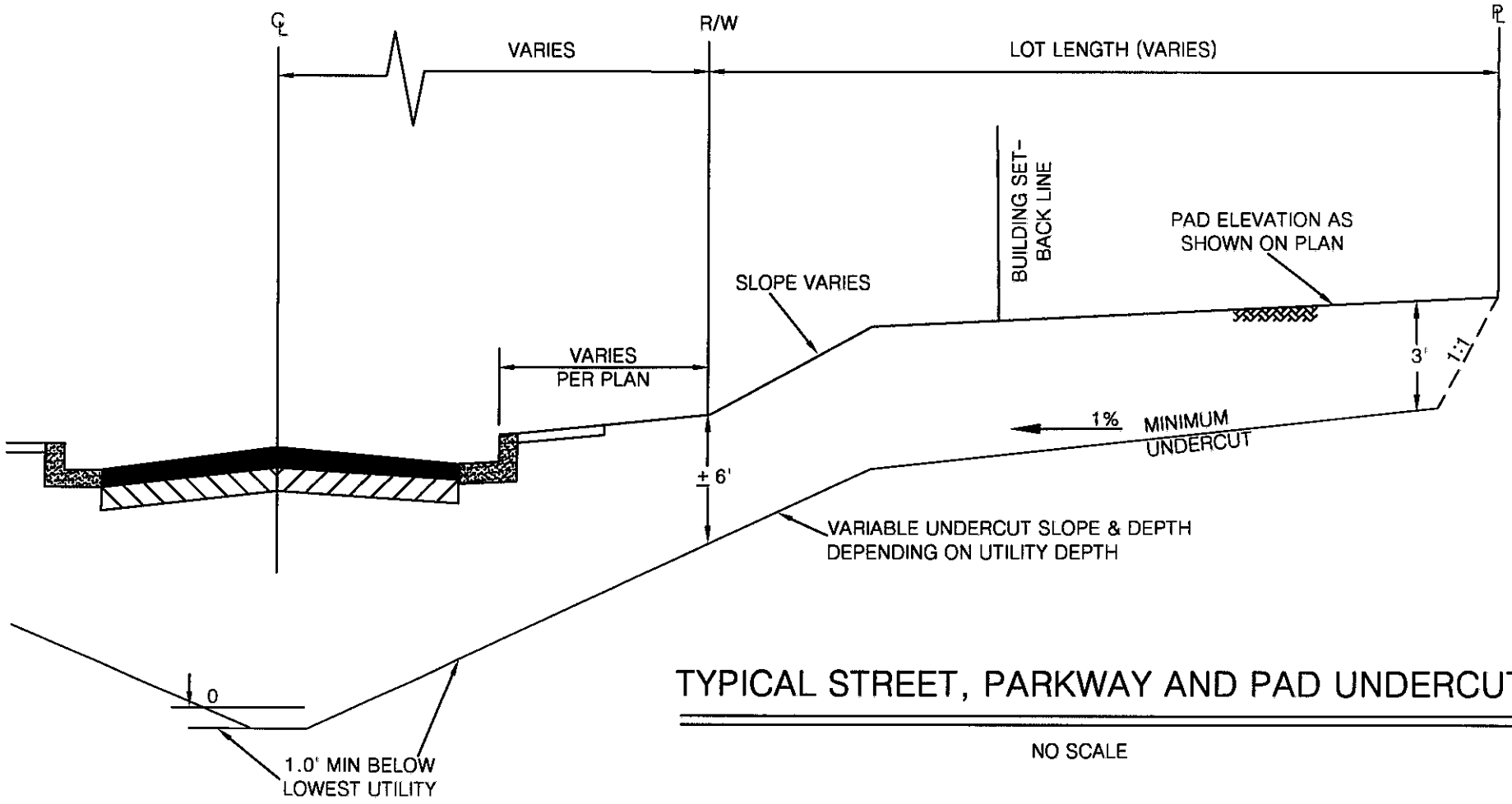
2) CONTRACTOR SHALL MAINTAIN 10' HORIZONTAL CLEARANCE FOR HEAVY EQUIPMENT WITHIN 5' (VERTICAL) OF PLATE BASE. FILL WITHIN CLEARANCE AREA SHALL BE HAND COMPACTED TO PROJECT SPECIFICATIONS OR COMPACTED BY ALTERNATIVE APPROVED BY THE GEOTECHNICAL ENGINEER.

3) AFTER 5' (VERTICAL) OF FILL IS IN PLACE, CONTRACTOR SHALL MAINTAIN 5' HORIZONTAL EQUIPMENT CLEARANCE. FILL IN CLEARANCE AREA SHALL BE HAND COMPACTED (OR APPROVED ALTERNATIVE) IN VERTICAL INCREMENTS NOT TO EXCEED 2 FEET.

4) IN THE EVENT OF DAMAGE TO SETTLEMENT PLATE OR EXTENSION RESULTING FROM EQUIPMENT OPERATING WITHIN PRESCRIBED CLEARANCE AREA, CONTRACTOR SHALL IMMEDIATELY NOTIFY GEOTECHNICAL ENGINEER AND SHALL BE RESPONSIBLE FOR RESTORING THE SETTLEMENT PLATE AND EXTENSION RODS TO WORKING ORDER.

SURFACE SETTLEMENT MONUMENT DETAIL





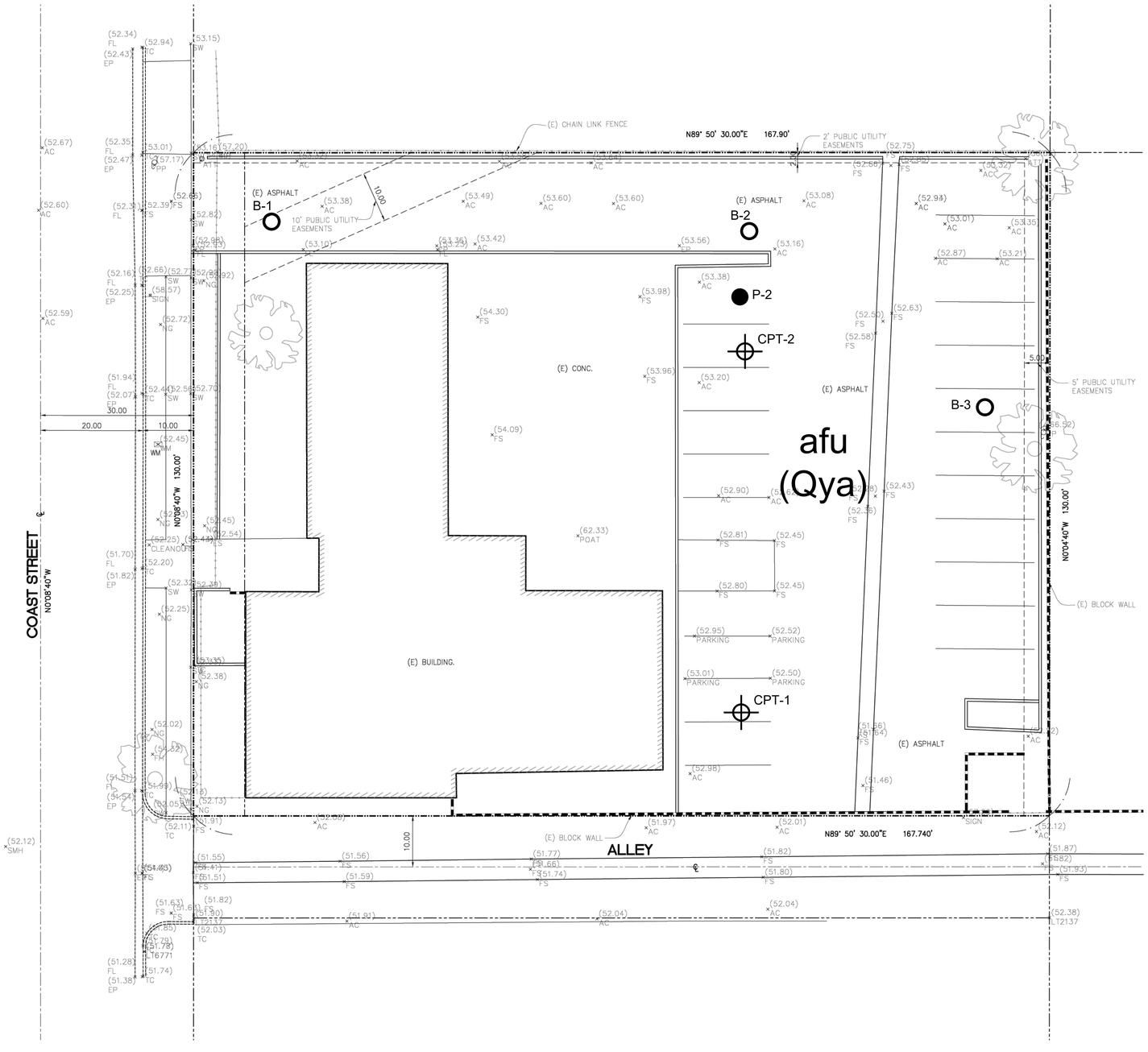
TYPICAL STREET, PARKWAY AND PAD UNDERCUT

NO SCALE

ALTA CALIFORNIA GEOTECHNICAL, INC .
VER. 3/13

PLATE G-19

PATH: C:\Users\Jinks\Desktop\Drafting\GRADING DETAILS\G-19.dwg



SCALE IN FEET
1 inch = 10 ft.

ABBREVIATION:

AC	ASPHALT CONCRETE
BCOR	BUILDING CORNER
BX	BOTTOM OF X
CC	CORNER CONCRETE
CP	CONTROL POINT
CONC	CONCRETE
CB	CABLE BOX
EDGBUIL	EDGE BUILDING
EP	EDGE OF PAVEMENT
FD	FOUND
FF	FINISH FLOOR
FG	FINISH GRADE
FL	FLOWLINE
FS	FINISH SURFACE
ICV	IRRIGATION CONTROL BOX
IP	IRON PIPE
GSP&W	GEAR SPIKE & WASHER
GUYPOLE	GUYWIRE/POWER POLE SUPPORT
L&T	LEAD & TAG/TACK
TSB	TRAFFIC SIGNAL BOX
TX	TOP OF X
WELMON	MONUMENT IN WELL
WM	WATER METER
WV	WATER VALVE

LEGEND

afu	ARTIFICIAL FILL-UNDOCUMENTED
Qya	YOUNG ALLUVIUM (BRACKETED WHERE BURIED)
B-3	APPROXIMATE LOCATION OF HOLLOW STEM BORING
P-2	APPROXIMATE LOCATION OF INFILTRATION TEST
CPT-2	APPROXIMATE LOCATION CPT BORING

LEGEND

BLOCK WALL		ASPHALT CONCRETE	
STEEL FENCE		CONCRETE	
CHAINLINK FENCE			
CENTERLINE			
BOUNDARY LINE			
PROPERTY LINE			

LEGAL DESCRIPTION:

LOT 2 IN BLOCK A OF TRACT NO. 1075, IN THE CITY OF GARDEN GROVE, COUNTY OF ORANGE, STATE OF CALIFORNIA, AS SHOWN ON A MAP RECORDED IN BOOK 35, PAGE 4 OF MISCELLANEOUS MAPS, RECORDS OF SAID ORANGE COUNTY.
TOGETHER WITH THAT PORTION OF COAST STREET AS DESCRIBED IN THAT CERTAIN RESOLUTION NO. 3239-66 ORDERING THE VACATION AND ABANDONMENT OF A PORTION OF SAID COAST STREET, A CERTIFIED COPY OF WHICH WAS RECORDED OCTOBER 14, 1966 IN BOOK 8076, PAGE 589 OF OFFICIAL RECORDS IN THE OFFICE OF THE COUNTY RECORDER OF SAID ORANGE COUNTY, LYING BETWEEN THE WESTERLY PROLONGATION OF THE NORTHERLY AND SOUTHERLY LINES OF SAID LOT 2.
EXCEPT ALL WATER AND WATER RIGHTS OF EVERY KING OR CHARACTER, IN UPON AND UNDER SAID LAND, AS RESERVED BY R.F. DEEBLE AND OTHERS IN DEED RECORDED OCTOBER 31, 1945 IN BOOK 1358, PAGE 525 OF OFFICIAL RECORDS, AND NOVEMBER 1, 1947 IN BOOK 1559, PAGE 366 OF OFFICIAL RECORDS.
APN: 097-011-03

BENCH MARK:

BENCH MARK ID: 1G-147-70
ELEVATION: 66.528 FT (NAVD88).
YEAR OF UPDATE: 2005.
DESCRIPTION:

BASIS OF BEARING:

THE CENTERLINE OF COAST STREET BEING N0°08'40"W PER TRACT No. 1075.

PREPARE BY: TRUONG DONG, RCE 75466.
LICENSE EXPIRES: 3/31/2024
DATE OF SURVEY: 09/30/2023
DONG ENGINEERING, INC.
12682 HOOVER ST, GARDEN GROVE, CA 92841.
TEL: (714) 204-2874.

PLATE 1

ALTA CALIFORNIA GEOTECHNICAL, INC.
170 N. MAPLE STREET, STE 108, CORONA, CA 92880
TELEPHONE: (951) 509-7090
PROJECT NUMBER: 1-0521 DATE: MAY 1, 2024

DONG ENGINEERING, INC.
ATTN: TROY DONG
12682 HOOVER ST.,
GARDEN GROVE, CA 92841
TEL- 714-204-2874
TRUONGDONG@GMAIL.COM

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REVISIONS

NO:	DATE	REVISIONS

PROJECT OWNER

PROJECT ADDRESS

TOPOGRAPHIC SURVEY
13040 Coast St, Garden Grove, CA 92844

STAMP

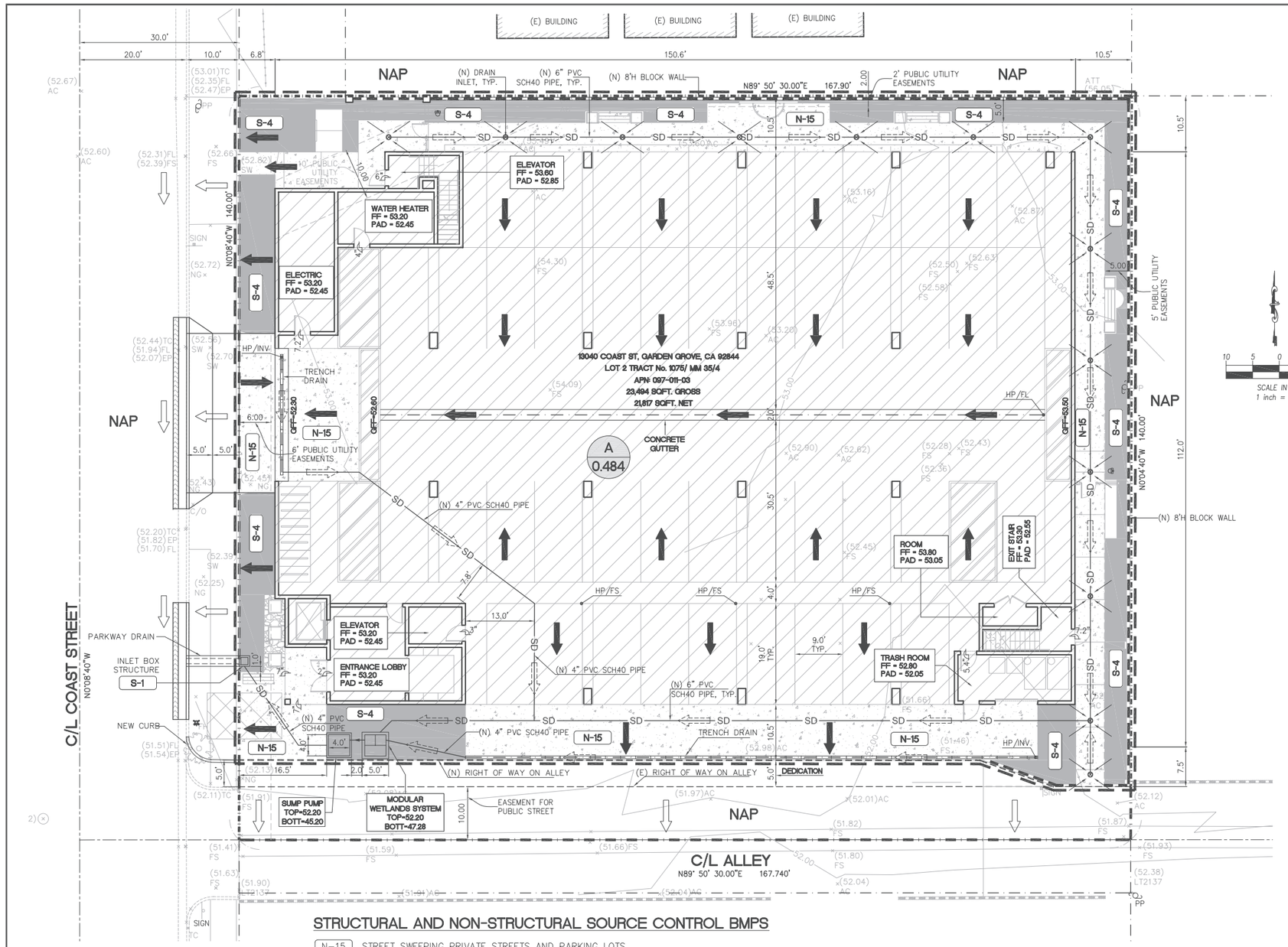
DATE SIGNED: 10/26/23

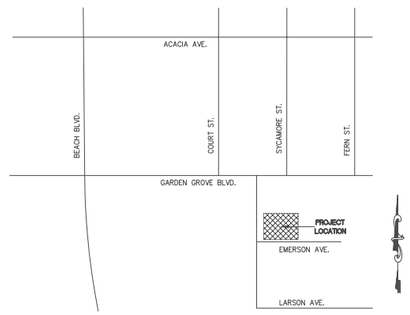
SHEET DESCRIPTION

DE#: 230447
SHEET

ATTACHMENT E

WQMP Plot Plan





VICINITY MAP
NOT TO SCALE

10 5 0 10
SCALE IN FEET
1 inch = 10 ft.

LEGEND

	EXISTING	PROPOSED
BLOCK WALL		
WOOD FENCE		
CURB & GUTTER	CURB / GUTTER / EP	CURB / GUTTER / EP
CENTERLINE		
PROPERTY LINE		
FLOWLINE		
DRAIN PIPE		SD
DRAIN DIRECTION TO DRAIN INLET		
LANDSCAPE AREA		
CONCRETE		
BUILDING		
NOT A PART		NAP
DIRECTION OF ONSITE SURFACE FLOW		
DIRECTION OF OFFSITE SURFACE FLOW		
DIRECTION OF PIPE		
DRAINAGE AREA BOUNDARY		
DRAINAGE AREA		X / XX DRAINAGE AREA DESIGNATION / AREA IN ACRES

STRUCTURAL AND NON-STRUCTURAL SOURCE CONTROL BMPS

N-15	STREET SWEEPING PRIVATE STREETS AND PARKING LOTS.
S-1	CATCH BASIN STENCILING.
S-3	TRASH AND WASTE STORAGE AREAS.
S-4	FILTRATION: SURFACE RUNOFF SHALL BE DIRECTED TO LANDSCAPE AREAS WHEREVER PRACTICAL.
S-4	COMMON AREA EFFICIENT IRRIGATION.
S-4	COMMON AREA RUNOFF-MINIMIZING LANDSCAPE DESIGN.
	BIOFILTRATION DEVICE (MODULAR WETLANDS SYSTEM)

DMI	LATITUDE	LONGITUDE
MODULAR WETLANDS SYSTEM	33°46'22"N	117°59'23"W
SUMP PUMP	33°46'22"N	117°59'23"W
INLET BOX STRUCTURE	33°46'22"N	117°59'23"W

IMPERVIOUS AREA = 3,143 SF
PERVIOUS AREA = 2,953 SF
BUILDING AREA = 14,992 SF
TOTAL AREA = 21,088 SF/0.484 ACRES

NOTES:

- THIS PLAN PRESENTS METHODS FOR FULFILLING THE REQUIREMENTS FOR THE ORANGE COUNTY CLEAN WATER PROGRAM STORMWATER QUALITY CONTROL REQUIREMENTS.

REVISIONS

NO.	INIT.	DATE	DESCRIPTION	APP'D	DATE

BENCH MARK:
1G-147-70, NAVD88; ELEVATION: 66.528', YEAR LEVELED: 2005.
DESCRIPTION: DESCRIBED BY OCS 2002 – FOUND 3 3\4" OCS ALUMINUM BENCHMARK DISK STAMPED "1G-147-70", SET IN THE TOP OF A 6 IN. BY 6 IN. CONCRETE POST. MONUMENT IS LOCATED IN THE NORTHWESTERLY CORNER OF THE INTERSECTION OF GARDEN GROVE BOULEVARD AND MAGNOLIA STREET, 142 FT. NORTHERLY OF THE NORTH CURB ALONG GARDEN GROVE BOULEVARD AND 53 WESTERLY OF THE CENTERLINE OF MAGNOLIA STREET. MONUMENT IS SET LEVEL WITH THE SIDEWALK.

OWNER OR DEVELOPER:
OWNER: LOC TRAN.
ADDRESS: 13040 COAST ST, GARDEN GROVE, CA 92844
TEL: (214) 682-5559.

SOILS ENGINEER:
ALTA CALIFORNIA GEOTECHNICAL INC
ADDRESS: 170 NORTH MAPLE STREET, CORONA, CA 92880
TEL: (951) 509-7090.
PROJECT NO.: 1-0521, REPORT DATED: MAY 1, 2024.
PREPARED BY: SCOTT A.GRAY, GE 2857.

PREPARED BY:
DONG ENGINEERING, INC.
ADDRESS: 7661 GARDEN GROVE BLVD., GARDEN GROVE, CA 92841.
TEL: (714) 617-5979.
EMAIL: INFO@DONGENGINEERING.COM

REGISTERED PROFESSIONAL ENGINEER
TRUONG TOMMY DONG
C75466
EXP. 03/31/2026
CIVIL
STATE OF CALIFORNIA

DATE SIGNED: 4/24/25

PRELIM WQMP PLAN

SITE ADDRESS: 13040 COAST ST, GARDEN GROVE, CA 92844

G-

SHEET 1 OF 1

SCALE: AS NOTED | DRAWN BY: GC | CHECKED BY: TD

CITY OF GARDEN GROVE

ATTACHMENT F

BMPs Fact Sheet

MODULAR WETLANDS™

*Advanced **Stormwater** Biofiltration*

MWS Linear

Contents

1 Introduction
2 Applications
3 Configurations
4 Advantages
5 Operation
6 Orientations | Bypass
7 Performance | Approvals
8 Sizing
9 Installation | Maintenance | Plants

The Urban Impact

For hundreds of years natural wetlands surrounding our shores have played an integral role as nature's stormwater treatment system. But as our cities grow and develop, these natural wetlands have perished under countless roads, rooftops, and parking lots.

Plant A Wetland

Without natural wetlands our cities are deprived of water purification, flood control, and land stability. Modular Wetlands and the MWS Linear re-establish nature's presence and rejuvenate water ways in urban areas.

MWS Linear

The Modular Wetland System Linear represents a pioneering breakthrough in stormwater technology as the only biofiltration system to utilize patented horizontal flow, allowing for a smaller footprint and higher treatment capacity. While most biofilters use little or no pre-treatment, the MWS Linear incorporates an advanced pre-treatment chamber that includes separation and pre-filter cartridges. In this chamber sediment and hydrocarbons are removed from runoff before it enters the biofiltration chamber, in turn reducing maintenance costs and improving performance.

Applications

The MWS Linear has been successfully used on numerous new construction and retrofit projects. The system's superior versatility makes it beneficial for a wide range of stormwater and waste water applications - treating rooftops, streetscapes, parking lots, and industrial sites.

Industrial

Many states enforce strict regulations for discharges from industrial sites. The MWS Linear has helped various sites meet difficult EPA mandated effluent limits for dissolved metals and other pollutants.

Residential

Low to high density developments can benefit from the versatile design of the MWS Linear. The system can be used in both decentralized LID design and cost-effective end-of-the-line configurations.

Streets

Street applications can be challenging due to limited space. The MWS Linear is very adaptable, and offers the smallest footprint to work around the constraints of existing utilities on retrofit projects.

Parking Lots

Parking lots are designed to maximize space and the MWS Linear's 4 ft. standard planter width allows for easy integration into parking lot islands and other landscape medians.

Commercial

Compared to bioretention systems, the MWS Linear can treat far more area in less space - meeting treatment and volume control requirements.

Mixed Use

The MWS Linear can be installed as a raised planter to treat runoff from rooftops or patios, making it perfect for sustainable "live-work" spaces.

More applications are available on our website: www.ModularWetlands.com/Applications

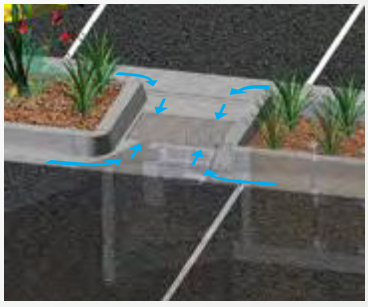
- Agriculture
- Reuse
- Low Impact Development
- Waste Water

Configurations

The MWS Linear is the preferred biofiltration system of Civil Engineers across the country due to its versatile design. This highly versatile system has available "pipe-in" options on most models, along with built-in curb or grated inlets for simple integration into your stormdrain design.

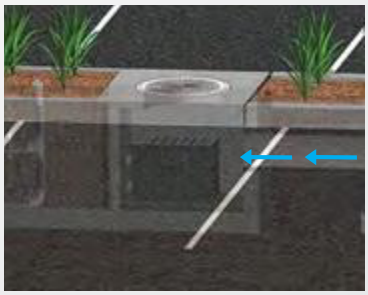
Curb Type

The *Curb Type* configuration accepts sheet flow through a curb opening and is commonly used along road ways and parking lots. It can be used in sump or flow by conditions. Length of curb opening varies based on model and size.



Grate Type

The *Grate Type* configuration offers the same features and benefits as the *Curb Type* but with a grated/drop inlet above the systems pre-treatment chamber. It has the added benefit of allowing for pedestrian access over the inlet. ADA compliant grates are available to assure easy and safe access. The *Grate Type* can also be used in scenarios where runoff needs to be intercepted on both sides of landscape islands.



Vault Type

The system's patented horizontal flow biofilter is able to accept inflow pipes directly into the pre-treatment chamber, meaning the MWS Linear can be used in end-of-the-line installations. This greatly improves feasibility over typical decentralized designs that are required with other biofiltration/bioretention systems. Another benefit of the "pipe in" design is the ability to install the system downstream of underground detention systems to meet water quality volume requirements.

Downspout Type

The *Downspout Type* is a variation of the *Vault Type* and is designed to accept a vertical downspout pipe from roof top and podium areas. Some models have the option of utilizing an internal bypass, simplifying the overall design. The system can be installed as a raised planter and the exterior can be stuccoed or covered with other finishes to match the look of adjacent buildings.

Advantages & Operation

The MWS Linear is the most efficient and versatile biofiltration system on the market, and the only system with horizontal flow which improves performance, reduces footprint, and minimizes maintenance. Figure-1 and Figure-2 illustrate the invaluable benefits of horizontal flow and the multiple treatment stages.

Featured Advantages

- Horizontal Flow Biofiltration
- Greater Filter Surface Area
- Pre-Treatment Chamber
- Patented Perimeter Void Area
- Flow Control
- No Depressed Planter Area

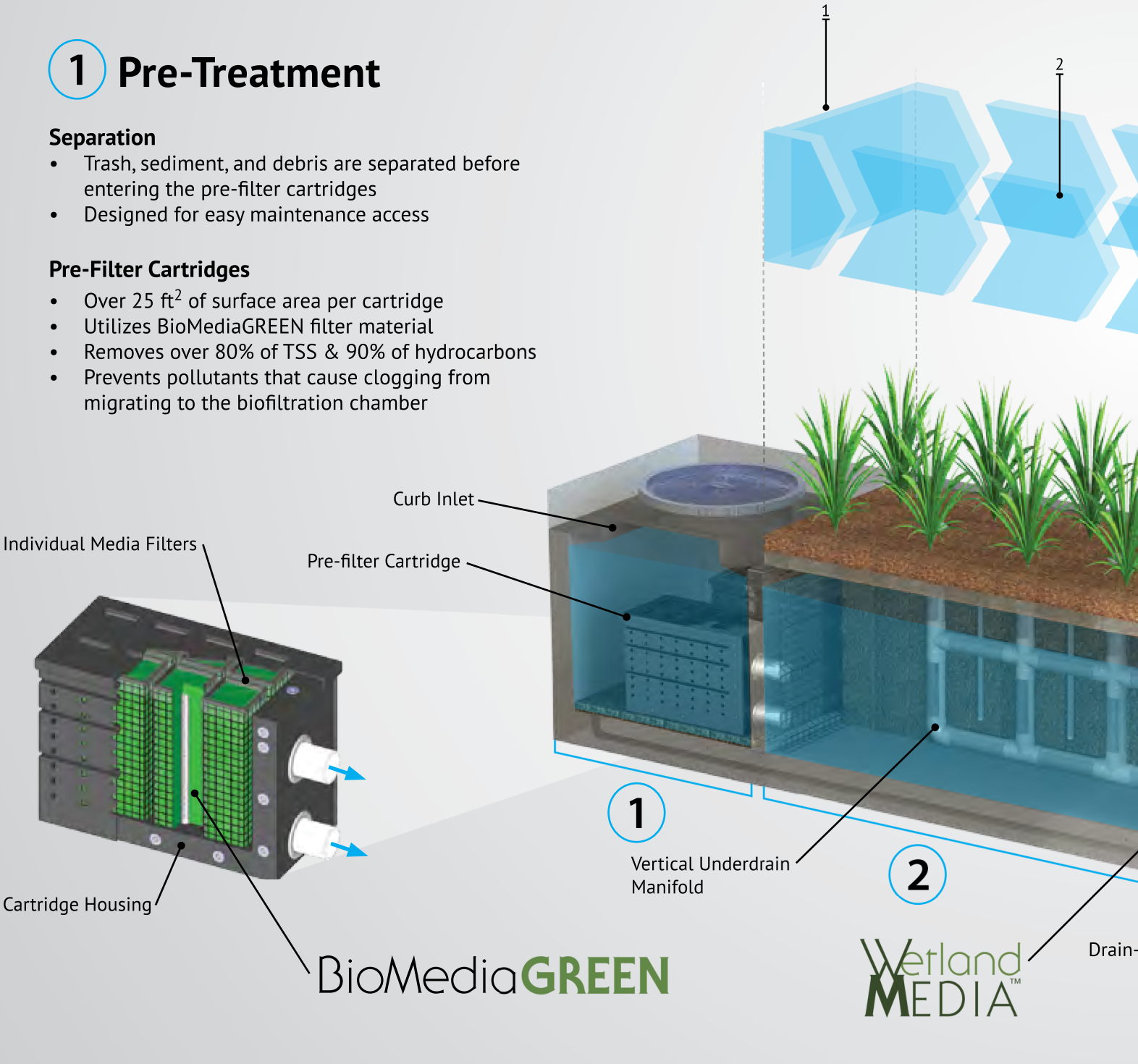
1 Pre-Treatment

Separation

- Trash, sediment, and debris are separated before entering the pre-filter cartridges
- Designed for easy maintenance access

Pre-Filter Cartridges

- Over 25 ft^2 of surface area per cartridge
- Utilizes BioMediaGREEN filter material
- Removes over 80% of TSS & 90% of hydrocarbons
- Prevents pollutants that cause clogging from migrating to the biofiltration chamber



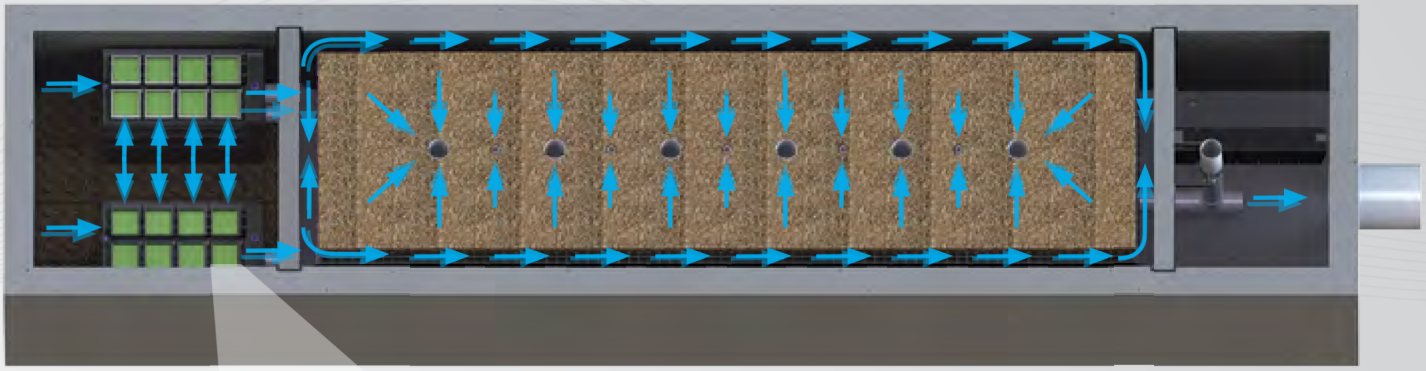


Fig. 2 - Top View

2x to 3x More Surface Area Than Traditional Downward Flow Bioretention Systems.

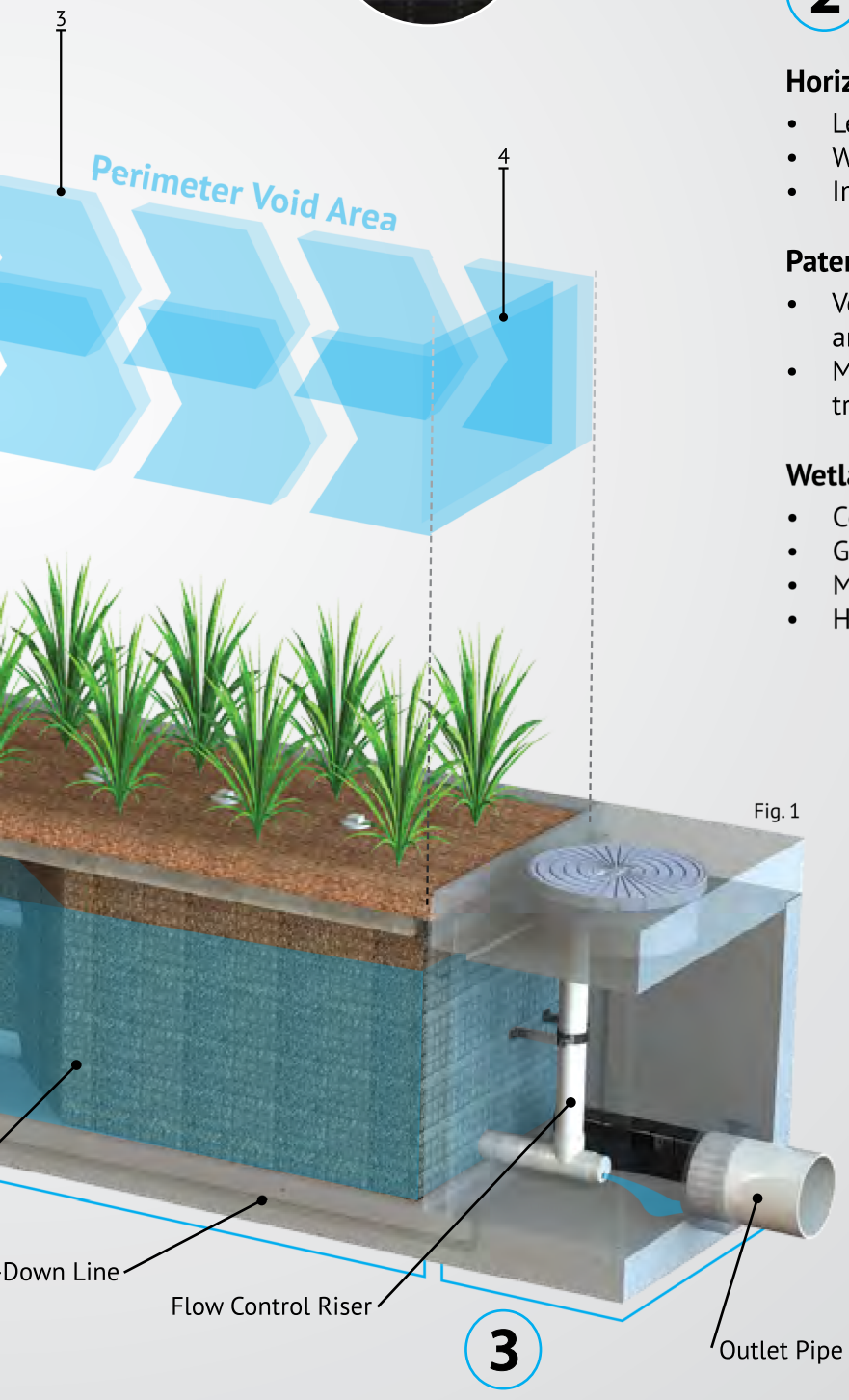


Fig. 1

2 Biofiltration

Horizontal Flow

- Less clogging than downward flow biofilters
- Water flow is subsurface
- Improves biological filtration

Patented Perimeter Void Area

- Vertically extends void area between the walls and the WetlandMEDIA on all four sides.
- Maximizes surface area of the media for higher treatment capacity

WetlandMEDIA

- Contains no organics and removes phosphorus
- Greater surface area and 48% void space
- Maximum evapotranspiration
- High ion exchange capacity and light weight

3 Discharge

Flow Control

- Orifice plate controls flow of water through WetlandMEDIA to a level lower than the media's capacity.
- Extends the life of the media and improves performance

Drain-Down Filter

- The Drain-Down is an optional feature that completely drains the pre-treatment chamber
- Water that drains from the pre-treatment chamber between storm events will be treated

Orientations

Side-By-Side

The *Side-By-Side* orientation places the pre-treatment and discharge chamber adjacent to one another with the biofiltration chamber running parallel on either side. This minimizes the system length, providing a highly compact footprint. It has been proven useful in situations such as streets with directly adjacent sidewalks, as half of the system can be placed under that sidewalk. This orientation also offers internal bypass options as discussed below.

End-To-End

The *End-To-End* orientation places the pre-treatment and discharge chambers on opposite ends of the biofiltration chamber therefore minimizing the width of the system to 5 ft (outside dimension). This orientation is perfect for linear projects and street retrofits where existing utilities and sidewalks limit the amount of space available for installation. One limitation of this orientation is bypass must be external.

Bypass

Internal Bypass Weir (Side-by-Side Only)

The *Side-By-Side* orientation places the pre-treatment and discharge chambers adjacent to one another allowing for integration of internal bypass. The wall between these chambers can act as a bypass weir when flows exceed the system's treatment capacity, thus allowing bypass from the pre-treatment chamber directly to the discharge chamber.

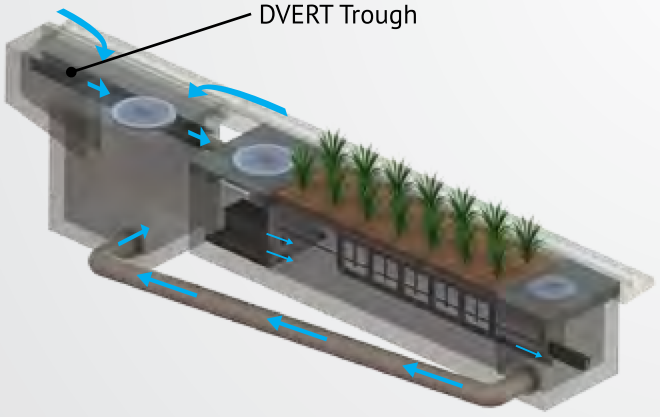
External Diversion Weir Structure

This traditional offline diversion method can be used with the MWS Linear in scenarios where runoff is being piped to the system. These simple and effective structures are generally configured with two outflow pipes. The first is a smaller pipe on the upstream side of the diversion weir - to divert low flows over to the MWS Linear for treatment. The second is the main pipe that receives water once the system has exceeded treatment capacity and water flows over the weir.

Flow By Design

This method is one in which the system is placed just upstream of a standard curb or grate inlet to intercept the first flush. Higher flows simply pass by the MWS Linear and into the standard inlet downstream.

DVERT Low Flow Diversion



This simple yet innovative diversion trough can be installed in existing or new curb and grate inlets to divert the first flush to the MWS Linear via pipe. It works similar to a rain gutter and is installed just below the opening into the inlet. It captures the low flows and channels them over to a connecting pipe exiting out the wall of the inlet and leading to the MWS Linear. The DVERT is perfect for retrofit and green street applications that allows the MWS Linear to be installed anywhere space is available.

Performance

The MWS Linear continues to outperform other treatment methods with superior pollutant removal for TSS, heavy metals, nutrients, hydrocarbons and bacteria. Since 2007 the MWS Linear has been field tested on numerous sites across the country. With it's advanced pre-treatment chamber and innovative horizontal flow biofilter, the system is able to effectively remove pollutants through a combination of physical, chemical, and biological filtration processes. With the same biological processes found in natural wetlands, the MWS Linear harnesses natures ability to process, transform, and remove even the most harmful pollutants.

Approvals

The MWS Linear has successfully met years of challenging technical reviews and testing from some of the most prestigious and demanding agencies in the nation, and perhaps the world.

Washington State DOE Approved

The MWS Linear is approved for General Use Level Designation (GULD) for Basic, Enhanced, and Phosphorus treatment at 1 gpm/ft^2 loading rate. The highest performing BMP on the market for all main pollutant categories.

TSS	Total Phosphorus	Ortho Phosphorus	Nitrogen	Dissolved Zinc	Dissolved Copper	Total Zinc	Total Copper	Motor Oil
85%	64%	67%	45%	66%	38%	69%	50%	95%

DEQ Assignment

The Virginia Department of Environmental Quality assigned the MWS Linear, the highest phosphorus removal rating for manufactured treatment devices to meet the new Virginia Stormwater Management Program (VSMP) Technical Criteria.

MASTEP Evaluation

The University of Massachusetts at Amherst – Water Resources Research Center, issued a technical evaluation report noting removal rates up to 84% TSS, 70% Total Phosphorus, 68.5% Total Zinc, and more.

Rhode Island DEM Approved

Approved as an authorized BMP and noted to achieve the following minimum removal efficiencies: 85% TSS, 60% Pathogens, 30% Total Phosphorus for discharges to freshwater systems, and 30% Total Nitrogen for discharges to saltwater or tidal systems.

Flow Based Sizing

The MWS Linear can be used in stand alone applications to meet treatment flow requirements. Since the MWS Linear is the only biofiltration system that can accept inflow pipes several feet below the surface it can be used not only in decentralized design applications but also as a large central end-of-the-line application for maximum feasibility.

Treatment Flow Sizing Table

Model #	Dimensions	WetlandMedia Surface Area	Treatment Flow Rate (cfs)
MWS-L-4-4	4' x 4'	23 ft^2	0.052
MWS-L-4-6	4' x 6'	32 ft^2	0.073
MWS-L-4-8	4' x 8'	50 ft^2	0.115
MWS-L-4-13	4' x 13'	63 ft^2	0.144
MWS-L-4-15	4' x 15'	76 ft^2	0.175
MWS-L-4-17	4' x 17'	90 ft^2	0.206
MWS-L-4-19	4' x 19'	103 ft^2	0.237
MWS-L-4-21	4' x 21'	117 ft^2	0.268
MWS-L-8-8	8' x 8'	100 ft^2	0.230
MWS-L-8-12	8' x 12'	151 ft^2	0.346
MWS-L-8-16	8' x 16'	201 ft^2	0.462

Volume Based Sizing

Many states require treatment of a water quality volume and do not offer the option of flow based design. The MWS Linear and its unique horizontal flow makes it the only biofilter that can be used in volume based design installed downstream of ponds, detention basins, and underground storage systems.

Treatment Volume Sizing Table

Model #	Treatment Capacity (cu. ft.) @ 24-Hour Drain Down	Treatment Capacity (cu. ft.) @ 48-Hour Drain Down
MWS-L-4-4	1140	2280
MWS-L-4-6	1600	3200
MWS-L-4-8	2518	5036
MWS-L-4-13	3131	6261
MWS-L-4-15	3811	7623
MWS-L-4-17	4492	8984
MWS-L-4-19	5172	10345
MWS-L-4-21	5853	11706
MWS-L-8-8	5036	10072
MWS-L-8-12	7554	15109
MWS-L-8-16	10073	20145

Installation

The MWS Linear is simple, easy to install, and has a space efficient design that offers lower excavation and installation costs compared to traditional tree-box type systems. The structure of the system resembles pre-cast catch basin or utility vaults and is installed in a similar fashion.

The system is delivered fully assembled for quick installation. Generally, the structure can be unloaded and set in place in 15 minutes. Our experienced team of field technicians are available to supervise installations and provide technical support.

Maintenance

Reduce your maintenance costs, man hours, and materials with the MWS Linear. Unlike other biofiltration systems that provide no pre-treatment, the MWS Linear is a self-contained treatment train which incorporates simple and effective pre-treatment.

Maintenance requirements for the biofilter itself are almost completely eliminated, as the pre-treatment chamber removes and isolates trash, sediments, and hydrocarbons. What's left is the simple maintenance of an easily accessible pre-treatment chamber that can be cleaned by hand or with a standard vac truck. Only periodic replacement of low-cost media in the pre-filter cartridges is required for long term operation and there is absolutely no need to replace expensive biofiltration media.

Plant Selection

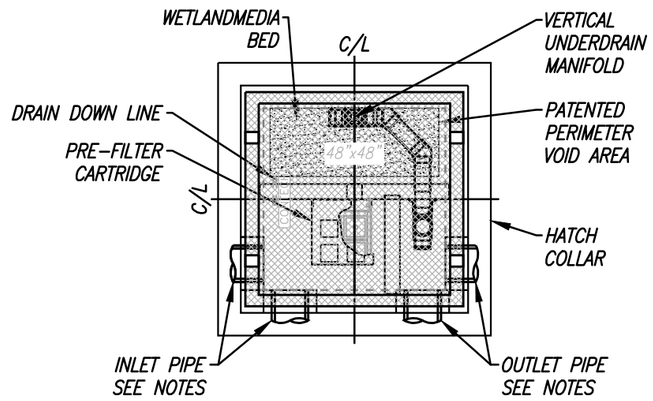
Abundant plants, trees, and grasses bring value and an aesthetic benefit to any urban setting, but those in the MWS Linear do even more - they increase pollutant removal. What's not seen, but very important, is that below grade the stormwater runoff/flow is being subjected to nature's secret weapon: a dynamic physical, chemical, and biological process working to break down and remove non-point source pollutants. The flow rate is controlled in the MWS Linear, giving the plants more "contact time" so that pollutants are more successfully decomposed, volatilized and incorporated into the biomass of The MWS Linear's micro/macro flora and fauna.

A wide range of plants are suitable for use in the MWS Linear, but selections vary by location and climate. View suitable plants by selecting the list relative to your project location's hardy zone.

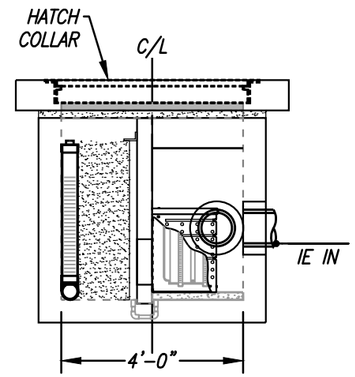
Please visit www.ModularWetlands.com/Plants for more information and various plant lists.

SITE SPECIFIC DATA			
PROJECT NUMBER		230447	
PROJECT NAME		34-UNIT APARTMENT	
PROJECT LOCATION		13040 COAST ST	
STRUCTURE ID			
TREATMENT REQUIRED			
TREATMENT FLOW (CFS)			0.052
PRETREATMENT LOADING RATE (GPM/SF)			3.0 GPM/SF
WETLAND MEDIA LOADING RATE (GPM/SF)			1.0
PEAK BYPASS REQUIRED (CFS) – IF APPLICABLE			_____ (CF
PIPE DATA	I.E.	MATERIAL	DIAMETER
INLET PIPE 1	48.42	PVC	8"
INLET PIPE 2	48.42	PVC	8"
OUTLET PIPE	47.08	PVC	8"
	PRETREATMENT	BIOFILTRATION	DISCHARGE
RIM ELEVATION	52.00	52.00	52.00
SURFACE LOAD	PEDESTRIAN		
NOTES:			

* PRELIMINARY ONLY - NOT FOR CONSTRUCTION



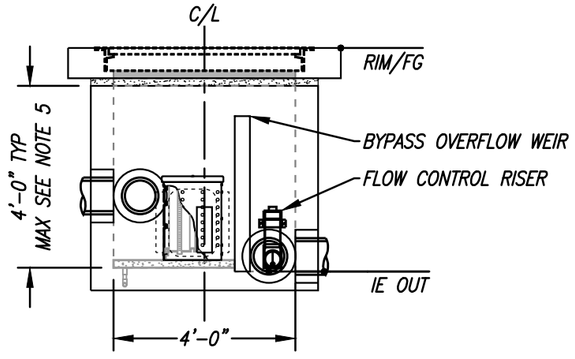
PLAN VIEW



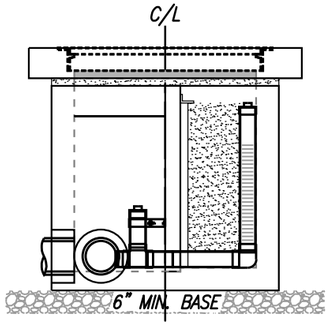
LEFT END VIEW

INSTALLATION NOTES

1. CONTRACTOR TO PROVIDE ALL LABOR, EQUIPMENT, MATERIALS AND INCIDENTALS REQUIRED TO OFFLOAD AND INSTALL THE SYSTEM AND APPURTENANCES IN ACCORDANCE WITH THIS DRAWING AND THE MANUFACTURER'S SPECIFICATIONS, UNLESS OTHERWISE STATED IN MANUFACTURER'S CONTRACT.
2. UNIT MUST BE INSTALLED ON LEVEL BASE. MANUFACTURER RECOMMENDS A MINIMUM 6" LEVEL ROCK BASE UNLESS SPECIFIED BY THE PROJECT ENGINEER. CONTRACTOR IS RESPONSIBLE FOR VERIFYING PROJECT ENGINEER'S RECOMMENDED BASE SPECIFICATIONS.
3. CONTRACTOR TO SUPPLY AND INSTALL ALL EXTERNAL CONNECTING PIPES. ALL PIPES MUST BE FLUSH WITH INSIDE SURFACE OF CONCRETE (PIPES CANNOT INTRUDE BEYOND FLUSH). INVERT OF OUTFLOW PIPE MUST BE FLUSH WITH DISCHARGE CHAMBER FLOOR. ALL PIPES SHALL BE SEALED WATERTIGHT PER MANUFACTURER'S STANDARD CONNECTION DETAIL.
4. CONTRACTOR RESPONSIBLE FOR CONTACTING CONTECH FOR ACTIVATION OF UNIT. MANUFACTURER'S WARRANTY IS VOID WITHOUT PROPER ACTIVATION BY A CONTECH REPRESENTATIVE.
5. VERTICAL HEIGHT VARIES BASED ON SITE SPECIFIC REQUIREMENTS.



ELEVATION VIEW



RIGHT END VIEW

MODULAR WETLANDS
FOR PATENT INFORMATION, GO TO www.ContechES.com/IP

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CONTECH ENGINEERED SOLUTIONS LLC
www.ContechES.com

MWS-L-4-4-V-UG
STORMWATER BIOFILTRATION SYSTEM
STANDARD DETAIL

PRELIM HYDROLOGY AND HYDRAULIC STUDY

Grading Permit No. GRD2X-XXX

PROJECT

34-UNIT APARTMENT
13040 COAST ST, GARDEN GROVE, CA 92844
APN: 097-011-03

PREPARED BY

DONG ENGINEERING, INC.
7661 Garden Grove Blvd,
Garden Grove, CA 92841
Tel: (714) 617-5979
Email: info@dongengineering.com

Prepared April 23, 2025

Revised

TRUONG DONG, RCE 75466, EXP: 03/31/2026

Table of contents

Section I: Project Description…….……..…..... 3

Section II: Construction Hydrology Calculations……...…….....…….....4

Attachment…….…… Hydrology Map

Appendix G: Preliminary Hydrology and Hydraulic Study

Section I: Project Description

- The project site is approximately 0.484 acres which located at 13040 Coast St in the City of Garden Grove

- The existing site includes 1 preschool building structure, asphalt concrete, concrete walkway, concrete gutter and landscapes. The whole site will be demolished for new construction.

- The proposed site includes:

Proposed building structure with 14,992 sf building/garage footprint.
Driveways and walkway: 3,143 sf
Landscapes area: 2,953 sf
+ Pervious: 2,953 SF
+ Impervious: 18,135 SF

There is 1 proposed drainage areas:

- DMA-A: Storm water will be captured via onsite storm drain facilities and surface drainage, then conveyed to a biofiltration device (Modular Wetlands System) where the DCV will be treated. Excess storm runoff will flow to sump pump then discharged to the street, following its existing drainage path.

Base on the attached calculations the anticipated runoffs of the post-development are:

Existing

Area	**Acres**	**Q_{10} (cfs)**	**Q_{25} (cfs)**	**Q_{100} (cfs)**
A	0.275	0.79	0.95	1.21
B	0.226	0.63	0.75	0.96
Total	0.501	1.42	1.70	2.17

Proposed

Area	**Acres**	**Q_{10} (cfs)**	**Q_{25} (cfs)**	**Q_{100} (cfs)**
A	0.484	1.03	1.23	1.58

Q	**Q_{10} (cfs)**	**Q_{25} (cfs)**	**Q_{100} (cfs)**
Ratio	0.72	0.73	0.73

Section II: Construction Hydrology Calculations

RATIONAL METHOD HYDROLOGY CALCULATIONS

Project location: 13040 COAST ST, GARDEN GROVE, CA 92844

The Rational method is commonly used for determining peak discharge from relatively small drainage area.

The Rational method is based on the following equation: Q = 0.9(I - Fm)A

Where: Q = peak discharge, in cubic feet per second (cfs)

Fm = ap x Fp : maximum loss rate (in/hr)

Fp = Loss rate for soil group B (in/hr) from O.C. Hydrology manual.

ap = Pervious area percentage:

ai = Impervious area percentage

I = a x tb = average rainfall intensity for a duration equal to the Tc for the area (in/hr)

a & b: factors in the Intensity regression equation from the Orange County Hydrology Manual

t = time of concentration (min.)

A = drainage area contributing to the design location, in acres.

	DMA	**Area**	**Pervious**	**a_p**
		sq-ft	*sq-ft*	*%*
Existing	A	11,975	1,653	0.138
	B	9,843	0	0.000
Proposed	A	21,088	2,953	0.140

Factors in the Intensity regression equation from the Orange County Hydrology Manual	**a**	**b**
For 10-year storm	10.209	-0.573
For 25-year storm	11.995	-0.566
For 100-year storm	15.560	-0.573

Soil group	**B**
F_P=	0.30

RUNOFF CALCULATIONS

Existing

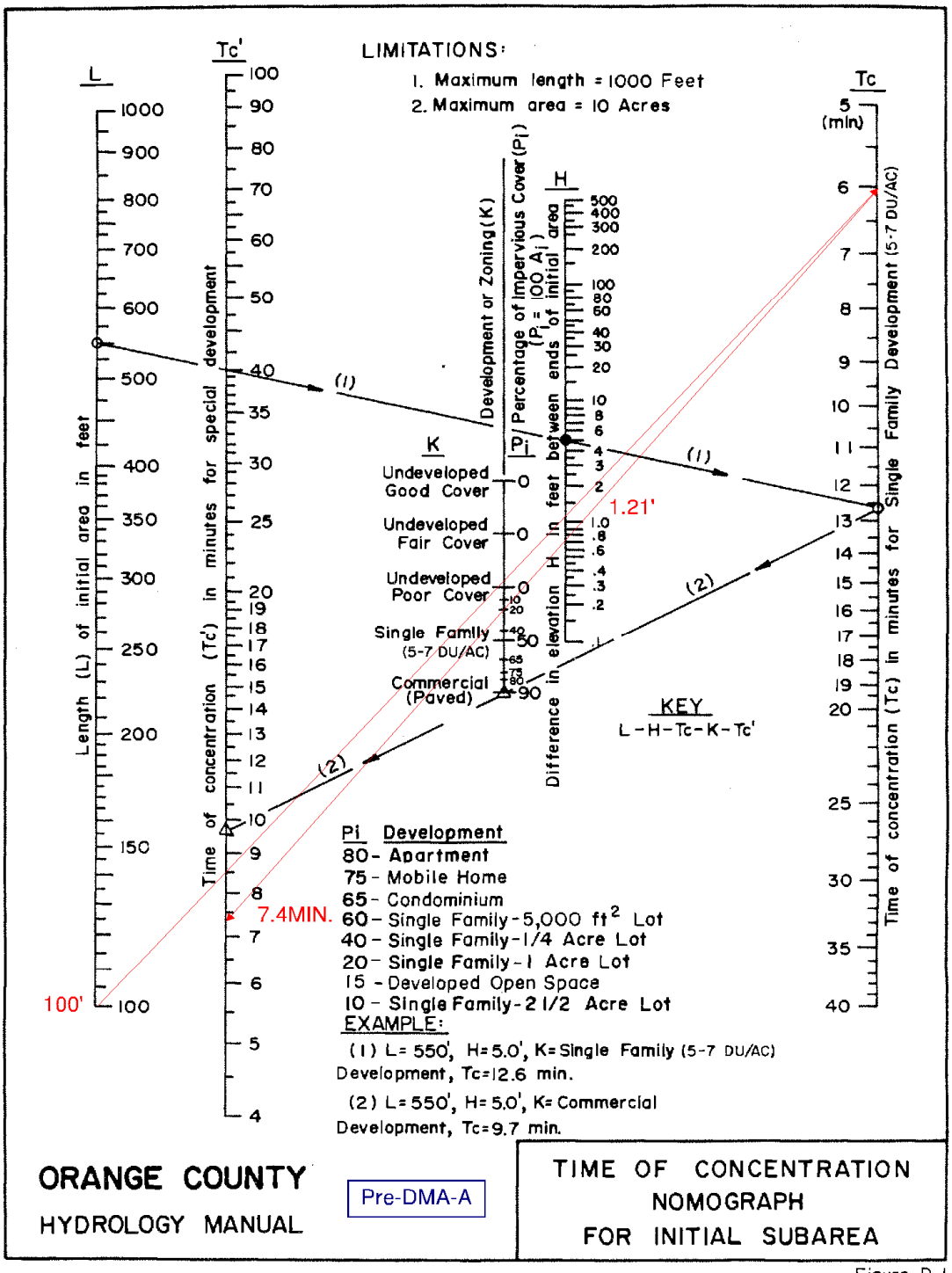
Area	**Q**	**A**	**Soil**	**Dev.**	**T_c**	**I**	**F_m**	**Q**	**Notes**
		(acres)	*type*	*type*	*(min)*	*(in/hr)*	*(in/hr)*	*(cfs)*	
A	**Q10**	0.275	B	Res.	7.4	3.24	0.04	***0.79***	Initial area
	Q25	0.275	B	Res.	7.4	3.86	0.04	***0.95***	Initial area
	Q100	0.275	B	Res.	7.4	4.94	0.04	***1.21***	Initial area
B	**Q10**	0.226	B	Res.	8	3.10	0.00	***0.63***	Initial area
	Q25	0.226	B	Res.	8	3.70	0.00	***0.75***	Initial area
	Q100	0.226	B	Res.	8	4.73	0.00	***0.96***	Initial area
Total:	**Q10**			**Q25**				**Q100**	
	1.42			**1.70**				**2.17**	

Proposed

A	**Q10**	0.484	B	Res.	12.5	2.40	0.04	***1.03***	Initial area
	Q25	0.484	B	Res.	12.5	2.87	0.04	***1.23***	Initial area
	Q100	0.484	B	Res.	12.5	3.66	0.04	***1.58***	Initial area
Total:	**Q10**			**Q25**			**Q100**		
	1.03			**1.23**			**1.58**		

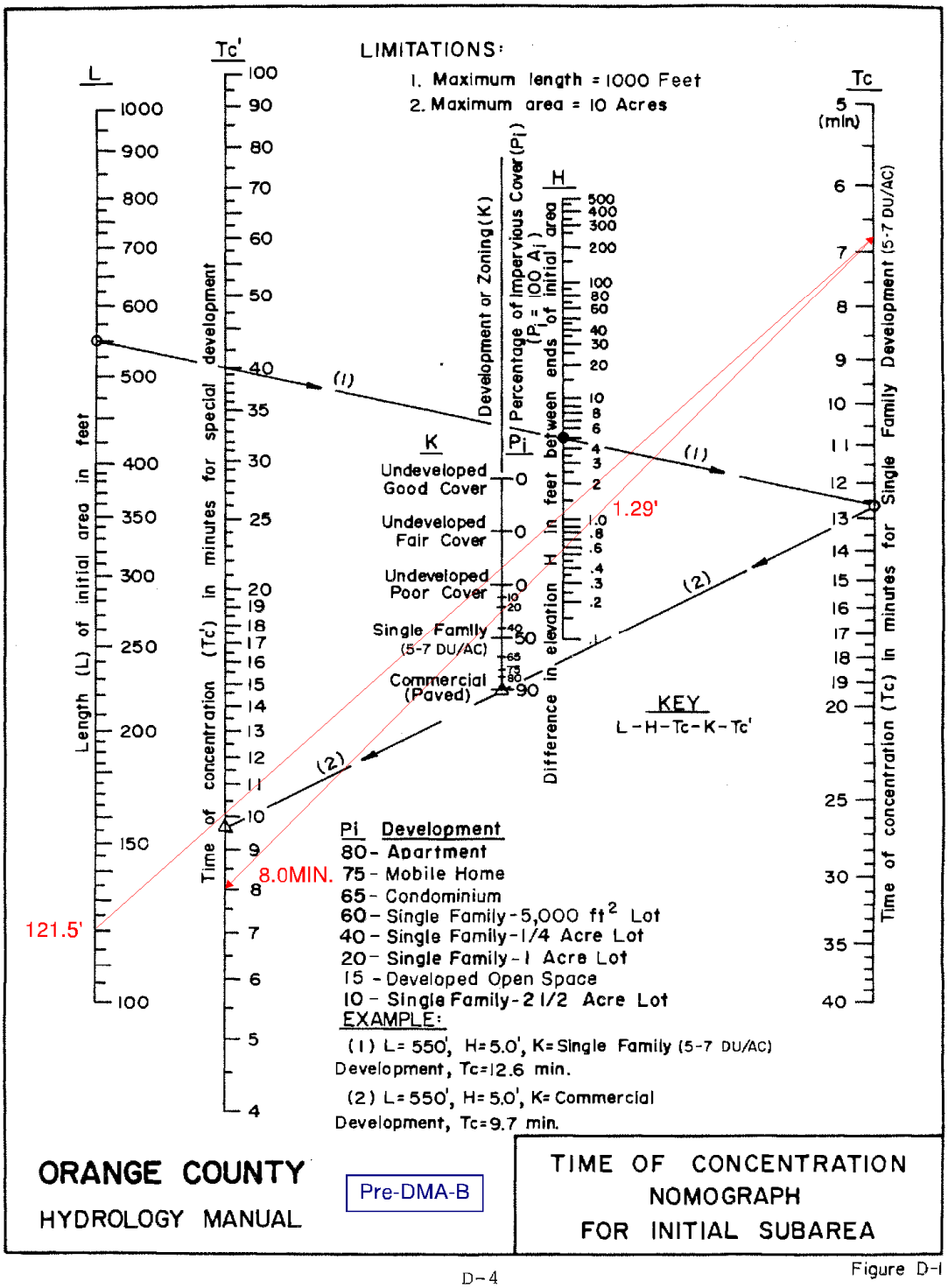
XVI-2a
FIGURE
PACE
Advanced Water Engineering
ORANGE COUNTY
INFILTRATION STUDY
ORANGE CO
CA
NRCS HYDROLOGIC
SOILS GROUPS
LEGEND
City Boundaries
Hydrologic Soil Groups
A Soils
B Soils
C Soils
D Soils
Source:
Soils: Natural Resources Conservation Service (NRCS)
Soil Survey - soil_ca679, Orange County & Western Riverside
Date of publication: 2006-02-06
http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm
SITE
Kilometers
Miles
Pacific Ocean

Existing



D-4

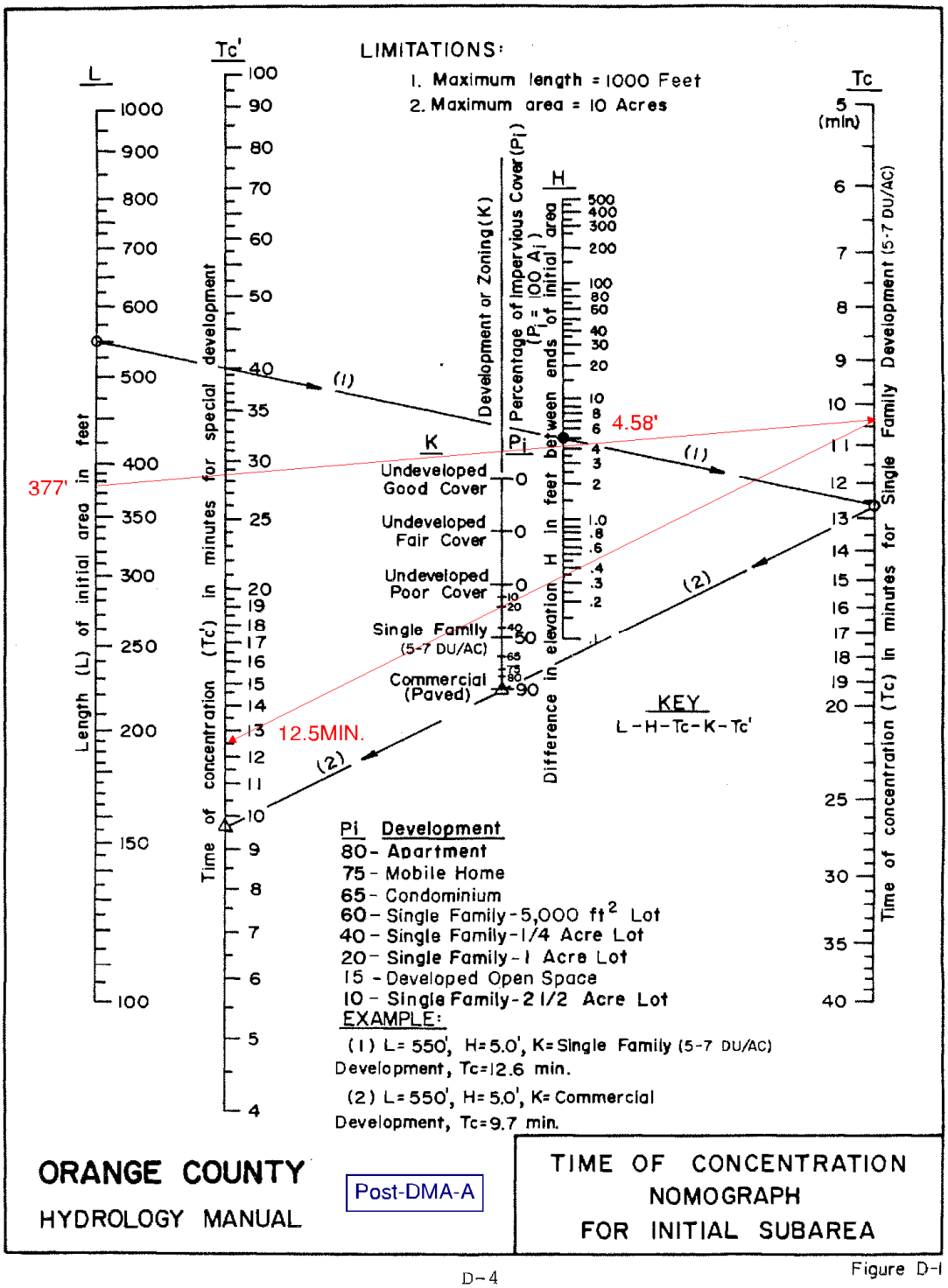
Figure D-1


LIMITATIONS:
1. Maximum length = 1000 Feet
2. Maximum area = 10 Acres
L
Tc'
Tc
Length (L) of initial area in feet
Time of concentration (Tc') in minutes for special development
Development or Zoning (K)
Pj Percentage of Impervious Cover (Pi)
(Pi = 100 Ai)
H
Difference in elevation H in feet between ends of initial area
Time of concentration (Tc) in minutes for Single Family Development (5-7 DU/AC)
K
Undeveloped Good Cover
Undeveloped Fair Cover
Undeveloped Poor Cover
Single Family (5-7 DU/AC)
Commercial (Paved)
KEY
L-H-Tc-K-Tc'
121.5'
8.0MIN.
1.29'
(1)
(2)
Pi Development
80- Apartment
75- Mobile Home
65- Condominium
60- Single Family-5,000 ft² Lot
40- Single Family-1/4 Acre Lot
20- Single Family-1 Acre Lot
15- Developed Open Space
10- Single Family-2 1/2 Acre Lot
EXAMPLE:
(1) L= 550', H= 5.0', K= Single Family (5-7 DU/AC) Development, Tc=12.6 min.
(2) L= 550', H= 5.0', K= Commercial Development, Tc=9.7 min.
ORANGE COUNTY
HYDROLOGY MANUAL
Pre-DMA-B
TIME OF CONCENTRATION NOMOGRAPH FOR INITIAL SUBAREA

D-4

Figure D-1

Proposed

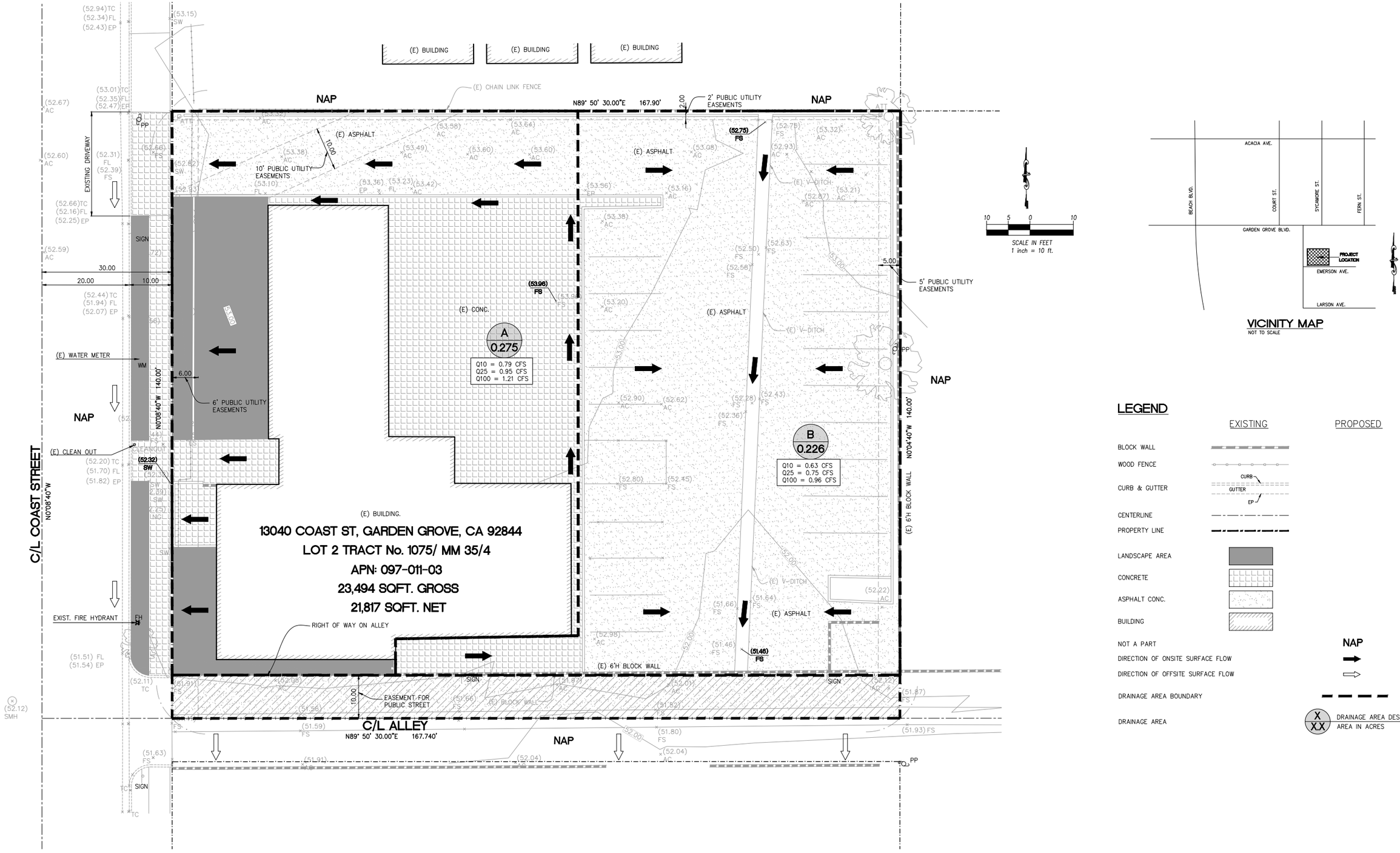


D-4

Figure D-1

Attachment A

HYDROLOGY MAP



VICINITY MAP
NOT TO SCALE

LEGEND

	EXISTING	PROPOSED
BLOCK WALL		
WOOD FENCE		
CURB & GUTTER	CURB / GUTTER / EP	
CENTERLINE		
PROPERTY LINE		
LANDSCAPE AREA		
CONCRETE		
ASPHALT CONC.		
BUILDING		
NOT A PART	NAP	
DIRECTION OF ONSITE SURFACE FLOW		
DIRECTION OF OFFSITE SURFACE FLOW		
DRAINAGE AREA BOUNDARY		
DRAINAGE AREA	X / X.X DRAINAGE AREA DESIGNATION / AREA IN ACRES	

REVISIONS

NO.	INIT.	DATE	DESCRIPTION	APP'D	DATE

BENCH MARK:
1G-147-70, NAVD88; ELEVATION: 66.528', YEAR LEVELED: 2005.
DESCRIPTION: DESCRIBED BY OCS 2002 – FOUND 3 3\4" OCS ALUMINUM BENCHMARK DISK STAMPED "1G-147-70", SET IN THE TOP OF A 6 IN. BY 6 IN. CONCRETE POST. MONUMENT IS LOCATED IN THE NORTHWESTERLY CORNER OF THE INTERSECTION OF GARDEN GROVE BOULEVARD AND MAGNOLIA STREET, 142 FT. NORTHERLY OF THE NORTH CURB ALONG GARDEN GROVE BOULEVARD AND 53 WESTERLY OF THE CENTERLINE OF MAGNOLIA STREET. MONUMENT IS SET LEVEL WITH THE SIDEWALK.

OWNER OR DEVELOPER:
OWNER: LOC TRAN.
ADDRESS: 13040 COAST ST, GARDEN GROVE, CA 92844
TEL: (214) 682-5559.

SOILS ENGINEER:
ALTA CALIFORNIA GEOTECHNICAL INC
ADDRESS: 170 NORTH MAPLE STREET, CORONA, CA 92880
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PROJECT NO.: 1-0521, REPORT DATED: MAY 1, 2024.
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REGISTERED PROFESSIONAL ENGINEER TRUONG DONG C75486 EXP. 03/31/2026 CIVIL STATE OF CALIFORNIA

DATE SIGNED: 4/23/25

PRELIM EXISTING HYDROLOGY MAP

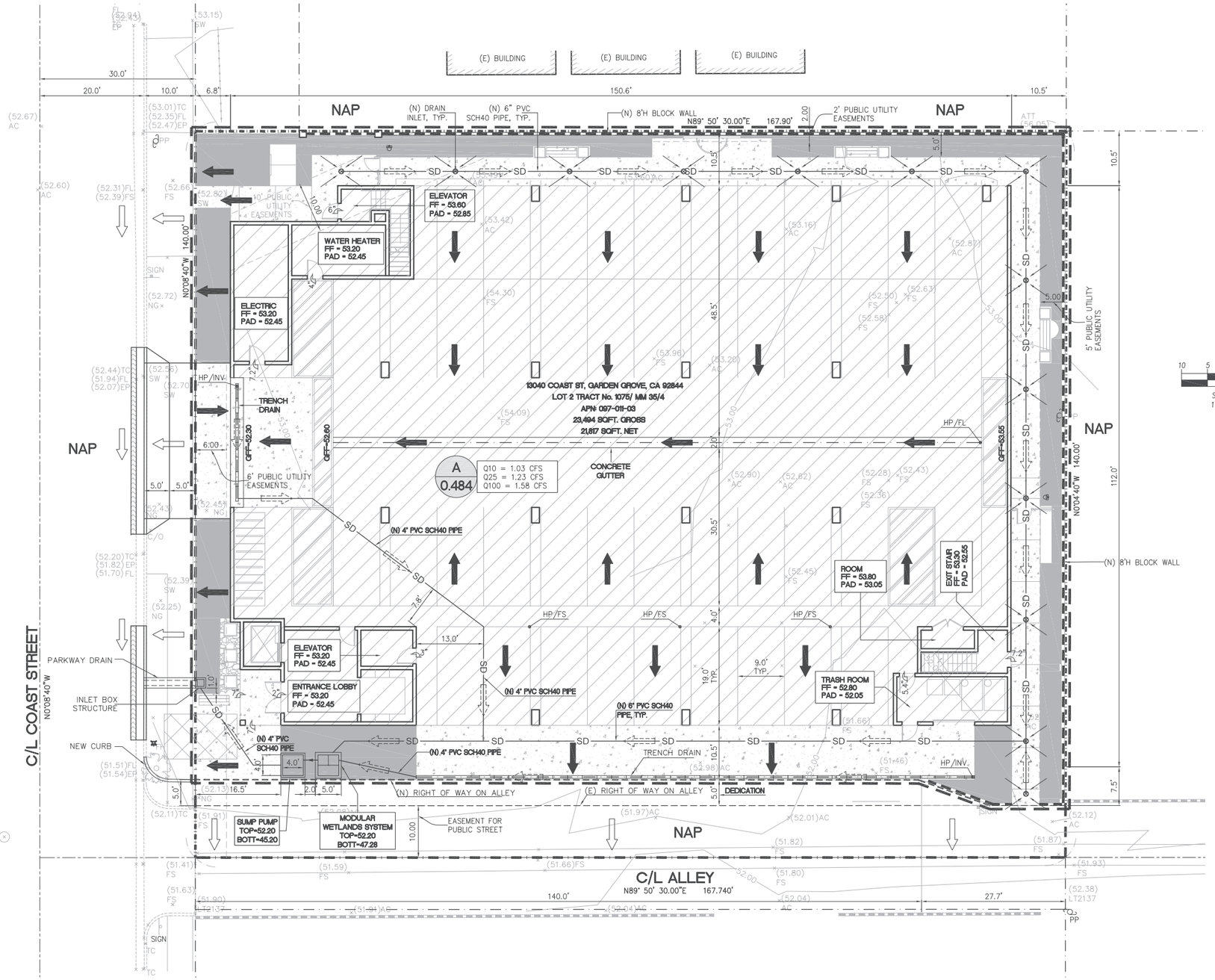
SITE ADDRESS: 13040 COAST ST, GARDEN GROVE, CA 92844

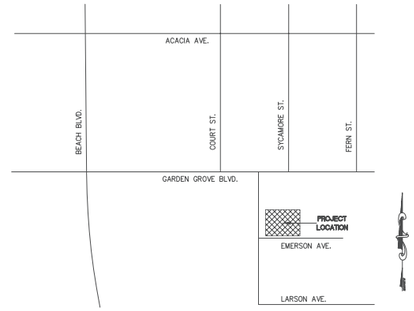
G-

SHEET 1 OF 2

SCALE: AS NOTED | DRAWN BY: GC | CHECKED BY: TD

CITY OF GARDEN GROVE





VICINITY MAP
NOT TO SCALE

LEGEND

	EXISTING	PROPOSED
BLOCK WALL		
WOOD FENCE		
CURB & GUTTER	CURB / GUTTER / EP	CURB / GUTTER / EP
CENTERLINE		
PROPERTY LINE		
FLOWLINE		
DRAIN PIPE		SD
DRAIN DIRECTION TO DRAIN INLET		
LANDSCAPE AREA		
CONCRETE		
BUILDING		
NOT A PART		NAP
DIRECTION OF ONSITE SURFACE FLOW		
DIRECTION OF OFFSITE SURFACE FLOW		
DIRECTION OF PIPE		
DRAINAGE AREA BOUNDARY		
DRAINAGE AREA		X / XX DRAINAGE AREA DESIGNATION, AREA IN ACRES

REVISIONS

NO.	INIT.	DATE	DESCRIPTION	APP'D	DATE

BENCH MARK:
1G-147-70, NAVD88; ELEVATION: 66.528', YEAR LEVELED: 2005.
DESCRIPTION: DESCRIBED BY OCS 2002 – FOUND 3 3\4" OCS ALUMINUM BENCHMARK DISK STAMPED "1G-147-70", SET IN THE TOP OF A 6 IN. BY 6 IN. CONCRETE POST. MONUMENT IS LOCATED IN THE NORTHWESTERLY CORNER OF THE INTERSECTION OF GARDEN GROVE BOULEVARD AND MAGNOLIA STREET, 142 FT. NORTHERLY OF THE NORTH CURB ALONG GARDEN GROVE BOULEVARD AND 53 WESTERLY OF THE CENTERLINE OF MAGNOLIA STREET. MONUMENT IS SET LEVEL WITH THE SIDEWALK.

OWNER OR DEVELOPER:
OWNER: LOC TRAN.
ADDRESS: 13040 COAST ST, GARDEN GROVE, CA 92844
TEL: (214) 682-5559.

SOILS ENGINEER:
ALTA CALIFORNIA GEOTECHNICAL INC
ADDRESS: 170 NORTH MAPLE STREET, CORONA, CA 92880
TEL: (951) 509-7090.
PROJECT NO.: 1-0521, REPORT DATED: MAY 1, 2024.
PREPARED BY: SCOTT A.GRAY, GE 2857.

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REGISTERED PROFESSIONAL ENGINEER — TRUONG DONG — C75466 — EXP. 03/31/2026 — CIVIL — STATE OF CALIFORNIA

DATE SIGNED: 4/24/25

PRELIM PROPOSED HYDROLOGY MAP

SITE ADDRESS: 13040 COAST ST, GARDEN GROVE, CA 92844

G-

SHEET 2 OF 2

SCALE: AS NOTED | DRAWN BY: GC | CHECKED BY: TD

CITY OF GARDEN GROVE

Appendix H: Phase I Environmental Site Assessment

CEC
Certified Environmental Consultants, Inc.

PHASE I ENVIRONMENTAL SITE ASSESSMENT REPORT FOR COMMERCIAL PROPERTY LOCATED AT 13040 COAST STREET, WITHIN THE CITY OF GARDEN GROVE, CALIFORNIA

For submittal to

Enterprise Bank & Trust
In Care Of: Dawson Appraisal, Inc,
229 Seal Beach Boulevard
Seal Beach, CA 90740

On behalf of

Mr. Bao Nguyen and
COT Trucking Inc.

Prepared by

Certified Environmental Consultants, Inc.

David R. Johannes, PG, REA, CES
President

CEC Project Number 22-2425
October 29, 2022

1206 Harris Avenue, Camarillo, CA 93010 (805) 388-8970 cecdj@aol.com

EXECUTIVE SUMMARY

Certified Environmental Consultants, Inc. (CEC) recently completed a Phase I Environmental Site Assessment (Phase I) for a church-type commercial property that is located along the east side of Coast Street, just south of the intersection of Garden Grove Boulevard and Coast Street, within the City of Garden Grove, in Orange County, California. The street address for the subject site is 13040 Coast Street, Garden Grove, CA 92844. The county-assigned assessor's parcel number for the subject property is 097-011-03.

This report summarizes the investigative procedures that were followed, and describes the findings and related conclusions for this recent environmental-screening investigation.

Based on CEC's research findings, it appears the site was vacant land, prior to being occupied by two sheds and/or residential-type buildings during the 1940s. The site appeared to have been vacant land again in aerial photographs from the years 1953 and 1963.

The existing site building could be seen in an aerial view of the site from the year 1972. The site appeared to have remained generally unchanged in more-recent aerial photographs.

Telephone directories showed the site had been occupied by a private party and a staffing business in 1970, and a series of banks from 1975 through 1990. The site currently is occupied by a church-based school. Reviewed records suggest church-type and school use of property has been in place since the mid-1990s.

Knowledgeable personnel indicated site operations do not utilize any underground tanks, clarifiers, or other types of potential environmental concerns, and do not generate hazardous wastes. Also, as described in the various report sections, no current TSD facilities, such as USTs, or indications of large-scale TSD-type facilities, such as disposal ponds, dry wells, hazardous-waste clarifiers, waste-treatment or -disposal facilities, land-filling operations, oil wells and/or petroleum-product tank farms, were identified at the site during CEC's visit or otherwise discovered through completion of the described land-use research.

The subject site did not appear on any of the various enforcement-type regulatory listings. The only listing found for the site pertained to one-time disposal of asbestos-related waste (1994). The closest database listings pertained to the adjacent-north property, for which operating permits, historical references, and a LUST case were shown. However, the former LUST case was shown to have been closed by the oversight agency.

Listings that are related to permits and/or directories do not suggest an unauthorized release has occurred, or other form of environmental concern exists, only that regulated materials or wastes may be or at one time have been present. No violations were reported for the nearby permit-based listings. As indicated above, a closed-case condition makes it unlikely significant residual and/or migratory contamination would be present.

Given a lack of known contamination on adjacent properties, relative location of more-distant listed properties, loamy and stratified nature of local soils, apparent direction of ground-water flow,

and/or nature of nearby listings (non-volatile compounds), it is unlikely the subject site has been adversely impacted by migratory contamination from nearby properties.

Based on distance(s) from the subject site, relative location(s) with respect to the anticipated direction of ground-water and surface-water flow, apparent depth to ground water, regional soil types, nature of listing(s) and/or status of listing(s), it is deemed unlikely the described regulatory listings included in the ERS database report are indicative of current environmental concerns for the subject property.

In summary, CEC has completed a Phase I as described for the subject property. Based on findings and rationale discussed in the various report sections, no current or historical environmental concerns were identified for the site or adjacent properties. Additionally, no "significant data gaps" deemed likely to adversely effect the findings of this investigation were identified.

CEC therefore concludes the site has been satisfactorily screened for potential environmental concerns. Given these findings, no additional site assessment or remediation activities presently are deemed necessary or recommended.

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Appendix A - Site Photographs
Appendix B - ERS Database Report (excerpts)

1.0 INTRODUCTION

Certified Environmental Consultants, Inc. (CEC) recently completed a Phase I Environmental Site Assessment (Phase I) for a church-type commercial property that is located along the east side of Coast Street, just south of the intersection of Garden Grove Boulevard and Coast Street, within the City of Garden Grove, in Orange County, California. The street address for the subject site is 13040 Coast Street, Garden Grove, CA 92844. The county-assigned assessor's parcel number for the subject property is 097-011-03.

This report summarizes the investigative procedures that were followed, and describes the findings and related conclusions for this recent environmental-screening investigation.

1.1 Purpose

The purpose of the assessment was to identify and assess apparent and recognizable site characteristics that likely would be of environmental concern, if present, and conversely, to ascertain and describe the apparent lack of recognized environmental conditions (RECs). Specifically, this investigation is intended for the purpose of providing the client with an "innocent landowner defense" under Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), also known as "Superfund", environmental-type liabilities.

Typical areas of potential environmental concern include present/past activities related to the treatment, storage and/or disposal (TSD) of regulated/hazardous materials, which could have adversely impacted the site, or other environmental hazards that likely would affect the property's value and/or future land use.

RECs do not include de minimis conditions at the subject site that generally do not appear to present a material risk of harm to public health or the environment, and that generally would not be deemed likely to become the subject of an enforcement action if brought to the attention of local-agency personnel. Small, isolated staining of the pavement surface in a vehicle-parking area would be an example of a de minimis condition.

A current REC would involve the presence or likely presence of hazardous substances or petroleum products in, on, or at a property due to release to the environment, under conditions indicative of a release to the environment, and/or under observable conditions that would pose a material threat of future release. An identified current REC would potentially represent a reportable/actionable environmental condition.

An historical REC (HREC) would be one that pertains to an older environmental release, wherein site assessment and/or remediation activities were completed to the satisfaction of an overseeing regulatory agency, and status as a "closed case" has been granted, with no on-going land- or activity-use restrictions having been imposed.

A controlled REC (CREC) also would involve an older release, wherein regulatory site closure had been issued. However, CRECs have not been remediated to cleanup levels that provide for unrestricted future land and/or activity use(s), such as physical barriers or other engineering controls that must remain in place.

1.2 Involved Parties

This report was prepared for submittal to Enterprise Bank & Trust (EBT), on behalf of Mr. Bao Nguyen and COT Trucking Inc., as authorized by EBT's contracting agent, Dawson Appraisal, Inc., in an October 17, 2022 electronic transmittal.

1.3 Scope of Work

The Scope of Work for the Phase I was based on current, published and widely accepted guidelines (American Society for Testing and Materials Guideline E1527-13), and experiences with similar projects.

Specifically, the following tasks were completed: performing a reconnaissance of the site and nearby properties; reviewing readily available local regulatory agency listings; reviewing a database-derived printout of federal, state, regional and local regulatory lists; reviewing various site-history/land-usage information sources, such as previous reports, historical photographs and maps; reviewing the state's Well Finder, Geotracker and Envirostor databases; performing a preliminary vapor-encroachment screening; reviewing questionnaires completed by knowledgeable persons and/or conducting personal interviews with property-ownership personnel.

Portions of the reviewed historical materials for this project were provided by Environmental Record Search (ERS), of Laguna Beach, California. The historical records, maps, and other data that were derived from the various ERS-provided references are indicated in the respective report sections.

CEC's services culminated with preparation of this written report of project-related findings and conclusions. Data acquisition for this report commenced on October 17, 2022. Data acquisition and evaluation for this report ended on October 29, 2022.

2.0 GENERAL SITE CHARACTERISTICS

2.1 Site Location

The subject site is located along the east side of Coast Street, approximately 150 feet south of the intersection of Garden Grove Boulevard and Coast Street, within the City of Garden Grove, California. The site location is shown on an excerpt from a recent topographic map, which is provided as Figure 1 - Site Location Map.

The site location also is shown on Figure 2 - Assessor's Parcel Map. Figure 2 additionally depicts the dimensions and layout of the subject parcels, and relationships to adjacent and nearby properties and roadways can be seen.

2.2 Adjacent Properties

The subject land is located in an area of mixed-use residential and commercial development. To the north, the site is bounded by a used-car lot, with Garden Grove Boulevard and a mixture of commercial and residential properties beyond. Commercial properties and more-distant residential

properties are present to the east of the site. Residential properties bound the site to the south. Coast Street borders the site to the west, with a church property and additional residences beyond.

Several views of the adjacent and nearby properties can be seen in recent photographs that are included in Appendix A. Adjacent land use also can be seen on Figure 3 - Recent Aerial Photograph.

2.3 Site Description and Current Site Uses/Operations

As reflected on the attached figures, the site consists of a rectangle shaped parcel, which occupies an area of roughly 0.5 acre. The western part of the site is developed with a single-story building, which formerly served as a church, and now is used for a private school.

The eastern part of the site is utilized for a gated, paved parking lot. The building appeared to be of wood-frame construction, with stucco and wood-trim exterior facings, and exhibited a concrete, slab-on-grade foundation/flooring system.

Additionally observed site improvements included paved driveway areas, landscaping, and features that were deemed to be indicative of the presence of municipal services (storm-water management, potable water and sanitary sewer) and regional-vendor utility connections (natural gas and electricity).

3.0 ENVIRONMENTAL SETTING

3.1 Regional Physiographic Conditions

The site is located within the southern, near-coastal portion of California's Transverse Ranges Geomorphic Province. The Transverse Ranges Province generally consists of east-trending, elongate, fault-derived, sequential mountains and valleys, and geologically is quite complex. Structural features in the region generally are related to crustal shortening (compression-type forces).

The Transverse Ranges Geomorphic Province is characterized by complexly folded and faulted rock units, primarily consisting of marine and non-marine sedimentary materials, with some localized outcroppings of intrusive (granitic) and extrusive (volcanic) igneous rocks, and associated metamorphic rocks.

Formational and other mapped units of the Transverse Ranges Province vary in age from Proterozoic to Holocene/Recent (greater than 570 million years old to less than 11,000 years in age). Questions still remain regarding the origin and/or age of many physiographic features found in the Transverse Ranges region.

3.2 Soils Conditions

The site and surrounding areas have been developed with the described building, landscaping and pavement. Inasmuch, CEC did not observe the site's native soils. However, according to information provided by ERS, the site area's soils primarily belong to the Bolsa assemblage.

Soils of this grouping are reported to consist of layered zones of silty to clayey loams, which would exhibit slow to very slow infiltration rates. These types of layered (stratified) soils, and/or fine-grained soil types unto themselves, would tend to inhibit the migration of liquid-phase or vapor-phase contamination, if present.

3.3 Geological Conditions

Based on review of a geologic map of the area, the site and vicinity are underlain by Recent-aged alluvial deposits. These younger materials appeared to be unconformably underlain by Miocene-age sedimentary deposits that are of marine origin.

Numerous named and unnamed faults have been identified at on-shore and off-shore locations in the Orange County area, and southern California in general is known to be seismically active. Several active and inactive faults are known or suspected to be present within a 20-mile radius of the subject site.

However, based on CEC's cursory review of a state-wide fault map, no known or suspected faults appear to be present at or adjacent to the site. Therefore, like much of southern California, the site could be subjected to significant ground motion during an earthquake event, but it appears unlikely site improvements would be directly impacted by rupture of the ground surface.

3.4 Hydrological/Hydrogeological Conditions

The site area was found to be relatively level land. The site building lies at an estimated elevation of about 74 feet above mean sea level. The general area surrounding the subject property appeared to have been graded to route surface drainage into collection boxes and storm-drain inlets and channels that were noted at the site and in the adjacent municipal roadways.

Nearby properties appeared to have been graded to direct surface-water runoff away from the subject site. No readily apparent indications of improper use of storm drains at or adjacent to the site for improper disposal of hazardous wastes were noted.

No mapped water courses pass through or adjacent to the site, and according to information provided by ERS, the site area does not lie within a mapped flood zone. Based on this finding, routine flooding of the site does not appear to be of significant concern. Additionally, no mapped riparian areas, or designated wetland zones, were identified at or adjacent to the subject site.

No water wells were identified at the site, and no depth or quality data has been reviewed for ground water beneath the site. Based on CEC's regional experience, first ground water beneath the site area likely occurs as a perched or semi-perched water-bearing interval, under unconfined or semi-confined conditions, at depths of roughly 10 to 20 feet below ground surface.

Assuming a roughly parallel track with ground topography, ground water beneath the site likely flows westerly to southwesterly in general trend.

4.0 RESULTS OF INVESTIGATION

4.1 Site Inspection Observations

On October 18, 2022, CEC's representative performed a reconnaissance of the subject property. A tour of the property was provided by Mr. Kevin Lee (real estate agent). The site building currently is occupied by a church-based school, which was unoccupied at the time of the visit. The general layout of the site can be seen in photographs of the property and area that are provided in Appendix A. Aerial-view depictions of the site building and grounds also are shown on Figure 3.

Rubbish bins that were present at and near the site were labeled for use only in disposal of non-liquid and non-hazardous wastes. No indications of improper use of the rubbish bins for disposal of hazardous wastes were observed.

Electrical transformers were present at or near the site. However, no indications of damage to or leakage from the nearby transformers were observed. In addition, no leaking fluorescent light fixtures or underground hoists were noted at the site. Based on these field observations, it is deemed unlikely that the site has been adversely impacted by polychlorinated biphenyls (PCBs).

Storm-water channels and inlets were noted at and adjacent to the site. However, no indications of improper use of this fixture for disposal of hazardous wastes were observed.

No large-scale chemical storage areas, or hazardous-waste treatment or disposal facilities or operations, were observed or reported to be present at the subject property. Additionally, no indications of current environmental concerns, such as evidence of recurring chemical spills, existing underground storage tanks (USTs), or above-ground tanks, were noted or reported to be present at the site.

Further, no indications of residual contamination from past operations, such as irregular topography, noxious odors and/or stressed vegetation, were identified during CEC's site visit or reported to be present by knowledgeable personnel.

4.2 Adjacent Site and Vicinity Observations

A walk-by reconnaissance of the adjacent properties and general neighborhood also was performed on October 18, 2022, to check for readily apparent conditions that would be of potential environmental concern. No current and readily apparent indications of environmental concern were observed on the adjacent or close-proximity nearby parcels or roadways.

4.3 Results of Regulatory Agency Lists Review

CEC reviewed the state's Geotracker website, where county and state-level regulatory mandates and compliance-related technical reports are archived in a digital format. These local-agency records typically are related to leaking tanks, and/or other releases of hazardous-materials. The subject site was not included on any of the Geotracker listings.

The closest Geotracker listings were shown be closed leaking underground storage tank (LUST) cases. Status as a closed case indicates a site has been assessed and/or remediated to the satisfaction

of the applicable regulatory requirements, under regulatory oversight. This condition makes it unlikely significant residual and/or migratory contamination would be present.

CEC also visited the state's EnviroStor website, where listings of large-scale cleanups and partial cleanups that may have resulted in environmental liens, or land-use restrictions, are archived by the state. Neither the subject site nor any of the adjacent or near-proximity properties were included on any of the various EnviroStor listings.

Additionally, CEC reviewed database-derived summaries of governmental listings of known or suspected hazardous materials sites in the vicinity that may have an adverse impact on the subject site. The database search was performed by ERS, in accordance with ASTM standards for this type of investigation.

A summary of the various listings and findings follows. Descriptions of the various lists and listings, listing objectives, responsible regulatory agencies, ASTM's recommended search radius for each type of listing, as well as a copy of pertinent portions of the database report, are included in Appendix B.

The subject site did not appear on any of the various enforcement-type regulatory listings. The only listing found for the site pertained to one-time disposal of asbestos-related waste (1994). The closest database listings pertained to the adjacent-north property, for which operating permits, historical references, and a LUST case were shown. However, the former LUST case was shown to have been closed by the oversight agency.

Listings that are related to permits and/or directories do not suggest an unauthorized release has occurred, or other form of environmental concern exists, only that regulated materials or wastes may be or at one time have been present. No violations were reported for the nearby permit-based listings. As indicated above, a closed-case condition makes it unlikely significant residual and/or migratory contamination would be present.

Given a lack of known contamination on adjacent properties, relative location of more-distant listed properties, loamy and stratified nature of local soils, apparent direction of ground-water flow, and/or nature of nearby listings (non-volatile compounds), it is unlikely the subject site has been adversely impacted by migratory contamination from nearby properties.

Based on distance(s) from the subject site, relative location(s) with respect to the anticipated direction of ground-water and surface-water flow, apparent depth to ground water, regional soil types, nature of listing(s) and/or status of listing(s), it is deemed unlikely the described regulatory listings included in the ERS database report are indicative of current environmental concerns for the subject property.

4.4 Results of Site-History/Land-Use Review

4.4.1 Personal Interviews

CEC spoke with Mr. Kevin Lee regarding known site conditions. Mr. Lee indicated the site building formerly had been occupied by a church, which has moved to the property to the east, beyond Coast Street, and that the on-site school is affiliated with this church. Mr. Lee also

indicated that he was not aware, and the property owners had not disclosed any knowledge, of any underground storage tanks or other types of environmental concerns associated with the site.

CEC previously has contacted individuals that were associated with various local-agency regulatory offices regarding any personal knowledge they may have about known or potential environmental concerns at a particular site.

Through these prior conversations, CEC has been informed public-agency representatives would not be aware of any environmental issues that were not included in the above-described regulatory listings. Based on this information, it was deemed unlikely additional interviews of local agency personnel would provide information that would not otherwise be available through the described research.

4.4.2 Ownership Information

According to reviewed information, the site currently is owned by Gospel First Korean Baptist Foundation, a California nonprofit religious corporation. Historical-ownership information for the property was not provided for review, and was not readily available through public-domain information sources. The collection, review and reporting of prior property-ownership records, if desired, would require an increase in the scope and timeframe of CEC's investigation.

4.4.3 Air Resources Control Board Records

The referenced ERS database report included summaries of various regulatory listings that are related to industrial-type air emissions. No emission-related records for the site's current occupant were found.

4.4.4 Aerial Photographs

Historical aerial photographs of the site and vicinity that were provided by ERS were reviewed to gather historical land-usage information. Aerial photographs of the site area dating back to 1938 were provided and reviewed. Specifically, photographs from 1938, 1947, 1953, 1963, 1972, 1987, 1993, 2003, 2012 and 2022 were observed. A summary of the site-use information that was gathered from the various photographs follows.

The scale and/or generally poor quality of several photographs made detailed examination of specific site features impractical. However, general use of the site and area appeared to be generally consistent with the historical information gathered through the other described information sources.

The site appeared to have been vacant land in the 1938 photograph. Two sheds an/or small residences were present at the site at the time of the 1947 view. The site appeared to have been vacant in the 1953 and 1963 photographs.

The existing site building and grounds could be seen in the 1972 and more-recent aerial views. The site appeared to have remained generally unchanged since the mid-1970s. No large-scale TSD-type facilities, such as railroad facilities, waste-disposal/treatment ponds, land-filling operations, oil wells and/or tank farms, were observed at the site in these historical aerial photographs.

4.4.5 Insurance Maps

Sanborn Maps originally were prepared for use by the insurance industry, and date back to the late 1800s for some metropolitan areas. These maps often depict pertinent site information regarding number, approximate size and location of structures on the property, types of construction materials, presence of above-ground or underground storage tanks, and age of site improvements.

ERS's researchers indicated Sanborn Maps are not available for the site area. This finding is consistent with a lack of historically significant heavy-industry or large-scale commercial development at an near the site.

4.4.6 Regional Wildcat Map

CEC visited the Department of Oil, Gas and Geothermal Resources website and reviewed their Well Finder database of historical natural-gas and petroleum-exploration and -production maps (Wildcat Maps). No historical petroleum wells were shown to be or have been present at or within 1,000 feet of the site.

4.4.7 Topographic Maps

CEC reviewed excerpts of topographic maps of the site area that were provided by ERS to gather additional historical-usage information. The earliest provided topographic base map was prepared in 1896. Subsequent maps included publication and/or photograph-based revision dates of 1916, 1922, 1935, 1947, 1956, 1967, 1972, 1981, 2012 and 2018.

The site area was depicted as vacant, undeveloped land, on the 1896 through 1956 maps. The site and vicinity were shown to be "urbanized area", with no structures or specific land uses shown, on the 2012 and 2018 maps. No large-scale TSD-type facilities, such as railroad facilities, waste-disposal/treatment ponds, land-filling operations, oil wells and/or tank farms, were observed at the site in these historical aerial photographs.

4.4.8 Historical Directories

ERS provided a report of historical-directories (telephone books) for the site's street address. The reviewed listings summary dated back to 1955. Subsequent telephone-directory searches included the years of 1960, 1966, 1975, 1980, 1985, 1990, 1995, 2000, 2005 and 2007.

Directories from the years 1955 through 1966 did not show any listings for the site's address. A private-party listing and a staffing business were shown to have occupied the site in 1970. A Various banks were shown to have occupied the site from the mid-1970s through early 1990s. The former church usage described above, and more-recent school use, were found for the site in the 1995 through 2007 directories.

4.4.9 Environmental Liens/Institutional Controls/Engineering Barriers

The referenced environmental-screening guidelines require this report's user to determine whether any environmental liens or other types of institutional controls are present at the subject property.

However, CEC previously reviewed a provided copy of a Preliminary Title Report (PTR) for the site. The reviewed PTR recently had been issued on by Best California Title Company, Inc.

Only routine language, such as that pertaining to mineral rights, tax-liens, lease-agreements, and/or easements, was identified in the reviewed text. Specifically, no references to environmental liens, institutional controls, or engineering barriers, such as concrete caps that must remain in place, or other types of land-use restrictions, were described in the PTR.

Additionally, no large-scale cleanups were shown to have occurred at or near the site in the state's Envirostor database, and no actionable conditions related to former service-station operations were identified upon removal of USTs, as described in Section 4.5. Based on these findings, it is deemed unlikely any environmental liens of institutional controls exist for the site.

4.4.10 Building and Safety Department

CEC previously has visited the offices of the city's Building and Safety Department, to review their "street file" records. It was found the city's site records typically have been archived and are not readily available for public viewing. However, given the other findings, this condition is not deemed to represent a "significant data gap".

4.5 Synopsis of Previous Environmental Investigations

CEC previously performed a Phase I investigation for the subject parcels during 2019. No environmental concerns were identified for the site, and no further investigation or mitigation activities were recommended.

4.6 Results of Suspect ACM Observations

Asbestos is a naturally occurring mineral fiber that has been used in construction and many other industries. Manufacturers used asbestos in their commercial products because asbestos is noncombustible, noncorrosive, nonconductive, and it has high tensile strength.
Asbestos fibers have been mixed with binding agents and other materials to create approximately 3,600 different commercial products.

The amount of asbestos contained in these asbestos-containing materials (ACMs) can vary from less than 1% to 100%. Over a period of several decades, it generally was determined that any inhalation exposure to asbestos fibers represented a potential health hazard. Regulatory agencies banned the use of friable, asbestos-containing building materials after 1978.

The described research suggests initial construction of the site building occurred during the 1960s. While an asbestos-disposal record was found for the site, based on the date of construction, ACMs may be present at the site.

Although not an REC, CEC recommends that current and future owners and occupants be notified of the potential presence of ACMs and cautioned against activities that would disturb potential ACMs. Additionally, owners and occupants of the site should be informed that future demolition and renovation activities may require special permitting and/or engineering activities.

4.7 Radon Potential and Air-Quality Concerns

Radon is a colorless, odorless, tasteless radioactive gas that occurs in soil and ground water as a by product of radioactive decay of uranium and thorium isotopes found in certain rocks. Various levels of naturally occurring radon exist across the United States. Radon can become concentrated in buildings with poor air circulation. Prolonged exposure to radon has been associated with increased risk of certain types of cancer.

The California Statewide Radon Survey Interim Results Report was reviewed regarding potential naturally occurring radon levels at the site. For this report, the California Department of Health Services divided the state into nine regions, based on general geology, climate and existing radon occurrence and distribution knowledge.

The subject site is located in Region 9. Based on statistical analysis of random sampling performed by ZIP Code, the report predicted only 0.5% of the homes in Region 9 exceeded the EPA's action level of 4.0 pCi/l. Therefore, elevated levels of naturally occurring radon at the site are not anticipated.

Sampling at the site for the presence of radon, mold, or other indoor-air-quality concerns, would require use of specialty sampling equipment and outside laboratory analyses. Such additional sampling services, and/or otherwise evaluating the site for potential indoor-air-quality concerns, such as vapor intrusion, would necessitate an increase in CEC's scope of work, timeframe and budget.

5.0 VAPOR ENCROACHMENT SCREENING (VES)

In order to address potential vapor-encroachment concerns, as related to nearby sites, ASTM Standard E2600-10 (Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions) was referenced for general guidance, as part of this Phase I environmental screening. The step-wise screening process, rationale, and associated outcome, are discussed below.

The purpose of this type of additional vapor-threat screening is to establish whether or not an ASTM-defined Vapor Encroachment Condition (VEC) may exist, due to migratory contamination (ground water and/or soil vapor), that may be derived from nearby database-listed properties.

Conversely, the vapor-encroachment screening process is intended to provide a procedure for establishing that a VEC does not or is not likely to exist for a given property.

5.1 Tier I VES

The initial step in a VES involves a cursory review of the regulatory database report described in Section 4.3 and other historical records where applicable, to assess if any "known or suspect potentially contaminated properties" exist within close proximity of the site. The referenced ASTM guidelines require initial screening at a radius of 1 mile, in establishing a default Area of Concern (dAOC) that surrounds the site.

At this level of potential vapor-migration evaluation, there is no distinction between releases of petroleum products and other chemicals of concern, such as industrial cleaning and/or degreasing solvents, or local physical conditions.

Several of the nearby agency-listed properties that were described in Section 4.3 lie within the ASTM-defined dAOC for the subject site. Based on this initial finding, additional evaluation of the potential for off-site migratory contamination was conducted, as described below.

5.2 Tier II VES

Tier II screening uses more-detailed information for the nearby sites of potential concern that had been identified through the Tier I process, to better assess whether or not a migratory contaminant plume is close enough to the subject site to result in a possible VEC.

Specific distances between properties, with respect to the direction of ground-water flow and/or chemical type, soil types, and more-detailed review of the nature of nearby regulatory listings, are used to further assess the likely presence of a VEC. The known or likely presence of a nearby VEC unto itself could require consideration as a potential REC.

5.3 Tier III VES

As described in various report sections, no active enforcement-type listings were found for the site and the former LUST case for an adjacent property was found to have been formally closed. CEC therefore concludes it is unlikely that a VEC exists at the subject property. Inasmuch, no additional evaluation of subsurface vapor conditions (collection and analysis of physical samples) presently is deemed warranted or recommended.

6.0 CONCLUSIONS AND RECOMMENDATIONS

Based on CEC's research findings, it appears the site was vacant land, prior to being occupied by two sheds and/or residential-type buildings during the 1940s. The site appeared to have been vacant land again in aerial photographs from the years 1953 and 1963.

The existing site building could be seen in an aerial view of the site from the year 1972. The site appeared to have remained generally unchanged in more-recent aerial photographs.

Telephone directories showed the site had been occupied by a private party and a staffing business in 1970, and a series of banks from 1975 through 1990. The site currently is occupied by a church-based school. Reviewed records suggest church-type and school use of property has been in place since the mid-1990s.

Knowledgeable personnel indicated site operations do not utilize any underground tanks, clarifiers, or other types of potential environmental concerns, and do not generate hazardous wastes. Also, as described in the various report sections, no current TSD facilities, such as USTs, or indications of large-scale TSD-type facilities, such as disposal ponds, dry wells, hazardous-waste clarifiers, waste-treatment or -disposal facilities, land-filling operations, oil wells and/or petroleum-product tank farms, were identified at the site during CEC's visit or otherwise discovered through completion of the described land-use research.

The subject site did not appear on any of the various enforcement-type regulatory listings. The only listing found for the site pertained to one-time disposal of asbestos-related waste (1994). The closest database listings pertained to the adjacent-north property, for which operating permits, historical references, and a LUST case were shown. However, the former LUST case was shown to have been closed by the oversight agency.

Listings that are related to permits and/or directories do not suggest an unauthorized release has occurred, or other form of environmental concern exists, only that regulated materials or wastes may be or at one time have been present. No violations were reported for the nearby permit-based listings. As indicated above, a closed-case condition makes it unlikely significant residual and/or migratory contamination would be present.

Given a lack of known contamination on adjacent properties, relative location of more-distant listed properties, loamy and stratified nature of local soils, apparent direction of ground-water flow, and/or nature of nearby listings (non-volatile compounds), it is unlikely the subject site has been adversely impacted by migratory contamination from nearby properties.

Based on distance(s) from the subject site, relative location(s) with respect to the anticipated direction of ground-water and surface-water flow, apparent depth to ground water, regional soil types, nature of listing(s) and/or status of listing(s), it is deemed unlikely the described regulatory listings included in the ERS database report are indicative of current environmental concerns for the subject property.

In summary, CEC has completed a Phase I as described for the subject property. Based on findings and rationale discussed in the various report sections, no current or historical environmental concerns were identified for the site or adjacent properties. Additionally, no “significant data gaps” deemed likely to adversely effect the findings of this investigation were identified.

CEC therefore concludes the site has been satisfactorily screened for potential environmental concerns. Given these findings, no additional site assessment or remediation activities presently are deemed necessary or recommended.

7.0 LIMITATIONS

No site assessment activities, no matter how extensive or expensive, can guarantee the absence of hazardous or otherwise regulated materials at a particular site. Despite the use of reasonable care, CEC and other well-qualified and competent environmental professionals may fail to detect the presence of hazardous/regulated substances at a property.

Further, CEC and other environmental professionals may under or over estimate the amount and/or extent of hazardous or regulated substances present. Additionally, CEC offers no comments regarding future conditions at the property or changes to environmental-screening guidelines and practices. CEC assumes no responsibility for conditions that were not readily apparent at the time of its work, or for the accuracy or completeness of information provided or compiled by others. Also, it is possible pertinent information beyond that described exists for the property.

The professional services provided for this report and the related investigation are intended to meet the degree of skill and care ordinarily exercised by other environmental professionals in the region practicing under similar conditions and circumstances. No other warranty or guarantee, express or implied, is made.

This report was prepared for submittal to Enterprise Bank & Trust, on behalf of Mr. Bao Nguyen and COT Trucking Inc., and is intended to be used only by these named parties and their designated agents, and may not contain sufficient detail for use by others. Any use of or reliance upon the information by another party shall be at the sole risk of such third party, and without legal recourse against CEC, its employees, or officers, regardless of whether such action is based upon contract, tort or statute.

This report does not constitute a legal opinion. CEC's comments are based on its understanding of current regulations and experience with similar projects. A qualified environmental attorney should be consulted for a legal opinion on any related matters, including the site's current and future ownership and management requirements and options.

8.0 REFERENCES

8.1 Published References

Aerial Photo and Topographic Map Research, 8132 Garden Grove Boulevard, Garden Grove, California, Environmental Records Search, 2022.

Asbestos: A Contractor's Guide and Open Book Examination, Contractors State License Board, Department of Consumer Affairs, 1987, revised 1988 and 1995.

California Statewide Radon Survey-Interim Results, California Dept. of Health Services, 1990.

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Fault Map of California, California Division of Mines and Geology, 1975.

Geologic Map of California, California Division of Mines and Geology, 1977.

Geology of California, Second Edition, Robert M. Norris and Robert W. Webb, 1990.

Preliminary Title Report for 13040 Garden Grove Boulevard, Garden Grove, California, California Best Title Company Inc., 2022.

RecCheck Report, 13040 Coast Street, Garden Grove, California, Environmental Records Search, 2022.

Sanborn Map Report (no coverage letter), 8132 Garden Grove Boulevard, Garden Grove, California, Environmental Records Search, 2022.

Standard Guide for Vapor Encroachment Screening on Property Involved in Real Estate Transactions, American Society for Testing and Materials, 2010.

8.2 Record of Personal Communications

Mr. Kevin Lee, Real Estate Agent (714-865-8989)

9.0 QUALIFICATIONS AND PROFESSIONAL DECLARATION

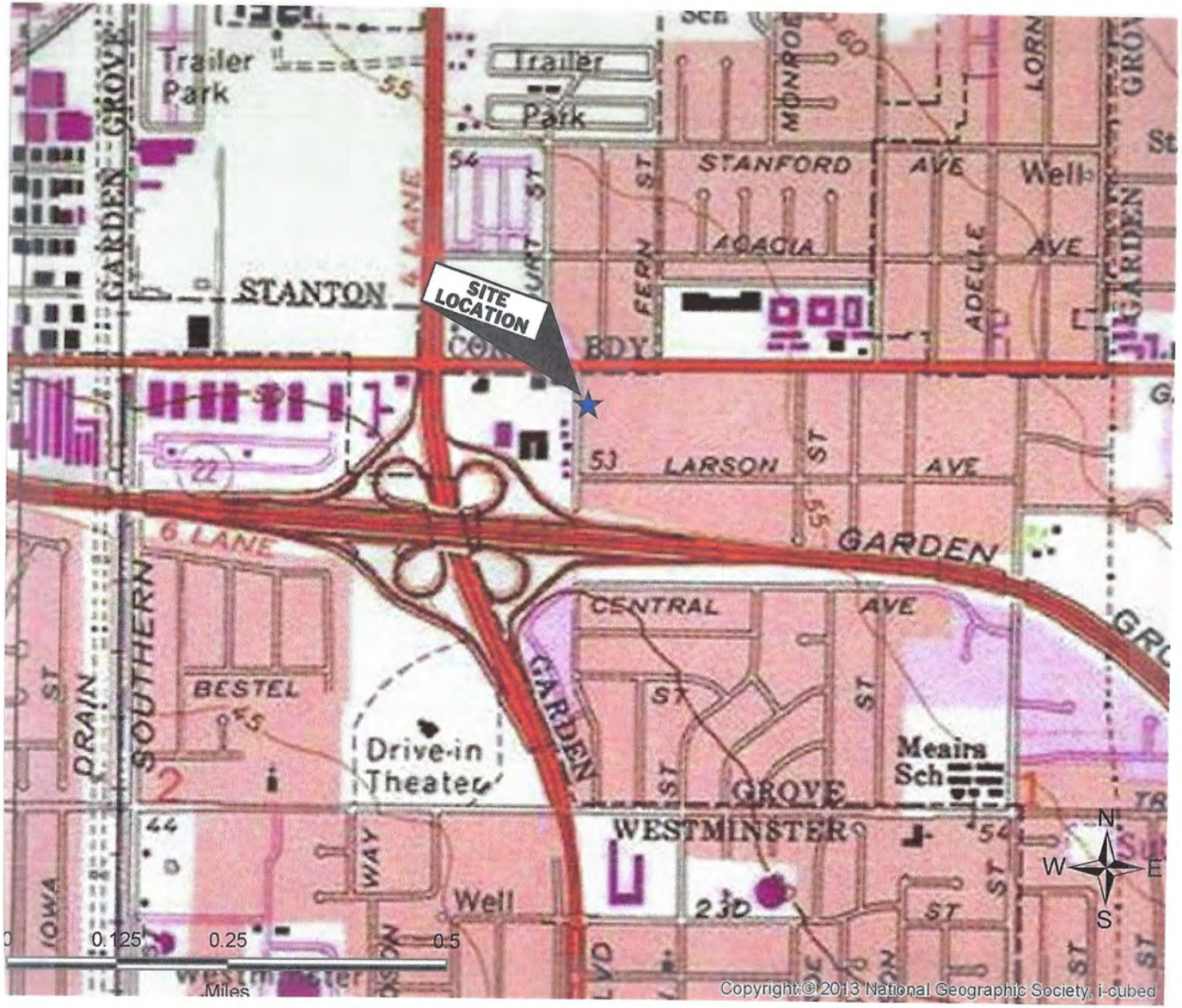
All of the herein-described Phase I investigation and historical research/review activities were performed by CEC's president and owner, David R. Johannes. Mr. Johannes founded CEC in 1996, after working 10-plus years with Southern California offices of international and regional geotechnical and environmental consulting companies.

To date, CEC has performed over 1,400 environmental site assessments and remediation and monitoring programs, in conformance with a variety of published and/or project-specific guidelines. CEC's client listing includes a diverse grouping of national and regional banks, public agencies, independent attorneys and law firms, military defense contractors, other environmental consults, and private-property owners and management firms.

Mr. Johannes is a Registered/Professional Geologist (California), Registered Environmental Assessor (California), Certified Environmental Specialist (USA), Certified Air Quality Specialist (USA), and is a California-Licensed "A" General Engineering Contractor. A copy of Mr. Johannes' professional resume of experience and credentials is maintained on file and can be provided upon receipt of formal request.

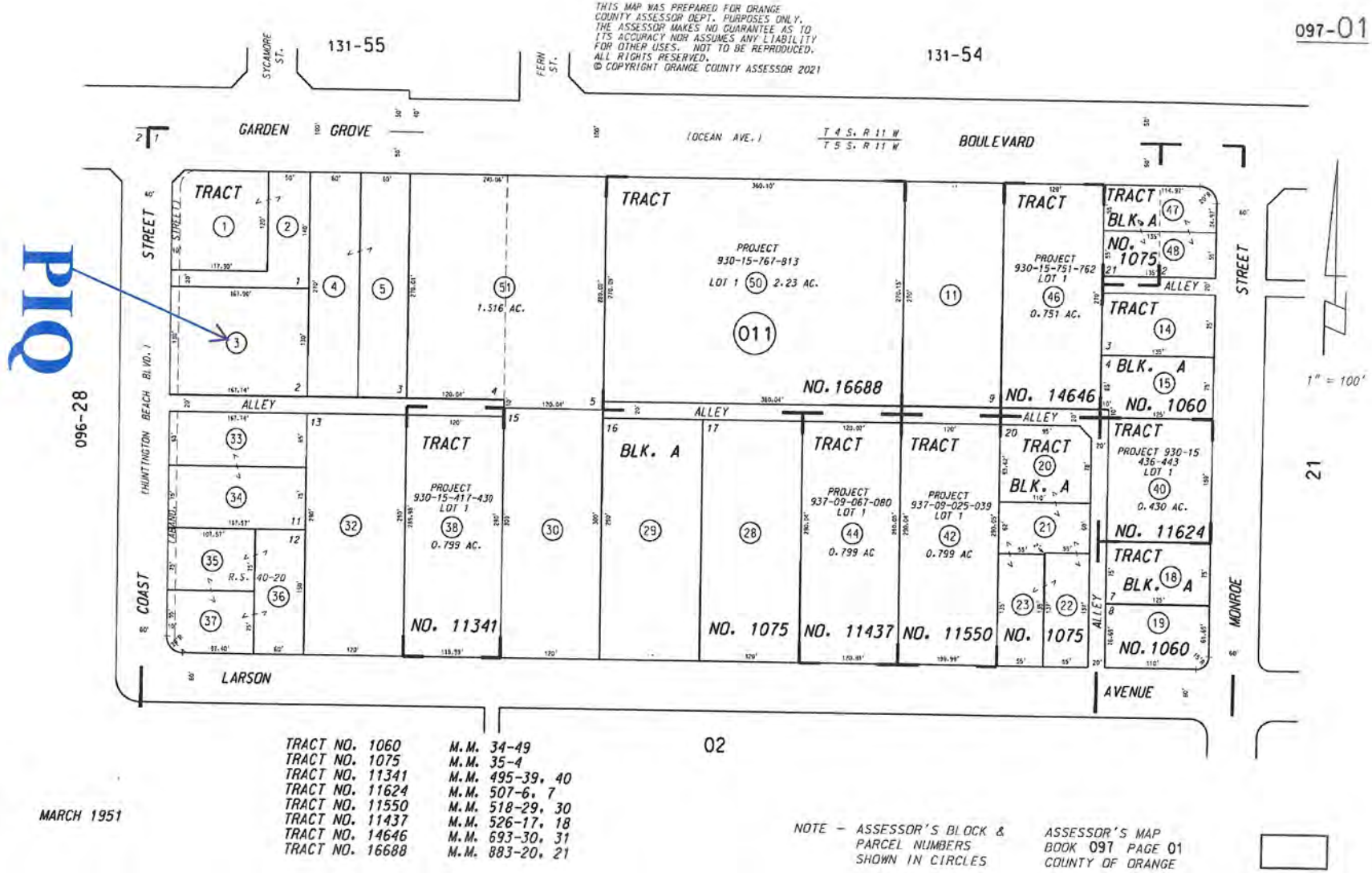
Declaration: I declare that, to the best of my professional knowledge and belief, I meet the definition of Environmental Professional as defined in Section 312.10 of 40 CFR Part 312, and that I have the specific qualifications based on education, training, and experience to assess a property of the nature, history, and setting of the subject property. In preparing the Phase I report, it is my opinion I have developed and performed an investigation that satisfies the intent of the "all appropriate inquiries" standards and practices set forth in 40 CFR Part 312.

Figures



DATE:	DRAWN BY:	PROJECT NO.	Site Location Map 13040 Coast Street Garden Grove, California	FIGURE
10/28/22	D. Johannes	22-2426		1
SOURCE:	USGS Anaheim Quadrangle			

CERTIFIED ENVIRONMENTAL CONSULTANTS, INC.



TRACT NO. 1060 M.M. 34-49
TRACT NO. 1075 M.M. 35-4
TRACT NO. 11341 M.M. 495-39, 40
TRACT NO. 11624 M.M. 507-6, 7
TRACT NO. 11550 M.M. 518-29, 30
TRACT NO. 11437 M.M. 526-17, 18
TRACT NO. 14646 M.M. 693-30, 31
TRACT NO. 16688 M.M. 883-20, 21

MARCH 1951

NOTE – ASSESSOR'S BLOCK & PARCEL NUMBERS SHOWN IN CIRCLES

ASSESSOR'S MAP BOOK 097 PAGE 01 COUNTY OF ORANGE

DATE:	DRAWN BY:	PROJECT NO.	Assessor's Parcel Map 13040 Coast Street Garden Grove, California	FIGURE
10/28/22	D. Johannes	22-2426		2
SOURCE:	California Best Title Company, Inc.			

CERTIFIED ENVIRONMENTAL CONSULTANTS, INC.

DATE:	DRAWN BY:	PROJECT NO.		FIGURE
10/28/22	D. Johannes	22-2426	Recent Aerial Photograph 13040 Coast Street Garden Grove, California	3
SOURCE:	Environmental Record Search			

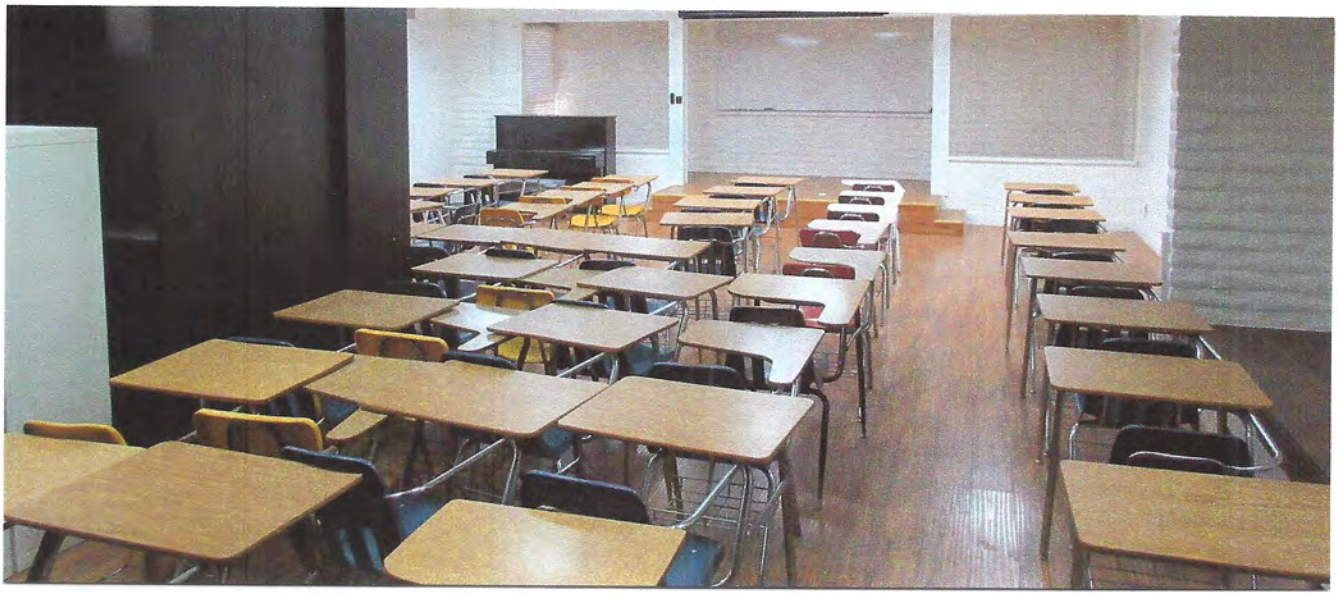
CERTIFIED ENVIRONMENTAL CONSULTANTS, INC.

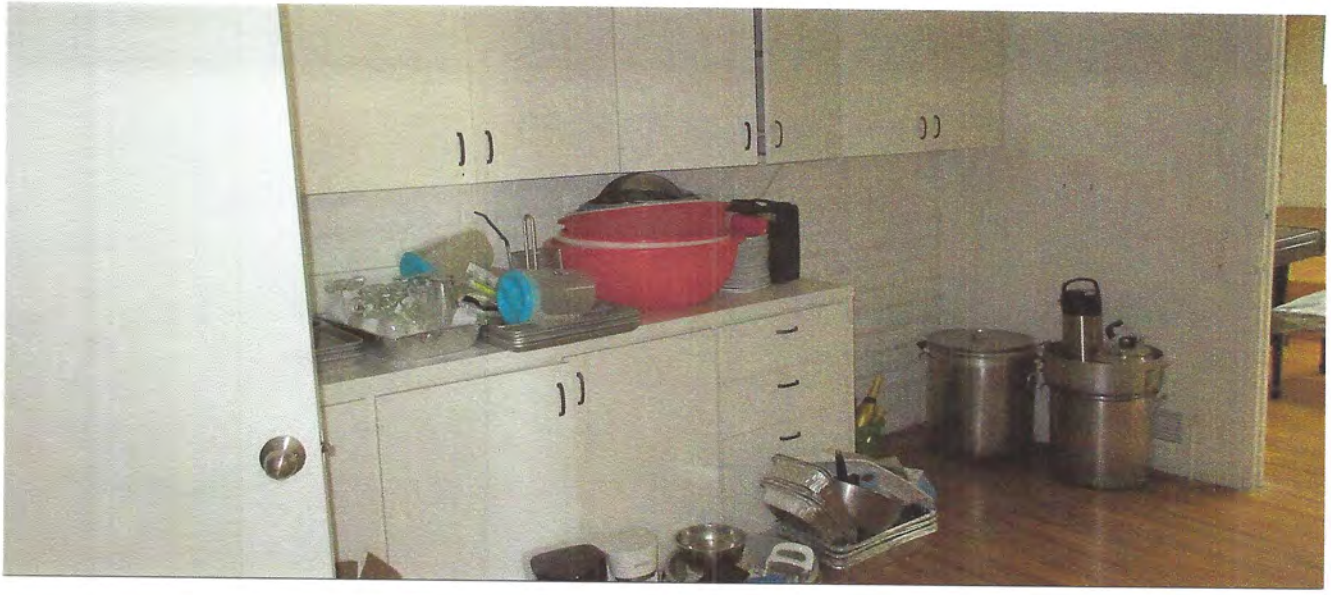
Appendix A
Site Photographs

Photographs 1, 2 and 3 - Easterly to southeasterly view of the site and adjacent properties and roadway, as seen from a point across Coast Street; northeasterly to easterly view of the site and adjacent properties and roadway, as seen from a point across Coast Street; and a westerly to northwesterly view of the site and adjacent properties and alley way, as seen from a point on the nearby-south residential property.

Photographs 4, 5 and 6 - Northwesterly to northerly view of the site and adjacent properties, as seen from a the southeastern part of the parcel; westerly to northwesterly view of the site and adjacent properties and roadways, as seen from near the central-eastern edge of the parcel; and southwesterly to westerly view of the site and adjacent properties, from a point near the northeast corner of the subject parcel.

Photographs 7, 8 and 9 - Northeasterly to southeasterly view of the adjacent and nearby properties to the east of the site; easterly view of construction debris (cubicle partitions) and landscaping debris (leaves) in a dumpster enclosure on the south part of the site; and a view of a classroom space in the site building.





Photographs 10, 11 and 12 - Additional views of classroom and kitchen spaces inside the site building.

Appendix B
ERS Database Report (excerpts)

ENVIRONMENTAL RECORD SEARCH

"The Intelligent Choice"

RecCheck

Report Results

The Standard for ASTM/AAI Radius Searches

(One Mile Environmental Records Search, Exceeds ASTM 1527/1528 and EPA All Appropriate Inquiry)

REPORT RESULTS

Site Location:

13040 Coast Street
Garden Grove, CA 92844
(N 33-46-23, W 117-59-23) NAD83

Client:

Certified Environmental Consultants, Inc.

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EXECUTIVE SUMMARY

INFORMATION ON THE REQUESTED LOCATION

Site Address:	13040 Coast Street Garden Grove, CA 92844
Client Project Name/Number:	13040CS 22-2426
Coordinates:	N 33-46-23, W 117-59-23 (NAD 83) 33.773039, -117.98965
Date of Report	October 17, 2022
ERS Project Number:	2104770924
Subject Site Listed on the following lists:	Hist-CA
Subject Site Listed as Map ID#:	1 (Click here for details)
USGS 7.5 Minute Quad Map:	Anaheim (Date Unavailable)
Subject Site Located within a Potential Area of Concern:	No
Township, Section and Range:	Township: 05S Range: 11W Section: 01 Baseline: San Bernardino
Site Elevation: **(feet above or below (-) mean sea level)**	55
Flood Zone: **(Digital Flood Insurance Rate Maps - DFIRMs)** **Only available digital data is provided**	Panel: 06059C0138J, Effective Date: 12/3/2009 Zone X - Area of minimal flood hazard, usually depicted on FIRMs as above the 500-year flood level.
Fire Insurance Map Coverage:	There may be coverage of your site.
Radon Information:	EPA Radon Zone: 3 (Predicted avg for county: < 2 pCi/L)
Search Radius Expansion Size: **(In Miles)**	0

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Soil Type: **(USDA Soil Survey Geographic Database) (SSURGO)**	Map Unit Name: Bolsa silt loam, drained Map Unit Type: Consociation Drainage Class - Dominant Condition: Somewhat poorly drained General Information: Fine-silty, mixed, superactive, calcareous, thermic Aquic Xerofluvents Top 3 Map Unit Components are below (if available): Component Name: Hueneme, Chino, Bolsa Component Percentage: 10%, 10%, 70% Hydric: No, No, No
Zip Codes Searched for "Un-Mappable" Sites:	Not Researched
Occurrence Count:	170

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SUMMARY OF OCCURRENCES

MAP ID	ID/SITE NAME	ADDRESS	DATABASE	STATUS	DISTANCE (MILES)	ELEV DIFF (FEET)
1 Maps: 1, 2, 3, 4	CAC000961696 FARM CREDIT SERVICE	13040 COAST ST GARDEN GROVE	Hist-CA	No Longer Listed	Subject Site	N/A
2 Maps: 1, 2, 3, 4	10556089 JAPANESE AUTO REPAIR	8196 GARDEN GROVE BLVD GARDEN GROVE	CERS-CA	Listed	0.04 NE	-1
2 Maps: 1, 2, 3, 4	FA0046974-ORG JAPANESE AUTO REPAIR	8196 GARDEN GROVE BLVD GARDEN GROVE	County-Others-CA	Listed	0.04 NE	-1
2 Maps: 1, 2, 3, 4	415233 JAPANESE AUTO REPAIR	8196 GARDEN GROVE BLVD GARDEN GROVE	CRSP-CA	Listed	0.04 NE	-1
3 Maps: 1, 2, 3, 4	10565221 CROWN AUTO SALES & REPAIR	8142 GARDEN GROVE Blvd GARDEN GROVE	CERS-CA	Listed	0.05 N	-1
3 Maps: 1, 2, 3, 4	10718932 EZ AUTO SALES RENTAL	8142 Garden Grove Blvd Garden Grove	CERS-CA	Listed	0.05 N	-1
3 Maps: 1, 2, 3, 4	RO0002940-ORG CROWN AUTO	8142 GARDEN GROVE BLVD GARDEN GROVE	County-LUST-Open-CA	Open	0.05 N	-1
3 Maps: 1, 2, 3, 4	FA0064011-ORG EZ AUTO SALES RENTAL & REPAIR	8142 GARDEN GROVE BLVD GARDEN GROVE	County-Others-CA	Listed	0.05 N	-1
3 Maps: 1, 2, 3, 4	437192 CROWN AUTO SALES & REPAIR	8142 GARDEN GROVE BLVD GARDEN GROVE	CRSP-CA	Listed	0.05 N	-1
3 Maps: 1, 2, 3, 4	414305 EZ AUTO SALES RENTAL	8142 GARDEN GROVE BLVD GARDEN GROVE	CRSP-CA	Listed	0.05 N	-1

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MAP ID	ID/SITE NAME	ADDRESS	DATABASE	STATUS	DISTANCE (MILES)	ELEV DIFF (FEET)
3 Maps: 1, 2, 3, 4	198036 CROWN AUTO	8142 GARDEN GROVE GARDEN GROVE	CRSP-CA	Listed	0.05 N	-1
3 Maps: 1, 2, 3, 4	T0605900522 CROWN AUTO	8142 GARDEN GROVE GARDEN GROVE	ENF-CA	Listed	0.05 N	-1
3 Maps: 1, 2, 3, 4	110043844766 7139 ORANGE COUNTY ENVIRONMENTAL HEALTH	8142 GARDEN GROVE BLVD GARDEN GROVE	FRS-US	Listed	0.05 N	-1
3 Maps: 1, 2, 3, 4	623480-PD CROWN AUTO SALES & REPAIR	8142 GARDEN GROVE BLVD GARDEN GROVE	Hist-Auto Repair	Listed	0.05 N	-1
3 Maps: 1, 2, 3, 4	CAL000093097 CROWN AUTO SERVICE_& REPAIR	8142 GARDEN GROVE BLVD GARDEN GROVE	Hist-CA	No Longer Listed	0.05 N	-1
3 Maps: 1, 2, 3, 4	T0605900522 CROWN AUTO	8142 GARDEN GROVE GARDEN GROVE	Hist-CA	No Longer Listed	0.05 N	-1
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3 Maps: 1, 2, 3, 4	RO0002940-ORG CROWNAUTO	8142 GARDEN GROVE BLVD GARDEN GROVE	Hist-CA	Name Changed	0.05 N	-1
3 Maps: 1, 2, 3, 4	552001 CROWN AUTO SERVICE	8142 GARDEN GROVE BLVD GARDEN GROVE	Hist-CA	No Longer Listed	0.05 N	-1
3 Maps: 1, 2, 3, 4	FA0064011-ORG CROWN AUTO REPAIR	8142 GARDEN GROVE BLVD GARDEN GROVE	Hist-CA	Name Changed	0.05 N	-1

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MAP ID	ID/SITE NAME	ADDRESS	DATABASE	STATUS	DISTANCE (MILES)	ELEV DIFF (FEET)
3 Maps: 1, 2, 3, 4	RO0002940-ORG CROWN AUTO	8142 GARDEN GROVE BLVD Garden Grove	Hist-CA	Name Changed	0.05 N	-1
3 Maps: 1, 2, 3, 4	1190442 CROWN AUTOMOTIVE SERVICE	8142 GARDEN GROVE GARDEN GROVE	Hist-HWS-CA	Listed	0.05 N	-1
3 Maps: 1, 2, 3, 4	1190442 CROWN AUTOMOTIVE SERVICE, INC.	8142 GARDEN GROVE BOULEVARD GARDEN GROVE	Hist-LUSTIS-CA	Listed	0.05 N	-1
3 Maps: 1, 2, 3, 4	1190442 CROWN AUTO	8142 GARDEN GROVE BLVD GARDEN GROVE	Hist-Regional-Other-CA	Listed	0.05 N	-1
3 Maps: 1, 2, 3, 4	1190442 CROWN AUTOMOTIVE SERVICE INC.	8142 GARDEN GROVE BOULEVARD GARDEN GROVE	Hist-Regional-UST-CA	Listed	0.05 N	-1
3 Maps: 1, 2, 3, 4	T0605900522 CROWN AUTO	8142 GARDEN GROVE GARDEN GROVE	LUST-Closed-CA	COMPLETED - CASE CLOSED	0.05 N	-1
3 Maps: 1, 2, 3, 4	CAL000446688 RODJYS LLC	8142 GARDEN GROVE BLVD GARDEN GROVE	RCRA-NON-US	Listed	0.05 N	-1
4 Maps: 1, 2, 4	106960-SC HENRY AUTO SALES & REPAIRS , HUNG NGUYEN	8218 GARDEN GROVE BLVD GARDEN GROVE	AIR-DIST-CA	Listed	0.07 NE	0
4 Maps: 1, 2, 4	457361-PD HENRY AUTO SALES & REPAIR	8218 GARDEN GROVE BLVD GARDEN GROVE	Hist-Auto Repair	Listed	0.07 NE	0
4 Maps: 1, 2, 4	CAD981653389 FULL SERVICE CAR RENTAL	8218 GARDEN GROVE BLVD GARDEN GROVE	RCRA-SQG-US	Listed	0.07 NE	0
4 Maps: 1, 2, 4	60003146 8218-8242 GARDEN GROVE BLVD GG	8218 GARDEN GROVE BLVD GARDEN GROVE	VCP-Active-CA	ACTIVE	0.07 NE	0

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MAP ID	ID/SITE NAME	ADDRESS	DATABASE	STATUS	DISTANCE (MILES)	ELEV DIFF (FEET)
5 Maps: 1, 2, 4	SC AQMD-SC-112507 IMPERIAL STATIONS INC # 1	8221 GARDEN GROVE BLVD GARDEN GROVE	Air-CA	Listed	0.07 NE	-1
5 Maps: 1, 2, 4	166338-SC THE REYNOLD GROUP	8221 GARDEN GROVE BLVD GARDEN GROVE	AIR-DIST-CA	Listed	0.07 NE	-1
5 Maps: 1, 2, 4	91363-SC IMPERIAL OIL	8221 GARDEN GROVE BLVD GARDEN GROVE	AIR-DIST-CA	Listed	0.07 NE	-1
5 Maps: 1, 2, 4	112507-SC IMPERIAL STATIONS INC # 1	8221 GARDEN GROVE BLVD GARDEN GROVE	AIR-DIST-CA	Listed	0.07 NE	-1
5 Maps: 1, 2, 4	54709-SC MOBIL DLR	8221 GARDEN GROVE BLVD STANTON	AIR-DIST-CA	Listed	0.07 NE	-1
5 Maps: 1, 2, 4	10512898 IMPERIAL STATIONS INC #1	8221 GARDEN GROVE BLVD GARDEN GROVE	CERS-CA	Listed	0.07 NE	-1
5 Maps: 1, 2, 4	RO0002146-ORG IMPERIAL STATIONS # 1	8221 GARDEN GROVE BLVD STANTON	County-LUST-Open-CA	Open	0.07 NE	-1
5 Maps: 1, 2, 4	FA0024162-ORG IMPERIAL STATIONS INC #1	8221 GARDEN GROVE BLVD GARDEN GROVE	County-Others-CA	Listed	0.07 NE	-1
5 Maps: 1, 2, 4	FA0024162-ORG IMPERIAL STATIONS INC #1	8221 GARDEN GROVE BLVD GARDEN GROVE	County-UST-CA	Listed	0.07 NE	-1
5 Maps: 1, 2, 4	200598 IMPERIAL STATIONS # 1	8221 GARDEN GROVE STANTON	CRSP-CA	Listed	0.07 NE	-1
5 Maps: 1, 2, 4	182939 IMPERIAL STATIONS INC #1	8221 GARDEN GROVE BLVD GARDEN GROVE	CRSP-CA	Listed	0.07 NE	-1
5 Maps: 1, 2, 4	T060592821 IMPERIAL STATIONS # 1	8221 GARDEN GROVE STANTON	ENF-CA	Listed	0.07 NE	-1
5 Maps: 1, 2, 4	3781316 IMPERIAL STATION INC #1	8221 GARDEN GROVE BL STANTON	Hist-Regional-UST-CA	Listed	0.07 NE	-1

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5 Maps: 1, 2, 4	26304-PD IMPERIAL OIL	8221 GARDEN GROVE BLVD GARDEN GROVE	Hist-Service Stations	Listed	0.07 NE	-1
5 Maps: 1, 2, 4	211839 IMPERIAL STATIONS INC #1	8221 GARDEN GROVE BLVD STANTON	Hist-Service Stations	Listed	0.07 NE	-1
5 Maps: 1, 2, 4	134317 76	8221 GARDEN GROVE BLVD Garden Grove	Hist-Service Stations	Listed	0.07 NE	-1
5 Maps: 1, 2, 4	268817 SUPERIOR DAIRY	8221 GARDEN GROVE BLVD GARDEN GROVE	Hist-UST-CA	Listed	0.07 NE	-1
5 Maps: 1, 2, 4	T060592821 IMPERIAL STATIONS # 1	8221 GARDEN GROVE STANTON	LUST-Open-CA	OPEN - SITE ASSESSMENT	0.07 NE	-1
5 Maps: 1, 2, 4	CAC003029757 IMPERIAL STATIONS INC.	8221 GARDEN GROVE BLVD., GARDEN GROVE	RCRA-NON-US	Listed	0.07 NE	-1
5 Maps: 1, 2, 4	254683 IMPERIAL STATIONS INC #1	8221 GARDEN GROVE BLVD GARDEN GROVE	UST-CA	Listed	0.07 NE	-1
6 Maps: 1, 2, 4	10535572 SOUTHLAND CYCLE CENTER INC	8141 GARDEN GROVE BLVD GARDEN GROVE	CERS-CA	Listed	0.07 NW	-1
6 Maps: 1, 2, 4	369211 SOUTHLAND CYCLE CENTER INC	8141 GARDEN GROVE BLVD GARDEN GROVE	CRSP-CA	Listed	0.07 NW	-1
7 Maps: 1, 2, 4	10539631 OKAY AUTO REPAIR & MUFFLER	8234 GARDEN GROVE BLVD GARDEN GROVE	CERS-CA	Listed	0.1 NE	0
7 Maps: 1, 2, 4	FA0027547-ORG OKAY AUTO REPAIR & MUFFLER	8234 GARDEN GROVE BLVD GARDEN GROVE	County-Others-CA	Listed	0.1 NE	0
7 Maps: 1, 2, 4	437354 OKAY AUTO REPAIR & MUFFLER	8234 GARDEN GROVE BLVD GARDEN GROVE	CRSP-CA	Listed	0.1 NE	0

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MAP ID	ID/SITE NAME	ADDRESS	DATABASE	STATUS	DISTANCE (MILES)	ELEV DIFF (FEET)
7 Maps: 1, 2, 4	528467-PD OKAY AUTO REPAIR & MUFFLER	8234 GARDEN GROVE BLVD GARDEN GROVE	Hist-Auto Repair	Listed	0.1 NE	0
8 Maps: 1, 2, 4	857583 Fern Street north of Garden Grove Boulevard	Fern Street north of Garden Grove Boulevard	Spills-SSO-CA	Listed	0.11 NE	-1
9 Maps: 1, 2, 4	10624480 T-MOBILE WEST CORPORATION LA02587A	8062 Garden Grove Blvd Garden Grove	CERS-CA	Listed	0.12 W	-2
10 Maps: 1, 2, 4	56993-SC AMBASSADOR AUTOMOTIVE SERVICE	12921 COURT ST GARDEN GROVE	AIR-DIST-CA	Listed	0.13 NW	-1
10 Maps: 1, 2, 4	RO0001100-ORG AMBASSADOR AUTO SERVICE	12921 COURT ST STANTON	County-LUST-Closed-CA	Closed	0.13 NW	-1
10 Maps: 1, 2, 4	227898 AMBASSADOR AUTO SERVICE	12921 COURT STANTON	CRSP-CA	Listed	0.13 NW	-1
10 Maps: 1, 2, 4	1605064 AMBASSADOR AUTO	12921 COURT STREET STANTON	Hist-LUSTIS-CA	Listed	0.13 NW	-1
10 Maps: 1, 2, 4	933727 AMBASSADOR AUTO SERVICE	12921 COURT ST STANTON	Hist-Regional-Other-CA	Listed	0.13 NW	-1
10 Maps: 1, 2, 4	933727 AMBASSADOR AUTO	12921 COURT STREET STANTON	Hist-Regional-UST-CA	Listed	0.13 NW	-1
10 Maps: 1, 2, 4	T0605900456 AMBASSADOR AUTO SERVICE	12921 COURT STANTON	LUST-Closed-CA	COMPLETED - CASE CLOSED	0.13 NW	-1
10 Maps: 1, 2, 4	CAD113501878 AMBASSADOR AUTO SVC	12921 COURT ST GARDEN GROVE	RCRA-SQG-US	Listed	0.13 NW	-1
11 Maps: 1, 2, 4	10563769 PROTEK AUTO REPAIR	8038 GARDEN GROVE BLVD GARDEN GROVE	CERS-CA	Listed	0.14 W	-2

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MAP ID	ID/SITE NAME	ADDRESS	DATABASE	STATUS	DISTANCE (MILES)	ELEV DIFF (FEET)
11 Maps: 1, 2, 4	FA0051527-ORG LUCAS COMPLETE AUTO REPAIR AND TIRES INC	8038 GARDEN GROVE BLVD GARDEN GROVE	County-Others-CA	Listed	0.14 W	-2
11 Maps: 1, 2, 4	366264 LUCAS AUTO REPAIR AND TIRE	8038 GARDEN GROVE BLVD GARDEN GROVE	CRSP-CA	Listed	0.14 W	-2
11 Maps: 1, 2, 4	3848 Advanced Mobil Systems	8038 Garden Grove Blvd Garden Grove	Hist-Auto Repair	Listed	0.14 W	-2
11 Maps: 1, 2, 4	CAL000430084 LUCAS COMPLETE AUTO REPAIR AND TIRES	8038 GARDEN GROVE BLVD GARDEN GROVE	RCRA-NON-US	Listed	0.14 W	-2
12 Maps: 1, 2, 4	10547686 CARLOS LAWN MOWER SHOP	12911 FERN GARDEN GROVE	CERS-CA	Listed	0.14 NE	-1
12 Maps: 1, 2, 4	FA0037711-ORG CARLOS LAWN MOWER SHOP	12911 FERN GARDEN GROVE	County-Others-CA	Listed	0.14 NE	-1
13 Maps: 1, 2, 4	437224 Alliance Express Lube +	8034 GARDEN GROVE BLVD STE B GARDEN GROVE	AST-CRSP-CA	Listed	0.15 W	-2
13 Maps: 1, 2, 4	10568722 EXPRESS CARWASH & LUBE	8034 GARDEN GROVE BLVD GARDEN GROVE	CERS-CA	Listed	0.15 W	-2
13 Maps: 1, 2, 4	FA0066711-ORG ALLIANCE EXPRESS LUBE PLUS	8034 GARDEN GROVE BLVD STE B Garden Grove	County-AST-CA	Listed	0.15 W	-2
13 Maps: 1, 2, 4	FA0066711-ORG ALLIANCE EXPRESS LUBE PLUS	8034 GARDEN GROVE BLVD STE B GARDEN GROVE	County-Others-CA	Listed	0.15 W	-2
13 Maps: 1, 2, 4	437224 Alliance Express Lube +	8034 GARDEN GROVE BLVD STE B GARDEN GROVE	CRSP-CA	Listed	0.15 W	-2
14 Maps: 1, 2, 4	SC AQMD-SC-143914 G&M OIL CO #140	8032 GARDEN GROVE BLVD GARDEN GROVE	Air-CA	Listed	0.15 W	-2
14 Maps: 1, 2, 4	143914-SC G&M OIL CO #140	8032 GARDEN GROVE BLVD GARDEN GROVE	AIR-DIST-CA	Listed	0.15 W	-2

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MAP ID	ID/SITE NAME	ADDRESS	DATABASE	STATUS	DISTANCE (MILES)	ELEV DIFF (FEET)
14 Maps: 1, 2, 4	9934-SC PINNACLE PEAK DIV OF AGRO LAND & CATTLE	8032 GARDEN GROVE BLVD GARDEN GROVE	AIR-DIST-CA	Listed	0.15 W	-2
14 Maps: 1, 2, 4	123469-SC ARCO AM PM	8032 GARDEN GROVE BLVD GARDEN GROVE	AIR-DIST-CA	Listed	0.15 W	-2
14 Maps: 1, 2, 4	10138405 G&M Oil Co. #140	8032 Garden Grove Blvd Garden Grove	CERS-CA	Listed	0.15 W	-2
14 Maps: 1, 2, 4	RO0003552-ORG G&M OIL	8032 GARDEN GROVE BLVD GARDEN GROVE	County-LUST-Open-CA	Open	0.15 W	-2
14 Maps: 1, 2, 4	FA0046206-ORG G&M OIL COMPANY #140	8032 GARDEN GROVE BLVD GARDEN GROVE	County-Others-CA	Listed	0.15 W	-2
14 Maps: 1, 2, 4	FA0046206-ORG G&M OIL COMPANY #140	8032 GARDEN GROVE BLVD GARDEN GROVE	County-UST-CA	Listed	0.15 W	-2
14 Maps: 1, 2, 4	32254 G&M Oil Co. #140	8032 GARDEN GROVE BLVD GARDEN GROVE	CRSP-CA	Listed	0.15 W	-2
14 Maps: 1, 2, 4	211293 ARCO AM/PM 82097	8032 GARDEN GROVE BLVD GARDEN GROVE	Hist-Service Stations	Listed	0.15 W	-2
14 Maps: 1, 2, 4	153033 Chevron	8032 Garden Grove Blvd Garden Grove	Hist-Service Stations	Listed	0.15 W	-2
14 Maps: 1, 2, 4	133655 G & M OIL CO	8032 GARDEN GROVE BLVD Garden Grove	Hist-Service Stations	Listed	0.15 W	-2
14 Maps: 1, 2, 4	CAL000292280 G&M OIL CO #140	8032 GARDEN GROVE BLVD GARDEN GROVE	RCRA-NON-US	Listed	0.15 W	-2
14 Maps: 1, 2, 4	248128 G&M Oil Co. #140	8032 Garden Grove Blvd Garden Grove	UST-CA	Listed	0.15 W	-2
14 Maps: 1, 2, 4	32254 G&M Oil Co. #140	8032 GARDEN GROVE BLVD GARDEN GROVE	UST-CRSP-CA	Listed	0.15 W	-2

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MAP ID	ID/SITE NAME	ADDRESS	DATABASE	STATUS	DISTANCE (MILES)	ELEV DIFF (FEET)
15 Maps: 1, 2, 4	221062 G & M OIL #140	8032 GARDEN GROVE GARDEN GROVE	CRSP-CA	Listed	0.15 W	-3
15 Maps: 1, 2, 4	T10000002773 G & M OIL #140	8032 GARDEN GROVE GARDEN GROVE	ENF-CA	Listed	0.15 W	-3
15 Maps: 1, 2, 4	T10000002773 G & M OIL #140	8032 GARDEN GROVE GARDEN GROVE	LUST-Closed-CA	COMPLETED - CASE CLOSED	0.15 W	-3
16 Maps: 1, 2, 4	414209-PD CAO COMPLETE AUTO REPAIR	8312 GARDEN GROVE BLVD GARDEN GROVE	Hist-Auto Repair	Listed	0.16 E	1
17 Maps: 1, 2, 4	CAC003064414 TAE SUB CHUNG	8321 GARDEN GROVE BLVD GARDEN GROVE	RCRA-NON-US	Listed	0.17 E	0
18 Maps: 1, 2, 4	105050-SC R & M OIL CO, SHELL DEALER	12950 BEACH BLVD STANTON	AIR-DIST-CA	Listed	0.18 W	-3
18 Maps: 1, 2, 4	141508-SC EQUILON ENT, STANTON SHELL #136137	12950 BEACH BLVD STANTON	AIR-DIST-CA	Listed	0.18 W	-3
18 Maps: 1, 2, 4	132422-SC SHELL OIL PRDT US DL, YANG'S OIL #136137	12950 BEACH BLVD STANTON	AIR-DIST-CA	Listed	0.18 W	-3
18 Maps: 1, 2, 4	116713-SC EQUILON DLR, R & M OIL CO INC, SHELL STN	12950 BEACH BLVD STANTON	AIR-DIST-CA	Listed	0.18 W	-3
18 Maps: 1, 2, 4	127943-SC EQUILON DLR, BEACH SHELL #136137, D KIM	12950 BEACH BLVD STANTON	AIR-DIST-CA	Listed	0.18 W	-3
18 Maps: 1, 2, 4	96148-SC SHELL OIL COMPANY	12950 BEACH BLVD STANTON	AIR-DIST-CA	Listed	0.18 W	-3
18 Maps: 1, 2, 4	87800-SC PACIFIC STATIONS	12950 BEACH BLVD STANTON	AIR-DIST-CA	Listed	0.18 W	-3
18 Maps: 1, 2, 4	10515247 SHELL 136137	12950 BEACH BLVD STANTON	CERS-CA	Listed	0.18 W	-3

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MAP ID	ID/SITE NAME	ADDRESS	DATABASE	STATUS	DISTANCE (MILES)	ELEV DIFF (FEET)
18 Maps: 1, 2, 4	RO0002822-ORG SHELL OIL	12950 BEACH BLVD STANTON	County-LUST-Closed-CA	Closed	0.18 W	-3
18 Maps: 1, 2, 4	237277 SHELL OIL	12950 BEACH STANTON	CRSP-CA	Listed	0.18 W	-3
18 Maps: 1, 2, 4	T0605900387 SHELL OIL	12950 BEACH STANTON	ENF-CA	Listed	0.18 W	-3
18 Maps: 1, 2, 4	347953 SHELL SERVICE STATION	12950 BEACH STANTON	Hist-HWS-CA	Listed	0.18 W	-3
18 Maps: 1, 2, 4	347953 SHELL SERVICE STATION	12950 BEACH BOULEVARD STANTON	Hist-LUSTIS-CA	Listed	0.18 W	-3
18 Maps: 1, 2, 4	347953 SHELL SERVICE STATION	12950 BEACH BOULEVARD STANTON	Hist-Regional-UST-CA	Listed	0.18 W	-3
18 Maps: 1, 2, 4	45107-PD R & M OIL	12950 BEACH BLVD STANTON	Hist-Service Stations	Listed	0.18 W	-3
18 Maps: 1, 2, 4	211842 SHELL (137137)	12950 BEACH BLVD STANTON	Hist-Service Stations	Listed	0.18 W	-3
18 Maps: 1, 2, 4	9347 R & M Shell	12950 Beach Blvd Stanton	Hist-Service Stations	Listed	0.18 W	-3
18 Maps: 1, 2, 4	259145 RAYS SUPER SHELL	12950 BEACH BLVD STANTON	Hist-UST-CA	Listed	0.18 W	-3
18 Maps: 1, 2, 4	T0605900387 Site Name Not Reported	12950 BEACH BLVD STANTON	Hist-UST-Cleanup-CA	Listed	0.18 W	-3
18 Maps: 1, 2, 4	T0605900387 SHELL OIL	12950 BEACH STANTON	LUST-Closed-CA	COMPLETED - CASE CLOSED	0.18 W	-3
19 Maps: 1, 2, 4	160755-SC MEGA PAINT INC	8341 GARDEN GROVE BLVD GARDEN GROVE	AIR-DIST-CA	Listed	0.2 E	1

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MAP ID	ID/SITE NAME	ADDRESS	DATABASE	STATUS	DISTANCE (MILES)	ELEV DIFF (FEET)
20 Maps: 1, 2, 4	RO0002845-ORG TRAMMEL CROW	12900 BEACH BLVD STANTON	County-LUST-Closed-CA	Closed	0.21 NW	-2
20 Maps: 1, 2, 4	192863 TRAMMEL CROW	12900 BEACH STANTON	CRSP-CA	Listed	0.21 NW	-2
20 Maps: 1, 2, 4	1186684 TRAMMEL CROW	12900 BEACH BOULEVARD STANTON	Hist-LUSTIS-CA	Listed	0.21 NW	-2
20 Maps: 1, 2, 4	1186684 TRAMMEL CROW	12900 BEACH BLVD STANTON	Hist-Regional-Other-CA	Listed	0.21 NW	-2
20 Maps: 1, 2, 4	1186684 TRAMMEL CROW	12900 BEACH BOULEVARD STANTON	Hist-Regional-UST-CA	Listed	0.21 NW	-2
20 Maps: 1, 2, 4	T0605901364 TRAMMEL CROW	12900 BEACH STANTON	LUST-Closed-CA	COMPLETED - CASE CLOSED	0.21 NW	-2
20 Maps: 1, 2, 4	CAD011158060 AUTO EXCHANGE THE	12900 BEACH STANTON	RCRA-SQG-US	Listed	0.21 NW	-2
21 Maps: 1, 2, 4	69331-SC MIMI'S CAFE GARDEN GROVE	7985 GARDEN GROVE BLVD GARDEN GROVE	AIR-DIST-CA	Listed	0.21 W	-3
22 Maps: 1, 2, 4	836193 8205 Larson Ave	Not Reported by Agency	Spills-SSO-CA	Listed	0.22 E	0
23 Maps: 1, 2, 4	115134-SC A AMERICAN CLEANERS, LINH NGUYEN DBA	12860 BEACH BLVD STE C STANTON	AIR-DIST-CA	Listed	0.22 NW	-2
23 Maps: 1, 2, 4	117553-SC A AMERICAN CLEANERS, XUAN VAN NGUYEN DNA	12860 BEACH BLVD STE C STANTON	AIR-DIST-CA	Listed	0.22 NW	-2
23 Maps: 1, 2, 4	73464-SC A AMERICAN CLEANERS, JOSEPH MOORE DBA	12860 BEACH BLVD STE C STANTON	AIR-DIST-CA	Listed	0.22 NW	-2
23 Maps: 1, 2, 4	7820 A-American Cleaners	12860 Beach Blvd # C Stanton	Cleaners-CA	Listed	0.22 NW	-2

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MAP ID	ID/SITE NAME	ADDRESS	DATABASE	STATUS	DISTANCE (MILES)	ELEV DIFF (FEET)
23 Maps: 1, 2, 4	8771 B J Coin Laundry	12860 Beach Blvd Stanton	Cleaners-CA	Listed	0.22 NW	-2
23 Maps: 1, 2, 4	CAL000209545 A AMERICAN CLEANERS	12860 BEACH BLVD,#C STANTON	DryCleaners-CA	Listed	0.22 NW	-2
23 Maps: 1, 2, 4	CAL000127232 A AMERICAN CLEANERS	12860 BEACH BLVD,#C STANTON	DryCleaners-CA	Listed	0.22 NW	-2
23 Maps: 1, 2, 4	291038-PD A AMERICAN CLEANERS	12860 BEACH BLVD STANTON	Hist-Cleaners	Listed	0.22 NW	-2
24 Maps: 1, 2, 4	CAD981627938 SPIC & SPAN CLEANERS	12971 BEACH BLVD GARDEN GROVE	DryCleaners-CA	Listed	0.22 NW	-1
25 Maps: 1, 2, 4	65442-SC COCO'S #610	7942 GARDEN GROVE GARDEN GROVE	AIR-DIST-CA	Listed	0.22 W	-3
26 Maps: 1, 2, 4	87066-SC ALPHA BETA CO #258	12840 BEACH BLVD STANTON	AIR-DIST-CA	Listed	0.23 NW	-1
26 Maps: 1, 2, 4	123444-SC FOOD 4 LESS #325	12840 BEACH BLVD STANTON	AIR-DIST-CA	Listed	0.23 NW	-1
26 Maps: 1, 2, 4	176807-SC WALMART #4134 WALMART STORES INC	12840 BEACH BLVD STANTON	AIR-DIST-CA	Listed	0.23 NW	-1
26 Maps: 1, 2, 4	10453732 Walmart #4134	12840 Beach Blvd Stanton	CERS-CA	Listed	0.23 NW	-1
26 Maps: 1, 2, 4	RO0000255-ORG TRAMMEL CROW	12840 BEACH BLVD STANTON	County-Others-CA	Listed	0.23 NW	-1
26 Maps: 1, 2, 4	FA0066503-ORG WAL MART #4134	12840 BEACH BLVD STANTON	County-Others-CA	Listed	0.23 NW	-1
26 Maps: 1, 2, 4	170235 Walmart #4134	12840 BEACH BLVD STANTON	CRSP-CA	Listed	0.23 NW	-1

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MAP ID	ID/SITE NAME	ADDRESS	DATABASE	STATUS	DISTANCE (MILES)	ELEV DIFF (FEET)
26 Maps: 1, 2, 4	259416 RAY'S SUPER SHELL (DEMOLISHED)	12840 BEACH BLVD STANTON	CRSP-CA	Listed	0.23 NW	-1
26 Maps: 1, 2, 4	1582761 RAY'S SUPER SHELL (DEMOLISHED)	12840 BEACH BOULEVARD STANTON	Hist-LUSTIS-CA	Listed	0.23 NW	-1
26 Maps: 1, 2, 4	1582761 RAY'S SUPER SHELL (DEMOLISHED)	12840 BEACH BOULEVARD STANTON	Hist-Regional-UST-CA	Listed	0.23 NW	-1
26 Maps: 1, 2, 4	T0605900799 RAY'S SUPER SHELL (DEMOLISHED)	12840 BEACH BLVD STANTON	LUST-Closed-CA	COMPLETED - CASE CLOSED	0.23 NW	-1
26 Maps: 1, 2, 4	CAR000240408 WALMART NEIGHBORHOOD MARKET #4134	12840 BEACH BLVD STANTON	RCRA-SQG-US	Listed	0.23 NW	-1
26 Maps: 1, 2, 4	T10000018059 TRAMMEL CROW	12840 BEACH BLVD STANTON	SLIC-Closed-CA	COMPLETED - CASE CLOSED	0.23 NW	-1
27 Maps: 1, 2, 4	CAL000448890 STANTON SMILES DENTISTRY	12919 BEACH BLVD STANTON	RCRA-NON-US	Listed	0.23 NW	-1
28 Maps: 1, 2, 4	122972-SC RALPHS GROCERY #170	12875 BEACH BLVD STANTON	AIR-DIST-CA	Listed	0.24 NW	-1
28 Maps: 1, 2, 4	512836 VILLAGE CROSSROADS SHOPPING CENTER	12875 BEACH BOULEVARD STANTON	CRSP-CA	Listed	0.24 NW	-1
29 Maps: 1, 2, 4	66897-SC S W H CORP	7955 GARDEN GROVE BLVD GARDEN GROVE	AIR-DIST-CA	Listed	0.24 W	-3
30 Maps: 1, 4	T10000017813 SPIC & SPAN CLEANERS	12791 BEACH BLVD STANTON	SLIC-Closed-CA	COMPLETED - CASE CLOSED	0.27 NW	0
30 Maps: 1, 4	T10000006460 FORMER SPIC AND SPAN CLEANERS	12791 BEACH BOULEVARD STANTON	SLIC-Open-CA	OPEN - REMEDIATION	0.27 NW	0

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MAP ID	ID/SITE NAME	ADDRESS	DATABASE	STATUS	DISTANCE (MILES)	ELEV DIFF (FEET)
31 Maps: 1, 4	T0605900610 CHUN TUK YI	8471 GARDEN GROVE GARDEN GROVE	LUST-Closed-CA	COMPLETED - CASE CLOSED	0.31 E	3
32 Maps: 1, 4	RO0002561-ORG CHUN TUK YI	8471 GARDEN GROVE BLVD GARDEN GROVE	County-LUST-Closed-CA	Closed	0.31 E	3
33 Maps: 1, 4	T10000018084 GOLDEN STATE AUTO CENTER	8541 GARDEN GROVE BLVD GARDEN GROVE	SLIC-Closed-CA	COMPLETED - CASE CLOSED	0.38 E	4
34 Maps: 1, 4	RO0002080-ORG MOBIL OIL	13441 BEACH BLVD Westminster	County-LUST-Closed-CA	Closed	0.43 S	-3
34 Maps: 1, 4	T0605906190 MOBIL OIL	13441 BEACH WESTMINSTER	LUST-Closed-CA	COMPLETED - CASE CLOSED	0.43 S	-3
35 Maps: 1, 4	RO0001443-ORG FORMER TEXACO STATION	13502 BEACH BLVD Westminster	County-LUST-Closed-CA	Closed	0.47 S	-3
35 Maps: 1, 4	RO0001890-ORG TEXACO	13502 BEACH BLVD Westminster	County-LUST-Closed-CA	Closed	0.47 S	-3
36 Maps: 1, 4	T10000017792 8641 GARDEN LLC	8641 GARDEN GROVE BLVD GARDEN GROVE	SLIC-Closed-CA	COMPLETED - CASE CLOSED	0.47 E	6
37 Maps: 1, 4	30720002 MORELAND CLEANERS(FORMER)	8661 GARDEN GROVE BOULEVARD GARDEN GROVE	Eval-Hist-Other-CA	REFER: 1248 LOCAL AGENCY	0.48 E	6
37 Maps: 1, 4	T10000018631 FORMER MORELAND CLEANERS	8661 GARDEN GROVE BLVD GARDEN GROVE	SLIC-Open-CA	OPEN - LONG TERM MANAGEMENT	0.48 E	6
38 Maps: 1, 4	T0605900315 TEXACO STATION	13502 BEACH WESTMINSTER	LUST-Closed-CA	COMPLETED - CASE CLOSED	0.49 S	-3
38 Maps: 1, 4	T0605915524 TEXACO	13502 BEACH WESTMINSTER	LUST-Closed-CA	COMPLETED - CASE CLOSED	0.49 S	-3

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POTENTIAL AREAS OF CONCERN/CONTAMINATION SUMMARY

DATABASE SEARCHED	SUBJECT SITE WITHIN POTENTIAL AREA OF CONCERN	AREAS FOUND WITHIN 1-MILE RADIUS
NPL-R9-US	No	0
MethaneLF-CA	No	0
LA-LF-CA	No	0
Military-Bases-US	No	0
SGV-Deep-Plumes-CA	No	0
SGV-Shallow-Plumes-Puente-Valley-CA	No	0
SGV-Shallow-Plumes-CA	No	0

DATABASE OCCURRENCE SUMMARY

HIGH RISK* OCCURRENCES IDENTIFIED IN REQUESTED SEARCH RADIUS		
DATABASE SEARCHED	DISTANCE SEARCHED (MILES)	HIGH RISK OCCURRENCES FOUND
CERCLIS-US	0.5	0
CorAct-Open-CA	0.5	0
County-LUST-Open-CA	0.5	3
County-SLIC-Open-CA	0.5	0
Eval-Hist-Active-CA	0.5	0
Hist-UST-Cleanup-CA	0.5	1
LUST-Open-CA	0.5	1
Military-Active-CA	1	0
NPL-US	1	0
Proposed-NPL-US	1	0
Response-CA	1	0
SAA-Agreements-US	1	0
School-Active-CA	0.5	0
SLIC-Open-CA	0.5	2
State-Response-Active-CA	1	0
Superfund-Active-CA	1	0
Tribal-LUST-Open-Reg10	0.5	0
Tribal-LUST-Open-Reg4	0.5	0
Tribal-LUST-Open-Reg9	0.5	0
Tribal-LUST-Reg7	0.5	0
VCP-Active-CA	0.5	1

* For the purposes of this report, “high risk” occurrences are those that have known contamination and have not received a “case closed” or “no further action” status from the agency that maintains the records.

ASTM/AAI STANDARD RECORD SOURCES SUMMARY				
STANDARD ENVIRONMENTAL RECORD SOURCES	ASTM MIN. SEARCH DIST. / ERS SEARCH DIST.	ERS DATABASE NAME	TOTAL LISTINGS	MAP ID #’S

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	(MILES)			
Federal NPL site list	1.0 / 1.0	NPL-US	0	None Listed
		Proposed-NPL-US	0	None Listed
Federal Delisted NPL site list	0.5 / 1.0	Delisted-NPL-US	0	None Listed
Federal CERCLIS list	0.5 / 0.5	CERCLIS-US	0	None Listed
Federal CERCLIS NFRAP site list	0.5 / 0.5	CERCLIS-Archived-US	0	None Listed
Federal RCRA CORRACTS facilities list	1.0 / 1.0	RCRA-COR-US	0	None Listed
Federal RCRA non-CORRACTS TSD facilities list	0.5 / 0.5	RCRA-TSDF-US	0	None Listed
Federal RCRA generators list	Property and adjoining properties / 0.25	RCRA-CESQG-US	0	None Listed
		RCRA-LQG-US	0	None Listed
		RCRA-NON-US	6	3, 5, 11, 14, 17, 27
		RCRA-SQG-US	4	4, 10, 20, 26
Federal Inst/Eng control registries	Property Only / 0.25	Controls-RCRA-US	0	None Listed
		Controls-US	0	None Listed
		Hist-US-EC	0	None Listed
		Hist-US-IC	0	None Listed
		LIENS-US	0	None Listed
Federal ERNS list	Property Only / 0.0625	ERNS-US	0	None Listed
State and Tribal-Equivalent NPL	1.0 / 1.0	Response-CA	0	None Listed
		State-Response-Active-CA	0	None Listed
		State-Response-NFA-CA	0	None Listed
		State-Response-Other-CA	0	None Listed
State and Tribal-Equivalent CERCLIS	0.5 / 0.5	Superfund-Active-CA	0	None Listed
		Superfund-NFA-CA	0	None Listed
		Superfund-Other-CA	0	None Listed
State and Tribal landfill and/or solid waste disposal sites	0.5 / 0.5	County-SWF-CA	0	None Listed
		Debris-US	0	None Listed
		Hist-Dumps-US	0	None Listed
		Land-Disposal-CA	0	None Listed
		SWIS-CA	0	None Listed
		SWLF-US	0	None Listed
		Tribal-ODI-US	0	None Listed
State and Tribal Leaking Storage Tank Lists	0.5 / 0.5	County-LUST-CA	0	None Listed
		County-LUST-Closed-CA	7	10, 18, 20, 32, 34, 35, 35
		County-LUST-Open-CA	3	3, 5, 14

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		Hist-UST-Cleanup-CA	1	18
		LUST-Closed-CA	10	3, 10, 15, 18, 20, 26, 31, 34, 38, 38
		LUST-Open-CA	1	5
		Tribal-LUST-Closed-Reg4	0	None Listed
		Tribal-LUST-Closed-Reg9	0	None Listed
		Tribal-LUST-Open-Reg10	0	None Listed
		Tribal-LUST-Open-Reg4	0	None Listed
		Tribal-LUST-Open-Reg9	0	None Listed
		Tribal-LUST-Reg1	0	None Listed
		Tribal-LUST-Reg7	0	None Listed
State and Tribal Registered Storage Tank Lists	Property and adjoining properties / 0.25	AST-CA	0	None Listed
		AST-CRSP-CA	1	13
		City-AST-CA	0	None Listed
		City-UST-CA	0	None Listed
		County-AST-CA	1	13
		County-UST-CA	2	5, 14
		FEMA-UST-US	0	None Listed
		Hist-UST-CA	2	5, 18
		Tribal-UST-Reg1	0	None Listed
		Tribal-UST-Reg10	0	None Listed
		Tribal-UST-Reg4	0	None Listed
		Tribal-UST-Reg7	0	None Listed
		Tribal-UST-Reg9	0	None Listed
		UST-Abandoned-CA	0	None Listed
		UST-CA	2	5, 14
		UST-Closed-CA	0	None Listed
		USTComp-CA	0	None Listed
		UST-CRSP-CA	1	14
		UST-Priority-CA	0	None Listed
		UST-Proposed-CA	0	None Listed
State and Tribal Inst/Eng Control Registries	Property Only / 0.5	Controls-CA	0	None Listed
		Deed-CA	0	None Listed
		Hist-Controls-CA	0	None Listed
		HWMP-Controls-CA	0	None Listed
		Liens-CA	0	None Listed
State and Tribal Voluntary Cleanup Sites	0.5 / 0.5	Military-Active-CA	0	None Listed
		Military-NFA-CA	0	None Listed
		Military-Other-CA	0	None Listed
		School-Active-CA	0	None Listed
		School-NFA-CA	0	None Listed

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		School-Other-CA	0	None Listed
		Tribal-VCP-US	0	None Listed
		VCP-Active-CA	1	4
		VCP-NFA-CA	0	None Listed
		VCP-Other-CA	0	None Listed
State and Tribal Brownfield Sites	0.5 / 0.5	BF-MOA-CA	0	None Listed
		BF-Tribal-US	0	None Listed

FEDERAL ASTM/AAI DATABASES							
DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
BF-Tribal-US	0.5	0	0	0	0	-	0
BF-US	0.5	0	0	0	0	-	0
CERCLIS-Archived-US	0.5	0	0	0	0	-	0
CERCLIS-US	0.5	0	0	0	0	-	0
Controls-RCRA-US	0.5	0	0	0	0	-	0
Controls-US	0.5	0	0	0	0	-	0
Debris-US	0.5	0	0	0	0	-	0
Delisted-NPL-US	1	0	0	0	0	0	0
ERNS-US	0.0625	0	0	-	-	-	0
FEMA-UST-US	0.25	0	0	0	-	-	0
FTTS-ENF-US	0.25	0	0	0	-	-	0
Hist-Dumps-US	0.5	0	0	0	0	-	0
Hist-US-EC	0.5	0	0	0	0	-	0
Hist-US-IC	0.5	0	0	0	0	-	0
HMIS-US	0.0625	0	0	-	-	-	0
LIENS-US	0.0625	0	0	-	-	-	0
NPL-US	1	0	0	0	0	0	0
PADS-US	0.0625	0	0	-	-	-	0
PCB-US	0.25	0	0	0	-	-	0
Proposed-NPL-US	1	0	0	0	0	0	0
RCRA-CESQG-US	0.25	0	0	0	-	-	0
RCRA-COR-US	1	0	0	0	0	0	0
RCRA-LQG-US	0.25	0	0	0	-	-	0
RCRA-NON-US	0.25	0	4	2	-	-	6
RCRA-SQG-US	0.25	0	2	2	-	-	4
RCRA-TSDF-US	0.5	0	0	0	0	-	0
SAA-Agreements-US	1	0	0	0	0	0	0
SWLF-US	0.5	0	0	0	0	-	0
Tribal-LUST-Closed-Reg4	0.5	0	0	0	0	-	0
Tribal-LUST-Closed-Reg9	0.5	0	0	0	0	-	0
Tribal-LUST-Open-Reg10	0.5	0	0	0	0	-	0
Tribal-LUST-Open-Reg4	0.5	0	0	0	0	-	0
Tribal-LUST-Open-Reg9	0.5	0	0	0	0	-	0
Tribal-LUST-Reg1	0.5	0	0	0	0	-	0
Tribal-LUST-Reg7	0.5	0	0	0	0	-	0
Tribal-ODI-US	0.5	0	0	0	0	-	0
Tribal-UST-Reg1	0.25	0	0	0	-	-	0
Tribal-UST-Reg10	0.25	0	0	0	-	-	0
Tribal-UST-Reg4	0.25	0	0	0	-	-	0
Tribal-UST-Reg7	0.25	0	0	0	-	-	0
Tribal-UST-Reg9	0.25	0	0	0	-	-	0
Tribal-VCP-US	0.5	0	0	0	0	-	0

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STATE ASTM/AAI DATABASES							
DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
AST-CA	0.25	0	0	0	-	-	0
AST-CRSP-CA	0.25	0	1	0	-	-	1
BF-MOA-CA	0.5	0	0	0	0	-	0
BZ-HazWaste-CA	0.5	0	0	0	0	-	0
CERS-CA	0.25	0	11	2	-	-	13
CHMIRS-CA	0.0625	0	0	-	-	-	0
City-AST-CA	0.25	0	0	0	-	-	0
City-CUPA-CA	0.25	0	0	0	-	-	0
City-Others-CA	0.25	0	0	0	-	-	0
City-UST-CA	0.25	0	0	0	-	-	0
Controls-CA	0.5	0	0	0	0	-	0
CorAct-Closed-CA	0.5	0	0	0	0	-	0
CorAct-Open-CA	0.5	0	0	0	0	-	0
CorAct-Other-CA	0.5	0	0	0	0	-	0
CORTESE-CA	0.25	0	0	0	-	-	0
County-AST-CA	0.25	0	1	0	-	-	1
County-Hist-CA	0.25	0	0	0	-	-	0
County-LUST-CA	0.5	0	0	0	0	-	0
County-LUST-Closed-CA	0.5	0	1	2	4	-	7
County-LUST-Open-CA	0.5	0	3	0	0	-	3
County-Others-CA	0.25	0	8	2	-	-	10
County-SLIC-Closed-CA	0.25	0	0	0	-	-	0
County-SLIC-Open-CA	0.5	0	0	0	0	-	0
County-SML-CA	0.5	0	0	0	0	-	0
County-SWF-CA	0.5	0	0	0	0	-	0
County-UST-CA	0.25	0	2	0	-	-	2
CRSP-CA	0.25	0	13	5	-	-	18
CUPA-CA	0.25	0	0	0	-	-	0
Deed-CA	0.5	0	0	0	0	-	0
ENF-CA	0.25	0	3	1	-	-	4
ENF-SMARTS-CA	0.25	0	0	0	-	-	0
ENF-Wastewater-CA	0.25	0	0	0	-	-	0
Eval-Hist-Active-CA	0.5	0	0	0	0	-	0
Eval-Hist-NFA-CA	0.5	0	0	0	0	-	0
Eval-Hist-Other-CA	0.5	0	0	0	1	-	1
HazWaste-CA	0.25	0	0	0	-	-	0
Hist-Controls-CA	0.5	0	0	0	0	-	0
Hist-Cort-CA	0.25	0	0	0	-	-	0
HIST-R4-CA	0.25	0	0	0	-	-	0
HIST-SLIC-CV-CLOSED-CA	0.5	0	0	0	0	-	0
HIST-SLIC-CV-OPEN-CA	0.5	0	0	0	0	-	0
Hist-UST-CA	0.25	0	1	1	-	-	2
Hist-UST-Cleanup-CA	0.5	0	0	1	0	-	1
Hist-WIP-Active-CA	0.5	0	0	0	0	-	0
Hist-WIP-Backlog-CA	0.5	0	0	0	0	-	0
Hist-WIP-Historical-CA	0.5	0	0	0	0	-	0
HWIS-CA	0.0625	0	0	-	-	-	0
HWMP-Controls-CA	0.5	0	0	0	0	-	0
ICE-CA	0.25	0	0	0	-	-	0
Land-Disposal-CA	0.5	0	0	0	0	-	0
Liens-CA	0.0625	0	0	-	-	-	0
LUST-Closed-CA	0.5	0	3	3	4	-	10
LUST-Open-CA	0.5	0	1	0	0	-	1
Manifest2-RI	0.0625	0	0	-	-	-	0
Military-Active-CA	1	0	0	0	0	0	0

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STATE ASTM/AAI DATABASES							
DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
Military-NFA-CA	0.5	0	0	0	0	-	0
Military-Other-CA	1	0	0	0	0	0	0
PR-MOA-CA	0.25	0	0	0	-	-	0
Response-CA	1	0	0	0	0	0	0
School-Active-CA	0.5	0	0	0	0	-	0
School-NFA-CA	0.5	0	0	0	0	-	0
School-Other-CA	0.5	0	0	0	0	-	0
SLIC-Closed-CA	0.5	0	0	2	2	-	4
SLIC-Open-CA	0.5	0	0	1	1	-	2
SML-CA	0.5	0	0	0	0	-	0
State-Response-Active-CA	1	0	0	0	0	0	0
State-Response-NFA-CA	0.5	0	0	0	0	-	0
State-Response-Other-CA	0.5	0	0	0	0	-	0
Superfund-Active-CA	1	0	0	0	0	0	0
Superfund-NFA-CA	1	0	0	0	0	0	0
Superfund-Other-CA	1	0	0	0	0	0	0
SWIS-CA	0.5	0	0	0	0	-	0
SWRCY-CA	0.5	0	0	0	0	-	0
UST-Abandoned-CA	0.25	0	0	0	-	-	0
UST-CA	0.25	0	2	0	-	-	2
UST-Closed-CA	0.25	0	0	0	-	-	0
USTComp-CA	0.25	0	0	0	-	-	0
UST-CRSP-CA	0.25	0	1	0	-	-	1
UST-Priority-CA	0.5	0	0	0	0	-	0
UST-Proposed-CA	0.25	0	0	0	-	-	0
VCP-Active-CA	0.5	0	1	0	0	-	1
VCP-NFA-CA	0.5	0	0	0	0	-	0
VCP-Other-CA	0.5	0	0	0	0	-	0

SUPPLEMENTAL DATABASES							
DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
Air-CA	0.25	0	2	0	-	-	2
AIR-DIST-CA	0.25	0	9	18	-	-	27
BioFuel-US	0.25	0	0	0	-	-	0
CAF-CA	0.25	0	0	0	-	-	0
CDL-CA	0.0625	0	0	-	-	-	0
CDL-US	0.0625	0	0	-	-	-	0
CHWF-CA	0.5	0	0	0	0	-	0
Cleaners-CA	0.25	0	0	2	-	-	2
Coal-Ash-Dams-US	0.5	0	0	0	0	-	0
County-BI-CA	0.25	0	0	0	-	-	0
Dams-CA	0.25	0	0	0	-	-	0
DPR-CA	0.25	0	0	0	-	-	0
DryCleaners-CA	0.25	0	0	3	-	-	3
EGRID-US	0.5	0	0	0	0	-	0
EPA-Watch-List-US	0.25	0	0	0	-	-	0
FA-HW-CA	0.0625	0	0	-	-	-	0
FA-HW-US	0.0625	0	0	-	-	-	0
FA-SWF-CA	0.0625	0	0	-	-	-	0
FRS-US	0.0625	0	1	-	-	-	1
FTTS-INSP-US	0.0625	0	0	-	-	-	0
FUDS-US	1	0	0	0	0	0	0

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SUPPLEMENTAL DATABASES							
DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
FUSRAP-US	0.25	0	0	0	-	-	0
Haulers-CA	0.0625	0	0	-	-	-	0
Hist-AFS2-US	0.25	0	0	0	-	-	0
Hist-AFS-US	0.25	0	0	0	-	-	0
Hist-AST-CA	0.25	0	0	0	-	-	0
Hist-AWS-CA	0.25	0	0	0	-	-	0
Hist-CA	0.0625	1	7	-	-	-	8
Hist-CalFID-CA	0.25	0	0	0	-	-	0
Hist-CALSITES-CA	0.25	0	0	0	-	-	0
Hist-CERCLIS-NFRAP-US	0.25	0	0	0	-	-	0
Hist-CERCLIS-US	0.25	0	0	0	-	-	0
Hist-City-UST-CA	0.25	0	0	0	-	-	0
Hist-Deed-CA	0.25	0	0	0	-	-	0
Hist-DTG-CA	0.25	0	0	0	-	-	0
Hist-ERNS-US	0.0625	0	0	-	-	-	0
Hist-FIFRA-US	0.25	0	0	0	-	-	0
Hist-FINDS-US	0.0625	0	0	-	-	-	0
Hist-HWS-CA	0.25	0	1	1	-	-	2
Hist-LUSTIS-CA	0.25	0	2	3	-	-	5
HIST-MLTS-US	0.25	0	0	0	-	-	0
HIST-MTBE-CA	0.25	0	0	0	-	-	0
Hist-NPL-US	0.25	0	0	0	-	-	0
Hist-Orange-County-LF-CA	0.25	0	0	0	-	-	0
Historical-CA	0.5	0	0	0	0	-	0
Hist-Prop65-CA	0.25	0	0	0	-	-	0
Hist-RCRIS-US	0.25	0	0	0	-	-	0
Hist-Regional-LUST-CA	0.25	0	0	0	-	-	0
Hist-Regional-Other-CA	0.25	0	2	1	-	-	3
Hist-Regional-SLIC-CA	0.25	0	0	0	-	-	0
Hist-Regional-Spills-CA	0.25	0	0	0	-	-	0
Hist-Regional-SWLF-CA	0.25	0	0	0	-	-	0
Hist-Regional-UST-CA	0.25	0	3	3	-	-	6
Hist-SCL-CA	0.25	0	0	0	-	-	0
Hist-SWIS-CA	0.25	0	0	0	-	-	0
Hist-ToxicPits-CA	0.25	0	0	0	-	-	0
Hist-TRIS-US	0.25	0	0	0	-	-	0
Hist-US	0.0625	0	0	-	-	-	0
Hist-USGS-WaterWells-CA	0.0625	0	0	-	-	-	0
Hist-USTReg-CA	0.25	0	0	0	-	-	0
Hist-WaterWells-US	0.0625	0	0	-	-	-	0
Hist-WMUDS-CA	0.25	0	0	0	-	-	0
HWT-CA	0.25	0	0	0	-	-	0
ICIS-Air-US	0.0625	0	0	-	-	-	0
ICIS-FEC-US	0.0625	0	0	-	-	-	0
ICIS-NPDES-US	0.0625	0	0	-	-	-	0
LA-Waste-Haulers-CA	0.0625	0	0	-	-	-	0
Lead-Smelter-2-US	0.25	0	0	0	-	-	0
Lead-US	0.25	0	0	0	-	-	0
LMOP-US	0.5	0	0	0	0	-	0
Mines2-CA	0.0625	0	0	-	-	-	0
Mines-CA	0.0625	0	0	-	-	-	0
Mines-CDMG-CA	0.0625	0	0	-	-	-	0
MINES-US	0.0625	0	0	-	-	-	0
MLTS-US	0.0625	0	0	-	-	-	0
Mortgage-CA	0.25	0	0	0	-	-	0

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SUPPLEMENTAL DATABASES							
DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
MRDS-US	0.25	0	0	0	-	-	0
MWMP-CA	0.25	0	0	0	-	-	0
NCI-CA	0.25	0	0	0	-	-	0
NEI-LF-CA	0.25	0	0	0	-	-	0
NPDES-CA	0.0625	0	0	-	-	-	0
NPDES-SW-CA	0.0625	0	0	-	-	-	0
OGM-CA	0.0625	0	0	-	-	-	0
OGW-CA	0.0625	0	0	-	-	-	0
OSCF-CA	0.5	0	0	0	0	-	0
PCS-US	0.25	0	0	0	-	-	0
Perch1-CA	0.25	0	0	0	-	-	0
Perch2-CA	0.25	0	0	0	-	-	0
Project-CA	0.25	0	0	0	-	-	0
RADINFO-US	0.0625	0	0	-	-	-	0
RFG-Lab-US	0.25	0	0	0	-	-	0
RMP-US	0.0625	0	0	-	-	-	0
ROD-US	0.5	0	0	0	0	-	0
SDWIS-US	0.25	0	0	0	-	-	0
SP-CA	0.25	0	0	0	-	-	0
Spills-SSO-CA	0.25	0	1	1	-	-	2
SSTS-US	0.0625	0	0	-	-	-	0
TierPer-CA	0.25	0	0	0	-	-	0
TOMS-CA	0.0625	0	0	-	-	-	0
Tribal-Air-US	0.25	0	0	0	-	-	0
TRIS2000-US	0.0625	0	0	-	-	-	0
TRIS2010-US	0.0625	0	0	-	-	-	0
TRIS80-US	0.0625	0	0	-	-	-	0
TRIS90-US	0.0625	0	0	-	-	-	0
TSCA-US	0.0625	0	0	-	-	-	0
UIC2-CA	0.0625	0	0	-	-	-	0
UIC-CA	0.0625	0	0	-	-	-	0
UMTRA-US	0.0625	0	0	-	-	-	0
USGS-Waterwells-US	0.0625	0	0	-	-	-	0
Vapor-Intrusions-US	0.5	0	0	0	0	-	0
WDR-CA	0.25	0	0	0	-	-	0

PROPRIETARY HISTORIC DATABASES							
DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
Hist-Agriculture	0.0625	0	0	-	-	-	0
Hist-Auto Dealers	0.0625	0	0	-	-	-	0
Hist-Auto Repair	0.25	0	4	1	-	-	5
Hist-Chemical Manufacturing	0.0625	0	0	-	-	-	0
Hist-Chemical-Storage	0.0625	0	0	-	-	-	0
Hist-Cleaners	0.25	0	0	1	-	-	1
Hist-Convenience	0.0625	0	0	-	-	-	0
Hist-Disposal-Recycle	0.0625	0	0	-	-	-	0
Hist-Food-Processors	0.0625	0	0	-	-	-	0
Hist-Gun-Ranges	0.0625	0	0	-	-	-	0
Hist-Machine Shop	0.0625	0	0	-	-	-	0
Hist-Manufacturing	0.0625	0	0	-	-	-	0
Hist-Metal Plating	0.0625	0	0	-	-	-	0
Hist-Mining	0.0625	0	0	-	-	-	0

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PROPRIETARY HISTORIC DATABASES							
DATABASE SEARCHED	DISTANCE SEARCHED	SUBJECT SITE	0.125 MILES	0.25 MILES	0.5 MILES	1.0 MILES	TOTAL
Hist-Mortuaries	0.0625	0	0	-	-	-	0
Hist-Oil-Gas	0.0625	0	0	-	-	-	0
Hist-OilGas-Refiners	0.0625	0	0	-	-	-	0
Hist-Other	0.0625	0	0	-	-	-	0
Hist-Paint-Stores	0.0625	0	0	-	-	-	0
Hist-Petroleum	0.0625	0	0	-	-	-	0
Hist-Post-Offices	0.0625	0	0	-	-	-	0
Hist-Printers	0.0625	0	0	-	-	-	0
Hist-Rental	0.0625	0	0	-	-	-	0
Hist-RV-Dealers	0.0625	0	0	-	-	-	0
Hist-Salvage	0.0625	0	0	-	-	-	0
Hist-Service Stations	0.25	0	6	3	-	-	9
Hist-Steel-Metals	0.0625	0	0	-	-	-	0
Hist-Textile	0.0625	0	0	-	-	-	0
Hist-Transportation	0.0625	0	0	-	-	-	0
Hist-Trucking	0.0625	0	0	-	-	-	0
Hist-Vehicle-Parts	0.0625	0	0	-	-	-	0
Hist-Vehicle-Washing	0.0625	0	0	-	-	-	0

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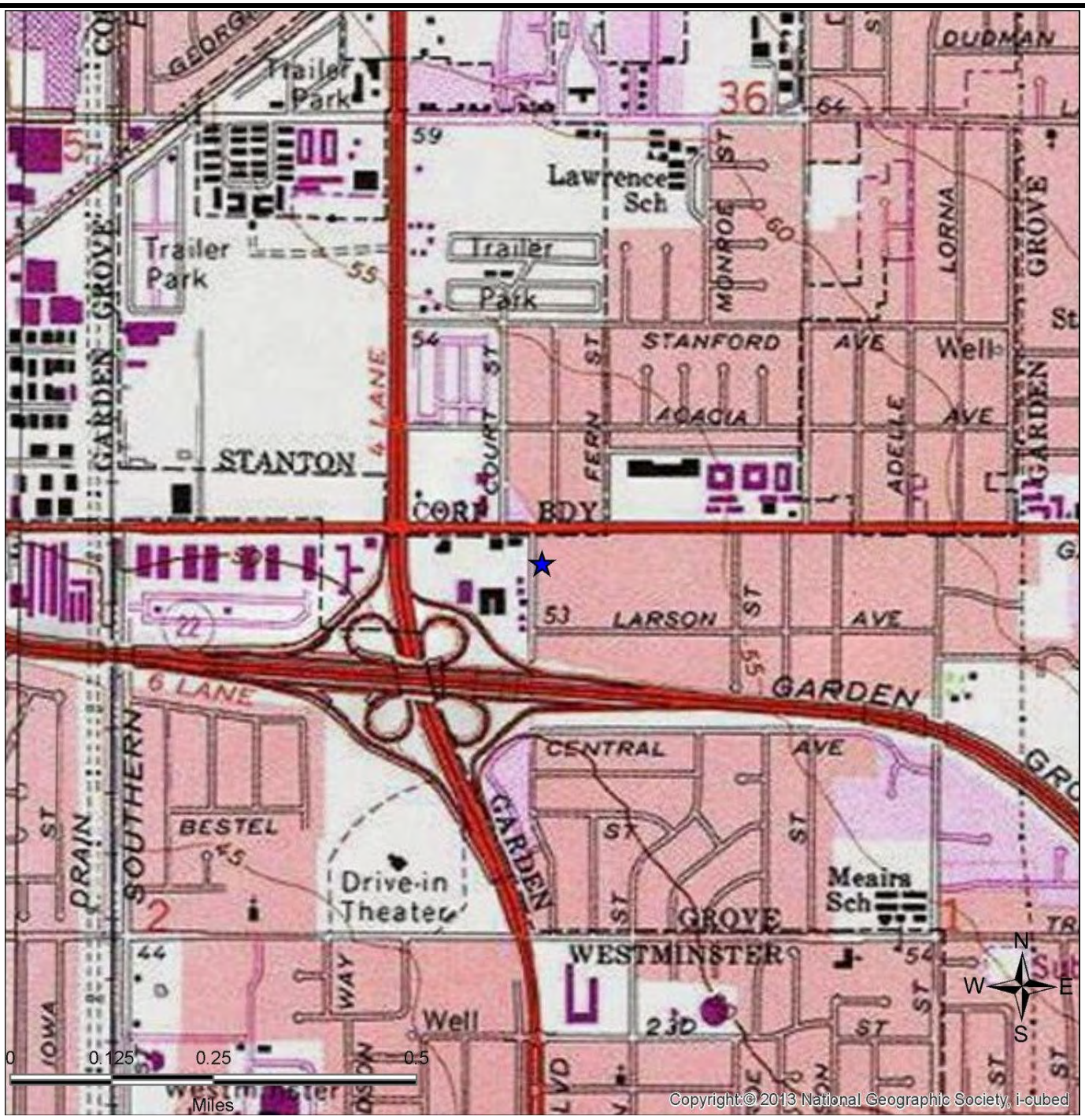

SITE LOCATION TOPOGRAPHIC MAP

U.S. Geological Survey. Anaheim (Date Unavailable) Quadrangle, 7.5 Minute Series

Certified Environmental Consultants, Inc.	13040 Coast Street Garden Grove, CA 92844	FIGURE: 1 JOB: 22-2426 DATE: 10/17/2022

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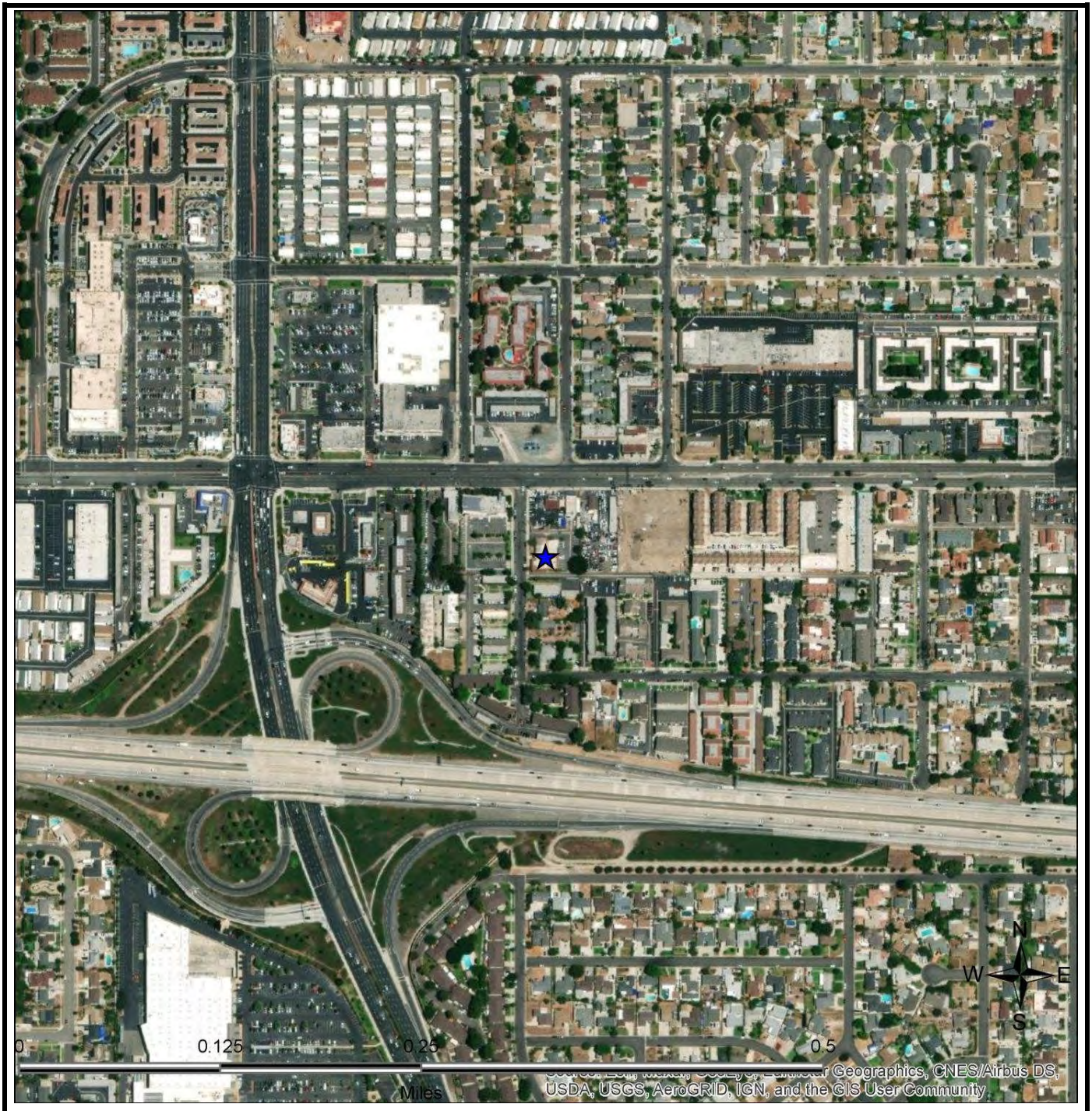

SITE LOCATION MAP

Certified Environmental Consultants, Inc.	13040 Coast Street Garden Grove, CA 92844	FIGURE: 2 JOB: 22-2426 DATE: 10/17/2022

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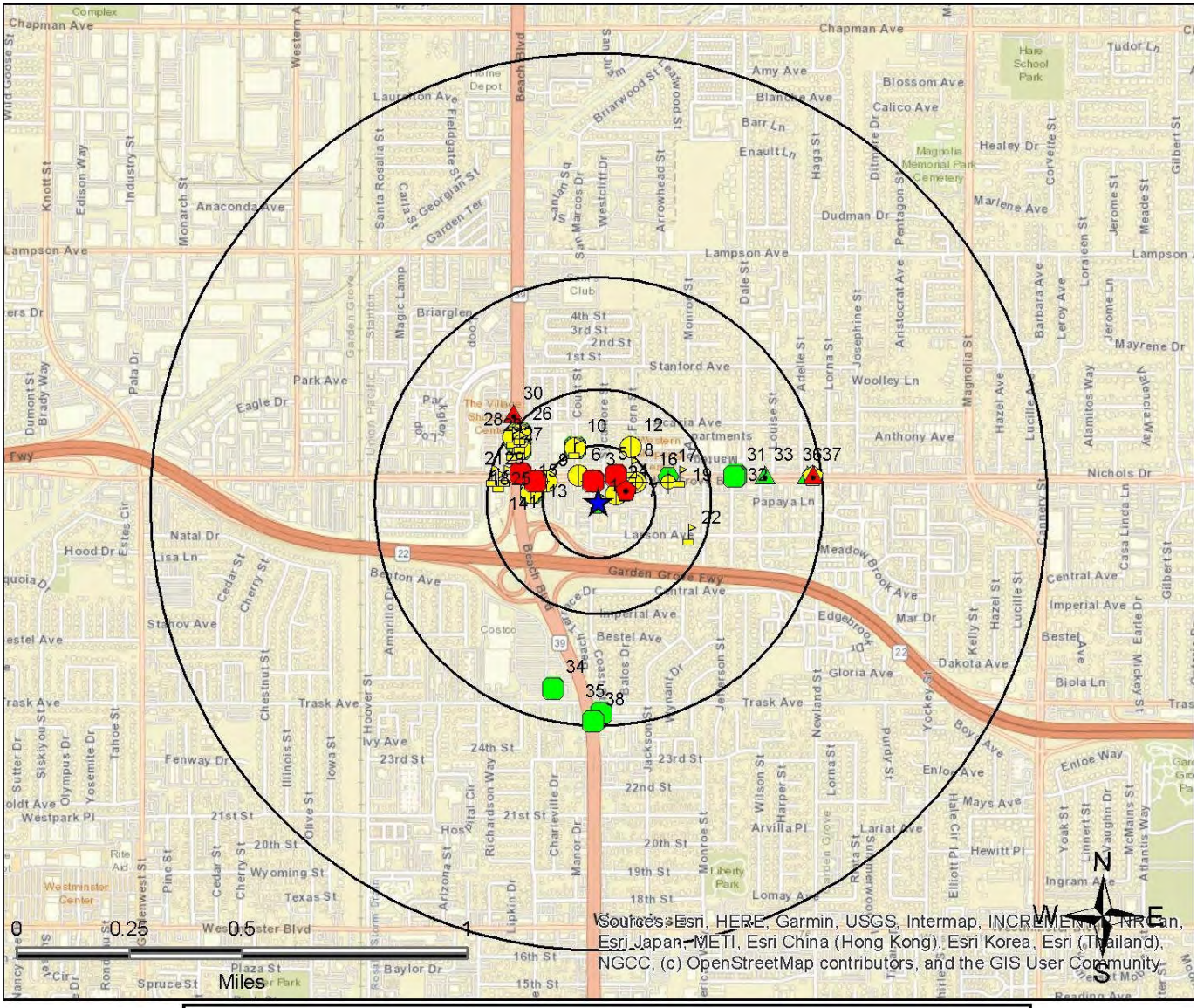
1-MILE RADIUS STREET MAP W/OCCURRENCES (MAP1)



Legend

Federal NPL	Federal RCRA non-CORRACTS TSD	Federal Emergency Release Reports	State/Tribal UST	ERS Supplemental Govt Sources
Federal Delisted NPL	Federal RCRA Generators	Emergency Release Reports	State/Tribal Brownfield	ERS Exclusive Historic Sources
Federal CERCLIS	Federal UST	State/Tribal NPL	State/Tribal Inst/Eng Controls	
Federal CERCLIS NFRAP	Federal Inst/Eng Controls	State/Tribal CERCLIS Equivalent	State/Tribal Landfill/Solid Waste	
Federal LUST	Federal Brownfield	State/Tribal LUST	State/Tribal RCRA Equivalent	
Federal RCRA CORR ACTS	Federal ERNS	State/Tribal Voluntary Cleanup Sites	State/Tribal ASTM Other	

All plotted occurrences represent approximate locations based on geographic information provided by the respective agency. Actual locations may vary due to numerous reasons such as: the size of the property, accuracy of the provided location, accuracy of the software used to determine the location, etc. **Occurrences are shown in three colors** to give a visual indication of the potential risk of the listed occurrence based on the type of list and the current status of the occurrence. Occurrences shown in **RED** are locations with known contamination that have not received a "case closed" or "no further action" status. Occurrences shown in **YELLOW** have been listed by the respective agency, but do not always represent an environmental risk. The detailed status information and description of the listing should be reviewed for further information. Occurrences shown in **GREEN** are occurrences that have active permits or have had contamination in the past but have received a "case closed" or "no further action" status and therefore, do not likely present an environmental risk.

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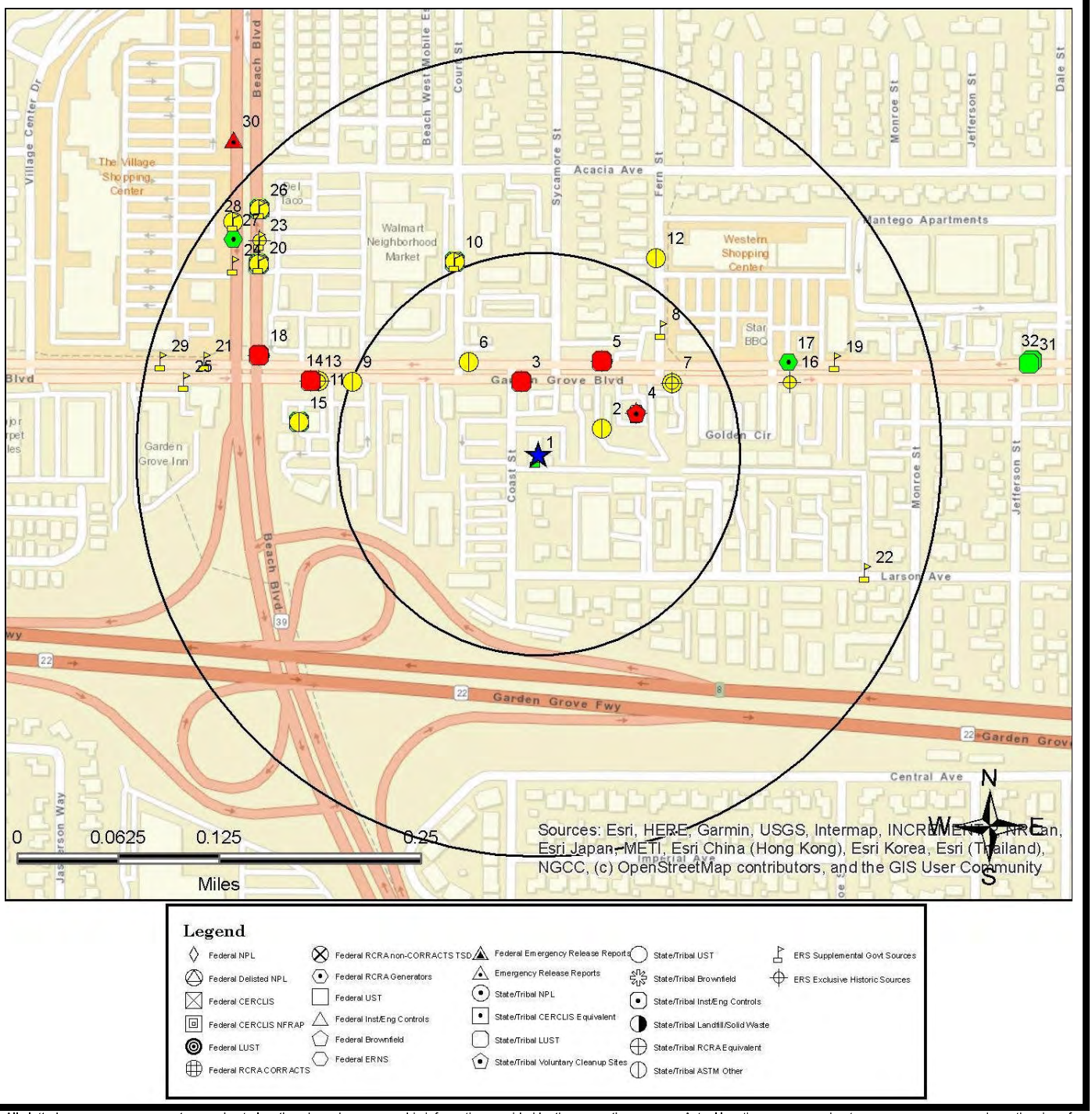
0.25-MILE RADIUS STREET MAP W/OCCURRENCES (MAP2)



All plotted occurrences represent approximate locations based on geographic information provided by the respective agency. Actual locations may vary due to numerous reasons such as: the size of the property, accuracy of the provided location, accuracy of the software used to determine the location, etc. **Occurrences are shown in three colors** to give a visual indication of the potential risk of the listed occurrence based on the type of list and the current status of the occurrence. Occurrences shown in **RED** are locations with known contamination that have not received a "case closed" or "no further action" status. Occurrences shown in **YELLOW** have been listed by the respective agency, but do not always represent an environmental risk. The detailed status information and description of the listing should be reviewed for further information. Occurrences shown in **GREEN** are occurrences that have active permits or have had contamination in the past but have received a "case closed" or "no further action" status and therefore, do not likely present an environmental risk.

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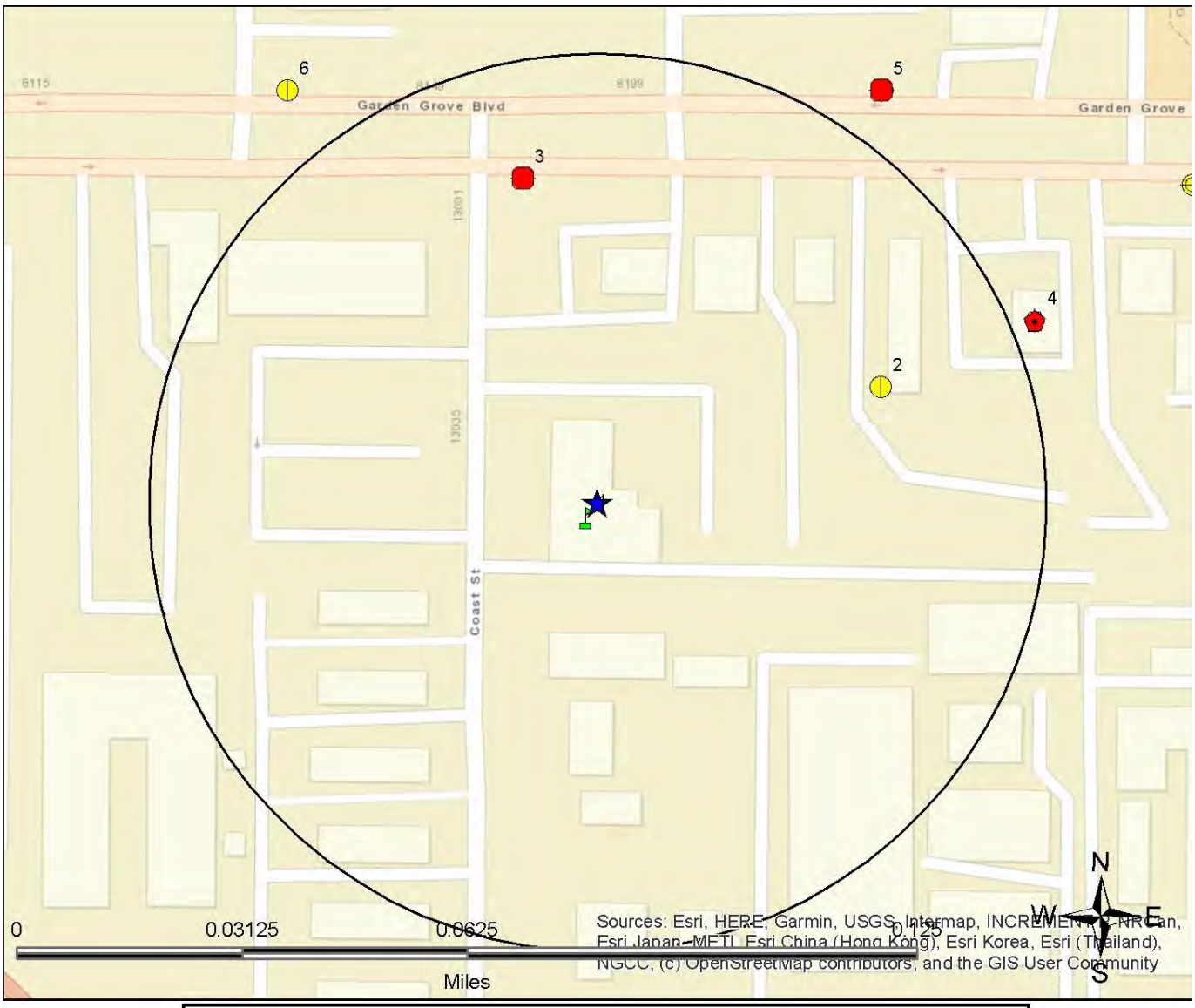
0.0625-MILE RADIUS STREET MAP W/ OCCURRENCES (MAP3)



All plotted occurrences represent approximate locations based on geographic information provided by the respective agency. Actual locations may vary due to numerous reasons such as: the size of the property, accuracy of the provided location, accuracy of the software used to determine the location, etc. **Occurrences are shown in three colors** to give a visual indication of the potential risk of the listed occurrence based on the type of list and the current status of the occurrence. Occurrences shown in **RED** are locations with known contamination that have not received a "case closed" or "no further action" status. Occurrences shown in **YELLOW** have been listed by the respective agency, but do not always represent an environmental risk. The detailed status information and description of the listing should be reviewed for further information. Occurrences shown in **GREEN** are occurrences that have active permits or have had contamination in the past but have received a "case closed" or "no further action" status and therefore, do not likely present an environmental risk.

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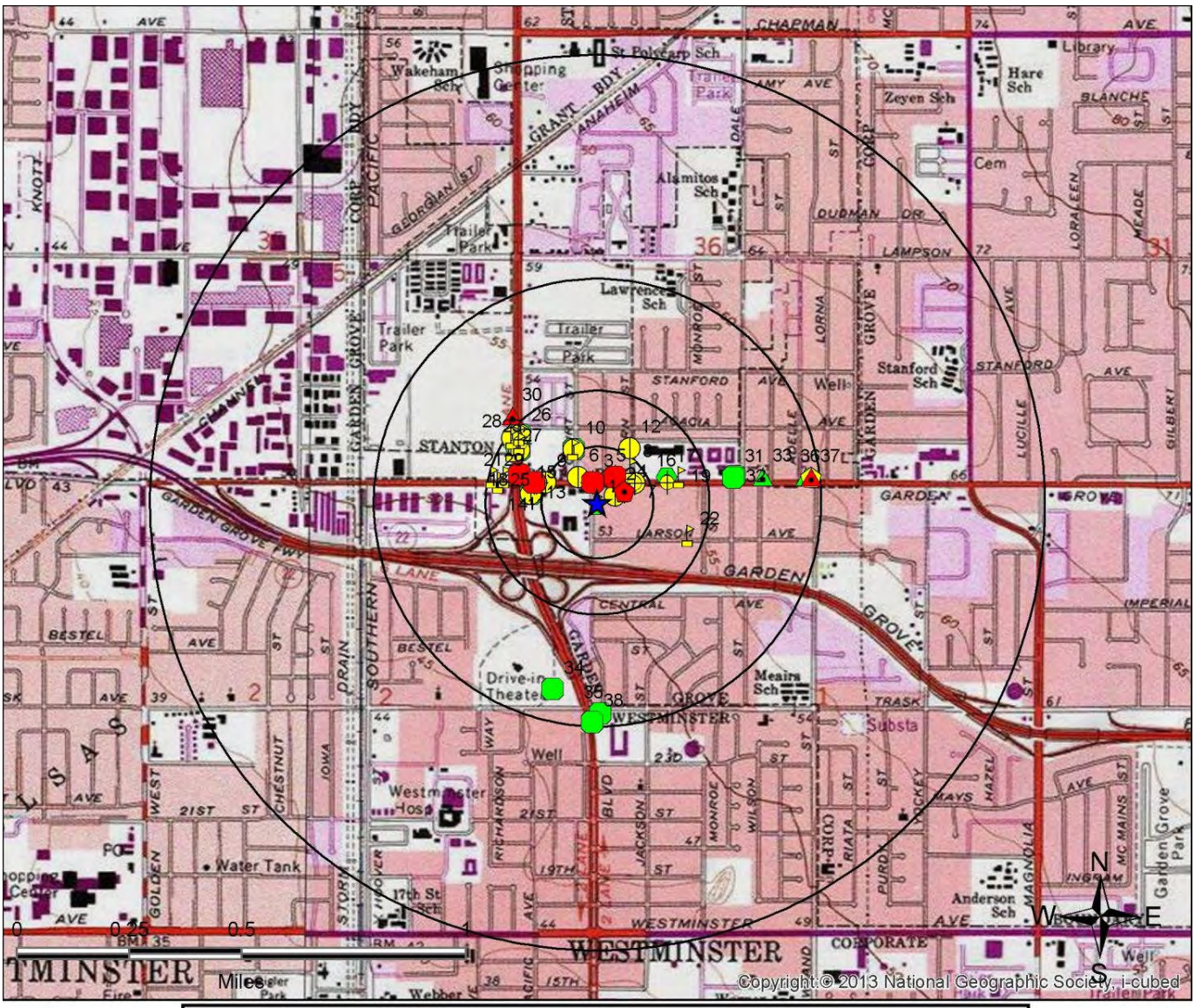
1-MILE TOPOGRAPHIC MAP W/OCCURRENCES (MAP4)



All plotted occurrences represent approximate locations based on geographic information provided by the respective agency. Actual locations may vary due to numerous reasons such as: the size of the property, accuracy of the provided location, accuracy of the software used to determine the location, etc. **Occurrences are shown in three colors** to give a visual indication of the potential risk of the listed occurrence based on the type of list and the current status of the occurrence. Occurrences shown in **RED** are locations with known contamination that have not received a "case closed" or "no further action" status. Occurrences shown in **YELLOW** have been listed by the respective agency, but do not always represent an environmental risk. The detailed status information and description of the listing should be reviewed for further information. Occurrences shown in **GREEN** are occurrences that have active permits or have had contamination in the past but have received a "case closed" or "no further action" status and therefore, do not likely present an environmental risk.

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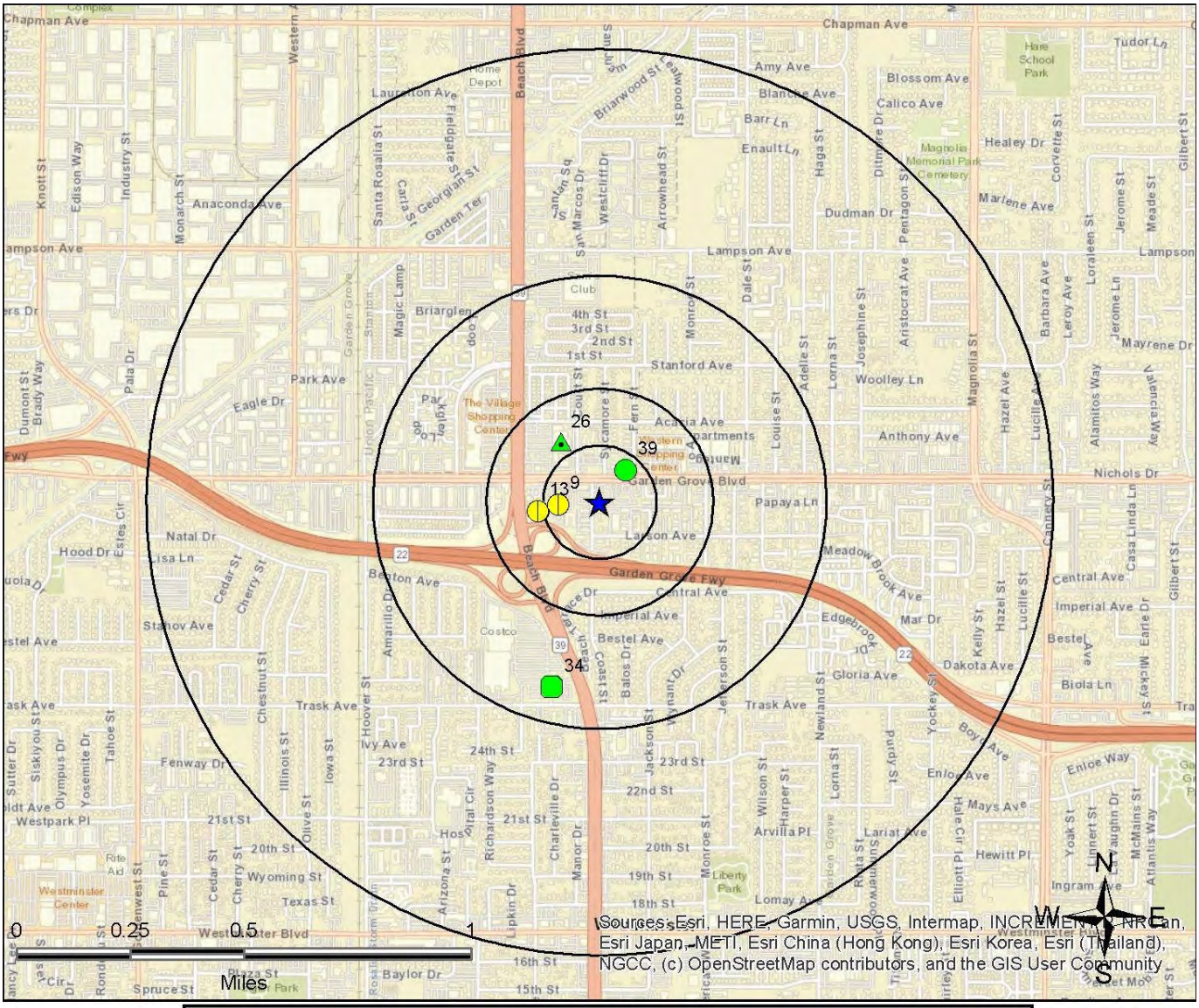
AGENCY DIFFERENCES IN MAPPED LOCATIONS (MAP5)

Note: Occurrences on this map have agency provided coordinates which differ significantly from geocoded locations.



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SUMMARY OF AGENCY DIFFERENCES

MAP ID	ID / SITE NAME	ADDRESS / DATABASE	AGENCY COORDINATES	DISTANCE (MILES)	DIRECTION
9	10624480 T-MOBILE WEST CORPORATION LA02587A	8062 Garden Grove Blvd CERS-CA	-117.9912, 33.77297	0.09	W
13	437224 Alliance Express Lube +	8034 GARDEN GROVE BLVD STE B AST-CRSP-CA	-117.99197, 33.77277	0.13	W
13	10568722 EXPRESS CARWASH & LUBE	8034 GARDEN GROVE BLVD CERS-CA	-117.99197, 33.77277	0.13	W
13	437224 Alliance Express Lube +	8034 GARDEN GROVE BLVD STE B CRSP-CA	-117.99197, 33.77277	0.13	W
26	T10000018059 TRAMMEL CROW	12840 BEACH BLVD SLIC-Closed-CA	-117.99112, 33.77498	0.16	NW
34	T0605906190 MOBIL OIL	13441 BEACH LUST-Closed-CA	-117.99136, 33.76714	0.42	S
39	182939 IMPERIAL STATIONS INC #1	8221 GARDEN GROVE BLVD UST-CRSP-CA	-117.98862, 33.7741	0.09	NE

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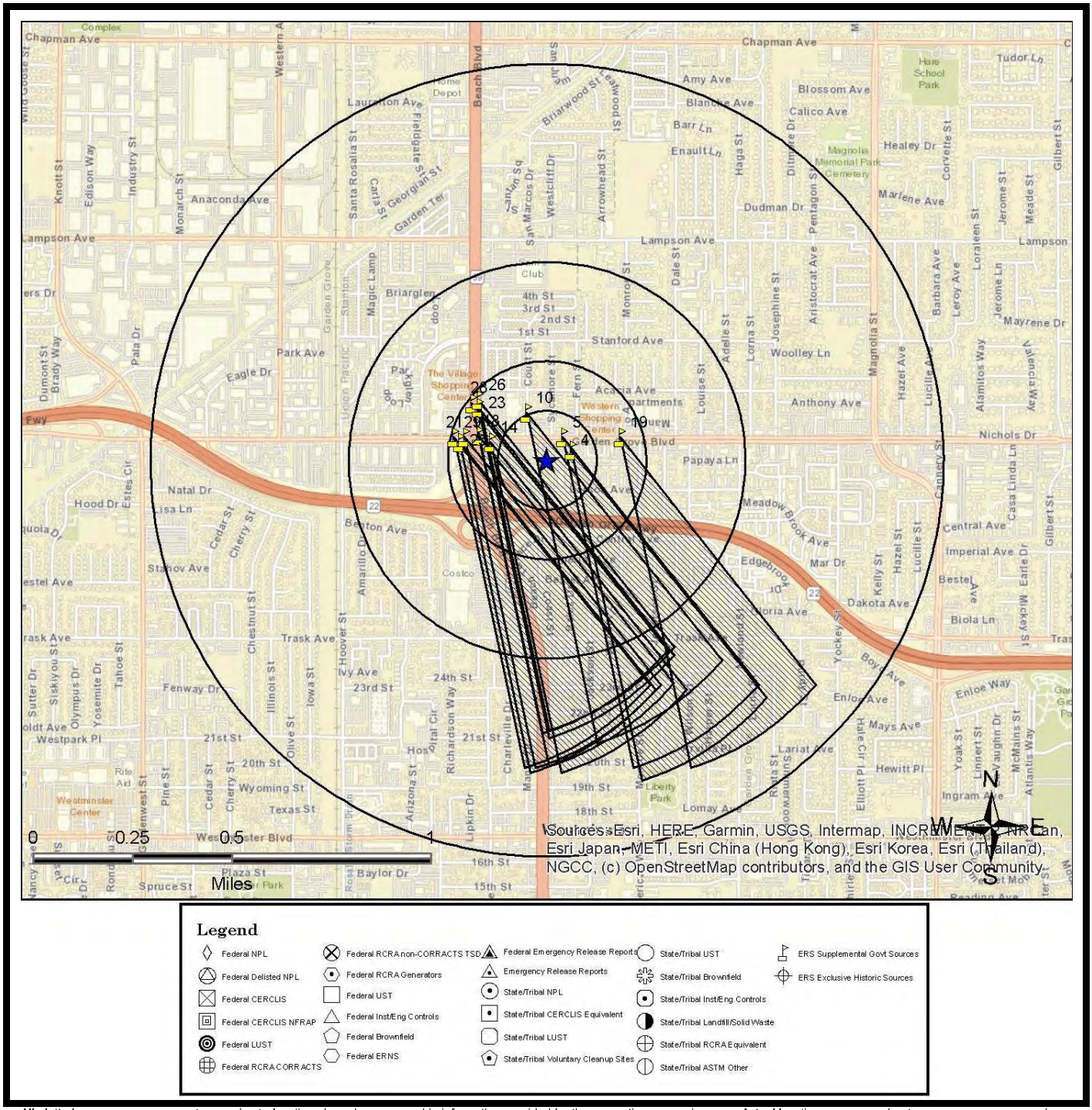
MAPPED AIR PERMITS WITH POTENTIAL DISPERSION (MAP6)

Note: Occurrences on this map are reported in Air Quality databases. Potential air plumes are drawn in the direction of the prevailing wind.



All plotted occurrences represent approximate locations based on geographic information provided by the respective agency/source. Actual locations may vary due to numerous reasons such as: the size of the property, accuracy of the provided location, accuracy of the software used to determine the location, etc. Potential air dispersion plumes are depicted to graphically show the direction contaminates may travel based on prevailing wind data and provide a visual screening tool only. Actual direction will vary especially by season. Depending on the actual contaminate, amount released, and other variables, the distance from the source the contaminate may travel can and will vary. Interpretation and review of all the actual relevant data by an environmental professional is recommended before making any decisions, conclusions or otherwise based on the map depictions, air data, and potential air dispersion plumes.

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LISTED OCCURRENCE DETAILS

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-CA	No Longer Listed	Subject Site	55 ft (0 ft higher than site)	1
SITE NAME			**MAPS**	**ID**
FARM CREDIT SERVICE			1, 2, 3, 4	CAC000961696
ADDRESS			**CITY**	**ZIP**
13040 COAST ST			GARDEN GROVE	928440000

DETAILS

Original Database: HWIS-CA
Last Agency Status: Listed
Archive Date: 10/07/21
No Longer Listed-EPA ID: CAC000961696
Facility County: 30
Mailing Street: PO BOX 9160
Mailing City: SAN BERNARDINO
Mailing State: CA
Mailing Zip: 924270000
Contact Name: FARM CREDIT SERVICE
Contact Phone: 9098878904

Year: 1994
TONS: 0.5899
TSD EPA ID: CAD009007626
Category Code: 151
Category Description: Asbestos containing waste
Method Description: DISPOSAL, LAND FILL

Year: 1994
TONS: 0.5899
TSD EPA ID: CAD009007626
Category Code: 151
Category Description: Asbestos containing waste
Method Description: LANDFILL

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DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CERS-CA	Listed	0.04 miles NE	54 ft (1 ft lower than site)	2

SITE NAME	MAPS	ID
JAPANESE AUTO REPAIR	1, 2, 3, 4	10556089

ADDRESS	CITY	ZIP
8196 GARDEN GROVE BLVD	GARDEN GROVE	92841

DETAILS

General Program & Facility Information
CERS ID: 10556089
Facility ID: FA0046974
Facility Regulator Key ID: FA0046974
Organization Code: 90504220
Business/Organization Name: JAPANESE AUTO REPAIR
Multiple Jurisdictional Business? (Y/N): No
Business Origin: EDT
Count of Business' CERS User Accounts: 0
Facility Count for Business: 1
Last Submittal Date (any element): 12/19/2016 2:23:13 PM
Count of Submitted Elements: 3
Remote Facility? (Y/N): No
Small Quantity Generator Facility? (Y/N): No
Local Facility Grouping: Not Reported

Facility Specific Information
Assessor Parcel Number (APN): Not Reported
Number of Employees: 2
Property Owner Name: Not Reported
Property Owner Phone Number: Not Reported
Property Owner Mailing Address: Not Reported
Property Owner Mailing City: Not Reported
Property Owner Mailing State: Not Reported
Property Owner Mailing Zip Code: Not Reported
Property Owner Mailing Country: Not Reported
More Details Link

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DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
County-Others-CA	Listed	0.04 miles NE	54 ft (1 ft lower than site)	2
SITE NAME			MAPS	ID
JAPANESE AUTO REPAIR			1, 2, 3, 4	FA0046974-ORG
ADDRESS			CITY	ZIP
8196 GARDEN GROVE BLVD			GARDEN GROVE	92841
DETAILS				

County: Orange
Responsible Agency: Orange County Environmental Health
Type of Listing: Hazardous Waste Facilities
Facility ID: FA0046974
Date Run: 7/13/2018 5:50 PM

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CRSP-CA	Listed	0.04 miles NE	54 ft (1 ft lower than site)	2
SITE NAME			MAPS	ID
JAPANESE AUTO REPAIR			1, 2, 3, 4	415233
ADDRESS			CITY	ZIP
8196 GARDEN GROVE BLVD			GARDEN GROVE	92841

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DETAILS
Site Regulated Program Information Site ID: 415233 Site EI ID: 10556089 Agency Provided Latitude: 33.773312 Agency Provided Longitude: -117.988945 Program Description: Chemical Storage Facilities Program Description: Hazardous Waste Generator   Evaluation Information Evaluation Date: 12/4/2017 Violations Found? (Y/N): No Evaluation General Type: Compliance Evaluation Inspection Evaluation Type: Routine done by local agency Evaluation Note(s): Facility has the following hazardous waste at site in 55 gallon drums Waste oil (3), used antifreeze (1) and used oil filters (1) drums are properly labeled Evaluation Division: Orange County Environmental Health Evaluation Program: HW Evaluation Source: CERS Evaluation Date: 12/4/2017 Violations Found? (Y/N): Yes Evaluation General Type: Compliance Evaluation Inspection Evaluation Type: Routine done by local agency Evaluation Note(s): Not Reported Evaluation Division: Orange County Environmental Health More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CERS-CA	Listed	0.05 miles N	54 ft (1 ft lower than site)	3
SITE NAME			**MAPS**	**ID**
CROWN AUTO SALES & REPAIR			1, 2, 3, 4	10565221
ADDRESS			**CITY**	**ZIP**
8142 GARDEN GROVE Blvd			GARDEN GROVE	92844

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DETAILS

General Program & Facility Information
CERS ID: 10565221
Facility ID: FA0052582
Facility Regulator Key ID: FA0052582
Organization Code: 90518482
Business/Organization Name: CROWN AUTO SALES & REPAIR
Multiple Jurisdictional Business? (Y/N): No
Business Origin: EDT
Count of Business' CERS User Accounts: 0
Facility Count for Business: 1
Last Submittal Date (any element): Not Reported
Count of Submitted Elements: 0
Remote Facility? (Y/N): No
Small Quantity Generator Facility? (Y/N): No
Local Facility Grouping: Not Reported

Facility Specific Information
Assessor Parcel Number (APN): Not Reported
Number of Employees: Not Reported
Property Owner Name: Not Reported
Property Owner Phone Number: Not Reported
Property Owner Mailing Address: Not Reported
Property Owner Mailing City: Not Reported
Property Owner Mailing State: Not Reported
Property Owner Mailing Zip Code: Not Reported
Property Owner Mailing Country: Not Reported
More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CERS-CA	Listed	0.05 miles N	54 ft (1 ft lower than site)	3
SITE NAME			**MAPS**	**ID**
EZ AUTO SALES RENTAL			1, 2, 3, 4	10718932
ADDRESS			**CITY**	**ZIP**
8142 Garden Grove Blvd			Garden Grove	92844

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DETAILS

General Program & Facility Information
CERS ID: 10718932
Facility ID: Not Reported
Facility Regulator Key ID: Not Reported
Organization Code: 90679234
Business/Organization Name: EZ AUTO SALES RENTAL
Multiple Jurisdictional Business? (Y/N): No
Business Origin: Business
Count of Business' CERS User Accounts: 1
Facility Count for Business: 1
Last Submittal Date (any element): Not Reported
Count of Submitted Elements: 0
Remote Facility? (Y/N): No
Small Quantity Generator Facility? (Y/N): No
Local Facility Grouping: Not Reported

Facility Specific Information
Assessor Parcel Number (APN): Not Reported
Number of Employees: Not Reported
Property Owner Name: Not Reported
Property Owner Phone Number: Not Reported
Property Owner Mailing Address: Not Reported
Property Owner Mailing City: Not Reported
Property Owner Mailing State: Not Reported
Property Owner Mailing Zip Code: Not Reported
Property Owner Mailing Country: Not Reported
More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
County-LUST-Open-CA	Open	0.05 miles N	54 ft (1 ft lower than site)	3
SITE NAME			**MAPS**	**ID**
CROWN AUTO			1, 2, 3, 4	RO0002940-ORG
ADDRESS			**CITY**	**ZIP**
8142 GARDEN GROVE BLVD			GARDEN GROVE	92844

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DETAILS
County: Orange Record ID: RO0002940 Case ID: 87UT181 Case Closed Date: Not Reported Type of Closure: Not Reported Status: Not Reported Case Type Code: O Released Substance: Gasoline-Automotive (motor gasoline and additives), leaded & unleaded

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
County-Others-CA	Listed	0.05 miles N	54 ft (1 ft lower than site)	3
SITE NAME			**MAPS**	**ID**
EZ AUTO SALES RENTAL & REPAIR			1, 2, 3, 4	FA0064011-ORG
ADDRESS			**CITY**	**ZIP**
8142 GARDEN GROVE BLVD			GARDEN GROVE	92844
DETAILS				
County: Orange Responsible Agency: Orange County Environmental Health Type of Listing: Hazardous Waste Facilities Facility ID: FA0064011 Date Run: 7/13/2018 5:50 PM				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CRSP-CA	Listed	0.05 miles N	54 ft (1 ft lower than site)	3
SITE NAME			**MAPS**	**ID**
CROWN AUTO SALES & REPAIR			1, 2, 3, 4	437192
ADDRESS			**CITY**	**ZIP**
8142 GARDEN GROVE BLVD			GARDEN GROVE	92844

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DETAILS

Site Regulated Program Information
Site ID: 437192
Site EI ID: 10565221
Agency Provided Latitude: 33.77351
Agency Provided Longitude: -117.9896

Program Description: Chemical Storage Facilities

Evaluation Information
Evaluation Date: 10/14/2016
Violations Found? (Y/N): No
Evaluation General Type: Compliance Evaluation Inspection
Evaluation Type: Routine done by local agency
Evaluation Note(s): INSPECTOR COMMENTS: On-site for a follow up inspection. This facility is no longer in operation. Facility closed 06/29/16.
Evaluation Division: Orange County Environmental Health
Evaluation Program: HMRRP
Evaluation Source: CERS

Evaluation Date: 9/12/2013
Violations Found? (Y/N): Yes
Evaluation General Type: Compliance Evaluation Inspection
Evaluation Type: Routine done by local agency
Evaluation Note(s): Not Reported
Evaluation Division: Orange County Environmental Health
Evaluation Program: HMRRP
Evaluation Source: CERS

More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CRSP-CA	Listed	0.05 miles N	54 ft (1 ft lower than site)	3
SITE NAME			**MAPS**	**ID**
EZ AUTO SALES RENTAL			1, 2, 3, 4	414305
ADDRESS			**CITY**	**ZIP**
8142 GARDEN GROVE BLVD			GARDEN GROVE	92844

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DETAILS

Site Regulated Program Information
Site ID: 414305
Site EI ID: 10718932
Agency Provided Latitude: 33.77351
Agency Provided Longitude: -117.98959

Program Description: Chemical Storage Facilities

Program Description: Hazardous Waste Generator

Evaluation Information
Evaluation Date: 10/14/2016
Violations Found? (Y/N): No
Evaluation General Type: Other/Unknown
Evaluation Type: Other, not routine, done by local agency
Evaluation Note(s): INSPECTOR COMMENTS: On-site for a follow up inspection. This facility is no longer in operation. Facility closed 06/29/16.
Evaluation Division: Orange County Environmental Health
Evaluation Program: HW
Evaluation Source: CERS

Evaluation Date: 10/14/2016
Violations Found? (Y/N): No
Evaluation General Type: Compliance Evaluation Inspection
Evaluation Type: Routine done by local agency
Evaluation Note(s): EZ Auto Sales-Rental & Repair 8142 GARDEN GROVE BLVD GARDEN GROVE CA 92844 Orange County Environmental Health as the Certified Unified Program Agency (OC CUPA) is the administrating agency for the Hazardous Materials Disclosure and Business Emergency Plan programs (HMD/BEP). Electronic submission of these forms is a legal requirement. Failure to submit HMD/BEP forms is in violation of the California Health & Safety Code Chapter 6.95. According to our records there is no electronic submission for this facility. Businesses may also submit forms must use the California Environmental Reporting System. Failure to electronically submit your HMD/BEP forms within the next 30 days may result in the issuance of a Notice of Violation to the facility and/or an Administrative Enforcement Order.
Evaluation Division: Orange County Environmental Health
More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CRSP-CA	Listed	0.05 miles N	54 ft (1 ft lower than site)	3
SITE NAME			**MAPS**	**ID**
CROWN AUTO			1, 2, 3, 4	198036
ADDRESS			**CITY**	**ZIP**
8142 GARDEN GROVE			GARDEN GROVE	92844

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DETAILS
Site Regulated Program Information Site ID: 198036 Site EI ID: T0605900522 Agency Provided Latitude: 33.773781 Agency Provided Longitude: -117.989848 Program Description: Leaking Underground Storage Tank Cleanup Site Evaluation Information : Not Reported :Violation Information : Not Reported :Enforcement Information : Not Reported :Chemical Information : Not Reported :Coordinate Information : Not Reported :

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
ENF-CA	Listed	0.05 miles N	54 ft (1 ft lower than site)	3
SITE NAME			**MAPS**	**ID**
CROWN AUTO			1, 2, 3, 4	T0605900522
ADDRESS			**CITY**	**ZIP**
8142 GARDEN GROVE			GARDEN GROVE	92844

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DETAILS
Global ID: T0605900522 County: Orange Site History: Please refer to recent Site Documents or Monitoring Reports in GeoTracker for site history. Orange County is not responsible for the accuracy of any professional interpretations provided in reports submitted by consultants for the responsible party. Case Type: LUST Cleanup Site Status: Completed - Case Closed Lead Agency: ORANGE COUNTY LOP Case Worker: GH Local Agency: ORANGE COUNTY LOP RB Case Number: 083000656T Loc Case Number: 87UT181 File Location: All Files are on GeoTracker or in the Local Agency Warehouse Potential Contaminants of Concern: Gasoline Potential Media Affected: Aquifer used for drinking water supply How Discovered: Tank Closure How Discovered Description: Not Reported Stop Method: Close and Remove Tank Stop Method Description: Not Reported Action Date: 2020-10-09 Action Type: ENFORCEMENT Action: Closure/No Further Action Letter Action Date: 2020-03-30 Action Type: ENFORCEMENT Action: Staff Letter Action Date: 2020-02-25 Action Type: ENFORCEMENT More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
FRS-US	Listed	0.05 miles N	54 ft (1 ft lower than site)	3
SITE NAME			**MAPS**	**ID**
7139 ORANGE COUNTY ENVIRONMENTAL HEALTH			1, 2, 3, 4	110043844766
ADDRESS			**CITY**	**ZIP**
8142 GARDEN GROVE BLVD			GARDEN GROVE	92840

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DETAILS
FRS Facility Detail Report URL: http://ofmpub.epa.gov/enviro/fii_query_detail.disp_program_facility?p_registry_id=110043844766 Create Date: 22-SEP-2011 11:31:30 Update Date: 17-OCT-2011 15:34:18 Program System: LUST-ARRA Interest Type(s): LEAKING UNDERGROUND STORAGE TANK - ARRA

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-Auto Repair	Listed	0.05 miles N	54 ft (1 ft lower than site)	3
SITE NAME			**MAPS**	**ID**
CROWN AUTO SALES & REPAIR			1, 2, 3, 4	623480-PD
ADDRESS			**CITY**	**ZIP**
8142 GARDEN GROVE BLVD			GARDEN GROVE	92844-1007
DETAILS				
Listing Year: 1997 SIC Category: AUTOMOBILE REPAIRING & SERVICE SIC Code: 753801				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-CA	No Longer Listed	0.05 miles N	54 ft (1 ft lower than site)	3
SITE NAME			**MAPS**	**ID**
CROWN AUTO SERVICE_& REPAIR			1, 2, 3, 4	CAL000093097
ADDRESS			**CITY**	**ZIP**
8142 GARDEN GROVE BLVD			GARDEN GROVE	926440000

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DETAILS
Original Database: HWIS-CA Last Agency Status: Listed Archive Date: 10/07/21 No Longer Listed-EPA ID: CAL000093097 Facility County: 30 Mailing Street: 8142 GARDEN GROVE BLVD Mailing City: GARDEN GROVE Mailing State: CA Mailing Zip: 926440000 Contact Name: YONG CHOI Contact Phone: 0000000000 Year: 2000 TONS: 0.37 TSD EPA ID: CAL000161743 Category Code: 134 Category Description: Aqueous solution with total organic residues less than 10 percent Method Description: RECYCLER Year: 1999 TONS: 0.5004 TSD EPA ID: CAL000161743 Category Code: 134 Category Description: Aqueous solution with total organic residues less than 10 percent Method Description: RECYCLER Year: 1994 More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-CA	No Longer Listed	0.05 miles N	54 ft (1 ft lower than site)	3
SITE NAME			**MAPS**	**ID**
CROWN AUTO			1, 2, 3, 4	T0605900522
ADDRESS			**CITY**	**ZIP**
8142 GARDEN GROVE			GARDEN GROVE	92844

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DETAILS

Original Database: LUST-Open-CA
Last Agency Status: Open - Eligible for Closure
Archive Date: 03/30/21
No Longer Listed-Sites Details
URL:
http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0605900522
Global ID: T0605900522
Case Type: LUST Cleanup Site
Status: Open - Eligible for Closure
Status Date: Not Reported
CUF Case: YES
Lead Agency: ORANGE COUNTY LOP
Case Worker: SB
Local Agency: ORANGE COUNTY LOP
RB Case Number: 083000656T
Loc Case Number: 87UT181
File Location: All Files are on GeoTracker or in the Local Agency Warehouse
Potential Contaminants of Concern: Gasoline
Potential Media Affected: Aquifer used for drinking water supply
Site History: Please refer to recent Site Documents or Monitoring Reports in GeoTracker for site history. Orange County is not responsible for the accuracy of any professional interpretations provided in reports submitted by consultants for the responsible party.
Begin Date: 1987-07-17 00:00:00
How Discovered: Tank Closure
How Discovered Description: Not Reported
Stop Method: Close and Remove Tank
Stop Method Description: Not Reported
Agency Provided Latitude: 33.7735518012853
Agency Provided Longitude: -117.98966932843
More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-CA	No Longer Listed	0.05 miles N	54 ft (1 ft lower than site)	3
SITE NAME			**MAPS**	**ID**
CROWN AUTO			1, 2, 3, 4	T0605900522
ADDRESS			**CITY**	**ZIP**
8142 GARDEN GROVE			GARDEN GROVE	92844

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DETAILS
Original Database: SLIC-Closed-CA Last Agency Status: Completed - Case Closed Archive Date: 12/17/21 No Longer Listed-Sites Details URL: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0605900522 Global ID: T0605900522 Case Type: LUST Cleanup Site Status: Completed - Case Closed Status Date: 10/9/2020 CUF Case: YES Lead Agency: ORANGE COUNTY LOP Case Worker: GH Local Agency: ORANGE COUNTY LOP RB Case Number: 083000656T Loc Case Number: 87UT181 File Location: All Files are on GeoTracker or in the Local Agency Warehouse Potential Contaminants of Concern: Gasoline Potential Media Affected: Aquifer used for drinking water supply Begin Date: 7/17/1987 How Discovered: Tank Closure How Discovered Description: Not Reported Stop Method: Close and Remove Tank Stop Method Description: Not Reported Agency Provided Latitude: 33.773551801 Agency Provided Longitude: -117.98966933 More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-CA	Name Changed	0.05 miles N	54 ft (1 ft lower than site)	3
SITE NAME			**MAPS**	**ID**
CROWNAUTO			1, 2, 3, 4	RO0002940-ORG
ADDRESS			**CITY**	**ZIP**
8142 GARDEN GROVE BLVD			GARDEN GROVE	92844

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DETAILS
Original Database: County-LUST-Open-CA Last Agency Status: Open Archive Date: 01/16/17 Name Changed-County: Orange Record ID: RO0002940 Site ID: 87UT181 Case Closed Date: Not Reported Status: Open - Verification Monitoring Released Substance: Gasoline-Automotive (motor gasoline and additives), leaded & unleaded

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-CA	No Longer Listed	0.05 miles N	54 ft (1 ft lower than site)	3
SITE NAME			**MAPS**	**ID**
CROWN AUTO SERVICE			1, 2, 3, 4	552001
ADDRESS			**CITY**	**ZIP**
8142 GARDEN GROVE BLVD			GARDEN GROVE	92844
DETAILS				
Original Database: UST-CA Last Agency Status: Listed Archive Date: 03/27/17 No Longer Listed-More Information on Site? Go to Following Link: http://geotracker.waterboards.ca.gov/search.asp Global ID: 6743 COUNTY: Orange Permitting Agency: ORANGE COUNTY Agency Provided Latitude: 33.774859 Agency Provided Longitude: -117.988247 PROJECT TYPE: Not Reported RB Case Number: Not Reported LOC Case Number: Not Reported Case Worker: Not Reported MTBE DATE: Not Reported GW CONC (PPB): Not Reported MATRIX: Not Reported				

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DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-CA	Name Changed	0.05 miles N	54 ft (1 ft lower than site)	3

SITE NAME	MAPS	ID
CROWN AUTO REPAIR	1, 2, 3, 4	FA0064011-ORG

ADDRESS	CITY	ZIP
8142 GARDEN GROVE BLVD	GARDEN GROVE	92844

DETAILS

Original Database: County-Others-CA
Last Agency Status: Listed
Archive Date: 04/17/17
Name Changed-County: Orange
Responsible Agency: Orange County Environmental Health
Type of Listing: Hazardous Waste Facilities
Facility ID: FA0064011
Date Run: 11/3/2016 4:05 PM

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-CA	Name Changed	0.05 miles N	54 ft (1 ft lower than site)	3

SITE NAME	MAPS	ID
CROWN AUTO	1, 2, 3, 4	RO0002940-ORG

ADDRESS	CITY	ZIP
8142 GARDEN GROVE BLVD	Garden Grove	92844

DETAILS

Original Database: County-LUST-Open-CA
Last Agency Status: Open
Archive Date: 10/08/16
Name Changed-County: Orange
Record ID: RO0002940
Site ID: 87UT181
Case Type: O
Case Closed Date: Not Reported
Status: 7
Released Substance: Gasoline-Automotive (motor gasoline and, additives), leaded & unleaded

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DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-HWS-CA	Listed	0.05 miles N	54 ft (1 ft lower than site)	3
SITE NAME			**MAPS**	**ID**
CROWN AUTOMOTIVE SERVICE			1, 2, 3, 4	1190442
ADDRESS			**CITY**	**ZIP**
8142 GARDEN GROVE			GARDEN GROVE	92644
DETAILS				
Reported Date: 1998				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-LUSTIS-CA	Listed	0.05 miles N	54 ft (1 ft lower than site)	3
SITE NAME			**MAPS**	**ID**
CROWN AUTOMOTIVE SERVICE, INC.			1, 2, 3, 4	1190442
ADDRESS			**CITY**	**ZIP**
8142 GARDEN GROVE BOULEVARD			GARDEN GROVE	92644
DETAILS				
Reported Date: 1998				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-Regional-Other-CA	Listed	0.05 miles N	54 ft (1 ft lower than site)	3
SITE NAME			**MAPS**	**ID**
CROWN AUTO			1, 2, 3, 4	1190442
ADDRESS			**CITY**	**ZIP**
8142 GARDEN GROVE BLVD			GARDEN GROVE	92644

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DETAILS
Reported Date: 1998 List: Orange County-Groundwater Cleanup Program Agency: Orange County Health Care Agency

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-Regional-UST-CA	Listed	0.05 miles N	54 ft (1 ft lower than site)	3
SITE NAME			**MAPS**	**ID**
CROWN AUTOMOTIVE SERVICE INC.			1, 2, 3, 4	1190442
ADDRESS			**CITY**	**ZIP**
8142 GARDEN GROVE BOULEVARD			GARDEN GROVE	
DETAILS				
Reported Date: 1998 List: Region #8-Santa Ana Regional Underground Tank Database List Agency: Regional Water Quality Control Board, Region #8				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
LUST-Closed-CA	COMPLETED - CASE CLOSED	0.05 miles N	54 ft (1 ft lower than site)	3
SITE NAME			**MAPS**	**ID**
CROWN AUTO			1, 2, 3, 4	T0605900522
ADDRESS			**CITY**	**ZIP**
8142 GARDEN GROVE			GARDEN GROVE	92844

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DETAILS
Sites Details URL: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0605900522 Global ID: T0605900522 Case Type: LUST CLEANUP SITE Status: COMPLETED - CASE CLOSED Agency Provided Address: 8142 GARDEN GROVE Status Date: 10/9/2020 Cleanup Fund Case: YES Lead Agency: ORANGE COUNTY LOP Case Worker: GH Local Agency: ORANGE COUNTY LOP Resolution Case Number: 083000656T Location Case Number: 87UT181 File Location: ALL FILES ARE ON GEOTRACKER OR IN THE LOCAL AGENCY WAREHOUSE Potential Contaminants of Concern: GASOLINE Potential Media Affected: AQUIFER USED FOR DRINKING WATER SUPPLY Site History: PLEASE REFER TO RECENT SITE DOCUMENTS OR MONITORING REPORTS IN GEOTRACKER FOR SITE HISTORY. ORANGE COUNTY IS NOT RESPONSIBLE FOR THE ACCURACY OF ANY PROFESSIONAL INTERPRETATIONS PROVIDED IN REPORTS SUBMITTED BY CONSULTANTS FOR THE RESPONSIBLE PARTY. Begin Date: 7/17/1987 How Discovered: TANK CLOSURE How Discovered Description: Not Reported Stop Method: CLOSE AND REMOVE TANK Stop Method Description: Not Reported Agency Provided Latitude: 33.7735518012853 Agency Provided Longitude: -117.98966932843 More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
RCRA-NON-US	Listed	0.05 miles N	54 ft (1 ft lower than site)	3
SITE NAME			**MAPS**	**ID**
RODJYS LLC			1, 2, 3, 4	CAL000446688
ADDRESS			**CITY**	**ZIP**
8142 GARDEN GROVE BLVD			GARDEN GROVE	92844

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DETAILS
Additional details may be found online using the following link: https://enviro.epa.gov/enviro/rcrainfoquery_3.facility_information?pgm_sys_id=CAL000446688 Source Type: Implementer Generator Status: Non-Generator NAICS1: GENERAL AUTOMOTIVE REPAIR Active Site Indicator: H---- Owner Name: RODJYS LLC Operator Name: ROGER ABBOUD In Handler Universes: Y In a Universe: Y Recycler Activity: Y Universal Waste: Y Universal Waste Destination Facility: Y Receive Date: 20190617 Acknowledge Flag Date: 20190617 Contact First Name: ROGER Contact Last Name: ABBOUD Contact Street 1: 18671 LIBRA CIR APT 3 Contact City: HUNTINGTON BEACH Contact State: CA Contact Zip: 92646 Contact Phone: 714-224-9324 Contact FAX: 714-242-7777 Contact E-mail Address: HELP@RODJYS.COM TSD Activity: Y More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
AIR-DIST-CA	Listed	0.07 miles NE	55 ft (0 ft higher than site)	4
SITE NAME			**MAPS**	**ID**
HENRY AUTO SALES & REPAIRS , HUNG NGUYEN			1, 2, 4	106960-SC
ADDRESS			**CITY**	**ZIP**
8218 GARDEN GROVE BLVD			GARDEN GROVE	92844

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DETAILS
District: South Coast AQMD Compliance URL: http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=106960 Note: For additional Facility, Equipment, Emissions, Hearing Board or Transporation Plan Information click on different tabs. Facility Id: 106960 County Code: OR County: Orange Facility Status Code: A Facility Status: ACTIVE Number of Employees: 4 Location Zip Code Extension: Not Reported Facility Representative First Name: DANA Facility Representative Last Name: NGUYEN Location Area Code: 714 Location Phone Number: 5303451 Location Phone Extension: Not Reported Mailing Address: 8218 GARDEN GROVE BLVD Mailing City: GARDEN GROVE Mailing State: CA Mailing Zip Code: 92844 Mailing Zip Code Extension: Not Reported Mailing Area Code: 714 Mailing Phone Number: 5303451 Mailing Phone Extension: Not Reported Mailing Representative First Name: DANA Mailing Representative Last Name: NGUYEN More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-Auto Repair	Listed	0.07 miles NE	55 ft (0 ft higher than site)	4
SITE NAME			**MAPS**	**ID**
HENRY AUTO SALES & REPAIR			1, 2, 4	457361-PD
ADDRESS			**CITY**	**ZIP**
8218 GARDEN GROVE BLVD			GARDEN GROVE	92844-1009
DETAILS				
Listing Year: 1997 SIC Category: AUTOMOBILE REPAIRING & SERVICE SIC Code: 753801				

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DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
RCRA-SQG-US	Listed	0.07 miles NE	55 ft (0 ft higher than site)	4
SITE NAME			**MAPS**	**ID**
FULL SERVICE CAR RENTAL			1, 2, 4	CAD981653389
ADDRESS			**CITY**	**ZIP**
8218 GARDEN GROVE BLVD			GARDEN GROVE	92844

DETAILS

Additional details may be found online using the following link:

https://enviro.epa.gov/enviro/rcrainfoquery_3.facility_information?pgm_sys_id=CAD981653389
Source Type: Notification
Generator Status Universe: SQG
Generator Status: Small Quantity Generator
Active Site Indicator: H----
Owner Name: ERWIN DAVIS INC
Operator Name: NOT REQUIRED
In Handler Universes: Y
In a Universe: Y

Receive Date: 19860917
Acknowledge Flag Date: 19910331
Contact First Name: ENVIRONMENTAL
Contact Last Name: MANAGER
Contact Street 1: 8218 GARDEN GROVE BLVD
Contact City: GARDEN GROVE
Contact State: CA
Contact Zip: 92644
Contact Country: US
Contact Phone: 714-534-0484

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
VCP-Active-CA	ACTIVE	0.07 miles NE	55 ft (0 ft higher than site)	4
SITE NAME			**MAPS**	**ID**
8218-8242 GARDEN GROVE BLVD GG			1, 2, 4	60003146
ADDRESS			**CITY**	**ZIP**
8218 GARDEN GROVE BLVD			GARDEN GROVE	92844

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DETAILS
URL: http://www.envirostor.dtsc.ca.gov/public/profile_report.asp?global_id=60003146 Envirostor ID: 60003146 Agency Provided Address: 8218-8242 GARDEN GROVE BLVD County: ORANGE Site Type: VOLUNTARY CLEANUP Site Type Detailed: VOLUNTARY AGREEMENT Acres: 1.5 Assessor's Parcel Number: NONE SPECIFIED National Priorities List: NO Lead Agency: SMBRP Project Manager: JIAN LIU Supervisor: YOLANDA GARZA Division Branch: SOUTHERN CALIFORNIA SCHOOLS & BROWNFIELDS OUTREACH Site Code: 401979 Assembly: 72 Senate: 34 Congressional District: 47 Special Program: VOLUNTARY AGREEMENT - STANDARD VOLUNTARY AGREEMENT Status: ACTIVE Status Date: 6/29/2021 Past Uses: FUEL - VEHICLE STORAGE/ REFUELING, VEHICLE MAINTENANCE Restricted Use: NO Funding: RESPONSIBLE PARTY Regulatory Agencies Involved: SMBRP Potential Contamination of Concern: 30022, 30024, 3002501, 3002502 Confirmed Contamination of Concern: NONE SPECIFIED More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Air-CA	Listed	0.07 miles NE	54 ft (1 ft lower than site)	5
SITE NAME			**MAPS**	**ID**
IMPERIAL STATIONS INC # 1			1, 2, 4	SC AQMD-SC-112507
ADDRESS			**CITY**	**ZIP**
8221 GARDEN GROVE BLVD			GARDEN GROVE	92844

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DETAILS
Toxic Facility Information Agency ID Desc: The first portion is the Air Quality District, the second portion is the County, the last is the Facility ID Facility ID: 112507 Database Year: 2015 Air Basin: SC County Code: 30 District Code: SC District: SOUTH COAST AQMD Facility SIC Code: 5989 COID: ORA Prioritization Thresholds: Not Reported Health Risk Assessment (HRA): Not Reported Non-Cancer Chronic Hazard Index: Not Reported Non-Cancer Acute Hazard Index: Not Reported CHAPIS: Not Reported CERR Code: Not Reported Pollutant Information : Not Reported

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
AIR-DIST-CA	Listed	0.07 miles NE	54 ft (1 ft lower than site)	5
SITE NAME			**MAPS**	**ID**
THE REYNOLD GROUP			1, 2, 4	166338-SC
ADDRESS			**CITY**	**ZIP**
8221 GARDEN GROVE BLVD			GARDEN GROVE	92841

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DETAILS

District: South Coast AQMD
Compliance URL:
http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=166338
Note: For additional Facility, Equipment, Emissions, Hearing Board or Transporation Plan Information click on different tabs.
Facility Id: 166338
County Code: OR
County: Orange
Facility Status Code: A
Facility Status: ACTIVE
Number of Employees: 2
Location Zip Code Extension: Not Reported
Facility Representative First Name: DANIEL
Facility Representative Last Name: NUNEZ
Location Area Code: 714
Location Phone Number: 9206020
Location Phone Extension: Not Reported
Mailing Address: 520 W IST ST
Mailing City: TUSTIN
Mailing State: CA
Mailing Zip Code: 92780
Mailing Zip Code Extension: Not Reported
Mailing Area Code: 714
Mailing Phone Number: 9206020
Mailing Phone Extension: Not Reported
Mailing Representative First Name: DANIEL
Mailing Representative Last Name: NUNEZ

More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
AIR-DIST-CA	Listed	0.07 miles NE	54 ft (1 ft lower than site)	5
SITE NAME			**MAPS**	**ID**
IMPERIAL OIL			1, 2, 4	91363-SC
ADDRESS			**CITY**	**ZIP**
8221 GARDEN GROVE BLVD			GARDEN GROVE	92644

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DETAILS
District: South Coast AQMD Compliance URL: http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=91363 Note: For additional Facility, Equipment, Emissions, Hearing Board or Transporation Plan Information click on different tabs. Facility Id: 91363 County Code: OR County: Orange Facility Status Code: S Facility Status: SOLD Number of Employees: 0 Location Zip Code Extension: Not Reported Facility Representative First Name: HUSSEIN Facility Representative Last Name: BERRI Location Area Code: 714 Location Phone Number: 8928716 Location Phone Extension: Not Reported Mailing Address: 8221 GARDEN GROVE BLVD Mailing City: GARDEN GROVE Mailing State: CA Mailing Zip Code: 92644 Mailing Zip Code Extension: Not Reported Mailing Area Code: 714 Mailing Phone Number: 8928716 Mailing Phone Extension: Not Reported Mailing Representative First Name: HUSSEIN Mailing Representative Last Name: BERRI More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
AIR-DIST-CA	Listed	0.07 miles NE	54 ft (1 ft lower than site)	5
SITE NAME			**MAPS**	**ID**
IMPERIAL STATIONS INC # 1			1, 2, 4	112507-SC
ADDRESS			**CITY**	**ZIP**
8221 GARDEN GROVE BLVD			GARDEN GROVE	92844

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DETAILS
District: South Coast AQMD Compliance URL: http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=112507 Note: For additional Facility, Equipment, Emissions, Hearing Board or Transporation Plan Information click on different tabs. Facility Id: 112507 County Code: OR County: Orange Facility Status Code: A Facility Status: ACTIVE Number of Employees: 3 Location Zip Code Extension: Not Reported Facility Representative First Name: DAVID Facility Representative Last Name: BERRI Location Area Code: 714 Location Phone Number: 8954437 Location Phone Extension: Not Reported Mailing Address: 8221 GARDEN GROVE BLVD Mailing City: GARDEN GROVE Mailing State: CA Mailing Zip Code: 92844 Mailing Zip Code Extension: Not Reported Mailing Area Code: 714 Mailing Phone Number: 8954437 Mailing Phone Extension: Not Reported Mailing Representative First Name: DAVID Mailing Representative Last Name: BERRI More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
AIR-DIST-CA	Listed	0.07 miles NE	54 ft (1 ft lower than site)	5
SITE NAME			**MAPS**	**ID**
MOBIL DLR			1, 2, 4	54709-SC
ADDRESS			**CITY**	**ZIP**
8221 GARDEN GROVE BLVD			STANTON	90680

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DETAILS
District: South Coast AQMD Compliance URL: http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=54709 Note: For additional Facility, Equipment, Emissions, Hearing Board or Transporation Plan Information click on different tabs. Facility Id: 54709 County Code: OR County: Orange Facility Status Code: I Facility Status: INACTIVE Number of Employees: 0 Location Zip Code Extension: Not Reported Facility Representative First Name: UNKNOWN Facility Representative Last Name: UNKNOWN Location Area Code: 213 Location Phone Number: 8977312 Location Phone Extension: Not Reported Mailing Address: 8221 GARDEN GROVE BLVD Mailing City: STANTON Mailing State: CA Mailing Zip Code: 90680 Mailing Zip Code Extension: Not Reported Mailing Area Code: 213 Mailing Phone Number: 8977312 Mailing Phone Extension: Not Reported Mailing Representative First Name: UNKNOWN Mailing Representative Last Name: UNKNOWN More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CERS-CA	Listed	0.07 miles NE	54 ft (1 ft lower than site)	5
SITE NAME			**MAPS**	**ID**
IMPERIAL STATIONS INC #1			1, 2, 4	10512898
ADDRESS			**CITY**	**ZIP**
8221 GARDEN GROVE BLVD			GARDEN GROVE	92844

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DETAILS

General Program & Facility Information
CERS ID: 10512898
Facility ID: FA0024162
Facility Regulator Key ID: FA0024162
Organization Code: 90438661
Business/Organization Name: IMPERIAL STATIONS INC #1
Multiple Jurisdictional Business? (Y/N): No
Business Origin: EDT
Count of Business' CERS User Accounts: 1
Facility Count for Business: 1
Last Submittal Date (any element): 1/9/2016 4:08:40 PM
Count of Submitted Elements: 10
Remote Facility? (Y/N): No
Small Quantity Generator Facility? (Y/N): No
Local Facility Grouping: Not Reported

Facility Specific Information
Assessor Parcel Number (APN): 131-552-22
Number of Employees: 5
Property Owner Name: Nanak Petro
Property Owner Phone Number: 702-493-3674
Property Owner Mailing Address: PO Box 7014
Property Owner Mailing City: Riverside
Property Owner Mailing State: CA
Property Owner Mailing Zip Code: 92513
Property Owner Mailing Country: United States
More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
County-LUST-Open-CA	Open	0.07 miles NE	54 ft (1 ft lower than site)	5
SITE NAME			**MAPS**	**ID**
IMPERIAL STATIONS # 1			1, 2, 4	RO0002146-ORG
ADDRESS			**CITY**	**ZIP**
8221 GARDEN GROVE BLVD			STANTON	92844

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DETAILS
County: Orange Record ID: RO0002146 Case ID: 00UT041 Case Closed Date: Not Reported Type of Closure: Not Reported Status: Not Reported Case Type Code: O Released Substance: Gasoline-Automotive (motor gasoline and additives), leaded & unleaded

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
County-Others-CA	Listed	0.07 miles NE	54 ft (1 ft lower than site)	5
SITE NAME			**MAPS**	**ID**
IMPERIAL STATIONS INC #1			1, 2, 4	FA0024162-ORG
ADDRESS			**CITY**	**ZIP**
8221 GARDEN GROVE BLVD			GARDEN GROVE	92844
DETAILS				
County: Orange Responsible Agency: Orange County Environmental Health Type of Listing: Hazardous Waste Facilities Facility ID: FA0024162 Date Run: 7/13/2018 5:50 PM				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
County-UST-CA	Listed	0.07 miles NE	54 ft (1 ft lower than site)	5
SITE NAME			**MAPS**	**ID**
IMPERIAL STATIONS INC #1			1, 2, 4	FA0024162-ORG
ADDRESS			**CITY**	**ZIP**
8221 GARDEN GROVE BLVD			GARDEN GROVE	92844

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DETAILS
County: Orange Responsible Agency: Orange County, Environmental Health Division Facility ID: FA0024162 Record ID: Not Reported Released Substance(s): Not Reported Current Status: Not Reported Current Status Date: Not Reported Type of Closure: Not Reported Agency Provided Longitude: -117.98862 Agency Provided Latitude: 33.7741

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CRSP-CA	Listed	0.07 miles NE	54 ft (1 ft lower than site)	5
SITE NAME			**MAPS**	**ID**
IMPERIAL STATIONS # 1			1, 2, 4	200598
ADDRESS			**CITY**	**ZIP**
8221 GARDEN GROVE			STANTON	92844

DETAILS
Site Regulated Program Information Site ID: 200598 Site EI ID: T060592821 Agency Provided Latitude: 33.7741 Agency Provided Longitude: -117.988572 Program Description: Leaking Underground Storage Tank Cleanup Site Evaluation Information : Not Reported :Violation Information : Not Reported :Enforcement Information : Not Reported :Chemical Information : Not Reported :Coordinate Information : Not Reported :

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DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CRSP-CA	Listed	0.07 miles NE	54 ft (1 ft lower than site)	5

SITE NAME	MAPS	ID
IMPERIAL STATIONS INC #1	1, 2, 4	182939

ADDRESS	CITY	ZIP
8221 GARDEN GROVE BLVD	GARDEN GROVE	92844

DETAILS

Site Regulated Program Information
Site ID: 182939
Site EI ID: 10512898
Agency Provided Latitude: 33.7741
Agency Provided Longitude: -117.98862

Program Description: Chemical Storage Facilities

Program Description: Hazardous Waste Generator

Program Description: Underground Storage Tank

Evaluation Information
Evaluation Date: 1/4/2018
Violations Found? (Y/N): No
Evaluation General Type: Compliance Evaluation Inspection
Evaluation Type: Routine done by local agency
Evaluation Note(s): Not Reported
Evaluation Division: Orange County Environmental Health
Evaluation Program: HW
Evaluation Source: CERS

Evaluation Date: 1/4/2018
Violations Found? (Y/N): No
Evaluation General Type: Compliance Evaluation Inspection
Evaluation Type: Routine done by local agency

More Details Link

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DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
ENF-CA	Listed	0.07 miles NE	54 ft (1 ft lower than site)	5

SITE NAME	MAPS	ID
IMPERIAL STATIONS # 1	1, 2, 4	T060592821

ADDRESS	CITY	ZIP
8221 GARDEN GROVE	STANTON	92844

DETAILS

Global ID: T060592821
County: Orange
Site History: Please refer to recent Site Documents or Monitoring Reports in GeoTracker for site history. Orange County is not responsible for the accuracy of any professional interpretations provided in reports submitted by consultants for the responsible party.
Case Type: LUST Cleanup Site
Status: Open - Remediation
Lead Agency: ORANGE COUNTY LOP
Case Worker: KB
Local Agency: ORANGE COUNTY LOP
RB Case Number: 083003862T
Loc Case Number: 00UT041
File Location: All Files are on GeoTracker or in the Local Agency Warehouse
Potential Contaminants of Concern: MTBE / TBA / Other Fuel Oxygenates, Gasoline
Potential Media Affected: Aquifer used for drinking water supply, Soil
How Discovered: Tank Closure
How Discovered Description: Not Reported
Stop Method: Close and Replace Tank
Stop Method Description: Not Reported
Action Date: 2020-11-12
Action Type: ENFORCEMENT
Action: Meeting

Action Date: 2019-09-10
Action Type: ENFORCEMENT
Action: Clean Up Fund - Case Closure Review Summary Report (RSR)

Action Date: 2019-03-22
Action Type: ENFORCEMENT
More Details Link

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DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-Regional-UST-CA	Listed	0.07 miles NE	54 ft (1 ft lower than site)	5
SITE NAME			**MAPS**	**ID**
IMPERIAL STATION INC #1			1, 2, 4	3781316
ADDRESS			**CITY**	**ZIP**
8221 GARDEN GROVE BL			STANTON	
DETAILS				
Reported Date: 1998 List: Orange County Underground Tank Facilities Agency: Orange County Health Care Agency				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-Service Stations	Listed	0.07 miles NE	54 ft (1 ft lower than site)	5
SITE NAME			**MAPS**	**ID**
IMPERIAL OIL			1, 2, 4	26304-PD
ADDRESS			**CITY**	**ZIP**
8221 GARDEN GROVE BLVD			GARDEN GROVE	92844-1008
DETAILS				
Listing Year: 1997 SIC Category: SERVICE STATIONS-GASOLINE & OIL SIC Code: 554101				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-Service Stations	Listed	0.07 miles NE	54 ft (1 ft lower than site)	5
SITE NAME			**MAPS**	**ID**
IMPERIAL STATIONS INC #1			1, 2, 4	211839
ADDRESS			**CITY**	**ZIP**
8221 GARDEN GROVE BLVD			STANTON	90680

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DETAILS
AS OF DATE: 1/3/2002 SITE TYPE: RETAIL TANK TYPE: UST COUNTY: ORANGE

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-Service Stations	Listed	0.07 miles NE	54 ft (1 ft lower than site)	5
SITE NAME			**MAPS**	**ID**
76			1, 2, 4	134317
ADDRESS			**CITY**	**ZIP**
8221 GARDEN GROVE BLVD			Garden Grove	92844
DETAILS				
Sic Code: 5541 Desc: Service Stations/Vehicle Fueling Site Added: 2/2010				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-UST-CA	Listed	0.07 miles NE	54 ft (1 ft lower than site)	5
SITE NAME			**MAPS**	**ID**
SUPERIOR DAIRY			1, 2, 4	268817
ADDRESS			**CITY**	**ZIP**
8221 GARDEN GROVE BLVD			GARDEN GROVE	92644
DETAILS				
Note: ID has been assigned by ERS Tank Details: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0002EA69.pdf				

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DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
LUST-Open-CA	OPEN - SITE ASSESSMENT	0.07 miles NE	54 ft (1 ft lower than site)	5

SITE NAME	MAPS	ID
IMPERIAL STATIONS # 1	1, 2, 4	T060592821

ADDRESS	CITY	ZIP
8221 GARDEN GROVE	STANTON	92844

DETAILS

Sites Details
URL:
http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T060592821
Global ID: T060592821
Case Type: LUST CLEANUP SITE
Status: OPEN - SITE ASSESSMENT
Agency Provided Address: 8221 GARDEN GROVE
Status Date: 3/24/2015
Cleanup Fund Case: YES
Lead Agency: ORANGE COUNTY LOP
Case Worker: KB
Local Agency: ORANGE COUNTY LOP
Resolution Case Number: 083003862T
Location Case Number: 00UT041
File Location: ALL FILES ARE ON GEOTRACKER OR IN THE LOCAL AGENCY WAREHOUSE
Potential Contaminants of Concern: MTBE / TBA / OTHER FUEL OXYGENATES, GASOLINE
Potential Media Affected: AQUIFER USED FOR DRINKING WATER SUPPLY, SOIL
Site History: PLEASE REFER TO RECENT SITE DOCUMENTS OR MONITORING REPORTS IN GEOTRACKER FOR SITE HISTORY. ORANGE COUNTY IS NOT RESPONSIBLE FOR THE ACCURACY OF ANY PROFESSIONAL INTERPRETATIONS PROVIDED IN REPORTS SUBMITTED BY CONSULTANTS FOR THE RESPONSIBLE PARTY.
Begin Date: 11/14/1997
How Discovered: TANK CLOSURE
How Discovered Description: Not Reported
Stop Method: CLOSE AND REPLACE TANK
Stop Method Description: Not Reported
Agency Provided Latitude: 33.77405296211
Agency Provided Longitude: -117.988623082638

More Details Link

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DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
RCRA-NON-US	Listed	0.07 miles NE	54 ft (1 ft lower than site)	5
SITE NAME			**MAPS**	**ID**
IMPERIAL STATIONS INC.			1, 2, 4	CAC003029757
ADDRESS			**CITY**	**ZIP**
8221 GARDEN GROVE BLVD.,			GARDEN GROVE	92844

DETAILS

Additional details may be found online using the following link:

https://enviro.epa.gov/enviro/rcrainfoquery_3.facility_information?pgm_sys_id=CAC003029757
Source Type: Implementer
Generator Status: Non-Generator
NAICS1: GASOLINE STATIONS WITH CONVENIENCE STORES
Owner Name: TAREK WAZNE
Operator Name: TAREK WAZNE

Receive Date: 20190816
Acknowledge Flag Date: 20190816
Contact First Name: TAREK
Contact Last Name: WAZNE
Contact Street 1: 8221 GARDEN GROVE BLVD.,
Contact City: GARDEN GROVE
Contact State: CA
Contact Zip: 92844
Contact Phone: 714-726-9116
Contact E-mail Address: TAREKW@BERRIBROTHERS.COM

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
UST-CA	Listed	0.07 miles NE	54 ft (1 ft lower than site)	5
SITE NAME			**MAPS**	**ID**
IMPERIAL STATIONS INC #1			1, 2, 4	254683
ADDRESS			**CITY**	**ZIP**
8221 GARDEN GROVE BLVD			GARDEN GROVE	92844

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DETAILS
More Information on Site? Go to Following Link: http://geotracker.waterboards.ca.gov/search.asp CERSID: 10512898 Global ID: FA0024162 COUNTY: Orange Permitting Agency: Orange County Environmental Health Agency Provided Latitude: 33.7741 Agency Provided Longitude: -117.98862 PROJECT TYPE: Not Reported RB Case Number: Not Reported LOC Case Number: Not Reported Case Worker: Not Reported MTBE DATE: Not Reported GW CONC (PPB): Not Reported MATRIX: Not Reported

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CERS-CA	Listed	0.07 miles NW	54 ft (1 ft lower than site)	6
SITE NAME			**MAPS**	**ID**
SOUTHLAND CYCLE CENTER INC			1, 2, 4	10535572
ADDRESS			**CITY**	**ZIP**
8141 GARDEN GROVE BLVD			GARDEN GROVE	92844

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DETAILS

General Program & Facility Information
CERS ID: 10535572
Facility ID: FA0024747
Facility Regulator Key ID: FA0024747
Organization Code: 90473041
Business/Organization Name: SOUTHLAND CYCLE CENTER INC
Multiple Jurisdictional Business? (Y/N): No
Business Origin: EDT
Count of Business' CERS User Accounts: 1
Facility Count for Business: 1
Last Submittal Date (any element): 4/25/2016 5:12:27 PM
Count of Submitted Elements: 4
Remote Facility? (Y/N): No
Small Quantity Generator Facility? (Y/N): No
Local Facility Grouping: Not Reported

Facility Specific Information
Assessor Parcel Number (APN): Not Reported
Number of Employees: Not Reported
Property Owner Name: Not Reported
Property Owner Phone Number: Not Reported
Property Owner Mailing Address: Not Reported
Property Owner Mailing City: Not Reported
Property Owner Mailing State: Not Reported
Property Owner Mailing Zip Code: Not Reported
Property Owner Mailing Country: Not Reported
More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CRSP-CA	Listed	0.07 miles NW	54 ft (1 ft lower than site)	6
SITE NAME			**MAPS**	**ID**
SOUTHLAND CYCLE CENTER INC			1, 2, 4	369211
ADDRESS			**CITY**	**ZIP**
8141 GARDEN GROVE BLVD			GARDEN GROVE	92844

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DETAILS
Site Regulated Program Information Site ID: 369211 Site EI ID: 10535572 Agency Provided Latitude: 33.7738 Agency Provided Longitude: -117.98289 Program Description: Chemical Storage Facilities Program Description: Hazardous Waste Generator Evaluation Information : Not Reported :Violation Information : Not Reported :Enforcement Information : Not Reported :Chemical Information : Not Reported :Coordinate Information : Not Reported :

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CERS-CA	Listed	0.1 miles NE	55 ft (0 ft higher than site)	7
SITE NAME			**MAPS**	**ID**
OKAY AUTO REPAIR & MUFFLER			1, 2, 4	10539631
ADDRESS			**CITY**	**ZIP**
8234 GARDEN GROVE BLVD			GARDEN GROVE	92844

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DETAILS

General Program & Facility Information
CERS ID: 10539631
Facility ID: FA0027547
Facility Regulator Key ID: FA0027547
Organization Code: 90479218
Business/Organization Name: OKAY AUTO REPAIR & MUFFLER
Multiple Jurisdictional Business? (Y/N): No
Business Origin: EDT
Count of Business' CERS User Accounts: 0
Facility Count for Business: 1
Last Submittal Date (any element): Not Reported
Count of Submitted Elements: 0
Remote Facility? (Y/N): No
Small Quantity Generator Facility? (Y/N): No
Local Facility Grouping: Not Reported

Facility Specific Information
Assessor Parcel Number (APN): Not Reported
Number of Employees: Not Reported
Property Owner Name: Not Reported
Property Owner Phone Number: Not Reported
Property Owner Mailing Address: Not Reported
Property Owner Mailing City: Not Reported
Property Owner Mailing State: Not Reported
Property Owner Mailing Zip Code: Not Reported
Property Owner Mailing Country: Not Reported
More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
County-Others-CA	Listed	0.1 miles NE	55 ft (0 ft higher than site)	7
SITE NAME			**MAPS**	**ID**
OKAY AUTO REPAIR & MUFFLER			1, 2, 4	FA0027547-ORG
ADDRESS			**CITY**	**ZIP**
8234 GARDEN GROVE BLVD			GARDEN GROVE	92844

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DETAILS
County: Orange Responsible Agency: Orange County Environmental Health Type of Listing: Hazardous Waste Facilities Facility ID: FA0027547 Date Run: 7/13/2018 5:50 PM

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CRSP-CA	Listed	0.1 miles NE	55 ft (0 ft higher than site)	7
SITE NAME			**MAPS**	**ID**
OKAY AUTO REPAIR & MUFFLER			1, 2, 4	437354
ADDRESS			**CITY**	**ZIP**
8234 GARDEN GROVE BLVD			GARDEN GROVE	92844

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DETAILS
Site Regulated Program Information Site ID: 437354 Site EI ID: 10539631 Agency Provided Latitude: 33.7738 Agency Provided Longitude: -117.98289 Program Description: Chemical Storage Facilities Evaluation Information Evaluation Date: 3/16/2016 Violations Found? (Y/N): No Evaluation General Type: Other/Unknown Evaluation Type: Other, not routine, done by local agency Evaluation Note(s): Not Reported Evaluation Division: Orange County Environmental Health Evaluation Program: HMRRP Evaluation Source: CERS Evaluation Date: 3/16/2016 Violations Found? (Y/N): Yes Evaluation General Type: Compliance Evaluation Inspection Evaluation Type: Routine done by local agency Evaluation Note(s): OKAY Auto Repair and Muffler ? 3/16/2016 On site to conduct a routine hazardous material and business plan inspection. Consent to enter, inspect and take pictures was given by J.B Kim at 3:33 pm. Walked the site with Mr. Kim and observed the hazardous material storage areas throughout the auto body shop and the following materials were observed in amounts that meet or exceed the minimum volumes required for disclosure: - Argon and CO2 mixture cylinder = 350 CF (one 200 CF and one 150 CF cylinders) - Used oil = 150 gallons (200 gallon tank) Business emergency plan was not available for review on site. Please update and submit the hazardous material business plan electronically and please keep a copy on site. Emergency response equipment was present at multiple locations onsite and serviced. The facility is responsible for identifying all hazardous materials, to include hazardous wastes, which are above disclosure thresholds. If there is a change in the or [Truncated] Evaluation Division: Orange County Environmental Health Evaluation Program: HMRRP Evaluation Source: CERS More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-Auto Repair	Listed	0.1 miles NE	55 ft (0 ft higher than site)	7
SITE NAME			**MAPS**	**ID**
OKAY AUTO REPAIR & MUFFLER			1, 2, 4	528467-PD
ADDRESS			**CITY**	**ZIP**
8234 GARDEN GROVE BLVD			GARDEN GROVE	92844-1009

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DETAILS
Listing Year: 1997 SIC Category: AUTOMOBILE REPAIRING & SERVICE SIC Code: 753801

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Spills-SSO-CA	Listed	0.11 miles NE	54 ft (1 ft lower than site)	8
SITE NAME			**MAPS**	**ID**
Fern Street north of Garden Grove Boulevard			1, 2, 4	857583
ADDRESS			**CITY**	**ZIP**
Fern Street north of Garden Grove Boulevard				
DETAILS				

Facility and Program Information
Note I: This database contains private lateral sewage discharges contained in the State Water Resources Control Board's SSO database. All of the information collected in the SSO database is entered by enrollees.
Note II: State and Regional Water board staff cannot enter or modify any information in the SSO database.
SSO Status: Active
Step: Certified
Spill Created Date: 4/11/2019
Draft Submit Date: 5/8/2019
Original Certified Date: 5/8/2019
SSO Number Appear Points: 1
SSO Storm Associated: No
Reason Investigate: Not Reported
SSO If Impact Beach: Not Reported
SSO Volume Method: The overflow was calculated using an OCSD pick hole overflow chart. Two circular pick holes 1/2 inch in diameter, overflowing 3/4 inches high equals 1.62 gal/min. This was multiplied by the 45 minutes of spillage to equal 72.9 gal, rounded up to 73 gal.
SSO Operator Name: Stephen Porras, Public Works Foreman
SSO Operator Phone: 7147415347
Agency Provided Latitude: 33.774203
Agency Provided Longitude: -117.988313

Additional Information
: Not Reported

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DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CERS-CA	Listed	0.12 miles W	53 ft (2 ft lower than site)	9

SITE NAME	MAPS	ID
T-MOBILE WEST CORPORATION LA02587A	1, 2, 4	10624480

ADDRESS	CITY	ZIP
8062 Garden Grove Blvd	Garden Grove	92844

DETAILS

General Program & Facility Information
CERS ID: 10624480
Facility ID: Not Reported
Facility Regulator Key ID: Not Reported
Organization Code: 90128011
Business/Organization Name: T-Mobile West Corporation
Multiple Jurisdictional Business? (Y/N): Yes
Business Origin: Business
Count of Business' CERS User Accounts: 9
Facility Count for Business: 3045
Last Submittal Date (any element): Not Reported
Count of Submitted Elements: 0
Remote Facility? (Y/N): No
Small Quantity Generator Facility? (Y/N): No
Local Facility Grouping: Not Reported

Facility Specific Information
Assessor Parcel Number (APN): Not Reported
Number of Employees: Not Reported
Property Owner Name: Not Reported
Property Owner Phone Number: Not Reported
Property Owner Mailing Address: Not Reported
Property Owner Mailing City: Not Reported
Property Owner Mailing State: Not Reported
Property Owner Mailing Zip Code: Not Reported
Property Owner Mailing Country: Not Reported
More Details Link

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DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
AIR-DIST-CA	Listed	0.13 miles NW	54 ft (1 ft lower than site)	10

SITE NAME	MAPS	ID
AMBASSADOR AUTOMOTIVE SERVICE	1, 2, 4	56993-SC

ADDRESS	CITY	ZIP
12921 COURT ST	GARDEN GROVE	92844

DETAILS

District: South Coast AQMD
Compliance URL:
http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=56993
Note: For additional Facility, Equipment, Emissions, Hearing Board or Transporation Plan Information click on different tabs.
Facility Id: 56993
County Code: OR
County: Orange
Facility Status Code: A
Facility Status: ACTIVE
Number of Employees: 0
Location Zip Code Extension: 4310
Facility Representative First Name: DONALD
Facility Representative Last Name: NELSON
Location Area Code: 714
Location Phone Number: 8938877
Location Phone Extension: Not Reported
Mailing Address: 12921 COURT ST
Mailing City: GARDEN GROVE
Mailing State: CA
Mailing Zip Code: 92844
Mailing Zip Code Extension: 4310
Mailing Area Code: 714
Mailing Phone Number: 8938877
Mailing Phone Extension: Not Reported
Mailing Representative First Name: DONALD
Mailing Representative Last Name: NELSON

More Details Link

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DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
County-LUST-Closed-CA	Closed	0.13 miles NW	54 ft (1 ft lower than site)	10
SITE NAME			**MAPS**	**ID**
AMBASSADOR AUTO SERVICE			1, 2, 4	RO0001100-ORG
ADDRESS			**CITY**	**ZIP**
12921 COURT ST			STANTON	90680

DETAILS

County: Orange
Record ID: RO0001100
Case ID: 88UT014

Case Closed Date: 4/4/1988
Type of Closure: Closure certification issued
Status: Not Reported
Case Type Code: S
Released Substance: Waste oil/Used oil

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CRSP-CA	Listed	0.13 miles NW	54 ft (1 ft lower than site)	10
SITE NAME			**MAPS**	**ID**
AMBASSADOR AUTO SERVICE			1, 2, 4	227898
ADDRESS			**CITY**	**ZIP**
12921 COURT			STANTON	90680

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DETAILS
Site Regulated Program Information Site ID: 227898 Site EI ID: T0605900456 Agency Provided Latitude: 33.774724 Agency Provided Longitude: -117.990514 Program Description: Leaking Underground Storage Tank Cleanup Site Evaluation Information : Not Reported :Violation Information : Not Reported :Enforcement Information : Not Reported :Chemical Information : Not Reported :Coordinate Information : Not Reported :

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-LUSTIS-CA	Listed	0.13 miles NW	54 ft (1 ft lower than site)	10

SITE NAME	MAPS	ID
AMBASSADOR AUTO	1, 2, 4	1605064

ADDRESS	CITY	ZIP
12921 COURT STREET	STANTON	90680

DETAILS
Reported Date: 1998

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DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-Regional-Other-CA	Listed	0.13 miles NW	54 ft (1 ft lower than site)	10
SITE NAME			**MAPS**	**ID**
AMBASSADOR AUTO SERVICE			1, 2, 4	933727
ADDRESS			**CITY**	**ZIP**
12921 COURT ST			STANTON	90680
DETAILS				
Reported Date: 1998 List: Orange County-Groundwater Cleanup Program Agency: Orange County Health Care Agency				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-Regional-UST-CA	Listed	0.13 miles NW	54 ft (1 ft lower than site)	10
SITE NAME			**MAPS**	**ID**
AMBASSADOR AUTO			1, 2, 4	933727
ADDRESS			**CITY**	**ZIP**
12921 COURT STREET			STANTON	
DETAILS				
Reported Date: 1998 List: Region #8-Santa Ana Regional Underground Tank Database List Agency: Regional Water Quality Control Board, Region #8				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
LUST-Closed-CA	COMPLETED - CASE CLOSED	0.13 miles NW	54 ft (1 ft lower than site)	10
SITE NAME			**MAPS**	**ID**
AMBASSADOR AUTO SERVICE			1, 2, 4	T0605900456
ADDRESS			**CITY**	**ZIP**
12921 COURT			STANTON	90680

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DETAILS

Sites Details
URL:
http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0605900456
Global ID: T0605900456
Case Type: LUST CLEANUP SITE
Status: COMPLETED - CASE CLOSED
Agency Provided Address: 12921 COURT
Status Date: 4/4/1988
Cleanup Fund Case: NO
Lead Agency: ORANGE COUNTY LOP
Case Worker: Not Reported
Local Agency: Not Reported
Resolution Case Number: 083000570T
Location Case Number: 88UT014
File Location: LOCAL AGENCY
Potential Contaminants of Concern: WASTE OIL / MOTOR / HYDRAULIC / LUBRICATING
Potential Media Affected: SOIL
Site History: Not Reported
Begin Date: 4/4/1988
How Discovered: TANK CLOSURE
How Discovered Description: Not Reported
Stop Method: CLOSE AND REMOVE TANK
Stop Method Description: Not Reported
Agency Provided Latitude: 33.774724
Agency Provided Longitude: -117.990514

More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
RCRA-SQG-US	Listed	0.13 miles NW	54 ft (1 ft lower than site)	10
SITE NAME			**MAPS**	**ID**
AMBASSADOR AUTO SVC			1, 2, 4	CAD113501878
ADDRESS			**CITY**	**ZIP**
12921 COURT ST			GARDEN GROVE	92841

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DETAILS
Additional details may be found online using the following link: https://enviro.epa.gov/enviro/rcrainfoquery_3.facility_information?pgm_sys_id=CAD113501878 Source Type: Notification Generator Status Universe: SQG Generator Status: Small Quantity Generator Active Site Indicator: H---- Owner Name: DON NELSON Operator Name: NOT REQUIRED In Handler Universes: Y In a Universe: Y Receive Date: 19860822 Acknowledge Flag Date: 19910331 Contact First Name: ENVIRONMENTAL Contact Last Name: MANAGER Contact Street 1: 12921 COURT ST Contact City: GARDEN GROVE Contact State: CA Contact Zip: 92641 Contact Country: US Contact Phone: 714-893-8877

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CERS-CA	Listed	0.14 miles W	53 ft (2 ft lower than site)	11
SITE NAME			**MAPS**	**ID**
PROTEK AUTO REPAIR			1, 2, 4	10563769
ADDRESS			**CITY**	**ZIP**
8038 GARDEN GROVE BLVD			GARDEN GROVE	92844

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DETAILS
General Program & Facility Information CERS ID: 10563769 Facility ID: FA0051527 Facility Regulator Key ID: FA0051527 Organization Code: 90516265 Business/Organization Name: PROTEK AUTO REPAIR Multiple Jurisdictional Business? (Y/N): No Business Origin: EDT Count of Business' CERS User Accounts: 1 Facility Count for Business: 1 Last Submittal Date (any element): Not Reported Count of Submitted Elements: 0 Remote Facility? (Y/N): No Small Quantity Generator Facility? (Y/N): No Local Facility Grouping: Not Reported Facility Specific Information Assessor Parcel Number (APN): Not Reported Number of Employees: Not Reported Property Owner Name: Not Reported Property Owner Phone Number: Not Reported Property Owner Mailing Address: Not Reported Property Owner Mailing City: Not Reported Property Owner Mailing State: Not Reported Property Owner Mailing Zip Code: Not Reported Property Owner Mailing Country: Not Reported More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
County-Others-CA	Listed	0.14 miles W	53 ft (2 ft lower than site)	11
SITE NAME			**MAPS**	**ID**
LUCAS COMPLETE AUTO REPAIR AND TIRES INC			1, 2, 4	FA0051527-ORG
ADDRESS			**CITY**	**ZIP**
8038 GARDEN GROVE BLVD			GARDEN GROVE	92844

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DETAILS
County: Orange Responsible Agency: Orange County Environmental Health Type of Listing: Hazardous Waste Facilities Facility ID: FA0051527 Date Run: 7/13/2018 5:50 PM

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CRSP-CA	Listed	0.14 miles W	53 ft (2 ft lower than site)	11
SITE NAME			**MAPS**	**ID**
LUCAS AUTO REPAIR AND TIRE			1, 2, 4	366264
ADDRESS			**CITY**	**ZIP**
8038 GARDEN GROVE BLVD			GARDEN GROVE	92844

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DETAILS
Site Regulated Program Information Site ID: 366264 Site EI ID: 10563769 Agency Provided Latitude: 33.7738 Agency Provided Longitude: -117.98289 Program Description: Chemical Storage Facilities Program Description: Hazardous Waste Generator Evaluation Information Evaluation Date: 12/22/2017 Violations Found? (Y/N): No Evaluation General Type: Compliance Evaluation Inspection Evaluation Type: Routine done by local agency Evaluation Note(s): Lucas Complete Auto Repair and Tires Inc. 8039 Garden Grove Blvd. Garden Grove CA 92844 The facility has undergone an ownership change. The new owner is Lucas Complete Auto Repair and Tires Inc. The contacts are Haui Tran and Trish Nguyen. (714-373-6394 email lucastheautoshop@gmail.com). The facility generates waste oil, waste antifreeze and drained used oil filters. The facility EPA ID # is CAL000430084. Evaluation Division: Orange County Environmental Health Evaluation Program: HW Evaluation Source: CERS Evaluation Date: 12/22/2017 Violations Found? (Y/N): No Evaluation General Type: Compliance Evaluation Inspection Evaluation Type: Routine done by local agency Evaluation Note(s): Lucas Complete Auto Repair and Tires Inc. 8039 Garden Grove Blvd. Garden Grove CA 92844 The facility has undergone an ownership change. The new owner is Lucas Complete Auto Repair and Tires Inc. The contacts are Haui Tran and Trish Nguyen. (714-373-6394 email lucastheautoshop@gmail.com). The Hazardous Materials Business Emergency Plan documents can be electronically submitted by going to the CERS website at http://cers.calepa.ca.gov/ Trish Nguyen visited the CERS website and requested the ownership change. Ensure the HMBE P documents completed and electronically submitted in CERS The following HMBEP documents must be electronically submitted: - Business Activities form - Owner/Operator Identification form - Hazardous Material Chemical Inventory forms - Facility Site Map - Business Emergency Plan Please completed the HMBEP and submit it within 30 days. This facility is responsible for identifying all hazardous materials and hazardous wastes, which [Truncated] More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-Auto Repair	Listed	0.14 miles W	53 ft (2 ft lower than site)	11
SITE NAME			**MAPS**	**ID**
Advanced Mobil Systems			1, 2, 4	3848
ADDRESS			**CITY**	**ZIP**
8038 Garden Grove Blvd			Garden Grove	92844

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DETAILS
Sic Code: 5531 Desc: Auto, Truck & Tire Service Site Added: 2/2010

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
RCRA-NON-US	Listed	0.14 miles W	53 ft (2 ft lower than site)	11
SITE NAME			**MAPS**	**ID**
LUCAS COMPLETE AUTO REPAIR AND TIRES			1, 2, 4	CAL000430084
ADDRESS			**CITY**	**ZIP**
8038 GARDEN GROVE BLVD			GARDEN GROVE	92844

DETAILS

Additional details may be found online using the following link:

https://enviro.epa.gov/enviro/rcrainfoquery_3.facility_information?pgm_sys_id=CAL000430084
Source Type: Implementer
Generator Status: Non-Generator
NAICS1: GENERAL AUTOMOTIVE REPAIR
Active Site Indicator: H----
Owner Name: LUCAS COMPLETE AUTO REPAIR AND TIRE
Operator Name: TRISH NGUYEN
In Handler Universes: Y
In a Universe: Y
Universal Waste: Y
Universal Waste Destination Facility: Y

Receive Date: 20170815
Acknowledge Flag Date: 20170815
Contact First Name: TRISH
Contact Last Name: NGUYEN
Contact Street 1: 8038 GARDEN GROVE BLVD
Contact City: GARDEN GROVE
Contact State: CA
Contact Zip: 92844
Contact Phone: 714-902-7377
Contact E-mail Address: LUCASTHEAUTOSHOP@GMAIL.COM
Universal Waste Destination Facility: Y

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DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CERS-CA	Listed	0.14 miles NE	54 ft (1 ft lower than site)	12

SITE NAME	MAPS	ID
CARLOS LAWN MOWER SHOP	1, 2, 4	10547686

ADDRESS	CITY	ZIP
12911 FERN	GARDEN GROVE	92841

DETAILS

General Program & Facility Information
CERS ID: 10547686
Facility ID: FA0037711
Facility Regulator Key ID: FA0037711
Organization Code: 90491338
Business/Organization Name: CARLOS LAWN MOWER SHOP
Multiple Jurisdictional Business? (Y/N): No
Business Origin: EDT
Count of Business' CERS User Accounts: 0
Facility Count for Business: 1
Last Submittal Date (any element): Not Reported
Count of Submitted Elements: 0
Remote Facility? (Y/N): No
Small Quantity Generator Facility? (Y/N): No
Local Facility Grouping: Not Reported

Facility Specific Information
Assessor Parcel Number (APN): Not Reported
Number of Employees: Not Reported
Property Owner Name: Not Reported
Property Owner Phone Number: Not Reported
Property Owner Mailing Address: Not Reported
Property Owner Mailing City: Not Reported
Property Owner Mailing State: Not Reported
Property Owner Mailing Zip Code: Not Reported
Property Owner Mailing Country: Not Reported
More Details Link

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DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
County-Others-CA	Listed	0.14 miles NE	54 ft (1 ft lower than site)	12

SITE NAME	MAPS	ID
CARLOS LAWN MOWER SHOP	1, 2, 4	FA0037711-ORG

ADDRESS	CITY	ZIP
12911 FERN	GARDEN GROVE	92841

DETAILS

County: Orange
Responsible Agency: Orange County Environmental Health
Type of Listing: Hazardous Waste Facilities
Facility ID: FA0037711
Date Run: 7/13/2018 5:50 PM

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
AST-CRSP-CA	Listed	0.15 miles W	53 ft (2 ft lower than site)	13

SITE NAME	MAPS	ID
Alliance Express Lube +	1, 2, 4	437224

ADDRESS	CITY	ZIP
8034 GARDEN GROVE BLVD STE B	GARDEN GROVE	92844

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DETAILS
Site Regulated Program Information Site ID: 437224 EI ID: 10568722 Agency Provided Address: 8034 GARDEN GROVE BLVD STE B Agency Provided Latitude: 33.77277 Agency Provided Longitude: -117.99197 Program Description: Aboveground Petroleum Storage Evaluation Information (2017 to present) : Not Reported :Violation Information (2017 to present) Violation Date: 8/3/2020 Citation: HSC 6.67 25270.4.5 (a) - California Health and Safety Code, Chapter 6.67, Section(s) 25270.4.5 (a) Violation Description: Failure to complete a review and evaluation of the SPCC Plan at least once every five years, document the completion of the review, and sign a statement as to whether the SPCC Plan will be amended. Violation Note(s): Returned to compliance on 01/24/2022. The facility must prepare and implement a Spill prevention and countermeasure plan (SPCC Plan) The facility is a Qualified Tier 1 facility (store less than 10,000 gallons, with no single tank/container having a volume greater than 5,000 gallons). Violation Division: Orange County Environmental Health Violation Program: APSA Violation Source: CERS Violation Date: 8/3/2020 Citation: HSC 6.95 25508(a)(1) - California Health and Safety Code, Chapter 6.95, Section(s) 25508(a)(1) Violation Description: Failure to complete and electronically submit a business plan when storing/handling a hazardous material at or above reportable quantities. Violation Note(s): A Hazmat Business plan must be resubmitted yearly. by March 1 or each year please resubmit your Hazmat Business plan Violation Division: Orange County Environmental Health Violation Program: HMRRP More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CERS-CA	Listed	0.15 miles W	53 ft (2 ft lower than site)	13
SITE NAME			**MAPS**	**ID**
EXPRESS CARWASH & LUBE			1, 2, 4	10568722
ADDRESS			**CITY**	**ZIP**
8034 GARDEN GROVE BLVD			GARDEN GROVE	92844

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DETAILS

General Program & Facility Information
CERS ID: 10568722
Facility ID: FA0056657
Facility Regulator Key ID: FA0056657
Organization Code: 90523792
Business/Organization Name: EXPRESS CARWASH & LUBE
Multiple Jurisdictional Business? (Y/N): No
Business Origin: EDT
Count of Business' CERS User Accounts: 0
Facility Count for Business: 1
Last Submittal Date (any element): Not Reported
Count of Submitted Elements: 0
Remote Facility? (Y/N): No
Small Quantity Generator Facility? (Y/N): No
Local Facility Grouping: Not Reported

Facility Specific Information
Assessor Parcel Number (APN): Not Reported
Number of Employees: Not Reported
Property Owner Name: Not Reported
Property Owner Phone Number: Not Reported
Property Owner Mailing Address: Not Reported
Property Owner Mailing City: Not Reported
Property Owner Mailing State: Not Reported
Property Owner Mailing Zip Code: Not Reported
Property Owner Mailing Country: Not Reported
More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
County-AST-CA	Listed	0.15 miles W	53 ft (2 ft lower than site)	13
SITE NAME			**MAPS**	**ID**
ALLIANCE EXPRESS LUBE PLUS			1, 2, 4	FA0066711-ORG
ADDRESS			**CITY**	**ZIP**
8034 GARDEN GROVE BLVD STE B			Garden Grove	92844

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DETAILS
Responsible Agency: Orange County Environmental Health County: Orange Facility ID: FA0066711 Care Of: Not Reported Report Date: Not Reported

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
County-Others-CA	Listed	0.15 miles W	53 ft (2 ft lower than site)	13
SITE NAME			**MAPS**	**ID**
ALLIANCE EXPRESS LUBE PLUS			1, 2, 4	FA0066711-ORG
ADDRESS			**CITY**	**ZIP**
8034 GARDEN GROVE BLVD STE B			GARDEN GROVE	92844
DETAILS				
County: Orange Responsible Agency: Orange County Environmental Health Type of Listing: Hazardous Waste Facilities Facility ID: FA0066711 Date Run: 7/13/2018 5:50 PM				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CRSP-CA	Listed	0.15 miles W	53 ft (2 ft lower than site)	13
SITE NAME			**MAPS**	**ID**
Alliance Express Lube +			1, 2, 4	437224
ADDRESS			**CITY**	**ZIP**
8034 GARDEN GROVE BLVD STE B			GARDEN GROVE	92844

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DETAILS
Site Regulated Program Information Site ID: 437224 Site EI ID: 10568722 Agency Provided Latitude: 33.77277 Agency Provided Longitude: -117.99197 Program Description: Aboveground Petroleum Storage Program Description: Chemical Storage Facilities Program Description: Hazardous Waste Generator Evaluation Information Evaluation Date: 6/25/2018 Violations Found? (Y/N): No Evaluation General Type: Compliance Evaluation Inspection Evaluation Type: Routine done by local agency Evaluation Note(s): Alliance Express Lube Plus, Inc. 8034 Garden Grove Blvd, STE B Garden Grove 92844 The facility has undergone a change of ownership. Worked with Alvaro Alonso on creating the facility's Spill Prevention Control & Countermeasures (SPCC) plan. Explained SPCC requirements, went over inspection and training logs. Tank facility statement is submitted with the CERS hazardous materials inventory. The facility's aboveground petroleum storage is as follows: Used Oil, 1,200 gallon tank Motor Oil, 495 x 3 gallon tanks Motor Oil, 1,000 gallon tank Evaluation Division: Orange County Environmental Health Evaluation Program: APSA Evaluation Source: CERS Evaluation Date: 6/25/2018 Violations Found? (Y/N): No Evaluation General Type: Compliance Evaluation Inspection Evaluation Type: Routine done by local agency More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Air-CA	Listed	0.15 miles W	53 ft (2 ft lower than site)	14

SITE NAME	MAPS	ID
G&M OIL CO #140	1, 2, 4	SC AQMD-SC-143914

ADDRESS	CITY	ZIP
8032 GARDEN GROVE BLVD	GARDEN GROVE	92844

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DETAILS
Toxic Facility Information Agency ID Desc: The first portion is the Air Quality District, the second portion is the County, the last is the Facility ID Facility ID: 143914 Database Year: 2015 Air Basin: SC County Code: 30 District Code: SC District: SOUTH COAST AQMD Facility SIC Code: 5541 COID: ORA Prioritization Thresholds: Not Reported Health Risk Assessment (HRA): Not Reported Non-Cancer Chronic Hazard Index: Not Reported Non-Cancer Acute Hazard Index: Not Reported CHAPIS: Not Reported CERR Code: Not Reported Pollutant Information : Not Reported

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
AIR-DIST-CA	Listed	0.15 miles W	53 ft (2 ft lower than site)	14
SITE NAME			**MAPS**	**ID**
G&M OIL CO #140			1, 2, 4	143914-SC
ADDRESS			**CITY**	**ZIP**
8032 GARDEN GROVE BLVD			GARDEN GROVE	92844

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DETAILS
District: South Coast AQMD Compliance URL: http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=143914 Note: For additional Facility, Equipment, Emissions, Hearing Board or Transporation Plan Information click on different tabs. Facility Id: 143914 County Code: OR County: Orange Facility Status Code: A Facility Status: ACTIVE Number of Employees: 30 Location Zip Code Extension: Not Reported Facility Representative First Name: JUDY Facility Representative Last Name: BOWE Location Area Code: 714 Location Phone Number: 3754700 Location Phone Extension: 364 Mailing Address: 16868 A ST Mailing City: HUNTINGTON BEACH Mailing State: CA Mailing Zip Code: 92647 Mailing Zip Code Extension: Not Reported Mailing Area Code: 714 Mailing Phone Number: 3754700 Mailing Phone Extension: 364 Mailing Representative First Name: JUDY Mailing Representative Last Name: BOWE More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
AIR-DIST-CA	Listed	0.15 miles W	53 ft (2 ft lower than site)	14
SITE NAME			**MAPS**	**ID**
PINNACLE PEAK DIV OF AGRO LAND & CATTLE			1, 2, 4	9934-SC
ADDRESS			**CITY**	**ZIP**
8032 GARDEN GROVE BLVD			GARDEN GROVE	90650

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DETAILS
District: South Coast AQMD Compliance URL: http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=9934 Note: For additional Facility, Equipment, Emissions, Hearing Board or Transporation Plan Information click on different tabs. Facility Id: 9934 County Code: OR County: Orange Facility Status Code: I Facility Status: INACTIVE Number of Employees: 0 Location Zip Code Extension: Not Reported Facility Representative First Name: Not Reported Facility Representative Last Name: Not Reported Location Area Code: Not Reported Location Phone Number: Not Reported Location Phone Extension: Not Reported Mailing Address: 8032 GARDEN GROVE BLVD Mailing City: GARDEN GROVE Mailing State: CA Mailing Zip Code: 90650 Mailing Zip Code Extension: Not Reported Mailing Area Code: Not Reported Mailing Phone Number: Not Reported Mailing Phone Extension: Not Reported Mailing Representative First Name: Not Reported Mailing Representative Last Name: Not Reported More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
AIR-DIST-CA	Listed	0.15 miles W	53 ft (2 ft lower than site)	14
SITE NAME			**MAPS**	**ID**
ARCO AM PM			1, 2, 4	123469-SC
ADDRESS			**CITY**	**ZIP**
8032 GARDEN GROVE BLVD			GARDEN GROVE	92683

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DETAILS
District: South Coast AQMD Compliance URL: http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=123469 Note: For additional Facility, Equipment, Emissions, Hearing Board or Transporation Plan Information click on different tabs. Facility Id: 123469 County Code: OR County: Orange Facility Status Code: S Facility Status: SOLD Number of Employees: 30 Location Zip Code Extension: Not Reported Facility Representative First Name: BOB Facility Representative Last Name: DAVIS Location Area Code: 858 Location Phone Number: 7932708 Location Phone Extension: Not Reported Mailing Address: 462 STEVENS AVE SUITE 105 Mailing City: SOLANA BEACH Mailing State: CA Mailing Zip Code: 92075 Mailing Zip Code Extension: Not Reported Mailing Area Code: 858 Mailing Phone Number: 7932708 Mailing Phone Extension: Not Reported Mailing Representative First Name: BOB Mailing Representative Last Name: DAVIS More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CERS-CA	Listed	0.15 miles W	53 ft (2 ft lower than site)	14
SITE NAME			**MAPS**	**ID**
G&M Oil Co. #140			1, 2, 4	10138405
ADDRESS			**CITY**	**ZIP**
8032 Garden Grove Blvd			Garden Grove	92844

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DETAILS

General Program & Facility Information
CERS ID: 10138405
Facility ID: Not Reported
Facility Regulator Key ID: Not Reported
Organization Code: 90000061
Business/Organization Name: G&M Oil Co.
Multiple Jurisdictional Business? (Y/N): Yes
Business Origin: Business
Count of Business' CERS User Accounts: 10
Facility Count for Business: 160
Last Submittal Date (any element): 6/22/2016 1:00:19 PM
Count of Submitted Elements: 55
Remote Facility? (Y/N): No
Small Quantity Generator Facility? (Y/N): No
Local Facility Grouping: Not Reported

Facility Specific Information
Assessor Parcel Number (APN): Not Reported
Number of Employees: 4
Property Owner Name: Not Reported
Property Owner Phone Number: Not Reported
Property Owner Mailing Address: Not Reported
Property Owner Mailing City: Not Reported
Property Owner Mailing State: Not Reported
Property Owner Mailing Zip Code: Not Reported
Property Owner Mailing Country: Not Reported
More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
County-LUST-Open-CA	Open	0.15 miles W	53 ft (2 ft lower than site)	14
SITE NAME			MAPS	ID
G&M OIL			1, 2, 4	RO0003552-ORG
ADDRESS			CITY	ZIP
8032 GARDEN GROVE BLVD			GARDEN GROVE	92844-

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DETAILS
County: Orange Record ID: RO0003552 Case ID: 11UT001 Case Closed Date: Not Reported Type of Closure: Not Reported Status: Not Reported Case Type Code: A Released Substance: Gasoline-Automotive (motor gasoline and additives), leaded & unleaded

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
County-Others-CA	Listed	0.15 miles W	53 ft (2 ft lower than site)	14
SITE NAME			**MAPS**	**ID**
G&M OIL COMPANY #140			1, 2, 4	FA0046206-ORG
ADDRESS			**CITY**	**ZIP**
8032 GARDEN GROVE BLVD			GARDEN GROVE	92844
DETAILS				
County: Orange Responsible Agency: Orange County Environmental Health Type of Listing: Hazardous Waste Facilities Facility ID: FA0046206 Date Run: 7/13/2018 5:50 PM				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
County-UST-CA	Listed	0.15 miles W	53 ft (2 ft lower than site)	14
SITE NAME			**MAPS**	**ID**
G&M OIL COMPANY #140			1, 2, 4	FA0046206-ORG
ADDRESS			**CITY**	**ZIP**
8032 GARDEN GROVE BLVD			GARDEN GROVE	92844

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DETAILS
County: Orange Responsible Agency: Orange County, Environmental Health Division Facility ID: FA0046206 Record ID: Not Reported Released Substance(s): Not Reported Current Status: Not Reported Current Status Date: Not Reported Type of Closure: Not Reported Agency Provided Longitude: Not Reported Agency Provided Latitude: Not Reported

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CRSP-CA	Listed	0.15 miles W	53 ft (2 ft lower than site)	14
SITE NAME			**MAPS**	**ID**
G&M Oil Co. #140			1, 2, 4	32254
ADDRESS			**CITY**	**ZIP**
8032 GARDEN GROVE BLVD			GARDEN GROVE	92844

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DETAILS
Site Regulated Program Information Site ID: 32254 Site EI ID: 10138405 Agency Provided Latitude: 33.77334 Agency Provided Longitude: -117.99221 Program Description: Chemical Storage Facilities Program Description: Hazardous Waste Generator Program Description: Underground Storage Tank Evaluation Information Evaluation Date: 2/27/2018 Violations Found? (Y/N): No Evaluation General Type: Compliance Evaluation Inspection Evaluation Type: Routine done by local agency Evaluation Note(s): On site to conduct a routine Underground Storage Tank inspection and witness annual monitor system certification and spill bucket testing. The facility has two double-walled tanks (87 and Diesel) and one double-walled split tank (87 and 91) monitored by a Veeder Root TLS-350R system. The monitor is operational for audible and visual alarms, panel display reads ?All functions normal?. The tanks have double-walled pressurized piping. Positive shutdown and fail-safe programming were verified, visual/audible alarm was verified. Flapper valves are used for overfill prevention. Annulars are monitored by VR-209 wrap-around sensors. Fill and piping sumps are monitored by VR-208 sensors, which shutdown corresponding turbines when submerged in liquid. All 6 UDC?s are monitored by VR-208 sensors which shutdown the dispenser when submerged in liquid. All tanks have FE Petro MLD line leak detectors installed and passed testing. The following documents were on site and available [Truncated] Evaluation Division: Orange County Environmental Health Evaluation Program: UST Evaluation Source: CERS Evaluation Date: 11/6/2017 Violations Found? (Y/N): Yes Evaluation General Type: Other/Unknown Evaluation Type: Other, not routine, done by local agency More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-Service Stations	Listed	0.15 miles W	53 ft (2 ft lower than site)	14
SITE NAME			**MAPS**	**ID**
ARCO AM/PM 82097			1, 2, 4	211293
ADDRESS			**CITY**	**ZIP**
8032 GARDEN GROVE BLVD			GARDEN GROVE	92844

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DETAILS
AS OF DATE: 1/3/2002 SITE TYPE: RETAIL TANK TYPE: UST COUNTY: ORANGE

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-Service Stations	Listed	0.15 miles W	53 ft (2 ft lower than site)	14
SITE NAME			**MAPS**	**ID**
Chevron			1, 2, 4	153033
ADDRESS			**CITY**	**ZIP**
8032 Garden Grove Blvd			Garden Grove	92844
DETAILS				
Site Added: 1/1/2013				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-Service Stations	Listed	0.15 miles W	53 ft (2 ft lower than site)	14
SITE NAME			**MAPS**	**ID**
G & M OIL CO			1, 2, 4	133655
ADDRESS			**CITY**	**ZIP**
8032 GARDEN GROVE BLVD			Garden Grove	92844
DETAILS				
Sic Code: 5541 Desc: Service Stations/Vehicle Fueling Site Added: 2/2010				

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DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
RCRA-NON-US	Listed	0.15 miles W	53 ft (2 ft lower than site)	14

SITE NAME	MAPS	ID
G&M OIL CO #140	1, 2, 4	CAL000292280

ADDRESS	CITY	ZIP
8032 GARDEN GROVE BLVD	GARDEN GROVE	92844

DETAILS

Additional details may be found online using the following link:

https://enviro.epa.gov/enviro/rcrainfoquery_3.facility_information?pgm_sys_id=CAL000292280
Source Type: Implementer
Generator Status: Non-Generator
NAICS1: OTHER GASOLINE STATIONS
Active Site Indicator: H----
Owner Name: G & M OIL CO LLC
Operator Name: SOLEDAD GERMAN
In Handler Universes: Y
In a Universe: Y
Universal Waste: Y
Universal Waste Destination Facility: Y

Receive Date: 20050316
Acknowledge Flag Date: 20050316
Contact First Name: SOLEDAD
Contact Last Name: GERMAN
Contact Street 1: 16868 A LANE
Contact City: HUNTINGTON BEACH
Contact State: CA
Contact Zip: 92647
Contact Phone: 714-375-4700
Contact FAX: 714-375-2009
Contact E-mail Address: SGERMAN@GMOC.COM
Universal Waste Destination Facility: Y

More Details Link

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DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
UST-CA	Listed	0.15 miles W	53 ft (2 ft lower than site)	14
SITE NAME			**MAPS**	**ID**
G&M Oil Co. #140			1, 2, 4	248128
ADDRESS			**CITY**	**ZIP**
8032 Garden Grove Blvd			Garden Grove	92844

DETAILS

More Information on Site? Go to Following Link:
http://geotracker.waterboards.ca.gov/search.asp
CERSID: 10138405
Global ID: FA0046206
COUNTY: Orange
Permitting Agency: Orange County Environmental Health
Agency Provided Latitude: 33.77334
Agency Provided Longitude: -117.99221
PROJECT TYPE: Not Reported
RB Case Number: Not Reported
LOC Case Number: Not Reported
Case Worker: Not Reported
MTBE DATE: Not Reported
GW CONC (PPB): Not Reported
MATRIX: Not Reported

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
UST-CRSP-CA	Listed	0.15 miles W	53 ft (2 ft lower than site)	14
SITE NAME			**MAPS**	**ID**
G&M Oil Co. #140			1, 2, 4	32254
ADDRESS			**CITY**	**ZIP**
8032 GARDEN GROVE BLVD			GARDEN GROVE	92844

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DETAILS
Site Regulated Program Information Site ID: 32254 EI ID: 10138405 Agency Provided Address: 8032 GARDEN GROVE BLVD Agency Provided Latitude: 33.77334 Agency Provided Longitude: -117.99221 Program Description: Underground Storage Tank Evaluation Information (2017 to present) Evaluation Date: 8/31/2021 Violations Found? (Y/N): No Evaluation General Type: Other/Unknown Evaluation Type: Other, not routine, done by local agency Evaluation Note(s): UST information reviewed and accepted by M Sutphin CFR dated 6-19-21 Evaluation Division: Orange County Environmental Health Evaluation Program: UST Evaluation Source: CERS Evaluation Date: 6/28/2021 Violations Found? (Y/N): No Evaluation General Type: Other/Unknown Evaluation Type: Other, not routine, done by local agency Evaluation Note(s): CERS submittal UST information reviewed and accepted by M Sutphin CFR dated 6-4-21 Evaluation Division: Orange County Environmental Health Evaluation Program: UST More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CRSP-CA	Listed	0.15 miles W	52 ft (3 ft lower than site)	15
SITE NAME			**MAPS**	**ID**
G & M OIL #140			1, 2, 4	221062
ADDRESS			**CITY**	**ZIP**
8032 GARDEN GROVE			GARDEN GROVE	92844

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DETAILS
Site Regulated Program Information Site ID: 221062 Site EI ID: T10000002773 Agency Provided Latitude: 33.77334 Agency Provided Longitude: -117.992212 Program Description: Leaking Underground Storage Tank Cleanup Site Evaluation Information : Not Reported :Violation Information : Not Reported :Enforcement Information : Not Reported :Chemical Information : Not Reported :Coordinate Information : Not Reported :

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
ENF-CA	Listed	0.15 miles W	52 ft (3 ft lower than site)	15
SITE NAME			**MAPS**	**ID**
G & M OIL #140			1, 2, 4	T10000002773
ADDRESS			**CITY**	**ZIP**
8032 GARDEN GROVE			GARDEN GROVE	92844

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DETAILS

Global ID: T10000002773
County: Orange
Site History: Please refer to recent Site Documents or Monitoring Reports in GeoTracker for site history. Orange County is not responsible for the accuracy of any professional interpretations provided in reports submitted by consultants for the responsible party.
Case Type: LUST Cleanup Site
Status: Completed - Case Closed
Lead Agency: ORANGE COUNTY LOP
Case Worker: SR
Local Agency: ORANGE COUNTY LOP
RB Case Number: Not Reported
Loc Case Number: 11UT001
File Location: Local Agency Warehouse
Potential Contaminants of Concern: MTBE / TBA / Other Fuel Oxygenates, Gasoline
Potential Media Affected: Aquifer used for drinking water supply
How Discovered: Site Assessment/Site Investigation
How Discovered Description: Not Reported
Stop Method: Not Reported
Stop Method Description: Not Reported
Action Date: 2019-06-25
Action Type: ENFORCEMENT
Action: Closure/No Further Action Letter

Action Date: 2019-06-24
Action Type: ENFORCEMENT
Action: File Review - Closure

Action Date: 2019-06-11
Action Type: ENFORCEMENT
More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
LUST-Closed-CA	COMPLETED - CASE CLOSED	0.15 miles W	52 ft (3 ft lower than site)	15
SITE NAME			**MAPS**	**ID**
G & M OIL #140			1, 2, 4	T10000002773
ADDRESS			**CITY**	**ZIP**
8032 GARDEN GROVE			GARDEN GROVE	92844

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DETAILS
Sites Details URL: http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000002773 Global ID: T10000002773 Case Type: LUST CLEANUP SITE Status: COMPLETED - CASE CLOSED Agency Provided Address: 8032 GARDEN GROVE Status Date: 6/25/2019 Cleanup Fund Case: NO Lead Agency: ORANGE COUNTY LOP Case Worker: Not Reported Local Agency: Not Reported Resolution Case Number: Not Reported Location Case Number: 11UT001 File Location: LOCAL AGENCY WAREHOUSE Potential Contaminants of Concern: MTBE / TBA / OTHER FUEL OXYGENATES, GASOLINE Potential Media Affected: AQUIFER USED FOR DRINKING WATER SUPPLY Site History: PLEASE REFER TO RECENT SITE DOCUMENTS OR MONITORING REPORTS IN GEOTRACKER FOR SITE HISTORY. ORANGE COUNTY IS NOT RESPONSIBLE FOR THE ACCURACY OF ANY PROFESSIONAL INTERPRETATIONS PROVIDED IN REPORTS SUBMITTED BY CONSULTANTS FOR THE RESPONSIBLE PARTY. Begin Date: 3/4/2005 How Discovered: SITE ASSESSMENT/SITE INVESTIGATION How Discovered Description: Not Reported Stop Method: Not Reported Stop Method Description: Not Reported Agency Provided Latitude: 33.77334 Agency Provided Longitude: -117.992212 More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-Auto Repair	Listed	0.16 miles E	56 ft (1 ft higher than site)	16
SITE NAME			**MAPS**	**ID**
CAO COMPLETE AUTO REPAIR			1, 2, 4	414209-PD
ADDRESS			**CITY**	**ZIP**
8312 GARDEN GROVE BLVD			GARDEN GROVE	92844-1103
DETAILS				
Listing Year: 1997 SIC Category: AUTOMOBILE REPAIRING & SERVICE SIC Code: 753801				

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DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
RCRA-NON-US	Listed	0.17 miles E	55 ft (0 ft higher than site)	17
SITE NAME			**MAPS**	**ID**
TAE SUB CHUNG			1, 2, 4	CAC003064414
ADDRESS			**CITY**	**ZIP**
8321 GARDEN GROVE BLVD			GARDEN GROVE	92844

DETAILS

Additional details may be found online using the following link:

https://enviro.epa.gov/enviro/rcrainfoquery_3.facility_information?pgm_sys_id=CAC003064414
Source Type: Implementer
Generator Status: Non-Generator
NAICS1: ALL OTHER WASTE MANAGEMENT SERVICES
Owner Name: TAE SUB CHUNG
Operator Name: TAE SUB CHUNG

Receive Date: 20200424
Acknowledge Flag Date: 20200424
Contact First Name: TAE
Contact Last Name: SUB CHUNG
Contact Street 1: 8321 GARDEN GROVE BLVD
Contact City: GARDEN GROVE
Contact State: CA
Contact Zip: 92844-1145
Contact Phone: 310-756-4274
Contact E-mail Address: CMCGUIRE@RMC.COM

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
AIR-DIST-CA	Listed	0.18 miles W	52 ft (3 ft lower than site)	18
SITE NAME			**MAPS**	**ID**
R & M OIL CO, SHELL DEALER			1, 2, 4	105050-SC
ADDRESS			**CITY**	**ZIP**
12950 BEACH BLVD			STANTON	90680

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DETAILS
District: South Coast AQMD Compliance URL: http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=105050 Note: For additional Facility, Equipment, Emissions, Hearing Board or Transporation Plan Information click on different tabs. Facility Id: 105050 County Code: OR County: Orange Facility Status Code: S Facility Status: SOLD Number of Employees: 0 Location Zip Code Extension: 4004 Facility Representative First Name: CHARLES T. Facility Representative Last Name: HART Location Area Code: 714 Location Phone Number: 5203471 Location Phone Extension: Not Reported Mailing Address: PO BOX 6249 EQUIVA SERVICES LLC Mailing City: CARSON Mailing State: CA Mailing Zip Code: 90749 Mailing Zip Code Extension: 6249 Mailing Area Code: 714 Mailing Phone Number: 5203471 Mailing Phone Extension: Not Reported Mailing Representative First Name: CHARLES T. Mailing Representative Last Name: HART More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
AIR-DIST-CA	Listed	0.18 miles W	52 ft (3 ft lower than site)	18
SITE NAME			**MAPS**	**ID**
EQUILON ENT, STANTON SHELL #136137			1, 2, 4	141508-SC
ADDRESS			**CITY**	**ZIP**
12950 BEACH BLVD			STANTON	90680

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DETAILS
District: South Coast AQMD Compliance URL: http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=141508 Note: For additional Facility, Equipment, Emissions, Hearing Board or Transporation Plan Information click on different tabs. Facility Id: 141508 County Code: OR County: Orange Facility Status Code: A Facility Status: ACTIVE Number of Employees: 0 Location Zip Code Extension: 4004 Facility Representative First Name: JEFF Facility Representative Last Name: OSBORN Location Area Code: 714 Location Phone Number: 6022137 Location Phone Extension: Not Reported Mailing Address: 20945 S WILMINGTON AVE ATTN:MICHELLE PONCE Mailing City: CARSON Mailing State: CA Mailing Zip Code: 90810 Mailing Zip Code Extension: 1039 Mailing Area Code: 714 Mailing Phone Number: 6022137 Mailing Phone Extension: Not Reported Mailing Representative First Name: JEFF Mailing Representative Last Name: OSBORN More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
AIR-DIST-CA	Listed	0.18 miles W	52 ft (3 ft lower than site)	18
SITE NAME			**MAPS**	**ID**
SHELL OIL PRDT US DL, YANG'S OIL #136137			1, 2, 4	132422-SC
ADDRESS			**CITY**	**ZIP**
12950 BEACH BLVD			STANTON	90680

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DETAILS
District: South Coast AQMD Compliance URL: http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=132422 Note: For additional Facility, Equipment, Emissions, Hearing Board or Transporation Plan Information click on different tabs. Facility Id: 132422 County Code: OR County: Orange Facility Status Code: S Facility Status: SOLD Number of Employees: 0 Location Zip Code Extension: 4004 Facility Representative First Name: MICHELLE KENNEDY Facility Representative Last Name: PONCE Location Area Code: 310 Location Phone Number: 8162094 Location Phone Extension: Not Reported Mailing Address: 20945 S WILMINGTON AVE ATTN:MICHELLE PONCE Mailing City: CARSON Mailing State: CA Mailing Zip Code: 90810 Mailing Zip Code Extension: 1039 Mailing Area Code: 310 Mailing Phone Number: 8162094 Mailing Phone Extension: Not Reported Mailing Representative First Name: MICHELLE KENNEDY Mailing Representative Last Name: PONCE More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
AIR-DIST-CA	Listed	0.18 miles W	52 ft (3 ft lower than site)	18
SITE NAME			**MAPS**	**ID**
EQUILON DLR, R & M OIL CO INC, SHELL STN			1, 2, 4	116713-SC
ADDRESS			**CITY**	**ZIP**
12950 BEACH BLVD			STANTON	90680

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DETAILS
District: South Coast AQMD Compliance URL: http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=116713 Note: For additional Facility, Equipment, Emissions, Hearing Board or Transporation Plan Information click on different tabs. Facility Id: 116713 County Code: OR County: Orange Facility Status Code: S Facility Status: SOLD Number of Employees: 0 Location Zip Code Extension: 4004 Facility Representative First Name: RUSS OSBORN OR Facility Representative Last Name: TOM JAMESON Location Area Code: 714 Location Phone Number: 8955866 Location Phone Extension: Not Reported Mailing Address: P O BOX 6249 M.KENNEDY-PONCE Mailing City: CARSON Mailing State: CA Mailing Zip Code: 90749 Mailing Zip Code Extension: 6249 Mailing Area Code: 714 Mailing Phone Number: 8955866 Mailing Phone Extension: Not Reported Mailing Representative First Name: RUSS OSBORN OR Mailing Representative Last Name: TOM JAMESON More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
AIR-DIST-CA	Listed	0.18 miles W	52 ft (3 ft lower than site)	18
SITE NAME			**MAPS**	**ID**
EQUILON DLR, BEACH SHELL #136137, D KIM			1, 2, 4	127943-SC
ADDRESS			**CITY**	**ZIP**
12950 BEACH BLVD			STANTON	90680

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DETAILS
District: South Coast AQMD Compliance URL: http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=127943 Note: For additional Facility, Equipment, Emissions, Hearing Board or Transporation Plan Information click on different tabs. Facility Id: 127943 County Code: OR County: Orange Facility Status Code: S Facility Status: SOLD Number of Employees: 5 Location Zip Code Extension: 4004 Facility Representative First Name: CHARLES T Facility Representative Last Name: HART Location Area Code: 310 Location Phone Number: 8162079 Location Phone Extension: Not Reported Mailing Address: 20945 S WILMINGTON AVE M.KENNEDY-PONCE Mailing City: CARSON Mailing State: CA Mailing Zip Code: 90810 Mailing Zip Code Extension: 1039 Mailing Area Code: 310 Mailing Phone Number: 8162079 Mailing Phone Extension: Not Reported Mailing Representative First Name: CHARLES T Mailing Representative Last Name: HART More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
AIR-DIST-CA	Listed	0.18 miles W	52 ft (3 ft lower than site)	18
SITE NAME			**MAPS**	**ID**
SHELL OIL COMPANY			1, 2, 4	96148-SC
ADDRESS			**CITY**	**ZIP**
12950 BEACH BLVD			STANTON	92641

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DETAILS
District: South Coast AQMD Compliance URL: http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=96148 Note: For additional Facility, Equipment, Emissions, Hearing Board or Transporation Plan Information click on different tabs. Facility Id: 96148 County Code: OR County: Orange Facility Status Code: I Facility Status: INACTIVE Number of Employees: 0 Location Zip Code Extension: Not Reported Facility Representative First Name: DAN Facility Representative Last Name: MCGILL Location Area Code: 714 Location Phone Number: 5203370 Location Phone Extension: Not Reported Mailing Address: P O BOX 25370/CHARLES T HART STE 160 (92704) Mailing City: SANTA ANA Mailing State: CA Mailing Zip Code: 92799 Mailing Zip Code Extension: Not Reported Mailing Area Code: 714 Mailing Phone Number: 5203370 Mailing Phone Extension: Not Reported Mailing Representative First Name: DAN Mailing Representative Last Name: MCGILL More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
AIR-DIST-CA	Listed	0.18 miles W	52 ft (3 ft lower than site)	18
SITE NAME			**MAPS**	**ID**
PACIFIC STATIONS			1, 2, 4	87800-SC
ADDRESS			**CITY**	**ZIP**
12950 BEACH BLVD			STANTON	90680

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DETAILS
District: South Coast AQMD Compliance URL: http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=87800 Note: For additional Facility, Equipment, Emissions, Hearing Board or Transporation Plan Information click on different tabs. Facility Id: 87800 County Code: OR County: Orange Facility Status Code: I Facility Status: INACTIVE Number of Employees: 0 Location Zip Code Extension: Not Reported Facility Representative First Name: RUSSELL Facility Representative Last Name: OSBORN Location Area Code: 213 Location Phone Number: 0000000 Location Phone Extension: Not Reported Mailing Address: 12950 BEACH BLVD Mailing City: STANTON Mailing State: CA Mailing Zip Code: 90680 Mailing Zip Code Extension: Not Reported Mailing Area Code: 213 Mailing Phone Number: 0000000 Mailing Phone Extension: Not Reported Mailing Representative First Name: RUSSELL Mailing Representative Last Name: OSBORN More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CERS-CA	Listed	0.18 miles W	52 ft (3 ft lower than site)	18
SITE NAME			MAPS	ID
SHELL 136137			1, 2, 4	10515247
ADDRESS			CITY	ZIP
12950 BEACH BLVD			STANTON	90680

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DETAILS

General Program & Facility Information
CERS ID: 10515247
Facility ID: FA0024854
Facility Regulator Key ID: FA0024854
Organization Code: 90442141
Business/Organization Name: SHELL 136137
Multiple Jurisdictional Business? (Y/N): No
Business Origin: EDT
Count of Business' CERS User Accounts: 0
Facility Count for Business: 1
Last Submittal Date (any element): Not Reported
Count of Submitted Elements: 0
Remote Facility? (Y/N): No
Small Quantity Generator Facility? (Y/N): No
Local Facility Grouping: Not Reported

Facility Specific Information
Assessor Parcel Number (APN): Not Reported
Number of Employees: Not Reported
Property Owner Name: Not Reported
Property Owner Phone Number: Not Reported
Property Owner Mailing Address: Not Reported
Property Owner Mailing City: Not Reported
Property Owner Mailing State: Not Reported
Property Owner Mailing Zip Code: Not Reported
Property Owner Mailing Country: Not Reported
More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
County-LUST-Closed-CA	Closed	0.18 miles W	52 ft (3 ft lower than site)	18
SITE NAME			MAPS	ID
SHELL OIL			1, 2, 4	RO0002822-ORG
ADDRESS			CITY	ZIP
12950 BEACH BLVD			STANTON	90680

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DETAILS
County: Orange Record ID: RO0002822 Case ID: 89UT155 Case Closed Date: 6/26/2017 Type of Closure: Closure certification issued Status: Not Reported Case Type Code: O Released Substance: Gasoline-Automotive (motor gasoline and additives), leaded & unleaded

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CRSP-CA	Listed	0.18 miles W	52 ft (3 ft lower than site)	18
SITE NAME			**MAPS**	**ID**
SHELL OIL			1, 2, 4	237277
ADDRESS			**CITY**	**ZIP**
12950 BEACH			STANTON	90680

DETAILS
Site Regulated Program Information Site ID: 237277 Site EI ID: T0605900387 Agency Provided Latitude: 33.774153 Agency Provided Longitude: -117.992245 Program Description: Leaking Underground Storage Tank Cleanup Site Evaluation Information : Not Reported :Violation Information : Not Reported :Enforcement Information : Not Reported :Chemical Information : Not Reported :Coordinate Information : Not Reported :

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DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
ENF-CA	Listed	0.18 miles W	52 ft (3 ft lower than site)	18
SITE NAME			**MAPS**	**ID**
SHELL OIL			1, 2, 4	T0605900387
ADDRESS			**CITY**	**ZIP**
12950 BEACH			STANTON	90680

DETAILS

Global ID: T0605900387
County: Orange
Site History: Please refer to recent Site Documents or Monitoring Reports in GeoTracker for site history. Orange County is not responsible for the accuracy of any professional interpretations provided in reports submitted by consultants for the responsible party.
Case Type: LUST Cleanup Site
Status: Completed - Case Closed
Lead Agency: ORANGE COUNTY LOP
Case Worker: SR
Local Agency: ORANGE COUNTY LOP
RB Case Number: 083000485T
Loc Case Number: 89UT155
File Location: Local Agency Warehouse
Potential Contaminants of Concern: MTBE / TBA / Other Fuel Oxygenates, Gasoline
Potential Media Affected: Aquifer used for drinking water supply, Soil
How Discovered: * SA
How Discovered Description: Not Reported
Stop Method: Close and Replace Tank
Stop Method Description: Not Reported
Action Date: 2017-06-26
Action Type: ENFORCEMENT
Action: Closure/No Further Action Letter

Action Date: 2017-06-26
Action Type: ENFORCEMENT
Action: File Review - Closure

Action Date: 2017-06-22
Action Type: ENFORCEMENT
More Details Link

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DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-HWS-CA	Listed	0.18 miles W	52 ft (3 ft lower than site)	18
SITE NAME			MAPS	ID
SHELL SERVICE STATION			1, 2, 4	347953
ADDRESS			CITY	ZIP
12950 BEACH			STANTON	90680
DETAILS				
Reported Date: 1998				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-LUSTIS-CA	Listed	0.18 miles W	52 ft (3 ft lower than site)	18
SITE NAME			MAPS	ID
SHELL SERVICE STATION			1, 2, 4	347953
ADDRESS			CITY	ZIP
12950 BEACH BOULEVARD			STANTON	90680
DETAILS				
Reported Date: 1998				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-Regional-UST-CA	Listed	0.18 miles W	52 ft (3 ft lower than site)	18
SITE NAME			MAPS	ID
SHELL SERVICE STATION			1, 2, 4	347953
ADDRESS			CITY	ZIP
12950 BEACH BOULEVARD			STANTON	

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DETAILS
Reported Date: 1998 List: Region #8-Santa Ana Regional Underground Tank Database List Agency: Regional Water Quality Control Board, Region #8

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-Service Stations	Listed	0.18 miles W	52 ft (3 ft lower than site)	18
SITE NAME			**MAPS**	**ID**
R & M OIL			1, 2, 4	45107-PD
ADDRESS			**CITY**	**ZIP**
12950 BEACH BLVD			STANTON	90680-4004
DETAILS				
Listing Year: 1997 SIC Category: SERVICE STATIONS-GASOLINE & OIL SIC Code: 554101				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-Service Stations	Listed	0.18 miles W	52 ft (3 ft lower than site)	18
SITE NAME			**MAPS**	**ID**
SHELL (137137)			1, 2, 4	211842
ADDRESS			**CITY**	**ZIP**
12950 BEACH BLVD			STANTON	90680
DETAILS				
AS OF DATE: 1/3/2002 SITE TYPE: RETAIL TANK TYPE: UST COUNTY: ORANGE				

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DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-Service Stations	Listed	0.18 miles W	52 ft (3 ft lower than site)	18
SITE NAME			MAPS	ID
R & M Shell			1, 2, 4	9347
ADDRESS			CITY	ZIP
12950 Beach Blvd			Stanton	90680
DETAILS				
Sic Code: 5541 Desc: Service Stations/Vehicle Fueling Site Added: 2/2010				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-UST-CA	Listed	0.18 miles W	52 ft (3 ft lower than site)	18
SITE NAME			MAPS	ID
RAYS SUPER SHELL			1, 2, 4	259145
ADDRESS			CITY	ZIP
12950 BEACH BLVD			STANTON	90680
DETAILS				
Note: ID has been assigned by ERS Tank Details: http://geotracker.waterboards.ca.gov/ustpdfs/pdf/0002E805.pdf County: Orange				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-UST-Cleanup-CA	Listed	0.18 miles W	52 ft (3 ft lower than site)	18
SITE NAME			MAPS	ID
Not Reported by Agency			1, 2, 4	T0605900387
ADDRESS			CITY	ZIP
12950 BEACH BLVD			STANTON	

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DETAILS
UST FUND PRIORITY CLASS: D UST FUND CLAIM NO#: 4618 GEOGRAPHIC AREA (BY REGIONAL BOARD NO#): 8 UST FUND CLAIM_CLOSURE DATE: Not Reported NO# OF FUND RECOMMEDED CLOSURE: 1 SITE LEAD AGENCY: ORANGE COUNTY LOP YEARS CASE HAS BEEN OPENED: 23 YEARS CLAIM HAS RECEIVED FUNDING: 15

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
LUST-Closed-CA	COMPLETED - CASE CLOSED	0.18 miles W	52 ft (3 ft lower than site)	18
SITE NAME			**MAPS**	**ID**
SHELL OIL			1, 2, 4	T0605900387
ADDRESS			**CITY**	**ZIP**
12950 BEACH			STANTON	90680

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DETAILS

Sites Details
URL:
http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0605900387
Global ID: T0605900387
Case Type: LUST CLEANUP SITE
Status: COMPLETED - CASE CLOSED
Agency Provided Address: 12950 BEACH
Status Date: 6/26/2017
Cleanup Fund Case: YES
Lead Agency: ORANGE COUNTY LOP
Case Worker: Not Reported
Local Agency: Not Reported
Resolution Case Number: 083000485T
Location Case Number: 89UT155
File Location: LOCAL AGENCY WAREHOUSE
Potential Contaminants of Concern: MTBE / TBA / OTHER FUEL OXYGENATES, GASOLINE
Potential Media Affected: AQUIFER USED FOR DRINKING WATER SUPPLY, SOIL
Site History: PLEASE REFER TO RECENT SITE DOCUMENTS OR MONITORING REPORTS IN GEOTRACKER FOR SITE HISTORY. ORANGE COUNTY IS NOT RESPONSIBLE FOR THE ACCURACY OF ANY PROFESSIONAL INTERPRETATIONS PROVIDED IN REPORTS SUBMITTED BY CONSULTANTS FOR THE RESPONSIBLE PARTY.
Begin Date: 7/26/1989
How Discovered: SA
How Discovered Description: Not Reported
Stop Method: CLOSE AND REPLACE TANK
Stop Method Description: Not Reported
Agency Provided Latitude: 33.7741527466751
Agency Provided Longitude: -117.992245073541

More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
AIR-DIST-CA	Listed	0.2 miles E	56 ft (1 ft higher than site)	19
SITE NAME			**MAPS**	**ID**
MEGA PAINT INC			1, 2, 4	160755-SC
ADDRESS			**CITY**	**ZIP**
8341 GARDEN GROVE BLVD			GARDEN GROVE	92844

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DETAILS
District: South Coast AQMD Compliance URL: http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=160755 Note: For additional Facility, Equipment, Emissions, Hearing Board or Transporation Plan Information click on different tabs. Facility Id: 160755 County Code: OR County: Orange Facility Status Code: A Facility Status: ACTIVE Number of Employees: 0 Location Zip Code Extension: Not Reported Facility Representative First Name: SCOTT Facility Representative Last Name: SONG Location Area Code: 713 Location Phone Number: 6365500 Location Phone Extension: Not Reported Mailing Address: 8341 GARDEN GROVE BLVD Mailing City: GARDEN GROVE Mailing State: CA Mailing Zip Code: 92844 Mailing Zip Code Extension: Not Reported Mailing Area Code: 713 Mailing Phone Number: 6365500 Mailing Phone Extension: Not Reported Mailing Representative First Name: SCOTT Mailing Representative Last Name: SONG More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
County-LUST-Closed-CA	Closed	0.21 miles NW	53 ft (2 ft lower than site)	20
SITE NAME			MAPS	ID
TRAMMEL CROW			1, 2, 4	RO0002845-ORG
ADDRESS			CITY	ZIP
12900 BEACH BLVD			STANTON	90680

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DETAILS
County: Orange Record ID: RO0002845 Case ID: 88UT084 Case Closed Date: 5/17/1991 Type of Closure: Closure certification issued Status: Not Reported Case Type Code: O Released Substance: Waste oil/Used oil

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
CRSP-CA	Listed	0.21 miles NW	53 ft (2 ft lower than site)	20
SITE NAME			**MAPS**	**ID**
TRAMMEL CROW			1, 2, 4	192863
ADDRESS			**CITY**	**ZIP**
12900 BEACH			STANTON	90680

DETAILS
Site Regulated Program Information Site ID: 192863 Site EI ID: T0605901364 Agency Provided Latitude: 33.774825 Agency Provided Longitude: -117.99221 Program Description: Leaking Underground Storage Tank Cleanup Site Evaluation Information : Not Reported :Violation Information : Not Reported :Enforcement Information : Not Reported :Chemical Information : Not Reported :Coordinate Information : Not Reported :

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DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-LUSTIS-CA	Listed	0.21 miles NW	53 ft (2 ft lower than site)	20
SITE NAME			MAPS	ID
TRAMMEL CROW			1, 2, 4	1186684
ADDRESS			CITY	ZIP
12900 BEACH BOULEVARD			STANTON	90680
DETAILS				
Reported Date: 1998				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-Regional-Other-CA	Listed	0.21 miles NW	53 ft (2 ft lower than site)	20
SITE NAME			MAPS	ID
TRAMMEL CROW			1, 2, 4	1186684
ADDRESS			CITY	ZIP
12900 BEACH BLVD			STANTON	90680
DETAILS				
Reported Date: 1998 List: Orange County-Groundwater Cleanup Program Agency: Orange County Health Care Agency				

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Hist-Regional-UST-CA	Listed	0.21 miles NW	53 ft (2 ft lower than site)	20
SITE NAME			MAPS	ID
TRAMMEL CROW			1, 2, 4	1186684
ADDRESS			CITY	ZIP
12900 BEACH BOULEVARD			STANTON	

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DETAILS
Reported Date: 1998 List: Region #8-Santa Ana Regional Underground Tank Database List Agency: Regional Water Quality Control Board, Region #8

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
LUST-Closed-CA	COMPLETED - CASE CLOSED	0.21 miles NW	53 ft (2 ft lower than site)	20
SITE NAME			**MAPS**	**ID**
TRAMMEL CROW			1, 2, 4	T0605901364
ADDRESS			**CITY**	**ZIP**
12900 BEACH			STANTON	90680
DETAILS				

Sites Details
URL:
http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T0605901364
Global ID: T0605901364
Case Type: LUST CLEANUP SITE
Status: COMPLETED - CASE CLOSED
Agency Provided Address: 12900 BEACH
Status Date: 5/17/1991
Cleanup Fund Case: NO
Lead Agency: ORANGE COUNTY LOP
Case Worker: Not Reported
Local Agency: Not Reported
Resolution Case Number: 083001824T
Location Case Number: 88UT084
File Location: LOCAL AGENCY
Potential Contaminants of Concern: WASTE OIL / MOTOR / HYDRAULIC / LUBRICATING
Potential Media Affected: OTHER GROUNDWATER (USES OTHER THAN DRINKING WATER)
Site History: Not Reported
Begin Date: 4/18/1988
How Discovered: TANK CLOSURE
How Discovered Description: Not Reported
Stop Method: CLOSE AND REMOVE TANK
Stop Method Description: Not Reported
Agency Provided Latitude: 33.774825
Agency Provided Longitude: -117.99221

More Details Link

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DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
RCRA-SQG-US	Listed	0.21 miles NW	53 ft (2 ft lower than site)	20
SITE NAME			**MAPS**	**ID**
AUTO EXCHANGE THE			1, 2, 4	CAD011158060
ADDRESS			**CITY**	**ZIP**
12900 BEACH			STANTON	90680

DETAILS

Additional details may be found online using the following link:

https://enviro.epa.gov/enviro/rcrainfoquery_3.facility_information?pgm_sys_id=CAD011158060
Source Type: Notification
Generator Status Universe: SQG
Generator Status: Small Quantity Generator
Active Site Indicator: H----
Owner Name: WEIH & HORN LTD INC
Operator Name: NOT REQUIRED
In Handler Universes: Y
In a Universe: Y

Receive Date: 19860924
Acknowledge Flag Date: 19910331
Contact First Name: ENVIRONMENTAL
Contact Last Name: MANAGER
Contact Street 1: 12900 BEACH
Contact City: STANTON
Contact State: CA
Contact Zip: 90680
Contact Country: US
Contact Phone: 714-891-9114

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
AIR-DIST-CA	Listed	0.21 miles W	52 ft (3 ft lower than site)	21
SITE NAME			**MAPS**	**ID**
MIMI'S CAFE GARDEN GROVE			1, 2, 4	69331-SC
ADDRESS			**CITY**	**ZIP**
7985 GARDEN GROVE BLVD			GARDEN GROVE	92841

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DETAILS
District: South Coast AQMD Compliance URL: http://www3.aqmd.gov/webappl/fim/prog/novnc.aspx?fac_id=69331 Note: For additional Facility, Equipment, Emissions, Hearing Board or Transporation Plan Information click on different tabs. Facility Id: 69331 County Code: OR County: Orange Facility Status Code: A Facility Status: ACTIVE Number of Employees: 0 Location Zip Code Extension: Not Reported Facility Representative First Name: STEVE Facility Representative Last Name: BARRATT Location Area Code: 714 Location Phone Number: 8985042 Location Phone Extension: Not Reported Mailing Address: 12201 MERIT DR STE 900 C.BOLDING ,LICENSING Mailing City: DALLAS Mailing State: TX Mailing Zip Code: 75251 Mailing Zip Code Extension: Not Reported Mailing Area Code: 714 Mailing Phone Number: 8985042 Mailing Phone Extension: Not Reported Mailing Representative First Name: STEVE Mailing Representative Last Name: BARRATT More Details Link

DATABASE	STATUS	DISTANCE	ELEVATION	MAP ID
Spills-SSO-CA	Listed	0.22 miles E	55 ft (0 ft higher than site)	22
SITE NAME			**MAPS**	**ID**
8205 Larson Ave			1, 2, 4	836193
ADDRESS			**CITY**	**ZIP**
Not Reported by Agency				

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ATTACHMENT 6

RESOLUTION NO. 6123-25

A RESOLUTION OF THE PLANNING COMMISSION OF THE CITY OF GARDEN GROVE APPROVING SITE PLAN NO. SP-162-2025 FOR A PROPERTY LOCATED ON THE EAST SIDE OF COAST STREET, BETWEEN GARDEN GROVE BOULEVARD AND LARSON AVENUE, AT 13040 COAST STREET, ASSESSOR'S PARCEL NO. 097-011-03.

BE IT RESOLVED that the Planning Commission of the City of Garden Grove, in a regular session assembled on September 18, 2025, hereby approves Site Plan No. SP-162-2025 for a property located on the east side of Coast Street, between Garden Grove Boulevard and Larson Avenue, at 13040 Coast Street, Assessor's Parcel No. 097-011-03, subject to the conditions of approval attached hereto as Exhibit "A".

BE IT FURTHER RESOLVED in the matter of Site Plan No. SP-162-2025, the Planning Commission of the City of Garden Grove does hereby report as follows:

1. The subject case was initiated by The Jager Company, Ltd., with authorization from the property owner, West St. Investments, LLC.

2. The applicant is requesting approval of a Site Plan for a five-story, thirty-four (34) unit apartment building and associated site improvements on an approximately 0.50-acre lot. The proposal includes three (3) affordable units for "very low-income" households and three (3) affordable units for "moderate-income" households. Inclusion of the six (6) affordable units qualifies the project for two density bonuses, incentives or concessions, waivers or reductions of development standards, and reduced parking pursuant to the State Density Bonus Law and Section 9.60.040 of the Garden Grove Municipal Code (DBL).

3. The City of Garden Grove Planning Commission hereby determines that the proposed project is categorically exempt from review under the California Environmental Quality Act ("CEQA") pursuant to Section 15332 (In-Fill Development Projects) of the State CEQA Guidelines (14 Cal. Code Regs., Section 15332). As set forth in the Class 32 exemption, the proposed project is: (1) consistent with the applicable general plan designation and all applicable general plan policies as well as with applicable zoning designation and regulations; (2) the proposed development occurs within City limits on a project site of no more than five acres substantially surrounded by urban uses; (3) the project site has no value as habitat for endangered, rare or threatened species; (4) approval of the project would not result in any significant effects relating to traffic, noise, air quality or water quality; and (5) the site can be adequately served by all required utilities and public services. The project is therefore exempt from CEQA review.

4. The property has a General Plan Land Use designation of MDR (Medium Density Residential) and is zoned R-3 (Multiple-Family Residential).

5. Existing land use, zoning, and General Plan designation of property in the vicinity of the subject property have been reviewed.

6. Report submitted by the City staff was reviewed.

7. Pursuant to a legal notice, a public hearing was held on September 18, 2025, and all interested persons were given an opportunity to be heard.

8. The Planning Commission gave due and careful consideration to the matter during its meeting on September 18, 2025.

BE IT FURTHER RESOLVED, FOUND AND DETERMINED that the facts and reasons supporting the conclusion of the Planning Commission, as required under Municipal Code Section 9.04.030 are as follows:

FACTS:

The subject site is a rectangular shaped lot located to the east side of Coast Street, between Garden Grove Boulevard and Larson Avenue. The site has a total gross lot area of 23,508 square feet (or 0.54 acres) and a net lot size of 21,829 square feet (or 0.50 acres). The site has a General Plan Land Use Designation of Medium Density Residential (MDR) and is zoned R-3 (Multiple-Family Residential). The site abuts R-3 properties to the north, east and across an alley to the south, and a GGMU-1 (Garden Grove Boulevard Mixed Use 1) zoned property across Coast Street to the west. Surrounding uses include auto repair shops to the north and to the east, a multifamily residential structure across the alley to the south, and a vacant religious facility, Gospel First Korean Baptist Church, across Coast Street to the west.

Prior to 1999, the subject property was zoned C-1 (Neighborhood Commercial) and improved with a commercial building. The property was previously owned by the Gospel First Korean Baptist Church, which formerly occupied the vacant religious facility located across Coast Street to the west. In 1999, the City Council approved a Zone Change, General Plan Amendment, Conditional Use Permit, and Variance request initiated by the Gospel Frist Korean Baptist Church to change the zoning of the project site from C-1 to R-3 in order to use the building as an ancillary facility for the church. In 2002, the Planning Commission approved Conditional Use Permit No. CUP-626-02 allowing a preschool to operate in conjunction with the church's religious activities. The church and the preschool continued to operate at the subject location until 2019.

In 2023, the property underwent a change in ownership. The current owner, West St. Investments, LLC, proposes to re-develop the site with a thirty-four (34) unit apartment building. To facilitate the proposed project, all existing improvements would be demolished to allow for the proposed development.

The proposed apartment building would include six (6) rental affordable housing units: three (3) for "very low-income" households and three (3) for "moderate-income" households. With the inclusion of six (6) affordable units, pursuant the DBL and AB 1287, the project qualifies for a combined density bonus of up to 85% over the base density, reduced parking ratios, up to four (4) incentives / concessions, and unlimited waivers / reductions of development standards set forth in the Garden Grove Municipal Code (GGMC). The applicant has proposed the following four (4) incentives / concessions and five (5) waivers / reductions of development standards pursuant to the DBL to facilitate the proposed development:

1) An incentive / concession to increase the maximum height limit from thirty-five feet (35'-0") to fifty-five feet and six inches (55'-6") (Section 9.12.040.020(A));

2) An incentive / concession to increase the maximum allowed number of building stories from three (3) to five (5) (Section 9.12.040.020(A));

3) An incentive / concession to increase the maximum lot coverage limit from fifty percent (50%) to seventy-one percent (71%) (Section 9.12.040.020(A));

4) An incentive / concession to forgo the undergrounding requirements of utilities and to allow the existing power lines along Coast Street to remain in place (Section 9.48.030);

5) A reduction of the required minimum front setback for the first and second floors from twenty feet (20'-0") to six feet (6'-0") (Section 9.12.040.020(A));

6) A reduction of the required minimum front setback for the third through fifth floor from twenty-five feet (25'-0") to six feet (6'-0") (Section 9.12.040.020(A));

7) A reduction of the required minimum interior side yard setback at the third through fifth floor from fifteen feet (15'-0") to ten feet (10'-0") (Section 9.12.040.020(A));

8) A reduction of the required minimum rear yard setback for the third through fifth floor from fifteen feet (15'-0") to ten feet (10'-0") (Section 9.12.040.020(A)); and

9) A reduction of the minimum unit size requirement for one-bedroom units from 750 to 656 square feet (Section 9.12.040.020(E)).

FINDINGS AND REASONS:

SITE PLAN (HOUSING DEVELOPMENTS)

1. The proposed development project is consistent, in compliance, and in conformity with the applicable, objective standards, provisions, conditions or requirements of the General Plan, Title 9, and other applicable ordinances or policies of the City.

   The proposed project includes construction of a five-story, thirty-forty (34) unit residential apartment development that includes three (3) affordable housing units for "very low-income" households and three (3) affordable units for "moderate-income" households, along with associated site improvements. The subject site has a General Plan Land Use designation of MDR (Medium Density Residential), and is zoned R-3 (Multiple-Family Residential). The MDR Land Use Designation is intended for the development of mainly multi-family residential neighborhoods that provide a variety of housing types, access to schools, parks, and other community services, a high-quality architectural design that preserves privacy, common spaces, recreation areas and services convenient to residents, an excellent environment for family life, and preserve residential property values. The R-3 zone implements the MDR General Plan Land Use Designation. The zone allows residential developments with densities of up to thirty-two (32) units per acre.

   With the exception of the zoning provisions and development standards proposed to be waived or modified pursuant to the DBL, the proposed project complies with all applicable objective development standards and provisions of the General Plan and the GGMC. The project has also been reviewed by the Public Works Department, and either complies with, or has been conditioned to meet, all applicable Public Works design requirements. The proposed Project is also consistent with the goals and policies of the General Plan Land Use Element and Housing Element, including the following:

   Policy LU-1.3: Support the production of housing citywide that is affordable to lower- and moderate-income households consistent with the policies and targets set forth in the Housing Element.

As proposed, the subject project would include three (3) affordable housing units for "very low-income" households and three (3) affordable units for "moderate-income" households. The inclusion of these affordable units would contribute to meeting the City's Regional Housing Needs Allocation (RHNA). Additionally, the units would be consistent with Housing Element policies encouraging the development of lower-income residential units.

Goal LU-2: Stable, well-maintained residential neighborhoods in Garden Grove.

The proposed project would incorporate a new driveway and parking areas, landscaping, pedestrian walkways, and other site features that can help create more attractive residential neighborhoods, which could be a benefit to the surrounding area as a whole. Conditions of Approval have been incorporated to help ensure proper maintenance of the property. With adherence to the Conditions of Approval, the project could contribute to the stability of the adjacent residential neighborhood.

Policy LU-3.2: Support development of multi-family housing that provides a diversity of densities, types, and prices that meet the needs of all household income levels.

The proposed project includes twelve (12) one-bedroom units and twenty-two (22) two-bedroom units, for a total of thirty-four (34) units. This mix of unit types is intended to accommodate varying family sizes and needs. The project includes three (3) units that will be deed restricted for rental and occupancy by very low-income tenants and three (3) units that will be deed restricted for rental and occupancy by moderate-income tenants. With its combination of market-rate, "very low-income", and "moderate-income units", the project would offer a range of housing options to meet the needs of households across different income levels.

Policy LU-3.3: Encourage developers to build housing projects at or above maximum allowable densities.

By taking advantage of the DBL, the project includes 34 dwelling units on the 0.50 net acre site, which is equivalent to seventy (70) units per acre. Therefore, the project exceeds the maximum allowable density for the R-3 zone of thirty-two (32) dwelling units per acre.

Goal LU-4: Uses compatible with one another.

The project is located in a neighborhood that consists of both commercial and multiple-family residential developments. The properties abutting the project site are zoned R-3 and a GGMU-1 (Garden Grove Boulevard Mixed Use 1). The proposed project would include thirty-four (34) apartment units. By

developing apartment units in an area already developed with multiple-family developments, the proposed project would be consistent with the development pattern of the surrounding neighborhood.

Policy H-2.1: Preserve and expand the City's supply of affordable rental and ownership housing for lower-income households.

As proposed, the subject project would include three (3) "very low-income" and three (3) "moderate-income" residential units. The inclusion of the "very low-income" and "moderate-income" units helps increase the City's stock of affordable residential rental units. An Affordable Housing Regulatory Agreement consistent with the DBL and GGMC Section 9.60.050 would be recorded to ensure affordability of the affordable units for the occupant(s) of said units.

Policy H-2.3: Provide density bonuses and other financial and regulatory incentives to facilitate the development of affordable housing.

In exchange for providing six (6) affordable units, the project is being granted a density bonus and incentives / concessions and waivers / reductions of development standards to deviate from certain R-3 zone development standards pursuant to the DBL.

Policy H-3.7: Encourage infill housing development that is compatible in character with established residential neighborhoods.

The subject property is surrounded on all sides by urban land uses, including commercial centers and multiple-family residential developments. The proposed project would construct thirty-four (34) residential apartment units and associated site improvements. The proposed project has been designed to limit impacts on the adjacent uses. The overall scale and design of the project has been oriented in a way such as to be less impactful on the surrounding uses. Therefore, the infill project would be consistent with the character of these surrounding uses.

2. The provisions of the California Environmental Quality Act have been complied with.

The proposed development is exempt from the California Environmental Quality Act ("CEQA"), pursuant to Section 15332 (In-Fill Development Projects) of the CEQA Guidelines (14 Cal. Code Regs., Section 15332). As set forth in the Class 32 exemption, the proposed project is: (1) consistent with the applicable general plan designation and all applicable general plan policies as well as with applicable zoning designation and regulations; (2) the proposed development occurs within City limits on a project site of no more than five acres substantially surrounded by urban uses; (3) the project site has no value

as habitat for endangered, rare or threatened species; (4) approval of the project would not result in any significant effects relating to traffic, noise, air quality or water quality; and (5) the site can be adequately served by all required utilities and public services. Therefore, the provisions of the California Environmental Quality Act have been complied with.

3. The proposed development project will not have specific, adverse impacts, as defined in subdivision (j)(1)(A) of Government Code Section 65589.5, on public health and safety without any feasible method to satisfactorily mitigate or avoid the specific adverse impact, other than the disapproval of the proposed project.

   The proposed thirty-four (34) unit residential development would not have specific, adverse impacts on the public health and safety. The Project is at a density allowed pursuant to the DBL, is compatible with surrounding uses, is similar in scale to the adjoining neighborhood, and is consistent with the land use type and intensity in the immediate neighborhood.

NO NET LOSS (GOVERNMENT CODE SECTION 65863) FINDINGS

1. If approval of the proposed Project will result in development of the Site at a lower residential density, the reduction in residential density is consistent with the adopted General Plan, including the Housing Element.

   The proposed project includes construction of a five-story, thirty-four (34) unit residential development that includes three (3) affordable units for "very low-income" households, and three (3) for "moderate-income" households along with associated site improvements. The site has a General Plan Land Use Designation of Medium Density Residential (MDR), and is zoned R-3 (Multiple-Family Residential). The site is identified in the City's Housing Element Sites Inventory List with a realistic capacity of fourteen (14) "moderate-income" units. The proposed project consists of twenty-eight (28) "above moderate-income" units, three (3) "moderate-income", and three (3) "very low-income" units.

   The MDR Land Use Designation is intended to create, maintain and enhance residential areas characterized by mostly traditional multiple-family apartments, condominiums, townhomes, and single-family small-lot subdivisions. The MDR Land Use Designation allows residential developments with densities ranging from 21.1 to 32.0 units per acre, and the density of the proposed project is within this range.

   Although the proposed project will provide fewer "moderate-income" units than identified in the City's Housing Element Sites Inventory List, the proposed project will not result in a lower residential density than allowed by the adopted General Plan. Moreover, the proposed project is also consistent with several

goals and policies of the General Plan Land Use and Housing Elements, as noted in the findings above.

2. The remaining sites identified in the housing element are adequate to meet the requirements of Government Code Section 65583.2 and to accommodate the City's share of the regional housing need pursuant to Government Code Section 65584; or, if not, the City has, or will within 180 days, identify and make available additional adequate sites to accommodate the City's share of the regional housing need by income level.

The City's 6th Cycle RHNA requires the City to plan for 19,168 housing units for all income levels. A component of preparing the City's Housing Element is the identification of vacant and underutilized sites suitable for residential development, and an evaluation of the housing development potential of these sites in fulfilling the City's RHNA. The project site (APN: 097-011-03) is identified in the site inventory as having a realistic capacity to accommodate fourteen (14) "moderate-income" units. The proposed project consists of three (3) "very low-income", three (3) "moderate-income" units and twenty-eight (28) "above moderate-income" units. Because the proposed project includes fewer moderate-income units than shown in the Housing Element sites inventory, the City must determine whether the remaining Housing Element inventory sites have sufficient capacity to accommodate the City's remaining unmet RHNA by income level if the project is approved as proposed. Staff has evaluated the housing projects that have been permitted or approved during the current planning period, or which are otherwise not accounted for in the Housing Element site analysis, and has determined that the remaining sites identified in the sites inventory have sufficient capacity to accommodate the City's remaining unmet RHNA need for each income level.

At the time the Housing Element was prepared and adopted, the City's unmet RHNA was calculated to be 18,208 units, broken down as follows: 6,567 "low- and very low-income" units, 3,087 "moderate-income" units, and 8,554 "above moderate-income" units. The sites identified in the certified adopted Housing Element were determined adequate to accommodate a total of 19,239 units, including 442 more units than the City's unmet RHNA in the "low- and very low-income" categories, 207 more units than the City's unmet RHNA for the "moderate-income" category, and 382 more units than the City's unmet RHNA for the "above moderate-income" category. Overall, the sites inventory in the adopted Housing Element reflected a total capacity surplus of 1,031 units.

After accounting for permitted and entitled units since the beginning of the 6th RHNA cycle, October 15, 2021, and the thirty-four (34) units in the proposed project, the City's total remaining unmet RHNA would be 17,559 units , broken

down as follows: 6,519 "low- and very low-income" units, 3,081 "moderate-income" units, and 7,959 "above moderate-income" units. The remaining capacity of the sites identified in the Housing Element would be 15,718 units, resulting in a total capacity surplus of 3,007 units. The remaining sites are also adequate to accommodate a surplus of "low- and very-low-income" units (469), "moderate-income" units (7), and "above moderate-income" units (2,531). Due to this surplus, the overall residential capacity on sites identified in the Housing Element would still be sufficient to accommodate the City's total remaining unmet RHNA if the proposed project is approved.

INCORPORATION OF FACTS AND FINDINGS SET FORTH IN STAFF REPORT

In addition to the foregoing, the Planning Commission incorporates herein by this reference, the facts and findings set forth in the staff report.

BE IT FURTHER RESOLVED that the Planning Commission does conclude:

1. The Site Plan possesses characteristics that would justify the request in accordance with Municipal Code Section 9.60.020 (Review of Housing Development Projects).

2. In order to fulfill the purpose and intent of the Municipal Code and thereby promote the health, safety, and general welfare, the attached Conditions of Approval (Exhibit "A") shall apply to Site Plan No. SP-162-2025.

EXHIBIT "A"

Site Plan No. SP-162-2025

13040 Coast Street

CONDITIONS OF APPROVAL

General Conditions

1. The applicant and each owner of the property shall execute, and the applicant shall record a "Notice of Agreement with Conditions of Approval and Discretionary Permit of Approval," as prepared by the City Attorney's Office, on the property. Proof of such recordation is required within thirty (30) days of the approval.

2. All Conditions of Approval set forth herein shall be binding on and enforceable against each of the following, and whenever used herein, the term "applicant" shall mean and refer to each of the following: the project applicant, The Jager Company, Ltd., the owner of the property, West St. Investment, LLC, and the future owner(s) and tenants(s) of the property, and each of their respective successors and assigns. All conditions of approval are required to be adhered to for the life of the project, regardless of property ownership. Except for minor modifications authorized to be approved by the Community Development Director pursuant to Condition No. 4, any changes of the Conditions of Approval require approval by the appropriate City hearing body.

3. Site Plan No. SP-162-2025 authorizes the development of a thirty-four (34) unit apartment project on an approximately 21,829 square feet (0.50-acre) parcel, and associated site improvements, as depicted on the plans submitted by the applicant and made a part of the record of the September 18, 2025, Planning Commission proceedings, subject to these Conditions of Approval. Approval of this Site Plan shall not be construed to mean any waiver of applicable and appropriate zoning and other regulations, and wherein not otherwise specified, all requirements of the City of Garden Grove Municipal Code shall apply.

4. The approved site plan and floor plan are an integral part of the decision approving this Site Plan. Minor modifications to the approved Site Plan and/or these Conditions of Approval may be approved by the Community Development Director, in his or her discretion. Proposed modifications to the approved project and/or these Conditions of Approval that would result in the intensification of the project, or create impacts that have not been previously addressed and which are determined by the Community Development Director not to be minor in nature shall be subject to approval of new and/or amended land use entitlements by the applicable City hearing body.

5. All conditions of approval shall be implemented at the applicant's expense, except where specified in the individual condition.

Engineering Division

6. A geotechnical study prepared by a registered geotechnical engineer must be submitted to the City, and approved by the City Engineer prior to the issuance of any grading or building permits. The report shall analyze the liquefaction potential of the site and make recommendations. The report shall analyze sub-surface issues related to the past uses of the site, including sub-surface tanks and basement and septic facilities. Any soil or groundwater contamination shall be remediated prior to the issuance of a building permit per the requirements of the Orange County Health Department and the mitigation requirements of governing regulatory requirements. The report shall make recommendations for foundations and pavement structural section design of interior streets and parking spaces. The report shall also test and analyze soil conditions for LID (Low Impact Development) principles and the implementation of water quality for storm water runoff, including potential infiltration alternatives, soil compaction, saturation, permeability and groundwater levels.

7. Prior to the issuance of any grading or building permits, the applicant shall submit to the City for review and approval a final design Water Quality Management Plan (WQMP) that:

   a. Addresses required mitigation Site Design Best Management Practices (BMPs) based upon the latest Santa Ana Regional Water Quality Control Board (SARWQCB) approved Drainage Area Management Plan (DAMP), as identified in the geotechnical report recommendations and findings, including, but not limited to, infiltration minimizing impervious areas, maximizing permeability, minimizing directly connected impervious areas, creating reduced or "zero discharge" areas, and conserving natural areas as required by the latest adopted County of Orange Technical Guidance Document (TGD).

   b. BMP's shall be sized per the requirements of the latest Technical Guidance Documents.

   c. Incorporates the applicable Routine Source Control BMPs as defined in the DAMP.

   d. Incorporates structural and Treatment Control BMPs as defined in the DAMP.

   e. Generally describes the long-term operation and maintenance requirements for the Treatment Control BMPs.

f. Identifies the entity that will be responsible for long-term operation and maintenance of the Treatment Control BMPs.

g. Describes the mechanism for funding the long-term operation and maintenance of the Treatment Control BMPs.

h. Provides a hydrological analysis with a scaled map as well as hydrologic and hydraulic calculations to size storm drains per the Orange County RDMD standards.

8. Parkway culverts shall be designed per Garden Grove Standard Plan B-209. Storm drain lateral pipe connections to City-maintained storm drains within City right-of-way shall be RCP with a minimum diameter of eighteen inches (1'-6").

9. Grading and street improvement plans prepared by a registered Civil Engineer are required. As required under Section 107 of the California Building Code (CBC), the grading plan shall be based on a current survey of the site, including a boundary survey, topography on adjacent properties up to thirty feet (30'-0") outside the boundary, and designed to preclude cross-lot drainage. Minimum grades shall be 0.50% for concrete flow lines and 1.25% for asphalt. The grading plan shall also include water and sewer improvements. The grading plan shall include a coordinated utility plan showing all existing utility facilities, easements and proposed utility facilities. All on-site improvements shall be tied by horizontal dimensional control to the property boundary as established by survey. A minimum uninterrupted twenty-foot (20'-0") wide throat access to the site is required from the street for multiple-family residential projects, and shall meet the requirements of the California Fire Code throughout the site. Vehicle maneuvering, as demonstrated by AutoTurn along private streets and access ways, shall be demonstrated on the grading plan. Street improvement plans shall conform to all format and design requirements of the City Standard Drawings & Specifications. The approved Site Plan shall be included as part of the grading improvements plan package, and the grading improvements plan shall be consistent with all layouts, drawings and details depicted in the approved Site Plan.

10. All vehicular access drives to the site shall be provided in locations approved by the City Traffic Engineer per Traffic Engineering Policy TE-17.

11. The applicant shall coordinate with the Planning Services Division and Orange County Fire Authority (OCFA) to identify proper emergency vehicle access to the site, and shall provide the Engineering Division a copy of the approval letters upon first submittal of the grading and street improvement plans.

12. All new driveway approaches to the site shall be constructed in accordance with Garden Grove Standard Plan B-120, as it conforms to the applicable land use and roadway designation.
13. The grading plan shall depict an accessibility route from the exterior of all buildings and structures to the public street for the ADA pathway in conformance with the requirements of the Department of Justice standards, latest edition, and Section 1110A of the California Building Code (CBC).

14. All trash container areas shall meet the following requirements per Garden Grove Standard Plan B-502 and State-mandated commercial organic recycling law, AB 1826, SB 1383 and its implementing regulations, and any other applicable State recycling laws related to refuse, recyclables, and/or organics, and shall be subject to the following, as applicable:

    a. Paved with an impervious surface, designed not to allow run-on mixing of drainage from adjoining areas, designed to divert drainage from adjoining roofs and pavements to be directed around the area for trash roll out, and screened or walled to prevent off-site transport of trash by water or wind.

    b. Provide solid roof or awning to prevent direct precipitation into the enclosure.

    c. Connection of trash area drains to the municipal storm drain system is prohibited. Drainage from the enclosure may be directed to a conforming grease or contaminant interceptor.

    d. Potential conflicts with fire code access requirements and garbage pickup routing for access activities shall be considered in implementation of design and source control. See CASQA Storm Water Handbook Section 3.2.9 and BMP Fact Sheet SD 32 for additional information.

    e. The trash enclosure and containers shall be located to allow pick-up and maneuvering, including turnarounds, in the area of enclosures, and concrete aprons for roll-out areas.

    f. Pursuant to state-mandated commercial organic recycling law, including AB 1826 and SB 1381 and its implementing regulations, the applicant is required to coordinate storage and removal of the organics waste with local recycling/trash company.

    g. Pursuant to applicable state-mandated laws, the applicant is required to contact and coordinate with the operations manager of the local recycling/trash company (Republic Services) to ensure the trash

enclosure includes the appropriate size and number of containers for the disposal of items such as, but may not limited to, municipal solid waste (MSW), recyclables, and organic green waste.

h. Based on the amount of waste disposed, per week, the applicant shall coordinate with the local recycling/trash company to ensure the adequate frequency of trash pick-up is serviced to the site for municipal solid waste (MSW), recyclables, and organic green waste, including any other type of waste.

i. The applicant shall ensure large bulk items, intended for coordinated and scheduled pick-up by the local recycling/trash company, are not placed in areas that encroach into drive aisles, parking spaces, pedestrian pathways, or areas in the front of the property including areas public right-of-way (e.g., street, sidewalk), during and after construction. Any large bulk items shall be out of public vantage points.

j. The requirements for the trash enclosure and design criteria are bound and coordinated with the Water Quality Management Plan (WQMP), when required, as depicted on the project grading plan, which shall be incorporated into the WQMP by narrative description, exhibits and an Operation and Maintenance Plan (O&M).

k. Where separate trash enclosures are required for mixed use occupancies, the enclosure sizing and access shall conform to the number of bins required by the hauler

15. Any new or required block walls and/or retaining walls shall be shown on the grading plans, both in plan-view and cross-sections. Cross-sections shall show vertical and horizontal relations of improvements (existing and proposed) on both sides of property lines. Required wall heights shall be measured vertically from the highest adjacent finished grade. Block walls shall be designed in accordance to Garden Grove Standard Plan B-504, B-505, B-506, and B-508, or designed by a professional registered engineer. In addition, the following shall apply:

a. The color and material of all proposed block walls, columns, and wrought iron fencing shall be approved by the Planning Services Division prior to installation.

b. Openings for drainage through walls shall be shown in section details and approved by the City Engineer. Cross-lot drainage is not allowed.

16. The applicant shall remove any existing substandard driveway approaches, curbs, sidewalks, ADA ramps, pavement sections, tree wells and landscaping, and construct frontage improvements on Chapman Avenue as identified below.

All landscape, irrigation, sidewalk, and lighting improvements installed within the public right-of-way shall require the approval of the City Engineer, Public Works Street Division, and Planning Services Division, and shall be maintained by the applicant for the life of the project.

a. A separate street improvement plan shall be prepared and submitted to the Engineering Division for the proposed improvements within the public right of way for Coast Street, which shall include any proposed median, sidewalk, curb/gutter, driveway approach, asphalt work, landscaping and irrigation plans. All work shall be per City standards and specifications.

b. Existing substandard driveways on Coast Street shall be removed and replaced with new curb, gutter, landscape, and sidewalk per City standards and specifications.

c. The new driveway approach to the site on Coast Street shall be constructed in accordance with Garden Grove Standard Plan B-121.

d. The applicant shall coordinate the relocation (if needed) of the existing street light located within the proposed median with Southern California Edison (SCE) and the City.

e. The applicant shall install red curb near driveway approaches on Coast Street per approved plan.

f. The applicant shall cold mill (grind) existing asphalt pavement three-inch (0'-3") uniform depth and replace with three-inch (0'-3") of fiber reinforced asphalt surface course from the edge of the westerly gutter to the edge of easterly gutter along the property frontage on Coast Street per City specifications and the direction of City Engineer.

g. The applicant shall cold mill (grind) existing asphalt pavement three-inch (0'-3") uniform depth and replace with three-inch (0'-3") of fiber reinforced asphalt surface course from the southerly edge to the northerly edge along the property frontage on Coast Street per City specifications and the direction of City Engineer.

h. Construct curb and gutter when replacing any existing driveway approach along the property frontage on Coast Street in accordance with Garden Grove Standard Plan B-114.

i. Remove and replace the alley apron on Coast Street in accordance with Garden Grove Standard B-118.

j. The new tree wells fronting the project on Coast Street shall be constructed in accordance with Garden Grove Standard Plan B-123 and B-127.

k. The applicant shall plant total of four Pink Trumpets trees (36-inch box), per the approved preliminary landscape plans. The applicant shall coordinate with City's Public Works Division prior to order and placement of trees on Coast Street.

l. The applicant shall locate all existing public utilities across the property frontage and within the property boundary of the project prior to commencement of grading operation and mobilization.

m. The applicant shall coordinate with the Planning Services Division and Public Works Street Division before placing any type of tree within public right of way and proposed landscape area.

n. Street signs shall be installed as required and approved by the City Traffic Engineer.

17. Any proposed new landscaping fronting the project in the public right-of-way shall be approved by Public Work Department and Planning Services Division; and maintained by the owner.

18. Driveway widths shall be in accordance with City's Traffic Engineering Policy TE-8 (Driveway Opening Policy).

19. Sight distance standards shall be in accordance with City's Traffic Engineering Policy TE-13.

20. The Site Plan shall comply with the completed Development Review and Comment Sheet prepared pursuant to the City's Traffic Engineering Policy TE-17 and provided to the applicant.

21. Private Property Tow Away Sign Design shall be in accordance with City's Traffic Engineering Policy TE-19.

22. No Parking Fire Lane Sign Design shall be in accordance with City's Traffic Engineering Policy TE-20.

23. Traffic Impact Mitigation Fees shall be in accordance with Garden Grove City Council Resolution No. 9401-16.

24. The layout of the parking lot shall be in accordance with Garden Grove Standard Plan B-311 and B-312.

25. Off-street parking requirements for residential uses shall be in accordance with Section 7-9-70.3 of the Orange County Code of Ordinances.

26. Except as authorized on the approved site plan and pursuant to the State Density Bonus Law, off-street parking requirements for residential uses shall be in accordance with the parking provisions in Chapter 9.18 of the Garden Grove Municipal Code and the City of Garden Grove's Traffic Policies and Procedures TE-17 Development Review and Comments Sheet.

27. A minimum five-foot-by-five-foot-wide (5'-0" x 5'-0") maneuvering area shall be provided at the end of a dead-end parking aisle, and shall consist of a ten-foot-by-nineteen-foot-wide (10'-0" x 19'-0") turnaround space.

Permit Issuance

28. The applicant shall be subject to Traffic Mitigation Fees, Citywide Park Fees, Drainage Facilities Fees, Water Assessment Fees, General Plan and Cultural Arts Fees, and other applicable mitigation fees identified in Chapter 9.44 of the Garden Grove Municipal Code, along with all other applicable fees duly adopted by the City. Unless otherwise provided pursuant to the Garden Grove Municipal Code or State law, the amount of said fees shall be calculated based on the City's current fee schedule at the time of permit issuance.

29. A separate street permit is required for work performed within the public right-of-way.

30. Grading fees shall be calculated based on the current fee schedule at the time of permit issuance.

31. The applicant shall identify a temporary parking site(s) for construction crew and construction trailers office staff prior to issuance of a grading permit. No construction parking is allowed on local streets. Construction vehicles should be parked off traveled roadways in a designated parking area. Parking areas, whether on-site or off-site, shall be included and covered by the erosion control plans and the Storm Water Pollution Prevention Plan (SWPPP).

32. Prior to issuance of a grading permit, the applicant shall submit and obtain approval of a work-site traffic control plan for all the proposed improvements within public right-of-way, which shall be subject to the review and approval of the City Traffic Engineer.

Project Construction/Operation

33. The applicant shall coordinate with City's Public Works Department (Engineering, Water Services, and Streets Division) to set up appointments for preconstruction inspections for all of the on-site and off-site improvements, prior to commencement of grading operation and mobilization.

34. In accordance with the Orange County Storm Water Program manual, the applicant and/or its contractors shall provide dumpsters on-site during

construction unless an Encroachment Permit is obtained for placement in street.

35. The applicant and its contractor shall be responsible for protecting all existing horizontal and vertical survey controls, monuments, ties (centerline and corner) and benchmarks located within the limits of the project. If any of the above require removal; relocation or resetting, the contractor shall, prior to any construction work, and under the supervision of a California-licensed Land Surveyor, establish sufficient temporary ties and benchmarks to enable the points to be reset after completion of construction. Any ties, monuments and bench marks disturbed during construction shall be reset per Orange County Surveyor Standards after construction. The applicant and their contractor shall also re-set the tie monuments where curb or curb ramps are removed and replaced, or new ramps are installed. The applicant and their contractor shall be liable for, at his/her expense, any resurvey required due to his/her negligence in protecting existing ties, monuments, benchmarks or any such horizontal and vertical controls. Temporary Benchmarks shall not be used for Vertical control. Benchmarks shall be to the National Geodetic Vertical Datum (NGVD).

36. Heavy construction truck traffic and hauling trips, and any required lane closures shall occur outside peak travel periods. Peak travel periods are considered to be from 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m.

37. Prior to grading or building permit closeout and/or the issuance of a certificate of use or a certificate of occupancy, the applicant shall:

    a. Demonstrate that all structural best management practices (BMPs) described in the Project WQMP have been constructed and installed in conformance with approved plans and specifications.

    b. Demonstrate that the applicant is prepared to implement and maintain all non-structural BMPs described in the Project WQMP.

    c. Demonstrate that an adequate number of copies of the approved Project WQMP are available on-site.

    d. Submit for review and approval by the City an Operations and Maintenance (O&M) Plan for all structural BMPs.

Water Services Division

38. New water service installations two inches (0'-2") and smaller may be installed by the City of Garden Grove at owner's/developer's expense. Installation shall be scheduled upon payment of applicable fees, unless otherwise noted. Fire

services and larger water services three inches (0'-3") and larger shall be installed by the applicant's contractor per City Standards.

39. Water meters shall be located within the City right-of-way or within a dedicated waterline easement. Fire services and large water services three inches (0'-3") and larger, shall be installed by a contractor with a Class A or C-34 license, per City water standards, and inspected by an approved Public Works inspection.

40. A Reduced Pressure Principle Device (RPPD) backflow prevention device shall be installed for meter protection. The landscape system shall also have RPPD device. Any carbonation dispensing equipment shall have a RPPD device. Installation shall be per City Standards and shall be tested by a certified backflow device tester immediately after installation. Cross-connection inspector shall be notified for inspection after the installation is completed. Owner shall have RPPD device tested once a year thereafter by a certified backflow device tester and the test results to be submitted to the Public Works Department, Water Services Division. Property owner must open a water account upon installation of RPPD device.

41. It shall be the responsibility of applicant to abandon any existing private water well(s) per Orange County Health Department requirements. Abandonment(s) shall be inspected by Orange County Health Department inspector after permits have been obtained.

42. A composite utility site plan shall be included in the grading plan set, which shall be submitted to both the Engineering Division and Water Services Division for review and approval.

43. New utilities shall have a minimum five-foot (5'-0") horizontal and a minimum one-foot (1'-0") vertical clearance from water main and appurtenances.

44. Any existing water services are to be abandoned at the main.

45. A master water meter for private water system shall be required for the development. A separate fire service connection shall also be required. The separate fire service and any private fire hydrant laterals shall have above ground backflow device with a double check valve assembly. Device shall be tested immediately after installation and once a year thereafter by a certified backflow device tester and the results to be submitted to Public Works, Water Services Division. Device shall be on private property and is the responsibility of the property owner. The above ground assembly shall be screened from public view as required by the Planning Services Division.

46. Location and number of fire hydrants shall be as required by Water Services Division and the Orange County Fire Authority (OCFA).

Sewer Division

47. Contractor shall abandon any existing unused sewer lateral(s) at street right-of-way on the property owner's side. The sewer pipe shall be capped with an expansion sewer plug and encased in concrete. Only one sewer connection per lot is allowed.

48. Owner shall install new sewer lateral with clean out at right-of-way line. Lateral in public right-of-way shall be six-inches (0'-6") minimum diameter, extra strength VCP with wedgelock joints and inspected by GGSD. New sewer lateral connection shall be minimum three-inches (0'-3") away from any existing tap or wye connection from the sewer main. All on site sewer and appurtenances to be installed per the California Plumbing Code and inspected by the Building and Safety Division.

49. Potholing shall be required to check the location and depths of existing offsite water, sewer, gas, and dry utilities.

50. All perpendicular crossings of the sewer, including laterals, shall maintain a vertical separation of minimum twelve inches (1'-0") below the water main, outer diameter to outer diameter. All exceptions to the above require a variance from the State Water Resources Control Board.

51. If water main is exposed during installation of sewer lateral, a twelve-foot (12'-0") section of the water main shall be replaced with twenty-feet (20'-0") of PVC C-900 DR-14 class 305 water pipe, size in kind and centered at the crossing.

Orange County Fire Authority

52. The applicant shall comply with all applicable Orange County Fire Authority requirements, including, but not limited to the Fire Master Plan.

53. A Knox Box shall be provided at the access gate and the pedestrian gate for fire and trash truck access.

Building and Safety Division

54. Project shall be subject to building plan review and must illustrate compliance with all applicable codes, regulations and local ordinances.

55. Construction type shall be subject to compliance with Chapter 5 of the California Building Code (CBC).

Planning Services Division

56. The applicant shall submit detailed plans showing the proposed location of utilities and mechanical equipment to the Community Development

Department, Planning Services Division for review and approval prior to submitting plans into the Building and Safety Division plan-check process. The project shall also be subject to the following:

a. Above-ground utility equipment (e.g. electrical, gas, telephone, cable TV) shall not be located in the street setback, within the common areas, or any parking areas, and such equipment shall be screened by densely planted and maintained landscaped hedges or a fence or wall. Ground-mounted equipment shall not exceed the maximum allowable height for a wall, fence, or hedge.

b. Roof-mounted mechanical equipment shall be screened by parapet walls, rooftop architectural features such as a tower equal to the height of the equipment, or low walls surrounding the equipment and shall be painted to match the color of the building materials.

c. No exterior piping, plumbing, or mechanical ductwork shall be permitted on any exterior façade and/or be visible from any public right-of-way or adjoining property. Roof rain gutters are permitted. The rain gutters shall follow the natural architecture lines of the building.

57. All landscaping shall be consistent with the landscape requirements of Title 9 of the Municipal Code. The developer shall submit a complete landscape plan governing the entire development. The landscape irrigation plans shall include type, size, location and quantity of all plant material. The landscape plan shall include irrigation plans and staking and planting specifications. All landscape irrigation shall comply with the City's Landscape Ordinance and associated Water Efficiency Guidelines. The landscape plan is also subject to the following:

a. A complete, permanent, automatic remote control irrigation system shall be provided for all landscaping areas shown on the plan. The sprinklers shall be of drip or micro-spray system sprinkler heads for water conservation.

b. Forty percent (40%) of the trees on the site shall consist of minimum size twenty-four inch (2'-0") box, and the remaining sixty percent (60%) shall be of minimum size fifteen (15) gallons. These trees shall be incorporated into the landscaped frontages of all streets. Where clinging vines are considered for covering walls, drought-tolerant species shall be used.

c. All landscape areas, including the areas located within the public right-of-way along Coast Street that abuts the subject property, are the responsibility of the applicant/property owner(s).

d. Trees planted within ten feet (10'-0") of any public right of-way shall be planted in a root barrier shield. All landscaping along street frontages adjacent to driveways shall be of the low-height variety to ensure safe sight clearance. All trees planted on the subject property, whether for screening the project from the neighboring lots or for aesthetic or selling/marketing purposes, shall have an irrigation system installed in order to maintain the trees.

e. All trees shall be double-staked in accordance with City standards.

f. The landscape treatment along the street frontage, including the area designated as public right-of-way, shall incorporate the landscape area between the sidewalk and the development wall with groundcover, shrubs and bushes, and trees that highlight the project's entrance as well as enhance the exterior appearance along Coast Street. The plant material for the entrance shall be the type to inhibit graffiti such as vines and dense growing shrubs and bushes, and shall be maintained.

g. Fifty percent (50%) of all required shrubs shall be a minimum size of five (5) gallons at time of planting.

h. Live groundcover shall be planted and maintained where shrubbery is not sufficient to cover exposed soil. Mulch may be used in place of groundcover where groundcover will not grow or where groundcover will cause harm to other plants, but not more than thirty percent (30%) of the groundcover area shall have the mulch substitute.

i. Groundcover plants shall be planted at a density and spacing necessary for them to become well established and provide surface coverage within eighteen (18) months of planting.

j. The landscape plan shall incorporate and maintain for the life of the project those means and methods to address water run-off also identified as Low Impact Development provisions, which address water run-off. This is to also to be inclusive of any application of Water Quality Management Plans (WQMP), Drainage Area Management Plans (DAMP) and any other water conservation measures applicable to this type of development.

k. The irrigation system shall comply with all applicable provisions of the City's Water Conservation Ordinance, the City's Municipal Code landscape provisions, and all applicable State regulations.

l. All above-ground utilities (e.g. water backflow devices, electrical transformers, irrigation equipment) shall be shown on the landscaping plan in order to ensure proper landscape screening will be provided.

58. Each unit within the proposed apartment building shall be provided with an air conditioning condensing unit and/or system such that there are no wall-mounted, or window mounted units. If units are located on the roof, screening shall be provided, such that units are not visible from the public right-of-way.

59. Mailboxes shall be provided and installed by the applicant. The local postmaster shall approve the design and location.

60. Each apartment unit shall be provided with washer and dryer hook-ups.

61. Gas and/or propane fireplaces shall not be provided within the units, or as a part of the common open/recreational space for the development.

62. All of the common recreational area, as identified on the approved site plan, shall be equipped with the list of amenities, as shown on the approved plan, and shall be subject to review by the Planning Services Division and Building and Safety Division prior to issuance of building permits for compliance with applicable standards.

    a. The improvements to the recreational areas shall include, at a minimum, community garden, lounge seating, barbecue and dining area, gym, business center, and community room with kitchen.

    b. Lighting in the common recreational areas shall be provided at a maximum one-foot light candle during the hours of darkness, and shall be restricted to low decorative type wall-mounted lights or ground lighting systems.

63. All lighting structures shall be placed so as to confine direct rays to the subject property. All exterior lights shall be reviewed and approved by the Planning Services Division. Lighting adjacent to residential properties shall be restricted to low decorative type wall-mounted lights, or a ground lighting system. Lighting shall be provided throughout all private drive aisles and entrances to the development per City standards for street lighting. Lighting in the common areas shall be directed, positioned, or shielded in such manner so as not to unreasonably illuminate the window area of nearby residences.

64. Decorative stamped concrete or pavers shall be provided within the front twenty feet (20'-0") for the apartment building's driveway along Coast Street. The final design and configuration shall be shown on the final site plan, grading plan, and landscape plans.

65. All new block walls, and/or retaining wall(s), including existing block walls to remain, if any, shall be shown on the grading plans. Block walls shall be developed to City Standards or designed by a Registered Engineer and shall

be measured from on-site finished grade. The applicant shall provide the following:

a. Decorative masonry walls are required along the perimeter property lines, and shall be constructed to a minimum height of six feet (6'-0"), up to a maximum of eight feet (8'-0"), as measured from highest point of finished grade. Whether new or existing, the block walls shall be decorative and utilize stucco finish, slump stone, decorative CMU, or split face block. Street-facing perimeter walls shall include trailing vines, hedges planted along the base of the exterior face, or other landscaping treatments that deter graffiti.

b. The applicant shall work with the existing property owners along the project perimeter in designing and constructing the required perimeter block walls. This requirement is to avoid having double-walls and minimize any impact that it might cause to the existing landscaping on the neighbor's side as much as possible. The perimeter block wall shall be constructed and situated entirely within the subject property. In the event that the applicant cannot obtain approval from the property owners, the applicant shall construct the new wall with a decorative cap to be placed between the new and existing walls. The Community Development Director shall be authorized to approve minor alterations the size and/or location of the landscape planter to accommodate the placement of such walls.

66. Short- and long-term bicycle parking shall be provided pursuant to the applicable requirements of the California Building Code.

67. Permitted hours and days of construction and grading shall be as follows, and all work shall be comply with the noise regulations set forth in Chapter 8.47 of the City of Garden Grove Municipal Code:

a. Monday through Friday – not before 7:00 a.m. and not after 7:00 p.m.

b. Saturday – not before 9:00 a.m. and not after 6:00 p.m.

c. Sunday and Federal Holidays – no construction shall occur.

68. During construction, the use of vibratory roller equipment shall be prohibited.

69. Construction activities shall adhere to SCAQMD Rule 403 (Fugitive Dust) that includes dust minimization measures, the use of electricity from power poles rather than diesel or gasoline powered generators, and the use methanol, natural gas, propane or butane vehicles instead of gasoline or diesel powered equipment, where feasible. Also, use of solar, low emission water heaters,

and low sodium parking lot lights, shall be required to ensure compliance with Title 24.

70. During construction, if paleontological or archaeological resources are found, all attempts will be made to preserve in place or leave in an undisturbed state in compliance with applicable law. In the event that fossil specimens or cultural resources are encountered on the site during construction and cannot be preserved in place, the applicant shall contact and retain, at applicant's expense, a qualified paleontologist or archaeologist, as applicable, acceptable to the City to evaluate and determine appropriate treatment for the specimen or resource, and work in the vicinity of the discovery shall halt until appropriate assessment and treatment of the specimen or resource is determined by the paleontologist or archeologist (work can continue elsewhere on the project site). Any mitigation, monitoring, collection, and specimen/resource treatment measures recommended by the paleontologist/archaeologist shall be implemented by the applicant at its own cost.

71. The applicant shall comply with the Migratory Bird Treaty Act (MBTA), and Sections 3503, 3503.5, and 3513 of the California Fish and Game Code, which require the protection of active nests of all bird species prior to the removal of any on-site landscaping, including the removal of existing trees.

72. Prior to issuance of grading permits, a temporary project identification sign shall be erected on the site in a secure and visible manner. The sign shall be conspicuously posted at the site and remain in place until occupancy of the project. The sign shall include the name and address of the development, and the developer's name, address, and a 24-hour emergency telephone number.

73. Upon the approval and effectiveness of Site Plan No. SP-162-2025, and prior to any ground-disturbing activity authorized by a grading permit, the site shall be maintained in a clean and clear condition. A perimeter fence shall secure the interior of the site. The site shall maintain an appearance that is free of debris or weeds. Appropriate and necessary erosion control devices shall be installed to prevent stormwater runoff and erosion of the site onto adjacent parcels and public rights-of-way.

74. Storage of boats, recreational vehicles, or commercial vehicles on the property shall be prohibited. The applicant/property owner shall ensure that this condition is complied with at all times by tenants of the units and shall include notice of this requirement in all lease agreements.

75. There shall be no parking allowed along any drive aisle, except within the designated parking areas. All curbs not designated as parking areas shall be painted red. The applicant shall post "No Parking" signs along the drive aisle.

76. Each residence shall be utilized as one (1) dwelling unit. No portion of any residence shall be utilized or rented as a separate dwelling unit.

77. All balconies shall remain open and shall not be enclosed at any time. There shall be no storage allowed in the balconies at any time. The applicant shall ensure that this condition is complied with at all times by tenants of the units and shall include notice of this requirement in all lease agreements.

78. All recreation areas, landscaping along the interior project street and entryway, landscaped areas in all common areas, and any landscaping within the public right-of-way shall be maintained by the applicant for the life of the project.

79. Litter shall be removed daily from the project site, including adjacent public sidewalk and all perking areas under the control of the applicant. The areas shall be swept or cleaned, either mechanically or manually, on a weekly basis, to control debris.

80. At the applicant's request, applicant has been granted Density Bonus allowances for an increase in density, and the following four (4) incentives / concessions and five (5) waivers / reductions of applicable development standards: (i) an incentive / concession to increase the maximum height limit for the proposed building from thirty-five feet (35'-0") to fifty-five feet and six inches (55'-6") (GGMC Section 9.12.040.020(A)); (ii) an incentive/concession to increase the maximum permitted number of building stories from three (3) to five (5) (GGMC Section 9.12.040.020(A)); (iii) an incentive/concession to increase the maximum lot coverage limit from fifty percent (50%) to seventy-one percent (71%) (GGMC Section 9.12.040.020(A)); (iv) an incentive/concession to forgo the undergrounding requirements of the Code, and to allow the existing power lines along Coast Street to remain in place. (GGMC Section 9.48.030); (v) a reduction of the required minimum front setback for first and second floor from twenty feet (20'-0") to six feet (6'-0") (GGMC Section 9.12.040.020(A)); (vi) a reduction of required minimum front setback for third floor through fifth floor from twenty-five feet (25'-0") to six feet (6'-0") (GGMC Section 9.12.040.020(A)); (vii) a reduction of the required minimum interior side yard setback at the third floor to fifth floor from fifteen feet (15'-0") to ten feet (10'-0")) (GGMC Section 9.12.040.020(A)); (viii) a reduction of the required minimum rear yard setback for third through fifth floor from fifteen feet (15'-0") to ten feet (10'-0") (GGMC Section 9.12.040.020(A)); (ix) a reduction of the minimum unit size requirement for one-bedroom unit from 750 square feet to 656 square feet (GGMC Section 9.12.040.020(A)).

    a. To comply with the provisions of Government Code Section 65915, the applicant has offered to, and shall, reserve at least three (3) dwelling

units in the project for occupancy by "very low-income" households and three (3) dwelling units in the project for occupancy by "moderate-income" households for a period of 55 years, commencing with the issuance of the certificate of occupancy for the project. The six (6) affordable units shall be "floating" units that are not permanently designated; however, at no time shall all affordable units be congregated to a certain section of the project. A minimum of two (2) two-bedroom units, and one (1) one-bedroom unit shall be reserved and allocated as very low-income units at all times and a minimum of two (2) two-bedroom units, and one (1) one-bedroom unit shall be reserved and allocated as moderate-income units at all times; provided, however, that the applicant may substitute a larger unit for a smaller unit.

b. The applicant shall at all times during the term of the affordability period comply with the requirement to rent the target units to "very low-income" and "moderate-income" households at an affordable rent as required by the Garden Grove Municipal Code and State Law.

c. Pursuant to State law, the Garden Grove Municipal Code, and the City's Density Bonus Agreement Guidelines, the record owner or owners of the subject property shall enter into an affordable housing regulatory agreement with the City, which satisfies the criteria set forth in subdivision (c) of Government Code Section 65915 and Garden Grove Municipal Code Section 9.60.050.

d. Pursuant to GGMC Section 9.60.050, the regulatory agreement shall contain a provision requiring the owner to pay the City an annual administration fee to reimburse the City for the estimated reasonable costs incurred by the City in monitoring the owner's compliance with, and otherwise administering, the regulatory agreement, including, but not limited to, the City's review of annual compliance reports and conduct of inspections and/or audits. Unless the City's estimated reasonable annual administration costs are determined by the City Manager, in his or her reasonable discretion, to be less, the amount of said administration fee shall be $75 per affordable unit per year for the initial year of the agreement, and increase at a rate of three percent (3%) per year for the term of the agreement.

e. The regulatory agreement shall be prepared by the City at the applicant/owner's expense, and the applicant and/or owner shall pay applicable fees pursuant to GGMC Section 9.60.050, and reimburse the City for the actual fees and costs charged for the services of attorneys and/or other professional third-party consultants engaged by the City to provide consultation, advice, analysis, and/or review and/or preparation

of documents in connection with preparation of the regulatory agreement, review of the initial marketing and management plan required as part of the regulatory agreement, review of annual compliance reports submitted by the owner pursuant to the regulatory agreement, and inspections and audits provided for in the regulatory agreement.

f. Prior to preparation of the regulatory agreement, applicant and/or property owner shall execute a reimbursement agreement with the City, in a form approved by the City Attorney, and provide a deposit to the City in the amount of $5,000. The regulatory agreement shall be approved by the City and recorded prior to the issuance of a building permit for any structure in the project.

g. The regulatory agreement shall remain a senior, non-subordinate covenant and as an encumbrance running with the land for the full term thereof. In no event shall the regulatory agreement be made junior or subordinate to any deed of trust or other documents providing financing for the construction or operation of the project, or any other lien or encumbrance whatsoever for the entire term of the required covenants.

81. Prior to permit issuance, the applicant shall submit a signed letter acknowledging receipt of the decision approving Site Plan No. SP-162-2025, and his/her agreement with all conditions of the approval.

82. The applicant shall, as a condition of project approval, at its sole expense, defend, indemnify and hold harmless the City, its officers, employees, agents and consultants from any claim, action, or proceeding against the City, its officers, agents, employees and/or consultants, which action seeks to set aside, void, annul or otherwise challenge any approval by the City Council, Planning Commission, or other City decision-making body, or City staff action concerning Site Plan No. SP-162-2025. The applicant shall pay the City's defense costs, including attorney fees and all other litigation related expenses, and shall reimburse the City for court costs, which the City may be required to pay as a result of such defense. The applicant shall further pay any adverse financial award, which may issue against the City including but not limited to any award of attorney fees to a party challenging such project approval. The City shall retain the right to select its counsel of choice in any action referred to herein.

83. In accordance with Garden Grove Municipal Code Sections 9.32.160, the rights granted pursuant to Site Plan No. SP-162-2025 shall be valid for a period of two (2) years. Unless a time extension is granted pursuant to Section 9.32.030.D.9 of the Municipal Code, the rights conferred by Site Plan No. SP-162-2025 shall become null and void if the subject development and

construction necessary and incidental thereto is not commenced within two (2) years of the expiration of the appeal period, and thereafter diligently advanced until completion of the project. In the event construction of the project is commenced, but not diligently advanced until completion, the rights granted pursuant to Site Plan No. SP-162-2025 shall expire if the building permits for the project expire.