FINDING OF NO SIGNFICANT IMPACT

AND

NOTICE OF INTENT TO REQUEST RELEASE OF FUNDS

September 4, 2026

California Housing Finance Agency
500 Capitol Mall, Suite 1400
Sacramento, CA 95814

This Notice shall satisfy the above-cited two separate but related procedural notification requirements for activities to be undertaken by the California Housing Finance Agency.

REQUEST FOR RELEASE OF FUNDS

On or about September 21, 2026, California Housing Finance Agency will submit a request to the U.S. Department of Housing and Urban Development (HUD) for the reservation of $21,598,000 in funds from the Housing Finance Agency Risk-sharing: Section 542(c) program, as authorized by the Housing and Community Development Act of 1992 (12 U.S.C. 1707) and Section 235 of HUD's FY 2001 Appropriation Act, Public Law 106-377, as amended, a program of the U.S. Department of Housing and Urban Development (HUD) to undertake a project known as **1401 Long Beach** for the purpose of providing affordable housing. The Program provides new insurance authority independent of the National Housing Act. Section 542(c) provides credit enhancement for mortgages of multifamily housing projects whose loans are underwritten, processed, serviced, and disposed of by California Housing Finance Agency (CalHFA). HUD and CalHFA share in the risk of the mortgage.

The 1401 Long Beach project consists of a new construction of an affordable housing building at 1401 and 1423 Long Beach Boulevard, and 217, 233, and 237 East 14th Street, Long Beach, Los Angeles County, California 90813 (APNs 726-901-6041, -6042, -6157, -6158, and -6159). The net building floor area comprises approximately 154,637 square feet, that is 70 feet above ground level (maximum 6 stories). The residential building consists of 153 units, 6 story apartment building, with 123,646 square feet of residential space, 25,642 square feet of circulation, 5,349 square feet of private deck space. There is an additional 31,834 square feet of garage parking space. Parking provided would include: 81 parking spaces with 42 standard parking spots, 5 accessible parking spots, 34 compact spots, and 77 bicycle parking spaces. Parking access would be provided by East 14th Street and would meet the parking needs estimated by the Los Angeles Region Affordable Parking Demand Study. Outdoor open space for residents would include 5,480 square feet of outdoor common space and 5,349 square feet of private outdoor space. The project consists of 100-percent affordable housing units. Units would include 1 bedroom (74 units), 2 bedroom (40 units), and 3 bedroom (39 units) options.

The total project cost is estimated to be $112,607,197.

FINDING OF NO SIGNIFICANT IMPACT

California Housing Finance Agency has adopted an Environmental Assessment conducted under the National Environmental Policy Act (NEPA) of 1969 by HDR, Inc. for the City of Long Beach in August 2024. The existing NEPA document has been peer reviewed and reviewed by California Housing Finance Agency and determined that there are no substantive differences between the current proposal and its associated environmental impacts discussed in the Environmental Assessment.

California Housing Finance Agency has determined that the project will have no significant impact on the human environment. Therefore, an Environmental Impact Statement under the National Environmental Policy Act (NEPA) of 1969 is not required. Additional project information is contained in the Environmental Review Record (ERR). The ERR will be made available to the public for review electronically. Please submit your request by email to Barbara Stribling, bstribling@calhfa.ca.gov . The ERR can be accessed online at the following website:

https://www.calhfa.ca.gov/about/press/public-notice/index.htm

PUBLIC COMMENTS

Any individual, group or agency disagreeing with this determination or wishing to comment on the project may submit written comments to Barbara Stribling, Loan Administrator, California Housing Finance Agency, via email to bstribling@calhfa.ca.gov . All comments received on or before September 19, 2026, will be considered by California Housing Finance Agency prior to submission of a request for release of funds. Comments should specify which Notice they are addressing.

ENVIRONMENTAL CERTIFICATION

The California Housing Finance Agency certifies to HUD that Anthony Sertich, Executive Director, in his capacity as NEPA Certifying Officer, consents to accept the jurisdiction of the Federal Courts if an action is brought to enforce responsibilities in relation to the environmental review process and that these responsibilities have been satisfied. HUD's approval of the certification satisfies its responsibilities under NEPA and related laws and authorities, and allows the California Housing Finance Agency to use Program funds.

OBJECTIONS

HUD will accept objections to the Responsible Entity's (RE) Request for Release of Funds and Environmental Certification for a period of fifteen days following the submission date specified above or the actual receipt of the request (whichever is later) only if they are on the following bases: (a) the certification was not executed by the Certifying Officer or other officer of the California Housing Finance Agency approved by HUD; (b) the RE has omitted a step or failed to make a determination or finding required by HUD regulations at 24 CFR Part 58 or by CEQ regulations at 40 CFR 1500-1508, as applicable;

(c) the RE has omitted one or more steps in the preparation, completion or publication of the Environmental Assessment or Environmental Impact Study per 24 CFR Subparts E, F or G of Part 58, as applicable; (d) the grant recipient or other participants in the development process has committed funds for or undertaken activities not authorized by 24 CFR Part 58 before release of funds and approval of the environmental certification; (e) another Federal, State or local agency has submitted a written finding that the project is unsatisfactory from the standpoint of environmental quality. Objections must be prepared and submitted in accordance with the required procedures (24 CFR Part 58) and shall be emailed to the HUD grant administration office at: MFW-Public-Notices@HUD.gov or mailed to U.S. HUD San Francisco Regional Office, Region IX, Office of Housing-Federal Housing Commission, One Sansome Street, Suite 1200, San Francisco, CA 94104. Potential objectors should contact HUD to verify the actual last day of the objection period.

Anthony Sertich
Executive Director and NEPA Certifying Officer

HUD Project #: 122-98065

September 1, 2026

Shannon M. Bergman
U.S. Department of Housing and Urban Development
Multifamily West Regional Center
One Sansome Street, Suite 1200
San Francisco, CA 94104

Re: Adoption of Environmental Assessment Report
1401 Long Beach

The California Housing Finance Agency, as the HUD Responsible Entity for the aforementioned project, is adopting the Environmental Assessment report dated August 28, 2024, which was prepared by HDR, Inc., on behalf of the City of Long Beach. The report is being adopted to meet HUD's environmental review requirements related to the 542(c) Risk Sharing Program. A description of the adoption and changes to the existing report are outlined below.

Adoption Description

- A description of the current action;
  - The California Housing Finance Agency (CalHFA) as the Responsible Entity, is adopting the Environmental Assessment dated August 28, 2024, and prepared on behalf of the City of Long Beach. CalHFA will use the report for the Request for Release of Funds related to the 542(c) HUD/RS program.

- The name and date of the existing NEPA document that describes and analyzes the action;
  - Environmental Assessment prepared by HDR, Inc., and dated August 28, 2024, to obtain HUD approval for Project Based Section 8 Vouchers. The Report was properly noticed and posted to the public. The report was submitted to HUD with a Request for Release of Funds (RROF). A copy of the signed Authority to Use Grant Funds (form HUD-7015.16) dated 10/10/2024, was received.

- A statement that the existing NEPA document has been reviewed and that there are no substantive differences between the current proposal and its associated environmental impacts and the proposal and impacts as described in the existing NEPA document and associated decision document;
  - The Environmental Assessment report was reviewed by Bay Desert, Inc.
  - The project environmental review still results in a Finding of No Significant Impact per 24 CFR 58.40(g)(1) and 40 CFR 1508.27.
  - Bay Desert, Inc. and CalHFA will coordinate posting a FONSI notice and repost the report for public comment prior to submitting for RROF.

- A reference to correspondence documenting updated consultation if other required consultation processes have been updated;

- Letter #1 dated June 24, 2026, from Cinnamon Crake, Bay Desert, Inc.: Reviewed report and has found it adoptable. Confirmed that report can be adopted. The Letter also includes an estimate to prepare FONSI/NOI RROF notice, distribution of notice, respond to comments, and preparation of 7015.15.

- Notification to the preparing entity; and
  - Email #1 dated 8/8/2026 from CalHFA to City of Long Beach: Notifying City of Long Beach of CalHFA's plans to adopt the Environmental Assessment report. Also included is a response from the City of Long Beach acknowledging CalHFA's intent to adopt.

Changes to Environmental Assessment dated August 28, 2024, prepared on behalf of the City of Long Beach by HDR, Inc.

Page 1-Cover Page:

- Project Name: 1401 Long Beach

- Responsible Entity:
  California Housing Finance Agency
  500 Capitol Mall, Suite 1400
  Sacramento, CA 95814

- Grant Recipient (if different than Responsible Entity): California Housing Finance Agency

- State/Local Identifier: 26-025-A-X-S

- Certifying Officer Name and Title:
  - Anthony Sertich - Executive Director

- Consultant (if applicable):
  - Bay Desert, Inc.
    Cinnamon Crake, President
    422 Larkfield Center #104
    Santa Rosa, CA 95402
    (707) 523-3710

- Direct Comments To:
  - Barbara Stribling, California Housing Finance Agency

500 Capitol Mall, STE 400 MS 990
Sacramento, CA 95814
(916) 326-8622
bstribling@calhfa.ca.gov

Page 2:

- Description of Project (updated information highlighted):

Project Location:

1401 Long Beach (project) is located at 1401 Long Beach Boulevard in the City of Long Beach. The project site is approximately 1.09 acres and consists of five parcels located between East 14th Street and East 15th Street, east of Long Beach Boulevard, and west of Locust Avenue in the central portion of the City of Long Beach (Figure 1). The Assessor Parcel Numbers are 726-901-6041, -6042, -6157, -6158, and -6159.

Description of the Proposed Project [24 CFR 50.12 & 58.32; 40 CFR 1508.25]:

The project consists of a new affordable housing building. The net building floor area comprises approximately 154,637 square feet, that is 70 feet above ground level (maximum 6 stories). The residential building consists of 153 units, 6 story apartment building, with 123,646 square feet of residential space, 25,642 square feet of circulation, 5,349 square feet of private deck space.

There is an additional 31,834 square feet of garage parking space. Parking provided would include: 81 parking spaces with 42 standard parking spots, 5 accessible parking spots, 34 compact spots, and 77 bicycle parking spaces. Parking access would be provided by East 14th Street and would meet the parking needs estimated by the Los Angeles Region Affordable Parking Demand Study. Outdoor open space for residents would include 5,480 square feet of outdoor common space and 5,349 square feet of private outdoor space. The project consists of 100-percent affordable housing units. Units would include 1 bedroom (74 units), 2 bedroom (40 units), and 3 bedroom (39 units) options.

In 2021, an EA was prepared and approved by HUD for a similar project at this same location. Because the scope and magnitude of the undertaking is similar, several technical studies prepared for the previous undertaking have been utilized in this analysis where noted. The previous undertaking included two mixed-use 100 percent affordable housing buildings (75 and 87 units, respectively) totaling 183,075 square feet and maximum seven stories.

Page 5:

Funding Information

Grant Number	HUD Program	Funding Amount
FHA # 122-98065	HUD/RS YHN - 542(c) HFA Risk Sharing—NC	$21,598,000

Estimated Total HUD Funded Amount: $21,598,000

Estimated Total Project Cost [24 CFR 58.32(d)]: $112,607,197

Page 45:

Determination:

☒ **Finding of No Significant Impact** [24 CFR 58.40(g)(1); 40 CFR 1508.27]

The project will not result in a significant impact on the quality of the human environment.

☐ **Finding of Significant Impact** [24 CFR 58.40(g)(2); 40 CFR 1508.27]

The project may significantly affect the quality of the human environment.

Certifying Officer Signature: _____ Digitally signed by Anthony Sertich _____ Date: 09/02/26

Name/Title: _Anthony Sertich, Executive Director

U.S. Department of Housing and Urban Development
451 Seventh Street, SW
Washington, DC 20410
www.hud.gov

espanol.hud.gov

Environmental Assessment
Determinations and Compliance Findings for HUD-assisted Projects
24 CFR Part 58

Project Information

Project Name: East 14th Street & Long Beach Boulevard Project

Responsible Entity: City of Long Beach, 411 W Ocean Blvd, 3rd Floor, Long Beach, CA 90802

HEROS Number: 900000010422736

Grant Recipient (if different than Responsible Entity): Century Affordable Development Inc

State/Local Identifier: California / City of Long Beach

Preparer: Jenny Vick, Senior Environmental Project Manager

Certifying Officer Name and Title: Christopher Koontz, AICP, Director of Community Development

Grant Recipient (if different than Responsible Entity): Oscar Alvarado, Vice President

Consultant (if applicable): HDR, Inc.

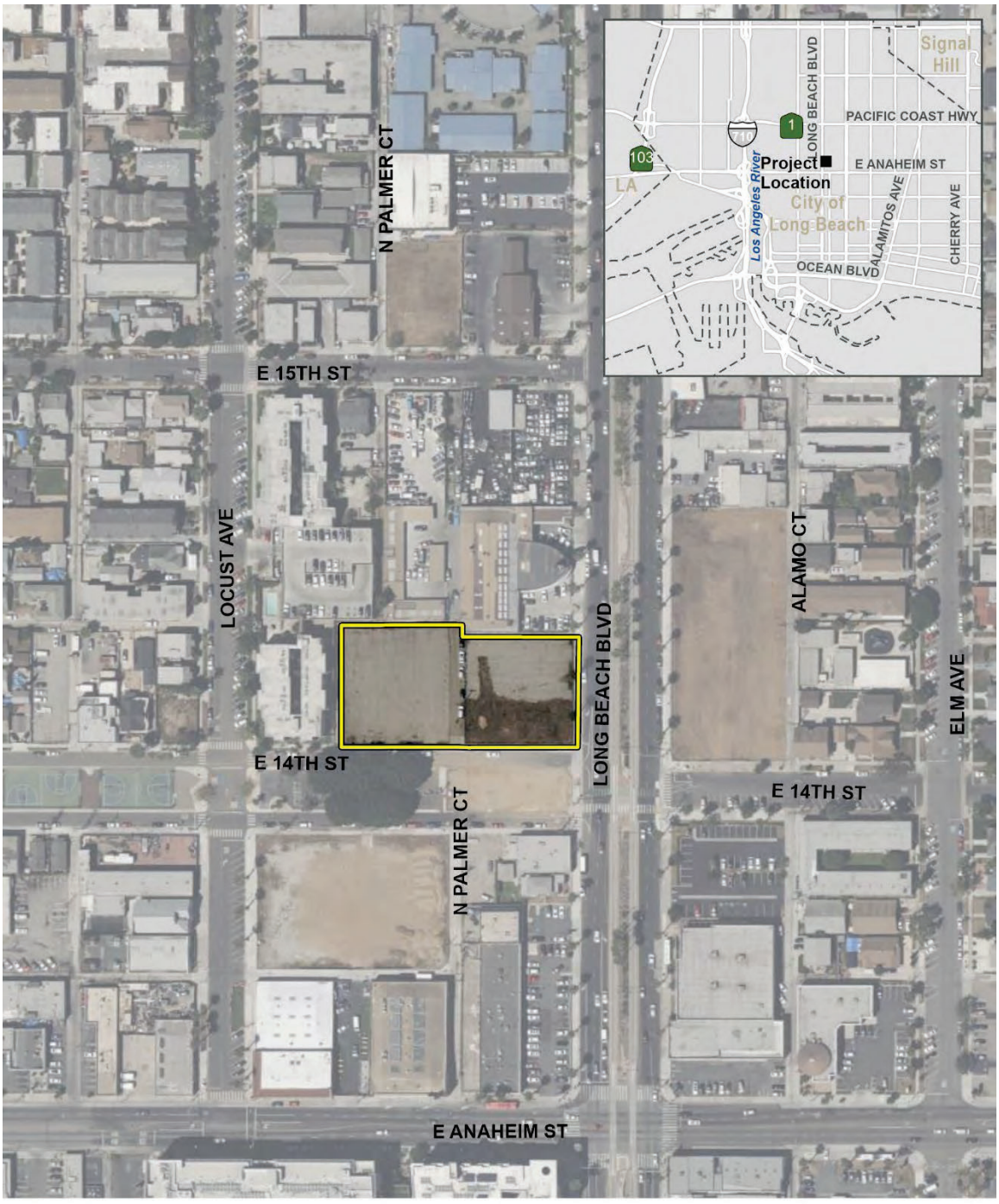
Direct Comments to: Gina Casillas, Planner, City of Long Beach Department of Development Services, 411 West Ocean Boulevard – 3rd Floor, Long Beach, CA 90802

Project Location: The East 14th Street and Long Beach Boulevard Project (project) is located at 1401 Long Beach Boulevard in the City of Long Beach. The project site is approximately 1.09 acres and consists of five parcels located between East 14th Street and East 15th Street, east of Long Beach Boulevard, and west of Locust Avenue in the central portion of the City of Long Beach (Figure 1). The Assessor Parcel Numbers are 726-901-6041, -6042, -6157, -6158, and -6159.

Description of the Proposed Project [24 CFR 50.12 & 58.32; 40 CFR 1508.25]**:**
The project consists of a new affordable housing building. The net building floor area comprises approximately 154,637 square feet, that is 70 feet above ground level (maximum 6 stories). The residential building consists of 153 units, 6 story apartment building, with 123,646 square feet of residential space, 25,896 square feet of circulation, 5,095 square feet of private deck space. There is an additional 31,834 square feet of garage parking space. Parking provided would include: 80 parking spaces with 60 standard parking spots, 5 accessible parking spots, 15 compact spots, and 77 bicycle parking spaces. Parking access would be provided by East 14th Street and would meet the parking needs estimated by the Long Angeles Region Affordable Parking Demand Study. Outdoor open space for residents would include 7,600 square feet of outdoor common space and 5,095 square feet of private outdoor space. The project consists of 100-percent affordable housing units. Units would include 1 bedroom (74 units), 2 bedroom (40 units), and 3 bedroom (39 units) options.

In 2021, an EA was prepared and approved by HUD for a similar project at this same location. Because the scope and magnitude of the undertaking is similar, several technical studies prepared for the previous undertaking have been utilized in this analysis where noted. The previous undertaking included two mixed-use 100 percent affordable housing buildings (75 and 87 units, respectively) totaling 183,075 square feet and maximum seven stories.

Figure 1. Regional Location and Project Vicinity



Statement of Purpose and Need for the Proposal [40 CFR 1508.9(b)]:
The provision of adequate affordable housing remains a challenge for Long Beach due to the escalating cost of housing in Long Beach. This continuing trend amplifies the need for providing affordable housing to all household income levels, especially low and very low-income levels.

According to the City of Long Beach 2021-2029 Housing Element, 15 percent of Long Beach renters experience overcrowding in their houses, and by 2040, there will be an estimated 28,524 housing units needed. In 2012, there was a supply of 176,000 housing units, offering a range of housing opportunities varying from single-family homes, mobile homes, and moderate-density courtyard apartments and town homes to higher-density condominium and apartment buildings.

Land costs, construction costs, and market financing contribute to the cost of housing investment and can potentially hinder the production of affordable housing. A key component in the cost of housing development is the price of raw land and any necessary improvements and infrastructure that must be made to a particular site. The diminishing supply of vacant residential land, combined with a fairly high demand, kept land cost relatively high in Southern California and Long Beach, even during the recent recession. In recognition that land costs affect the feasibility of developing affordable housing, the Long Beach Redevelopment Agency routinely wrote down the cost of land on agency-owned property in exchange for developers placing affordability controls on the units.

The City of Long Beach maintains a number of incentives to build affordable housing. This includes density incentives, compliant with state law, of a 35-percent bonus for development of lower income housing, moderate-income condominiums, and housing for seniors. In addition to the density bonus, parks and recreation and transportation development fees are waived for affordable housing if the criteria on length of affordability and income/affordability level are met. In conjunction with the density bonus ordinance, certain development standards may be relaxed if increased density cannot be physically accommodated on the site.

The proposed project would accommodate a portion of the citywide demand for new housing located near transit, jobs, retail services, and cultural institutions. The proposed project would provide 100 percent affordable housing in the Washington School neighborhood. The proposed project would be accessible to various modes of public transit, thereby helping the city meet the objectives of the Housing Element of the General Plan. These objectives include construction of additional residential units in established neighborhoods that will contribute to the city's housing supply.

Existing Conditions and Trends [24 CFR 58.40(a)]:
The site is currently vacant, graded flat to street level, and contains minimal vegetation. No sensitive resources have been identified on the project site. The project site is surrounded by urban development, including residences and commercial businesses. The surrounding land uses include residential homes and apartments to the west, and northwest; an auto repair facility and used car dealer to the north; the LA Metro A line (formerly the Blue line) and used car dealership to the east; and a strip mall, saloon, and beauty store to the south.

The project site is located in the Washington School neighborhood. Washington School neighborhood is a roughly 0.25-mile-long business corridor with numerous businesses including: restaurants, retail stores, housing, and schools.

Two bus routes, 1 and 51, run along Long Beach Boulevard and bus stops are located within one city block of the project site. The Los Angeles Metro A Line is located immediately adjacent to the site, within the Long Beach Boulevard right-of-way and the Anaheim Street stop is located approximately 860 feet south of the project site and provides access to South Los Angeles and Downtown Los Angeles.

Historically, the site has been developed for commercial and residential uses dating back to at least 1914. A commercial building, most recently used as the Farmers and Merchants Bank, was located in the eastern half of the project site between 1950 and approximately 2005.

Funding Information

Grant Number	HUD Program	Funding Amount
B-23-MC-06-0522 B-24-MC-06-0522	CDBG (14.218 CFDA)	$1,935,950 $1,564,050

Estimated Total HUD Funded Amount: $3,500,000

Estimated Total Project Cost (HUD and non-HUD funds) [24 CFR 58.32(d)]**:** $100 Million

Compliance with 24 CFR 50.4, 58.5, and 58.6 Laws and Authorities

Record below the compliance or conformance determinations for each statute, executive order, or regulation. Provide credible, traceable, and supportive source documentation for each authority. Where applicable, complete the necessary reviews or consultations and obtain or note applicable permits of approvals. Clearly note citations, dates/names/titles of contacts, and page references. Attach additional documentation as appropriate.

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 50.4 and 58.6		
Airport Hazards 24 CFR Part 51 Subpart D	Yes No ☐ ☒	The project site is located more than 2 miles southwest of the Long Beach Airport. The project is not located within a Federal Aviation Administration-designated civilian airport Runway Clear Zone or within an Airport Potential Zone. There are no military airfield Protection Zones or Clear Zones that would affect the project. Source Document: 1 and Attachment: 1
Coastal Barrier Resources Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement Act of 1990 [16 USC 3501]	Yes No ☐ ☒	There are no Coastal Barrier Resource System Units or Coastal Barrier Resource System buffer zones, as defined under the Coastal Barrier Resources Act, as amended by the Coastal Barrier Improvement Act of 1990 [16 USC 3501] located in California. The project site is, therefore, not located within a Coastal Barrier Resource System Unit, or Coastal Barrier Resource System buffer zone. As such, the project is not subject to the Coastal Barrier Resources Act or the Coastal Barrier Improvement Act. Source Document: 2
Flood Insurance Flood Disaster Protection Act of 1973 and National Flood Insurance Reform Act of 1994 [42 USC 4001-4128 and 42 USC 5154a]	Yes No ☐ ☒	The project does not involve construction, rehabilitation, or acquisition of a mobile home, building, or insurable personal property within a Federal Emergency Management Agency designated 100-year floodplain or 500-year floodplain identified in Federal Emergency Management Agency Flood Insurance Rate Map panel 06037C1962F. Source Document: 3 and Attachment: 2

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
STATUTES, EXECUTIVE ORDERS, AND REGULATIONS LISTED AT 24 CFR 50.4 & 58.5		
Clean Air Clean Air Act, as amended, particularly section 176(c) & (d); 40 CFR Parts 6, 51, 93	Yes No ☐ ☒	<u>Criteria Pollutants</u> Construction and operational criteria pollutant emissions were estimated using the California Emissions Estimator Model (CalEEMod), version (Version 2022.1.1) emission model for estimating exhaust emissions from Tier 4 off-road construction equipment and on-road motor vehicles, as well as calculating long-term mobile, energy, and area source emissions. The modeled criteria pollutants were compared to the federal General Conformity *de minimis* levels and local South Coast Air Quality Management District (SCAQMD) construction and operational thresholds to determine if the project would result in adverse air quality effects. Note the technical study (Attachment 3a) was completed for a previous project in 2021 at the same location where the scope and magnitude of the undertaking are not changing. Some assumptions from this technical study were utilized for the updated CalEEMod emissions calculations preformed July 2024. Model data can be found in Attachment 3b, and a Record of Non- Applicability for Clean Air Act Conformity can be found in Attachment 3c. The U.S. Environmental Protection Agency has classified the South Coast Air Basin as attainment/maintenance for carbon monoxide (CO), particles of 10 micrometers and smaller (PM_{10}), and nitrogen dioxide (NO_2), and nonattainment for ozone (O_3) and particles of 2.5 micrometers and smaller ($PM_{2.5}$). In addition, the Los Angeles County portion

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
		of the South Coast Air Basin is in nonattainment for lead. *Comparison to Federal General Conformity De Minimis Levels* Construction emissions from the project would result primarily from off-road equipment, vehicle use, and fugitive dust. The modeling results indicate that the maximum annual emissions from construction would be approximately: • 1.02 tons per year (2026), 2.24 ton per year (2027), and 1.28 tons per year (2028) CO • 0.06 tons per year (2026), .42 tons per year (2027), and .27 tons per year (2028) VOC • 0.64 tons per year (2026), 1.33 tons per year (2027), and 0.74 tons per year (2028) NO_x • 0.09 tons per year (2026), 0.19 tons per year (2027), and .13 tons per year (2028) PM_{10} • 0.04 tons per year (2026), 0.04 tons per year (2027), and 0.05 tons per year (2028) $PM_{2.5}$ Based on the SCAQMD's designation status, federal General Conformity *de minimis* levels would be 10 tons per year for NO_x and VOC and 100 tons per year for CO, PM_{10}, and $PM_{2.5}$. A conformity determination would be required for each criteria pollutant or precursor exceeding the federal General Conformity *de minimis* level. Emissions for all criteria pollutants would be below federal General

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
		Conformity *de minimis* levels pursuant to the federal Clean Air Act. Operational emissions are those associated with stationary sources and mobile sources associated with vehicular trips and on-site energy consumption. Results from the CalEEMod indicate the maximum annual emissions from the operation of the project would be approximately: • 2.01 tons per year CO • 0.01 tons per year NO_x • 1.09 tons per year VOC Operational emissions would be below the federal *de minimis* thresholds of 10 tons per year for NO_x and VOC and 100 tons per year for CO, PM_{10}, and $PM_{2.5}$. Therefore, the proposed action is exempt from General Conformity regulations. *Comparisons to South Coast Air Quality Management District Thresholds* The construction emissions for each phase of construction were calculated July 2024 using the CalEEMod Version 2022.1.1. The peak day modeling results indicate that the maximum daily emissions from construction would be: • 27.2 pounds per day CO • 8.7 pounds per day Volatile Organic Gases (ROGs) • 15 pounds per day NOx • <1 pound per day SO_2 • 3.5 pounds per day PM_{10} • 1.5 pounds per day $PM_{2.5}$

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
		The peak daily construction emissions would be below the SCAQMD threshold of 550 pounds per day CO, 75 pounds per day ROG, 100 pounds per day NO_x, 150 pounds per day PM_{10}, and 55 pounds per day $PM_{2.5}$. The daily operational emissions for area, energy, and mobile sources were calculated using the CalEEMod. The peak daily emissions from operations would be: • 10.1 pounds per day CO • 0.5 pounds per day NOx • 4.7 pounds per day ROG • <1 pound per day SO_2 • <1 pounds per day PM_{10} • <1 pounds per day $PM_{2.5}$ The total daily emissions would be below SCAQMD thresholds described above. Consequently, criteria pollutant emissions from construction and operation of the project would be below thresholds with respect to SCAQMD and federal General Conformity *de minimis* levels. <u>Fugitive Dust</u> SCAQMD has established Rule 403 for reducing fugitive dust emissions. Dust generated daily during construction would vary substantially, depending on the level of activity, the specific operations, and weather conditions. Nearby sensitive receptors and on-site workers may be exposed to blowing dust, depending upon prevailing wind conditions. Fugitive dust also would be generated as construction equipment or trucks travel on unpaved

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
		areas of the construction site. To reduce fugitive dust during the construction phase, watering would be incorporated into the project and occur a minimum of three times per day. With the inclusion of watering, the proposed project would not result in adverse effects to nearby sensitive receptors. <u>Asbestos</u> The project does not involve demolition of structures because the site is currently vacant; however, Los Angeles County is among the counties listed as containing serpentine and ultramafic rock, which may contain naturally occurring asbestos. The portion of the county in which the project lies is not known to contain serpentine or ultramafic rock. Therefore, the impact from naturally occurring asbestos during project construction would be minimal to none. Source Document: 4, 5, 6, 7, 8, 9 and Attachment: 3a, 3b, 3c
Coastal Zone Management Coastal Zone Management Act, sections 307(c) & (d)	Yes No ☐ ☒	The project is located approximately 1.52 mile from the Pacific Ocean. The project site is not located within the jurisdiction of the California Coastal Commission, which generally extends 1,000 yards inland from the mean high tide line along the California Coast. The project site is not located within the Coastal Zone Management area; therefore, the project would have no effect on the coastal zone. Source Document: 10 and Attachment: 4
Contamination and Toxic Substances 24 CFR Part 50.3(i) & 58.5(i)(2)	Yes No ☐ ☒	The project site is currently vacant land partially paved with signs of former parking lot usage and unpaved sections. There are no onsite operations.

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
		A Phase I Environmental Site Assessment (ESA) was conducted in July 2023. The Phase I ESA concluded that there was no evidence of RECs, CRECs, HRECs, or BERs in connection with the subject property. Source Document: 11, 12 and Attachment 5
Endangered Species Endangered Species Act of 1973, particularly section 7; 50 CFR Part 402	Yes No ☐ ☒	The project site is disturbed and surrounded by urban development with no ornamental trees. The site is vacant, graded flat to street level, is partially paved, and contains no vegetation. Database searches of Information for Planning and Consultation, California Natural Diversity Database, and the Inventory of Rare and Endangered Plants of California indicate no species identified as candidate, sensitive, or special status have the potential to occur on the project site. There is no critical habitat in the project vicinity. Source Document: 13, 14, 15 and Attachment: 6
Explosive and Flammable Hazards 24 CFR Part 51 Subpart C	Yes No ☐ ☒	As part of the Phase I ESA, no visual evidence was observed during site reconnaissance of unobstructed or unshielded above ground storage tanks (fuel oil, gasoline, propane, etc.) at, or immediately adjacent to, the project site. Based on the records search as part of the Phase I ESA, there are no above ground storage tanks within 0.25 mile of the project site. The project would not involve explosive or flammable operations. Additionally, no known sites containing flammable, explosive, hazardous, or toxic materials were found to be of concern to future development of the site.

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
		Source Document: 16 and Attachment 7
Farmlands Protection Farmland Protection Policy Act of 1981, particularly sections 1504(b) and 1541; 7 CFR Part 658	Yes No ☐ ☒	The project site is located in urbanized Long Beach and is not utilized for agriculture production. No farmland is present that would be converted. The project site is not zoned for agriculture and is not under a Williamson Act Contract. Source Document: 17 and Attachment: 8
Floodplain Management Executive Order 11988, particularly section 2(a); 24 CFR Part 55	Yes No ☐ ☒	The project site is not located in an existing floodplain. According to the Federal Emergency Management Agency, the project site is in an area of minimal flooding risk. The site is not subject to flooding by failure of a levee or dam; therefore, no impacts related to floodplain hazards or management would occur. Source Document: 3 and Attachment: 9
Historic Preservation National Historic Preservation Act of 1966, particularly sections 106 and 110; 36 CFR Part 800	Yes No ☐ ☒	The Area of Potential Effect (APE) for the purposes of archeological resources is limited to the project site; however, an expanded APE was utilized to identify historic properties adjacent to the project site that may be exposed to adverse indirect effects. In December 2020, the South Central Coastal Information Center (SCCIC) was contacted to perform a record search of all previously recorded cultural resources (including archaeological sites) within one-quarter mile of the project site. One archaeological resource had been previously identified within the Direct APE and no built environment resources have been previously recorded within the Indirect APE. Outside the Indirect APE within one-quarter mile, 11 built environment resources have been previously recorded. The 11 historic-age

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
		buildings are all residences. No archaeological resources have been recorded within the one-quarter mile search area. <u>Built Environment Resources</u> One newly identified built environment resource exists within the Indirect APE. The Packard Long Beach Company Building, constructed in 1946, is a two-story commercial building located at 1427 Long Beach Boulevard. The building historically served as an automobile dealership and repair shop and was originally used as a Packard dealership. The property is currently occupied by Sam's Autobody and Horn's Collision Center. The property, specifically the eastern portion of the property, located east of North Palmer Court and containing the original showroom, embodies the distinctive characteristics of the Googie style and postwar-era automobile-related architecture. In addition, the eastern portion of the property retains a high degree of integrity and most of its original features. Therefore, the Packard Long Beach Company Building dealership building is recommended eligible for listing in the National Register of Historic Places under *Criterion C* and the California Register of Historical Resources under *Criterion 3* for embodying the distinctive characteristics of the Googie style and postwar automobile-related architecture. Those characteristics include the roof form, cantilevered roof canopy, geometric building forms, multiple curved walls, large spans of glass window walls, and the attached building signage.

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
		The character-defining features of the Packard Long Beach Company Building dealership building include: the building location and overall building form, the roof form and cantilevered canopy, the fenestration pattern, all of the windows and doors (except for one replacement vinyl window), the curved exterior and interior walls, and the projecting signboard attached to the façade. There are no character-defining setting features, and the immediate setting has been altered on multiple occasions as adjacent buildings have been constructed and demolished. <u>Archaeological Resources</u> One previously recorded archaeological resource has been identified within the Direct APE. CA-LAN-694, recorded by Dixon in 1974 as a prehistoric site, and measures approximately 380 meters east-west by 100 meters north-south according to the site boundary provided by the SCCIC. In 1974, the site was most evident as shell fragments and flakes in exposed midden soil located in the East 14th Street median between Chestnut Street and Long Beach Boulevard. However, according to Dixon, prior utility excavations in the area of the site by the Long Beach Water Department, sometime prior to 1944, yielded "many artifacts." On January 14, 2021, a pedestrian survey of the APE was conducted. No evidence of CA-LAN-694 was observed on the surface within the APE. No other cultural resources from either the prehistoric or historic periods were observed. The project site is situated in an area (central Long Beach) that has been heavily

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
		developed and built-up for both commercial and residential purposes for the last 100+ years. Additionally, various portions of the project site itself have been developed since the 1910s with commercial businesses and residences. It is likely this historic development has resulted in considerable past ground disturbance that would have destroyed any potential buried cultural resources associated with CA-LAN-694. However, in order to confirm whether cultural materials associated with CA-LAN-694 were present below the surface, five shovel test pits (STPs) were excavated within and adjacent to the CA-LAN-694 site boundary on January 26, 2021. STPs were excavated to a depth of up to 3 feet and all STPs were negative for the presence of shell, artifacts, midden soil, or any other cultural materials. Soils were similar in all STPs and consisted of dark brown to dark yellowish brown moderately compact loam from 0 to 5 inches (approximately 0 to 13 centimeters), followed by highly compact sandy clay loam layer from 5 inches (approximately 13 centimeters) to the base of the STPs. Within this clay layer small fragments of historic debris – asphalt, brick, copper wire – were noted indicating the deposit is disturbed/construction fill with no potential to contain the archaeological site. Additionally, based on historic aerial imagery, at the time CA-LAN-694 was recorded in 1974, the south portion of the APE (14th Street median) was covered with a restaurant and parking lot, the east portion of the APE was covered with a bank building and parking lot, and the west

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
		portion of the APE was covered with a parking lot. Although the CA-LAN-694 site boundary overlaps these areas, it is unlikely Dixon could have seen any cultural materials in these areas since they were covered with buildings and asphalt. Based on this information, the site boundary is most likely inaccurately mapped and should not in fact overlap the APE. <u>Finding of Effect</u> One historic property, the Packard Long Beach Company Building, was identified in the Indirect APE as a result of survey. However, the proposed project is expected to have no effect on this property. The project would not cause physical destruction or damage to the property and would not remove it from its current location; it would not change the character of the property's use or of physical features within the property's setting that contribute to its historic significance; it would not introduce visual, audible, or atmospheric elements that are out of character with the property or alter its setting; and the project would not lead to the neglect of the property, or its sale, transfer or lease. In addition, there are no character-defining features, or character-defining viewsheds or views that have the potential to be impacted by the project. SHPO concurred on March 1, 2021, that the Packard Long Beach Company Building is eligible for the National Register of Historic Places under *Criterion C* and the California Register of Historical Resources under *Criterion 3* for embodying the distinctive characteristics of the Googie style and postwar automobile-related architecture.

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
		One unevaluated resource – prehistoric archaeological site CA-LAN-694 – was previously identified within the Direct APE as a result of the records search. Subsurface testing confirmed that the APE is disturbed to a depth of at least 3 feet (91.44 centimeters) (the maximum depth of planned disturbance for the portion of the proposed project that overlaps the site boundary) and it appears that this resource has been inaccurately mapped and does not exist within the APE. In either case, the resource will not be impacted. Therefore, as no historic properties, historic-era built environment, or archaeological resources have the potential to be impacted, the City of Long Beach has determined a finding of No Effect for the project. SHPO concurred with these findings on March 1, 2021. Source Document: 18 and Attachment 10, 10a, 10b Note the technical memo was completed for a previous project where the scope and magnitude of the undertaking are not changing. Per 24 C.F.R. Part 50, SHPO concurrence on these findings occurred within the previous 5 years and HUD may approve the project without further consultation with SHPO or Council.
Noise Abatement and Control Noise Control Act of 1972, as amended by the Quiet Communities Act of 1978; 24 CFR Part 51 Subpart B	Yes No ☒ ☐	Construction noise, although temporary, can potentially affect nearby sensitive receptors, such as residences closest to the project site. Project construction would require the use of heavy equipment that may be periodically audible at off-site locations. Received noise levels would fluctuate, depending on the construction activity, equipment type, and distance

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
		between noise source and receiver. Additionally, noise from construction equipment would vary dependent on the construction phase and the number and type of equipment at a location at any given time. The nearest sensitive receptors to the project site are the multifamily residential units located on the western property line, and Grace Presbyterian Church located 450 feet southwest of the site. At its closest point, the construction activity would be located within 50 feet of the multifamily residential units. The average distance from construction activities on the project site to the multifamily residential units on a daily basis is approximately 190 feet. Construction noise would attenuate with increased distance from the noise sources. Maximum noise levels at 50 feet and composite Leq noise levels at 190 feet were evaluated using the Roadway Construction Noise Model. As a general construction practice, functional mufflers are anticipated to be maintained on all equipment to attenuate noise levels as low as reasonably achievable. During the loudest construction phase, the maximum noise level is projected to be 74 A-weighted decibel (dBA) Leq at 190 feet. This is below the Federal Transit Administration threshold of 80 dBA Leq(8 hr). Chapter 8.80 Noise, of the City of Long Beach Municipal Code, establishes exterior and interior noise limits for the generation of sound within the City of Long Beach. The project would be required to comply with the municipal code which limits construction to the hours of 7:00 a.m. and

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
		7:00 p.m. Monday through Friday and Saturdays between 9:00 a.m. and 6:00 p.m. Additionally, no construction activities can occur on federal holidays and the City of Long Beach's Noise Control Office must issue a permit for construction work on Sundays. Traffic noise associated with project construction is not anticipated to be a substantial source of noise. Traffic noise is not greatly influenced by lower levels of traffic, such as those associated with the project's construction effort. For example, traffic levels would have to double for traffic noise on adjacent roadways to increase by 3 dBA. The project's construction traffic on adjacent roadways would increase hourly traffic volumes by much less than a factor of two; therefore, acceptable noise levels would not be exceeded. <u>HUD Noise Standards</u> The acceptable exterior noise levels set forth by HUD regulations for new construction of housing are 65 day-night average sound level (DNL) or less. DNL is a 24-hour average noise level with a 10 dBA penalty for noise occurring during the nighttime hours, defined as 10:00 p.m. to 7:00 a.m. The regulations consider the range between 65 dBA DNL and 75 dBA DNL to be normally unacceptable, unless appropriate sound attenuation measures are provided. Unacceptable noise levels, set by the HUD regulations, are 75 dBA DNL and higher. Based on the preliminary site plan, the proposed residential units will be constructed within 65 feet of the centerline

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
		of Long Beach Boulevard and 65 feet of the Metro A Line. At this distance the proposed residential units would potentially be exposed to noise levels above 67 dBA DNL for road noise and 61 dBA DNL for railroad noise, for a combined DNL of 68 dBA DNL. Standard building construction in warm climates provides 24 dBA of exterior to interior noise attenuation when windows are closed and 12 dBA of exterior to interior noise attenuation when windows are open (Protective Noise Levels, Environmental Protection Agency 550/9 79 100, November 1978). All new construction of residential units requires some form of mechanical ventilation to ensure that proper indoor air quality is maintained even with all windows and doors closed. Therefore, with windows closed, the new residential units would be exposed to interior noise levels exceeding the 45 dBA DNL standard (68 – 24 = 44). Therefore, Mitigation Measure NOI-1 would be implemented. HUD regulations also establish standards for exterior noise (24 CFR § 51.101(a)(9)). Associated open outdoor areas where people may congregate are considered in the evaluation for noise. The resident's courtyard is located in the center of the parcel and is shielded from traffic noise by buildings. Additionally, there are a limited number of balconies on specific units. Due to this design characteristic for outdoor attenuation purposes, acceptable noise levels for exterior noise would not be exceeded. The project site is located more than two miles southwest of the Long Beach Airport. The noise from the airport would not

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
		contribute to the noise environment at the project site based on the airport's noise contour map. Source Document: 19, 20 and Attachment 11 Note the technical study was completed for a previous project where the scope and magnitude of the undertaking are not changing. The setbacks and distance from noise sources, such as traffic, is the same and assumptions from the previous technical study are the same.
Sole Source Aquifers Safe Drinking Water Act of 1974, as amended, particularly section 1424(e); 40 CFR Part 149	Yes No ☐ ☒	The project is not located in an area designated by the U.S. Environmental Protection Agency as being supported by a sole source aquifer. The project is served by the Long Beach Water Department, which is not provided from a sole source aquifer. The nearest sole source aquifer is over 100 miles southeast near the Mexico border, east of San Diego. Source Document: 21 and Attachment 12
Wetlands Protection Executive Order 11990, particularly sections 2 and 5	Yes No ☐ ☒	The project site is not located within or adjacent to wetlands. Based on the USFWS wetland mapper and aerial photograph review, there are no previously identified wetlands within 0.25-mile of the project site. In addition, the project site is already heavily disturbed, urban in nature, and the project will not affect any coastal or riparian wetlands. Source Document: 22 and Attachment 13
Wild and Scenic Rivers Wild and Scenic Rivers Act of 1968, particularly section 7(b) and (c)	Yes No ☐ ☒	There are no waterways on the project site and there are no wild and scenic rivers in the City of Long Beach. Therefore, the project would have no effect on any scenic

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
		rivers as part of the Wild and Scenic Rivers Act of 1968. Source Document: 23 and Attachment: 14
ENVIRONMENTAL JUSTICE		
Environmental Justice Executive Order 12898	Yes No ☒ ☐	The project site consists of vacant land and does not currently house any populations. However, the city is classified as an environmental justice population based on 2019 American Community Survey 5-Year Estimates. The project would provide new affordable housing, thereby adding to the environmental justice population of the area. The development of the project site would provide low-income families with affordable housing opportunities, thus providing benefits to an environmental justice population. This analysis further considers project impacts and their potential to disproportionately affect the projects introduced environmental justice population. <u>Project Impacts</u> From the consideration of regulatory factors in this EA, a number of environmental topics were identified to generate potential effects requiring mitigation. However, because impacts would be shared by neighboring, non-environmental justice populations, the following impacts with their mitigation summarized below do not represent impacts with potential to disproportionately affect an environmental justice population. *Air Quality*: Construction and operation of the project would result in criteria pollutant emissions; however, these emissions would

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
		be below threshold levels, with respect to federal General Conformity *de minimis* levels and SCAQMD's threshold of significance. Fugitive dust control measures, such as watering would be implemented during construction per SCAQMD Rule 403. *Historic Preservation*: The project site has previously been disturbed. Record searches and surveys indicate there are no historic properties in the APE that would be adversely affected. *Construction Noise*: The project would introduce new noise sources to the neighborhood from vehicle use on adjacent and nearby roadways by new residents and visitors. The project would also introduce short-term noises during the construction of the new residential building. The nearest sensitive land uses to the project are the multifamily residential units located on the western property line, and Grace Presbyterian Church located 450 feet southwest of the site. Construction noise would not exceed thresholds and would occur during City of Long Beach approved hours. *Operational Noise*: HUD DNL Calculator estimates that exterior noise levels at the project site would be within HUD's "normally acceptable" range, thus indicating low-income residents would be exposed to excess noise. However, **Mitigation Measure NOI-1** would require preparation of a final acoustical report to minimize impacts on residents. Therefore, exterior noise exposure would be reduced for environmental justice populations.

Compliance Factors: Statutes, Executive Orders, and Regulations listed at 24 CFR §58.5 and §58.6	Are formal compliance steps or mitigation required?	Compliance determinations
		Geology and Soils: The project site is outside of an Earthquake Fault Zone. The principal seismic hazard that could affect the site is ground shaking resulting from an earthquake occurring along one of several major active or potentially active faults in Southern California. The site does have the potential to be exposed to strong seismic shaking; however, the project facilities would be designed consistent with the California Building Code in order to minimize hazards during a seismic event. The California Building Code includes standards related to soils and foundations, structure design, building materials, and structural testing and inspections. <u>Conclusion</u> Overall, the project is not anticipated to create permanent adverse effects in the project area existing populations, or to an introduced environmental justice population. Source Document: 24, 25, 26 and Attachment 15

Environmental Assessment Factors [24 CFR 58.40; Ref. 40 CFR 1508.8 &1508.27] Recorded below is the qualitative and quantitative significance of the effects of the proposal on the character, features and resources of the project area. Each factor has been evaluated and documented, as appropriate and in proportion to its relevance to the proposed action. Verifiable source documentation has been provided and described in support of each determination, as appropriate. Credible, traceable and supportive source documentation for each authority has been provided. Where applicable, the necessary reviews or consultations have been completed and applicable permits of approvals have been obtained or noted. Citations, dates/names/titles of contacts, and page references are clear. Additional documentation is attached, as appropriate. **All conditions, attenuation or mitigation measures have been clearly identified.**

Impact Codes: Use an impact code from the following list to make the determination of impact for each factor.
(1) Minor beneficial impact
(2) No impact anticipated
(3) Minor Adverse Impact – May require mitigation
(4) Significant or potentially significant impact requiring avoidance or modification which may require an Environmental Impact Statement

Environmental Assessment Factor	Impact Code	Impact Evaluation
LAND DEVELOPMENT		
Conformance with Plans / Compatible Land Use and Zoning / Scale and Urban Design	2	The project site is located within the heavily urbanized community of the Washington School neighborhood. The project is an infill development on parcels that were previously developed. The project would not physically divide an established community. The project consists of the construction of a new residential building with a maximum of six stories. The project site is not located in a coastal zone and is not subject to the Local Coastal Program. The project would require discretionary actions including adjustment of parking requirements to allow for reduced number of parking spots provided for residents, compliant with the Los Angeles Region Affordable Parking Demand Study. The project would consist of 100 percent affordable housing units and would take advantage of the density bonus offered by state law (California Government Code §65915) for such project. The project also would take advantage of the provisions of state law that requires local governments to grant development standards waivers and additional development standards concessions for affordable housing projects (§65915) and commercial development partnered with affordable housing projects (§65917.5) if the strict

Environmental Assessment Factor	Impact Code	Impact Evaluation
		application of normal development standards would preclude the project from being feasible. The required entitlements are site-specific and an allowable discretionary action and would not conflict with applicable land use plans, policies or regulations; as they would not result in broader changes to the goals, policies and programs. Source Document: 27, 28, 29
Soil Suitability/ Slope/ Erosion/ Drainage/ Storm Water Runoff	2	<u>Geology/Soil Stability</u> Due to the relatively flat topography and the lack of exposed slopes, the risk of substantial erosion or loss of topsoil is considered low. According to the Geotechnical Investigation Report prepared for the project the project site is located outside, but relatively close to an area mapped as liquefiable. Due to relatively shallow groundwater and deep alluvial soil deposits, the site is considered moderately susceptible to liquefaction. A liquefaction analysis should be performed during final design to confirm whether or not the site is susceptible to liquefaction. The project site and immediate area is not known to contain expansive soils; however, testing of samples obtained from the site should be performed to confirm that these hazards are not present on the site. <u>Stormwater</u> Construction of the project would disturb more than 1 acre of soil; therefore, the project would be required to obtain coverage under the National Pollutant Discharge Elimination System Construction General Permit, which requires the preparation of a Stormwater Pollution Prevention Plan and implementation of construction best management practices. Additionally, the project would comply with all requirements of the Long Beach Municipal Code related to stormwater management, the city's Stormwater Management Plan and the city's Waste Discharge Requirements for Municipal Separate Storm Sewer System Discharges from the City of Long Beach (City of Long Beach Municipal Separate Storm Sewer System Permit). Due to the increase in impervious surfaces, the project would be required to implement post-construction best

Environmental Assessment Factor	Impact Code	Impact Evaluation
		management practices to mitigate stormwater pollution during operation and prepare a Low Impact Development Plan or equivalent, in compliance with the City of Long Beach Low Impact Development Best Management Practice Design Manual. Source Document: 30, 31, 32, 33 and Attachment 16
Hazards and Nuisances including Site Safety and Noise	3	<u>Hazardous Materials</u> The project would involve the construction of a residential building, which would not involve the use or storage of large quantities of hazardous materials. During construction, the use of potentially hazardous materials such as fuels, lubricants, and solvents would occur. The transport, use, and storage of hazardous materials would be conducted in accordance with all applicable state and federal laws, such as the Hazardous Materials Transportation Act, Resource Conservation and Recovery Act, the California Hazardous Material Management Act, and the California Code of Regulations, Title 22. The City of Long Beach is an urbanized community, and there are no wild lands in the project site vicinity. There would be no risk of exposing people or structures to a significant risk of loss, injury, or death involving wild land fires. <u>Noise</u> Construction noise as discussed above in "Noise and Abatement Control" would be temporary and cease when the project is complete. Noise generated by the project would consist of short duration noise resulting from construction activities and long-term noise from on-site stationary sources and off-site traffic noise. Additionally, **Mitigation Measure NOI-1** would be implemented to demonstrate compliance with interior noise level requirements. The final acoustical report shall demonstrate that the residential development will be sound attenuated against present and projected noise levels, including roadway, railway, aircraft, helicopter, and stationary sources (e.g., industrial, commercial, etc.) to meet city interior standards. Source Document: 11, 20

Environmental Assessment Factor	Impact Code	Impact Evaluation
Energy Consumption	2	<u>Construction</u> Construction activities would consume electricity and fossil fuels but would not require consumption of natural gas. The use of construction vehicles and equipment would consume fossil fuels, such as diesel, gasoline, and oil. Water consumption during construction activities would indirectly consume electricity. When not in use, electric equipment would be shut off to avoid unnecessary consumption of electricity. Energy consumption during construction would be temporary and would cease upon completion of construction activities. Because of the high cost of fuel, construction and maintenance activities would not result in wasteful, inefficient, or unnecessary use of energy, as construction contractors would purchase fuel from local suppliers and would conserve the use of their supplies to minimize the cost of constructing the project. Therefore, construction impacts would not result in adverse effects. <u>Operation</u> Operation of the building would involve consumption of electricity, natural gas, and fossil fuels related to automobile use. During ongoing operation of the project, the project would consume electricity in the form of building energy use, outdoor electricity use, and electricity consumption related to indoor and outdoor water consumption. The project would comply with building energy efficiency standards, including the 2019 Building Energy Efficiency Standards (California Code of Regulations, Title 24, Part 6), effective January 1, 2020, which is mandatory statewide for new residential and nonresidential buildings. The 2019 Title 24 standards align the lighting and efficiency improvements to the residential standards with the American Society of Heating and Air-Conditioning Engineers national standards. The California Green Building Standards Code (California Code of Regulations, Title 24, Part 11), also called the CALGreen Code, went into effect on January 1, 2020, and includes mandatory standards for low rise residential buildings. The project would comply with the CALGreen Code, which includes measures to reduce greenhouse gas

Environmental Assessment Factor	Impact Code	Impact Evaluation
		(GHG) emissions from buildings through site development and reducing energy and water consumption. As the project site is currently vacant, when compared to existing conditions, the project would increase overall energy consumption. However, because the project would be constructed per the above standards and regulations, project operation would not result in wasteful, inefficient, or unnecessary consumption of energy resources, and would not result in adverse effects.

Environmental Assessment Factor	Impact Code	Impact Evaluation
SOCIOECONOMIC		
Employment and Income Patterns	1	Currently, the site is undeveloped and has no economic impact on the surrounding area. The project would increase available affordable residential real estate. It is expected that construction work and resident amenity space would be accommodated by the existing employment pool. No adverse impacts are anticipated from the project on employment and income within the project area.
Demographic Character Changes, Displacement	2	The project is expected to provide 160 units to serve low-income residents in the area. The project would be consistent with the Long Beach Housing element and help provide affordable housing to residents within the city. No displacement is expected to occur. The project will bring in additional housing units for the area and provide additional low-income housing for residents in the area. Currently the City of Long Beach has an estimated 18.1 percent of its population living under the poverty line. With the project site currently being vacant, no residents would be displaced during the construction of the project. Source document: 25, 26, 27

Environmental Assessment Factor	Impact Code	Impact Evaluation
COMMUNITY FACILITIES AND SERVICES		
Educational and Cultural Facilities	2	The project does include housing that would directly add students to the Long Beach Unified School District. The applicant would be required to pay school impact fees pursuant to Section 65995 (3)(h) of the California Government Code (Senate Bill 50, chaptered August 27, 1998). The closest schools include Roosevelt Elementary School, Washington Middle School, and Long Beach Poly High School, which would all serve the residents of the project. The closest public library branch is the Long Beach Public Library – Billie Jean King Branch, approximately 1 mile away, located at 200 West Broadway. The project would develop a residential building, which would not generate a significant demand for libraries. Primary users of the library system are residents of the City of Long Beach. Currently the Billie Jean King branch would be able to adequately serve the additional residents from the proposed project. Cultural facilities within the City of Long Beach are accessible within walking distance or via public transportation. The Museum of Latin American Art located at 628 Alamitos Avenue and the Long Beach Firefighter's Museum is located at 1445 North Peterson Avenue. Other cultural facilities are accessible via public transportation. Source document: 34 and 35
Commercial Facilities	2	The Washington School Neighborhood around the project site consists of various land uses including commercial, residential, and public space. For example, Superior Grocers is located 3 blocks south of the project site, and Smart and Final Extra located 7 blocks east. The project is within adequate and convenient distance to retail services that provide essential items such as food, medicine, banks, and other convenience shopping. The project residents would contribute to the ongoing vitality of these types of commercial facilities.
Health Care and Social Services	2	The closest hospital to the project is Dignity Health – St. Mary Medical Center and is located approximately 0.3 miles southeast of the project site at 1050 Linden Avenue. Additional health facilities include Memorial Care Health System (2801 Atlantic Avenue) 1.7 miles away, and the VA

Environmental Assessment Factor	Impact Code	Impact Evaluation
		Long Beach Healthcare System (5901 East 7th Street), 4.1 miles away.
Solid Waste Disposal / Recycling	2	The project involves construction of an apartment. Approximately 387 individuals are assumed to live in the building. CalRecycle maintains a waste characterization list of waste generation rates. The most recent information household disposal rates indicates a waste generation rate of 12.2 pounds of waste per household per day. Based on this rate, the tenants would generate approximately 4,221.2 pounds of solid waste produced by the units per day. This increase would be within the capacity of Scholl Canyon Landfill, which currently receives 1,400 tons per day, with 2,000 tons per day of capacity available. Based on the disposal capacity of landfills serving the project site, this incremental increase in solid waste generation would not affect the availability of solid waste disposal capacity. Source Document: 36 and 37
Waste Water / Sanitary Sewers	2	The project would require standard utilities for supporting the facilities that would be on site. The Los Angeles County Sanitation District, Joint Water Pollution Control Plant receives the city's wastewater. The Joint Water Pollution Control Plant provides advanced primary and partial secondary treatment for 261.1 million gallons of wastewater per day, with a permitted capacity for 400 million gallons of wastewater per day of wastewater. Generation rates based on the project uses is based on wastewater generation rates developed by the Sanitation Districts of Los Angeles County, the project would generate an estimated net total of 23,868 gallons of wastewater per day. The project's contribution to the wastewater capacity would be less than 0.1 percent. The increase associated with the percent of the available daily capacity would not cause the wastewater treatment limits to be exceeded. Source Document: 38
Water Supply	2	According to the City of Long Beach's 2015 Urban Water Management Plan, the total citywide water demand for 2015 was 55,206-acre feet and would increase by 3,900 acre feet in 2040. The Urban Water Management Plan identifies water supply as adequate to meet these needs.

Environmental Assessment Factor	Impact Code	Impact Evaluation
		Efforts for water conservation in California localities remain. In June 2016, the Long Beach Board of Water Commissioners declared a Stage 1 Water Supply Shortage for the City of Long Beach. This declaration put into place regulations that limit the use of water in the city including when outdoor watering can occur, and limits to use and practice for residential, business and commercial facilities. The project's incremental contribution to the future demand and new sources of water supply would not be required to meet the anticipated project water needs. Source Document: 39
Public Safety - Police, Fire and Emergency Medical	2	The project site is within the jurisdiction of the Long Beach Fire Department, which would provide fire protection, medical, paramedic, and other first aid rescue services. The Long Beach Fire Department fire station nearest to the site is Fire Station 3, located at 1222 Daisy Avenue, approximately 0.55 mile from the site. Police protection is provided by the Long Beach Police Department. The Long Beach Police Department nearest to the project site is Long Beach Police South Division, located at 400 West Broadway, approximately 1.13 mile from the project site. Ambulance services are provided by the Long Beach Fire Department and provide services to the hospitals within the city limits. The closest hospital to the project is Dignity Health –St. Mary Medical Center is located approximately 0.3 mile east of the project site at 1050 Linden Avenue. Additional health facilities include Memorial Care Health System (2801 Atlantic Avenue), 1.7 miles away, and the VA Long Beach Healthcare System (5901 East 7th Street), 4.1 miles away. Although the project would increase the number of buildings and individuals on site, it would be an incremental increase that would not require additional police presence or demand on site. As part of the project, police and fire impact fees would be required to be paid by the developer to offset the increase in population.
Parks, Open Space and Recreation	2	The project consists of apartments, community spaces, and parking structures, which would not add a significant amount of residents to the area and increase the demand for parks. The closest park to the project site includes 14th

Environmental Assessment Factor	Impact Code	Impact Evaluation
		Street Park, which is located 0.23 mile away at Cedar Avenue and 14th Street. The project proposes a 18,380 square foot park on 14th Street. A parks and recreational facilities fee would be required to offset the increase in residential units.
Transportation and Accessibility	2	During construction, construction-related traffic, such as deliveries of equipment and materials and construction worker traffic, would be generated. However, construction traffic would be temporary and would not substantially interfere with the existing traffic load and capacity of the street system. The increase in users after completion of the project would be considered minimal and not cause additional stress on the local street and transportation systems. Local public transportation stops nearby include: Long Beach Boulevard and 15th Street (Southwest) Stop, Long Beach Boulevard and 15th Street (Northeast) Stop being served by Long Beach Transit lines 1 and 51, these stops are located 312 feet and 680 feet north of the project site. Additionally, Metro Line A Anaheim Street Station is located 0.16 miles south of the project site. The project site is located within a Transit Priority Area; therefore, the project would have a less than significant impact on vehicle miles traveled according to the City of Long Beach Traffic Impact Analysis Guidelines (June 2020). Source documents: 40, 41 and Attachment 17 Note the technical assessment was completed for a previous project where the scope and magnitude of the undertaking are not changing.

Environmental Assessment Factor	Impact Code	Impact Evaluation
NATURAL FEATURES		
Unique Natural Features, Water Resources	2	Review of the California Geological Survey map of the region indicates that sediment in the project site consists of Old Lacustrine deposits. The deposit is described as slightly to moderately consolidated, moderately dissected fine-grained sand, silt, mud, and clay from lake, playa, and estuarine deposits of various types. Following

Environmental Assessment Factor	Impact Code	Impact Evaluation
		Caltrans' paleontological sensitivity scale, these units are considered to have low potential to contain significant vertebrate, significant invertebrate, or significant plant fossils. Rock units designated as having low potential generally do not require monitoring and mitigation. Based on review of previous studies, the project would not impact any unique paleontological resources or unique geologic features. The City of Long Beach Water Department would provide water service to the project site and the project would not deplete groundwater supplies. According to the *Geotechnical Investigation* prepared for the project, no groundwater wells exist within approximately 1 mile of the site, with depths to groundwater expected to be 10 feet below the ground surface. Therefore, the project would not interfere with groundwater recharge. Source Document: 42, 43, 44 and Attachment: 16
Vegetation, Wildlife	2	The project site is disturbed and surrounded by urban development. Database searches of California Natural Diversity Database, Information for Planning and Consultation, and the Inventory of Rare and Endangered Plants of California indicate no species identified as candidate, sensitive, or special status have the potential to occur on the project site. Source Document: 13, 14, 15
Other Factors	2	<u>Greenhouse Gas Emissions</u> In lieu of any federal guidance for assessing GHG emissions, this analysis applies the methodology of SCAQMD. The analysis is based on the *14th and Long Beach Boulevard Affordable Housing Air Quality and Greenhouse Gas Emissions Technical Study* prepared for the project. For the purposes of determining whether or not GHG emissions from affected projects are adverse, SCAQMD specifies that project emissions must include direct, indirect, and, to the extent information is available, life cycle emissions during construction and operation. Based on this direction, construction emissions were amortized over the life of the project (defined as 30 years), added to

Environmental Assessment Factor	Impact Code	Impact Evaluation
		the operational emissions, and compared to the applicable GHG significance thresholds. The SCAQMD's interim thresholds for commercial, residential, mixed use, and industrial development projects are as follows: • **Industrial projects** – 10,000 metric tons (MT) of carbon dioxide equivalent (CO_2e) per year • **Residential, commercial, and mixed use projects** (including parks, warehouses, etc.) – 3,000 MT CO_2e per year The project is a residential building with an attached parking structure. For purposes of this analysis, both direct and indirect GHG emissions from the project are discussed in the context of the 3,000 MT threshold levels. <u>Construction Emissions</u> Construction of the project would result in temporary emissions associated with diesel engine combustion from mass grading, and site preparation construction equipment would be assumed to occur for engines running at the correct fuel-to-air ratios (the ratio whereby complete combustion of the diesel fuel occurs). Construction-related GHG emissions include site preparation, excavation, and associated construction of the proposed residential building. The most recent version of the CalEEMod model (Version 2016.3.2) was used to calculate the construction emissions. Construction of the proposed project would generate 792 MT of CO_2e. Amortized over a 30-year period, the approximate life of the project, the yearly contribution to GHG from the construction of the build alternatives with an at-grade concourse would be 26 MT of CO_2e per year. <u>Operational Emissions</u> The operational GHG emission estimates were also calculated using CalEEMod. The following activities associated with the project could directly or indirectly contribute to the generation of GHG emissions: • **Gas, Electricity, and Water Use**: Natural gas use results in the emissions of two GHGs: methane (CH_4;

Environmental Assessment Factor	Impact Code	Impact Evaluation
		the major component of natural gas) and carbon dioxide (CO2) from the combustion of natural gas. Electricity use can result in GHG production if the electricity is generated by combusting fossil fuel. Annual electricity emissions were estimated using the reported GHG emissions per kilowatt-hour for Southern California Edison; the supplier would provide electricity for the project. • **Solid Waste Disposal**: Solid waste generated by the project could contribute to GHG emissions in a variety of ways. Landfilling and other methods of disposal use energy for transporting and managing the waste, and they produce additional GHGs to varying degrees. Landfilling, the most common waste management practice, results in the release of CH_4 from the anaerobic decomposition of organic materials. CH_4 is 21 times more potent a GHG than CO_2. However, landfill CH_4 can also be a source of energy. In addition, many materials in landfills do not decompose fully, and the carbon that remains is sequestered in the landfill and not released into the atmosphere. • **Motor Vehicle Use**: Transportation associated with the project would result in GHG emission from the combustion of fossil fuels in vehicle trips. The project would result in GHG emissions through the vehicular traffic generated. • **Combined Emissions**: Appendix B of the *14th and Long Beach Boulevard Affordable Housing Air Quality and Greenhouse Gas Emissions Technical Study* includes the annual CalEEMod calculations for GHG emissions. Project Operations would result in average emissions of 1,081 metric tons of CO_2e per year. The total annual GHG emissions of 1,081 MT of CO_2e is less than the county's screening threshold of 3,000 MT of CO_2e per year. Therefore, the proposed project will not result in individual or cumulative adverse effects from GHG emissions. Attachment: 3a

Additional Studies Performed:

1. Fehr and Peers, 14th and Long Beach Boulevard Affordable Housing Project Traffic Assessment, January 2021
2. GEOCON, Geotechnical Investigation for Proposed Multi-Family Residential Development 1401 & 1423 Long Beach Boulevard and 217 & 237 East 14th Street Long Beach, California, January 2024
3. Partner Engineering and Science, Inc, Phase I Environmental Site Assessment Report 1401-1423 Long Beach Boulevard, July 2023
4. HDR, 1401 Long Beach Boulevard Project Cultural Resource Technical Memorandum, February 2021
5. PlaceWorks, 14th and Long Beach Boulevard Affordable Housing Air Quality and Greenhouse Gas Emissions Technical Study, March 2021
6. PlaceWorks, 14th and Long Beach Boulevard Affordable Housing Noise and Vibration Technical Study, March 2021

Field Inspection (Date and completed by)**:**

1. January 14, 2021: HDR, pedestrian survey for cultural resource technical memorandum
2. January 26, 2021: HDR, extended phase I for cultural resources
3. July 20, 2023: Partner Engineering and Science, Inc, site reconnaissance for Phase I ESA
4. December 11, 2023: GEOCON, site reconnaissance for Geotechnical Investigation

List of Sources, Agencies and Persons Consulted [40 CFR 1508.9(b)]**:**

Source List:

1. Los Angeles County. 2004. Los Angeles County Airport Land Use Plan. Available at: Los-Angeles-County-Airport-Land-Use-Plan.pdf (lacounty.gov) Accessed July 10, 2024.
2. United States Fish and Wildlife. 2021. Coastal Barriers Resources System Mapper. Available at: https://www.fws.gov/cbra/Maps/Mapper.html. Accessed July 10, 2024.
3. Federal Emergency Management Agency. 2008. Flood Insurance Rate Map. Available at: https://msc.fema.gov/portal/search?AddressQuery=1401%20e%20long%20beach%20boulevard%20long%20beach#searchresultsanchor. Accessed July 10, 2024.
4. Air Resources Board (ARB). 2016. *Ambient Air Quality Standards*. https://ww2.arb.ca.gov/resources/documents/ambient-air-quality-standards-0. Accessed July 10, 2024.
5. California Emissions Estimator Model (CalEEMod). 2016. California Emissions Estimator Model Version 2016.3.2. Available at: http://www.caleemod.com/. Accessed July 10, 2024.
6. South Coast Air Quality Management District (SCAQMD). 1993. *CEQA Air Quality Handbook.* http://www.aqmd.gov/home/rules-compliance/ceqa/air-quality-analysis-handbook/ceqa-air-quality-handbook-(1993). Accessed July 10, 2024.
7. United States Environmental Protection Agency. 2018a. *Nonattainment Areas for Criteria Pollutants* (Green Book). Available at: https://www.epa.gov/green-book Accessed July 10, 2024.

8. United States Environmental Protection Agency. 2018b. General Conformity *De Minimis* Tables. Available: https://www.epa.gov/general-conformity/de-minimis-tables. Accessed July 10, 2024.
9. Department of Conservation, Division of Mines and Geology. 2000. *A General Location Guide for Ultramafic Rocks in California—Areas More Likely to Contain Naturally Occurring Asbestos*. https://ww2.arb.ca.gov/sites/default/files/classic//toxics/asbestos/ofr_2000-019.pdf. Accessed July 10, 2024.
10. National Oceanic and Atmospheric Administration. 2020. Coastal Zone Management Program. Available at: https://coast.noaa.gov/czm/mystate/. Accessed July 10, 2024.
11. California Department of Toxic Substance Control. 2019. EnviroStor Database. Available at: https://www.envirostor.dtsc.ca.gov/public/. Accessed July 10, 2024.
12. California State Water Resources Control Board. 2019. Geotracker. Available at: https://geotracker.waterboards.ca.gov/. Accessed July 10, 2024.
13. California Department of Fish and Wildlife. 2018. California Natural Diversity Database. Available at: https://www.wildlife.ca.gov/data/cnddb. Accessed July 10, 2024.
14. United States Fish and Wildlife Service. 2020. Information for Planning and Consultation. Available at: https://ecos.fws.gov/ipac/. Accessed July 10, 2024
15. California Native Plant Society. 2019. Inventory or Rare and Endangered Plants of California (online edition, v8-03 0.39). Available at: http://www.rareplants.cnps.org. Accessed July 10, 2024.
16. California Environmental Protection Agency. 2019. CalEPA Regulated Site Portal. Available at: https://siteportal.calepa.ca.gov/nsite. Accessed July 10, 2024.
17. California Department of Conservation. 2018. Farmland Mapping and Monitoring Program. Available at: https://maps.conservation.ca.gov/DLRP/CIFF/. Accessed July 10, 2024.
18. South Central Coastal Information Center. 2021. Record Search Results for the 1401 Long Beach Boulevard Project. File No: 21938.8072, prepared January 11, 2021
19. United Stated Department of Housing and Urban Development. 2009. HUD Noise Guidebook. Available at: https://www.hudexchange.info/resource/313/hud-noise-guidebook/. Accessed July 10, 2024.
20. Federal Highway Administration. 2006. FHWA Construction Noise Model User's Guide. Available at: https://www.fhwa.dot.gov/environment/noise/construction_noise/rcnm/rcnm.pdf. Accessed July 10, 2024.
21. United States Environmental Protection Agency. 2017. Sole Source Aquifer Data. Available at: https://epa.maps.arcgis.com/apps/webappviewer/index.html?id=9ebb047ba3ec41ada1877155fe31356b. Accessed July 11, 2024.
22. United States Fish and Wildlife Service. 2021. National Wetlands Inventory Wetlands Mapper. Available at: https://www.fws.gov/wetlands/Data/Mapper.html. Accessed July 11, 2024.
23. National Wild and Scenic Rivers System. 2021. National Wild and Scenic River Systems in the U.S. Available at: https://www.rivers.gov/index.php. Accessed July 11, 2024.

24. California Office of Environmental Health Hazard Assessment. 2020. CalEnviroScreen 4.0. Available at: https://oehha.ca.gov/calenviroscreen/maps-data. Accessed July 11, 2024.
25. United States Census Bureau. 2000. Profile of General Demographic Characteristics. Available at: https://www2.census.gov/library/publications/2001/dec/2kh00.pdf. Accessed July 11, 2024.
26. United States Census Bureau. 2019. Long Beach city, California. Available at: https://data.census.gov/cedsci/profile?g=1600000US0643000. Accessed July 11, 2024.
27. City of Long Beach. 2014. 2013-2021 Housing Element. Available at: Adopted 2013 - 2021 Long Beach Housing Element. Accessed July 11, 2024.
28. City of Long Beach. 2019. Land Use Element City of Long Beach General Plan. Available at: https://www.longbeach.gov/globalassets/lbcd/media-library/documents/planning/advance/lueude/land-use-element-final-adopted-december-2019. Accessed July 11, 2024.
29. City of Long Beach, Long Beach Planning Department. 2021. City of Long Beach Zoning. Available at: https://www.arcgis.com/apps/webappviewer/index.html?id=17b68e7082ef4a4ea8ba6b0d04729758. Accessed July 11, 2024.
30. California Geological Survey and Moss Landing Marine Laboratories. 2016. Geologic Map of the Long Beach 30'x 60' Quadrangle [map], California. Version 2.0. Digital Preparation by Carlos I. Gutierrez, Janet Tilden, Jason D. Little, Eric V. Niven, Marina T. Mascorro, Eric W. Ford, and Benjamin Middendorf
31. Dominguez Channel Watershed Management Area Group. 2016. *Coordinated Integrated Monitoring Program for the Dominguez Channel Watershed Management Area Group*. Available at: https://www.waterboards.ca.gov/losangeles/water_issues/programs/stormwater/municipal/watershed_management/dominguez_channel/DCWMA_CIMP_Update_FINAL_04182016.pdf Accessed July 11, 2024.
32. Long Beach Development Services. 2013. *Low Impact Development Best Management Practices Design Manual*, 2nd edition. Available at: https://www.longbeach.gov/globalassets/lbcd/media-library/documents/building--safety/dmps/dmp-002 Accessed July 11, 2024.
33. City of Long Beach. 2001. *Long Beach Stormwater Management Plan*. Available at: https://www.longbeach.gov/pw/resources/stormwater-management/Accessed July 11, 2024.
34. Long Beach Unified School District. 2019. School Finder. Available at: https://www.lbschools.net/departments/schools/school-finder Accessed July 11, 2024.
35. Long Beach Public Library. 2021. Library Locations. Available at: http://longbeach.gov/library/visit/locations/. Accessed July 11, 2024.
36. California Department of Resources Recycling and Recovery (CalRecycle). 2019. California's 2017 Per Capita Disposal Rate Estimate. Available at: https://www.calrecycle.ca.gov/lgcentral/goalmeasure/disposalrate/mostrecent. Accessed July 11, 2024.
37. City of Glendale. 2014. Draft Environmental Impact Report for the Scholl Canyon Landfill Expansion, Volume 1 of 2. March. Prepared by Sanitation Districts of Los Angeles County, Whittier.

38. Sanitation Districts of Los Angeles County. N.d. Table 1, Loadings for Each Class of Land Use. Available at: https://www.lacsd.org/home/showpublisheddocument/3644/637644575489800000 Accessed July 11, 2024.
39. City of Long Beach. 2015. City of Long Beach. Urban Water Management Plan. Available at: https://wuedata.water.ca.gov/getfile?filename=/public%2Fuwmp_attachments%2F8329084098%2FLBWD2015UWMP.pdf Accessed July 16, 2024.
40. Long Beach Transit. 2021. Trip Planner. Available at: https://ridelbt.com/trip-planner/. Accessed July 11, 2024.
41. LA Metro. 2021. Trip Planner. Available at: https://www.metro.net/riding/trip-planner/. Accessed July 11, 2024.
42. California Department of Transportation. 2017. "Paleontology." Standard Environmental Reference, Environmental Handbook, Volume 1, Chapter 8. Available at: https://dot.ca.gov/programs/environmental-analysis/standard-environmental-reference-ser/volume-1-guidance-for-compliance/ch-8-paleontology Accessed July 11, 2024.
43. Addicott W. O. 1964. *Pleistocene Invertebrates from the Dume Terrace, Western Santa Monica Mountains, California*. Bulletin of the Southern California Academy of Sciences 63(3):141-150
44. Delong, James H. 1939. *The Paleontology and Stratigraphy of the Pleistocene at Signal Hill, California*. Master's thesis, California Institute of Technology. Available at: https://thesis.library.caltech.edu/5582/. Accessed July 11, 2024.

Attachments:

1. Airport Hazards Worksheet
2. Flood Insurance Worksheet
3. Air Quality Worksheet
   a. 14th and Long Beach Boulevard Affordable Housing Air Quality and Greenhouse Gas Emissions Technical Study
   b. CalEEMod Version 2022.1.1 Calculations
   c. Record on Non-Applicability for Clean Air Act Conformity
4. Coastal Zone Management Worksheet
5. Site Contamination Multi Family Worksheet
   a. Phase I Environmental Site Assessment
6. Endangered Species Worksheet
7. Explosive and Flammable Facilities Worksheet
8. Farmlands Protection Worksheet
9. Floodplain Management Worksheet
10. Historic Resources Worksheet
    a. Office of Historic Preservation Concurrence Letter
    b. Cultural Resource Analysis Memorandum (includes confidential attachment)
11. Noise Abatement and Control Worksheet
    a. 14th and Long Beach Boulevard Affordable Housing Noise and Vibration Technical Study
    b. HUD DNL Calculator
12. Sole Source Aquifers Worksheet

13. Wetlands Protection Worksheet
14. Wild and Scenic River Worksheet
15. Environmental Justice worksheet
16. Geotechnical Investigation for Proposed Multi-Family Residential Development 1401 & 1423 Long Beach Boulevard and 217 & 237 East 14th Street Long Beach, California
17. 14th and Long Beach Boulevard Affordable Housing Project Traffic Assessment

List of Permits Obtained:
The project requires the following entitlements and project approvals from the City of Long Beach:

- Site plan review
- Density bonus/development standards waiver/concessions, per California Government Code §65915 and §65915.7
- Reduced parking standards per Assembly Bill 744

Public Outreach [24 CFR 50.23 & 58.43]**:**
An affordable housing project has been considered at this site since 2015. More recent public outreach events have been conducted, as described in the table below.

Event	**Date**
Zone In: City Core - Canvassing Washington Middle School	3/22/2022
Zone In: City Core - Canvassing Seaside Park	3/27/2022
Zone In: City Core - Phase 1 Open House 1	4/2/2022
Zone In: City Core - Phase 1 Open House 2	4/6/2022
Zone In: City Core - Phase 1 Open House 3	4/13/2022
Zone In: City Core - Phase 2 Open House 3	7/20/2022
Zone In: City Core - Phase 2 Centro CHA Safe Night Out	8/2/2022
Zone In: City Core - Phase 2 Centro Washington Middle School Welcome Event	8/22/2022
Zone In: City Core - Phase 3 Walk Audit	10/15/2022
Arts Council Long Beach – Washington Community Corners	9/18/2023
Books & Buckets - Washington Neighborhood Basketball Court Mural Program Event	2/13/2024

Cumulative Impact Analysis [24 CFR 58.32]**:**

A cumulative impact is the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or person undertakes such other actions. Cumulative impacts can result from individually minor, but collectively significant actions taking place over a period of time. Projects within the vicinity of the project that would contribute to the reasonably foreseeable cumulative environment were identified.

This analysis focuses on whether the project's contribution to potential cumulative impacts would result in adverse effects. The project would have no adverse impacts with respect to the following issues and thus would not contribute meaningfully to any potential cumulative impacts for these issues; therefore, the following issues are not discussed further: Airport Hazards, Coastal Resources/Coastal Zone, Flood Insurance/Floodplain, Endangered Species, Site Contamination, Explosive and Flammable Hazards, Farmlands, Sole Source Aquifers, Wetland, Wild and Scenic Rivers, Land Use Planning, Community Facilities and Services, Traffic, Energy Consumption, Socioeconomics and Natural Features.

With respect to *Noise Abatement and Control*, impacts identified for the project are limited to the project site as the project would be required to prepare a final acoustical report to demonstrate that the residential development will be sound attenuated against present and projected noise levels, including roadway, railway, aircraft, helicopter, and stationary sources (e.g., industrial, commercial, etc.) to meet city interior standards.

As identified above under *Clean Air Act*, the project would not exceed the federal *de minimis* threshold pursuant to the 1990 amendments to the Federal Clean Air Act or local SCAQMD for construction or operation. These thresholds are designed with development of the entire air basin in mind and thus are not cumulative in nature. As the project is below these thresholds, the project's contribution to potential cumulative impacts would be minimal.

With respect to *Historic Resources*, ground disturbance for the project would occur only in areas that have already been heavily disturbed by prior development and land use activities. A review of historic aerial photographs and topographic maps show that the proposed project area has been developed for commercial and residential uses dating back to at least 1914. A commercial building, most recently used as the Farmers and Merchants Bank, stood in the eastern half of the project site between 1950 and approximately 2005. The project is not anticipated to eliminate important examples of the major periods of California history or prehistory.

Alternatives [24 CFR 58.40(e); 40 CFR 1508.9]

Offsite Alternative:

Consideration of an off-site alternative is not warranted because there are no substantial adverse effects that would result from the project, or if potentially adverse effects were identified, mitigation has been required to reduce those potentially adverse effects. The project would involve development of a residential building on the specific site being studied that is currently vacant.

Reduced Project:

Reducing the number of apartment units or the square footage of non-residential space would provide less affordable public housing in the area. A reduced project with fewer units and a smaller residential population would have similar environmental impacts as the proposed project but would be slightly lower in magnitude. The magnitude of impacts would not decrease to a level that mitigation would not be required for issue areas such as noise.

Reducing the number of affordable housing units would not meet the purpose of need of the project, which includes objectives to accommodate a portion of the citywide demand for new housing located near transit, jobs, retail services, and cultural institutions.

No Action Alternative [24 CFR 58.40(e)]:

If the proposed project were not implemented, the project site would continue to be underutilized as a vacant lot and would remain a source of visual blight in the area. The No Action Alternative would result in no adverse environmental effects because there would be no construction or operational changes. However, the No Action Alternative would not support the City of Long Beach's objectives of creating affordable housing.

Summary of Findings and Conclusions:

For *Noise Control and Abatement*, the project would result in minor adverse, but mitigable, impacts. No impacts are potentially significant to the extent that an Environmental Impact Statement would be required. The project would result in primarily less than significant impacts to the environment, with beneficial socioeconomic impacts.

Mitigation Measures and Conditions [40 CFR 1505.2(c)]

Summarize below all mitigation measures adopted by the Responsible Entity to reduce, avoid, or eliminate adverse environmental impacts and to avoid non-compliance or non-conformance with the above-listed authorities and factors. These measures/conditions must be incorporated into project contracts, development agreements, and other relevant documents. The staff responsible for implementing and monitoring mitigation measures should be clearly identified in the mitigation plan.

Law, Authority, or Factor	Mitigation Measure
Noise Abatement and Control	**Mitigation Measure NOI-1: Final Acoustical Report** Prior to issuance of a building permit for residential development projects, the project applicant shall submit a final acoustical report prepared to the satisfaction of the City of Long Beach Development Services Department. The report shall demonstrate that the residential development will be sound attenuated against present and projects noise levels, including roadway, railway, aircraft, helicopter, and stationary sources (e.g., industrial, commercial, etc.) to meet City interior standards. Specifically, the report shall demonstrate that the proposed residential design will result in compliance with the 45 dBA CNEL interior noise levels, as required by the California Building Code and California Noise Insulation Standards (Title 24 and 25 of the California Code of Regulations). The

Law, Authority, or Factor	Mitigation Measure
	project applicant shall submit the final acoustical report to the City of Long Beach Development Services Department for review and approval. Upon approval by the City, the project's acoustical design features shall be incorporated into construction of the proposed development project.

Determination:

☒ **Finding of No Significant Impact** [24 CFR 58.40(g)(1); 40 CFR 1508.27]
The project will not result in a significant impact on the quality of the human environment.

☐ **Finding of Significant Impact** [24 CFR 58.40(g)(2); 40 CFR 1508.27]
The project may significantly affect the quality of the human environment.

Preparer Signature: _____ Date: 8/5/2024

Name/Title/Organization: Jenny Vick, Senior Environmental Project Manager, HDR Engineering, Inc.

Certifying Officer Signature: Christopher Koontz Date: 8/28/24

Name/Title: Director, Community Development

This original, signed document and related supporting material must be retained on file by the Responsible Entity in an Environmental Review Record (ERR) for the activity/project (ref: 24 CFR Part 58.38) and in accordance with recordkeeping requirements for the HUD program(s).

Attachment 1. Airport Hazards Worksheet

Airport Hazards (CEST and EA)

General policy	Legislation	Regulation
It is HUD's policy to apply standards to prevent incompatible development around civil airports and military airfields.		24 CFR Part 51 Subpart D
References		
https://www.hudexchange.info/environmental-review/airport-hazards		

1. **To ensure compatible land use development, you must determine your site's proximity to civil and military airports. Is your project within 15,000 feet of a military airport or 2,500 feet of a civilian airport?**

   ☒No → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map showing that the site is not within the applicable distances to a military or civilian airport.*

   ☐Yes → *Continue to Question 2.*

2. **Is your project located within a Runway Potential Zone/Clear Zone (RPZ/CZ) or Accident Potential Zone (APZ)?**

   ☐Yes, project is in an APZ → *Continue to Question 3.*

   ☐Yes, project is an RPZ/CZ → *Project cannot proceed at this location.*

   ☐No, project is not within an APZ or RPZ/CZ

   → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map showing that the site is not within either zone.*

3. **Is the project in conformance with DOD guidelines for APZ?**

   ☐Yes, project is consistent with DOD guidelines without further action.

   Explain how you determined that the project is consistent:

   → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documentation supporting this determination.*

☐No, the project cannot be brought into conformance with DOD guidelines and has not been approved. → *Project cannot proceed at this location.*

☐Project is not consistent with DOD guidelines, but it has been approved by Certifying Officer or HUD Approving Official.

Explain approval process:

If mitigation measures have been or will be taken, explain in detail the proposed measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation.

→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documentation supporting this determination.*

<u>Worksheet Summary</u>

Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

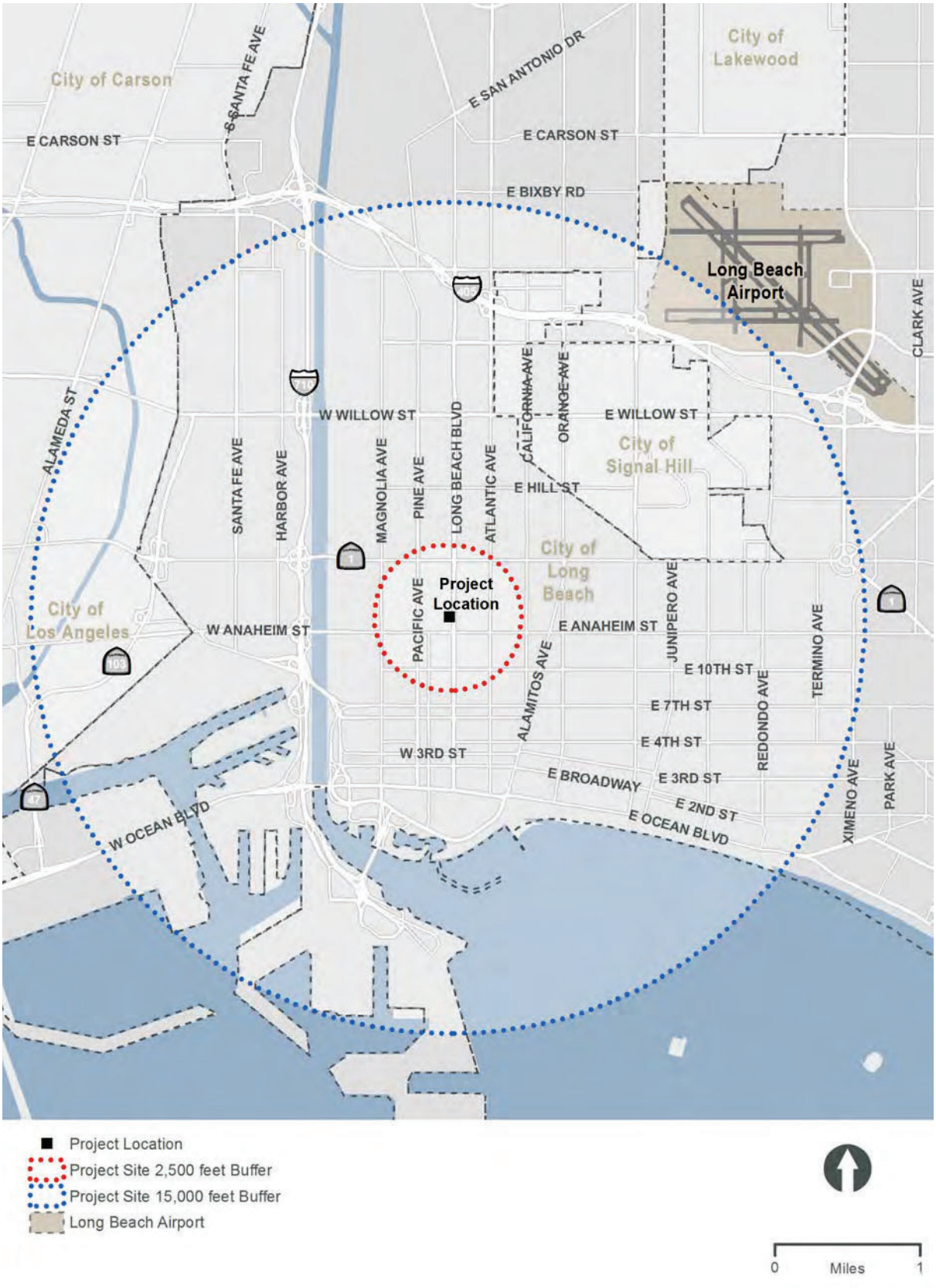
As shown in Figure 1 below, the project site is not within 2,500 feet of a civilian airport or 15,000 feet of a military airport. The Long Beach Airport is a public airport located more than 2 miles northeast of the project site.

Are formal compliance steps or mitigation required?

☐ Yes

☒ No

Figure 1 Airports within Project Vicinity



Attachment 2. Flood Insurance Worksheet

Flood Insurance (CEST and EA)

General requirements	Legislation	Regulation
Certain types of federal financial assistance may not be used in floodplains unless the community participates in National Flood Insurance Program and flood insurance is both obtained and maintained.	Flood Disaster Protection Act of 1973 as amended (42 USC 4001-4128)	24 CFR 50.4(b)(1) and 24 CFR 58.6(a) and (b); 24 CFR 55.1(b).
Reference		
https://www.hudexchange.info/environmental-review/flood-insurance		

1. **Does this project involve financial assistance for construction, rehabilitation, or acquisition of a mobile home, building, or insurable personal property?**

   ☒No. This project does not require flood insurance or is excepted from flood insurance. → *Continue to the Worksheet Summary.*

   ☐Yes → *Continue to Question 2.*

2. **Provide a FEMA/FIRM map showing the site.**

   The Federal Emergency Management Agency (FEMA) designates floodplains. The FEMA Map Service Center provides this information in the form of FEMA Flood Insurance Rate Maps (FIRMs). For projects in areas not mapped by FEMA, use the best available information to determine floodplain information. Include documentation, including a discussion of why this is the best available information for the site. Provide FEMA/FIRM floodplain zone designation, panel number, and date within your documentation.

   Is the structure, part of the structure, or insurable property located in a FEMA-designated Special Flood Hazard Area?

   ☐No → *Continue to the Worksheet Summary.*

   ☐Yes → *Continue to Question 3.*

3. **Is the community participating in the National Flood Insurance Program *or* has less than one year passed since FEMA notification of Special Flood Hazards?**

   ☐Yes, the community is participating in the National Flood Insurance Program.

   For loans, loan insurance or loan guarantees, flood insurance coverage must be continued for the term of the loan. For grants and other non-loan forms of financial assistance, flood insurance coverage must be continued for the life of the building irrespective of the transfer of ownership. The amount of coverage must equal the total project cost or the maximum coverage limit of the National Flood Insurance Program, whichever is less

Provide a copy of the flood insurance policy declaration or a paid receipt for the current annual flood insurance premium and a copy of the application for flood insurance.

→ *Continue to the Worksheet Summary.*

☐Yes, less than one year has passed since FEMA notification of Special Flood Hazards.
If less than one year has passed since notification of Special Flood Hazards, no flood Insurance is required.

→ *Continue to the Worksheet Summary.*

☐No. The community is not participating, or its participation has been suspended.

Federal assistance may not be used at this location. Cancel the project at this location.

Worksheet Summary

Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

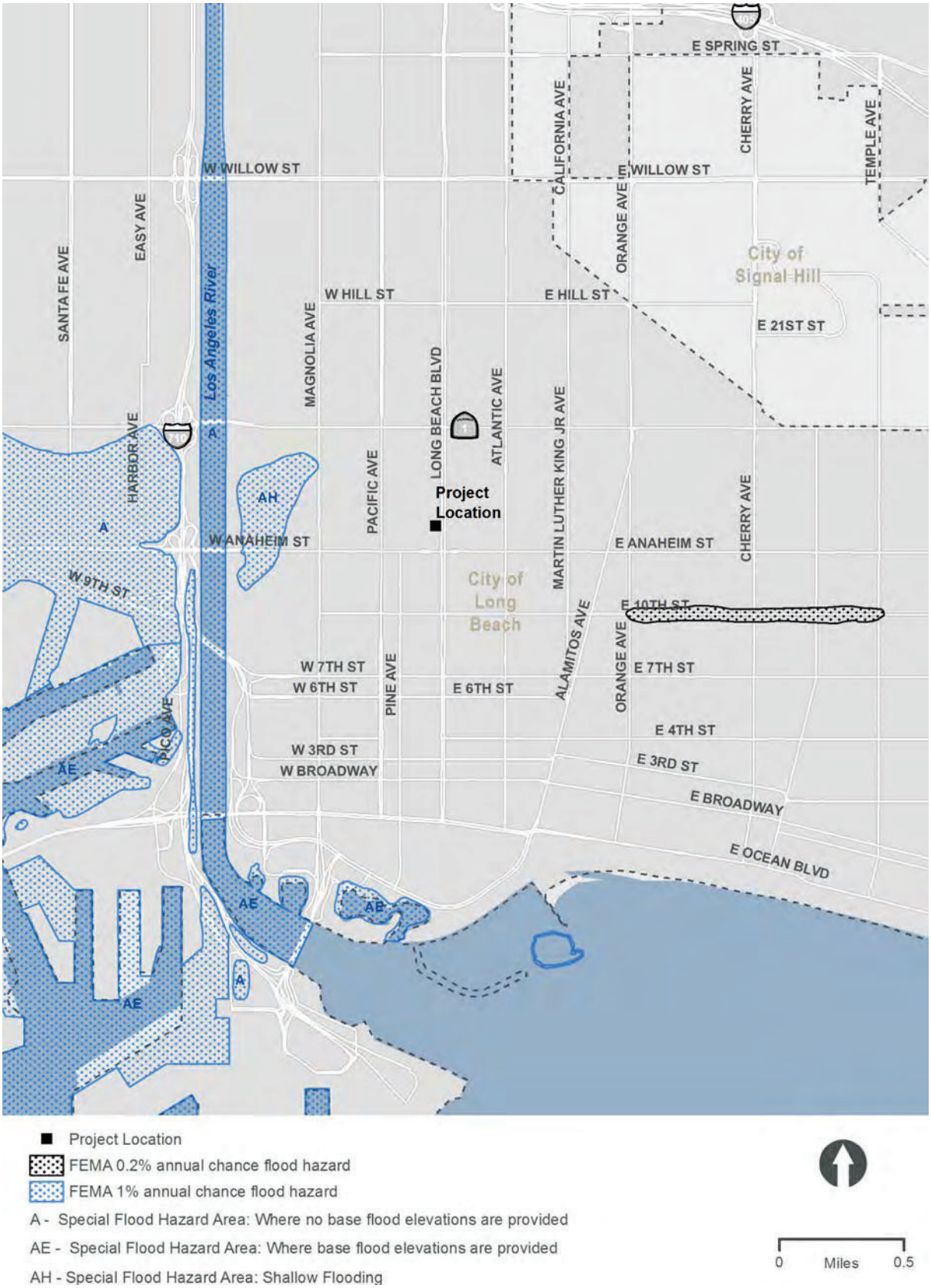
As show in Figure 1 below, the project site is not located within a FEMA designation 100-year floodplain or 500-year floodplain identified in FEMA Flood Insurance Rate Map panel 06037C1962F.

Are formal compliance steps or mitigation required?

☐ Yes

☒ No

Figure 1 Fe er ergency n ge ent Agency F oo nsur nce te p



Attachment 3. Air Quality Worksheet

Air Quality (CEST and EA)

General Requirements	Legislation	Regulation
The Clean Air Act is administered by the U.S. Environmental Protection Agency (EPA), which sets national standards on ambient pollutants. In addition, the Clean Air Act is administered by States, which must develop State Implementation Plans (SIPs) to regulate their state air quality. Projects funded by HUD must demonstrate that they conform to the appropriate SIP.	Clean Air Act (42 USC 7401 et seq.) as amended particularly Section 176(c) and (d) (42 USC 7506(c) and (d))	40 CFR Parts 6, 51 and 93
Reference		
https://www.hudexchange.info/environmental-review/air-quality		

Scope of Work

1. **Does your project include new construction or conversion of land use facilitating the development of public, commercial, or industrial facilities OR five or more dwelling units?**

   ☒ Yes

   → *Continue to Question 2.*

   ☐ No

   Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination.

Air Quality Attainment Status of Project's County or Air Quality Management District

2. **Is your project's air quality management district or county in non-attainment or maintenance status for any criteria pollutants?**
   Follow the link below to determine compliance status of project county or air quality management district:
   http://www.epa.gov/oaqps001/greenbk/

   ☐ No, project's county or air quality management district is in attainment status for all criteria pollutants

   → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination.*

   ☒ Yes, project's management district or county is in non-attainment or maintenance status for one or more criteria pollutants.

Describe the findings:

The U.S. Environmental Protection Agency has classified the South Coast Air Basin as attainment/maintenance for CO, PM_{10}, and NO_2 and nonattainment for O_3 and $PM_{2.5}$. In addition, the Los Angeles County portion of the SCAB is in nonattainment for lead.

→ *Continue to Question 3.*

3. **Determine the <u>estimated emissions levels of your project for each of those criteria pollutants</u> that are in non-attainment or maintenance status on your project area. Will your project exceed any of the *de minimis or threshold* emissions levels of non-attainment and maintenance level pollutants or exceed the screening levels established by the state or air quality management district?**

   ☒ No, the project will not exceed *de minimis* or threshold emissions levels or screening levels

   → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Explain how you determined that the project would not exceed de minimis or threshold emissions.*

   ☐ Yes, the project exceeds *de minimis* emissions levels or screening levels.

   → *Continue to Question 4. Explain how you determined that the project would not exceed de minimis or threshold emissions in the Worksheet Summary.*

4. **For the project to be brought into compliance with this section, all adverse impacts must be mitigated. Explain in detail the exact measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation.**

Worksheet Summary

Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

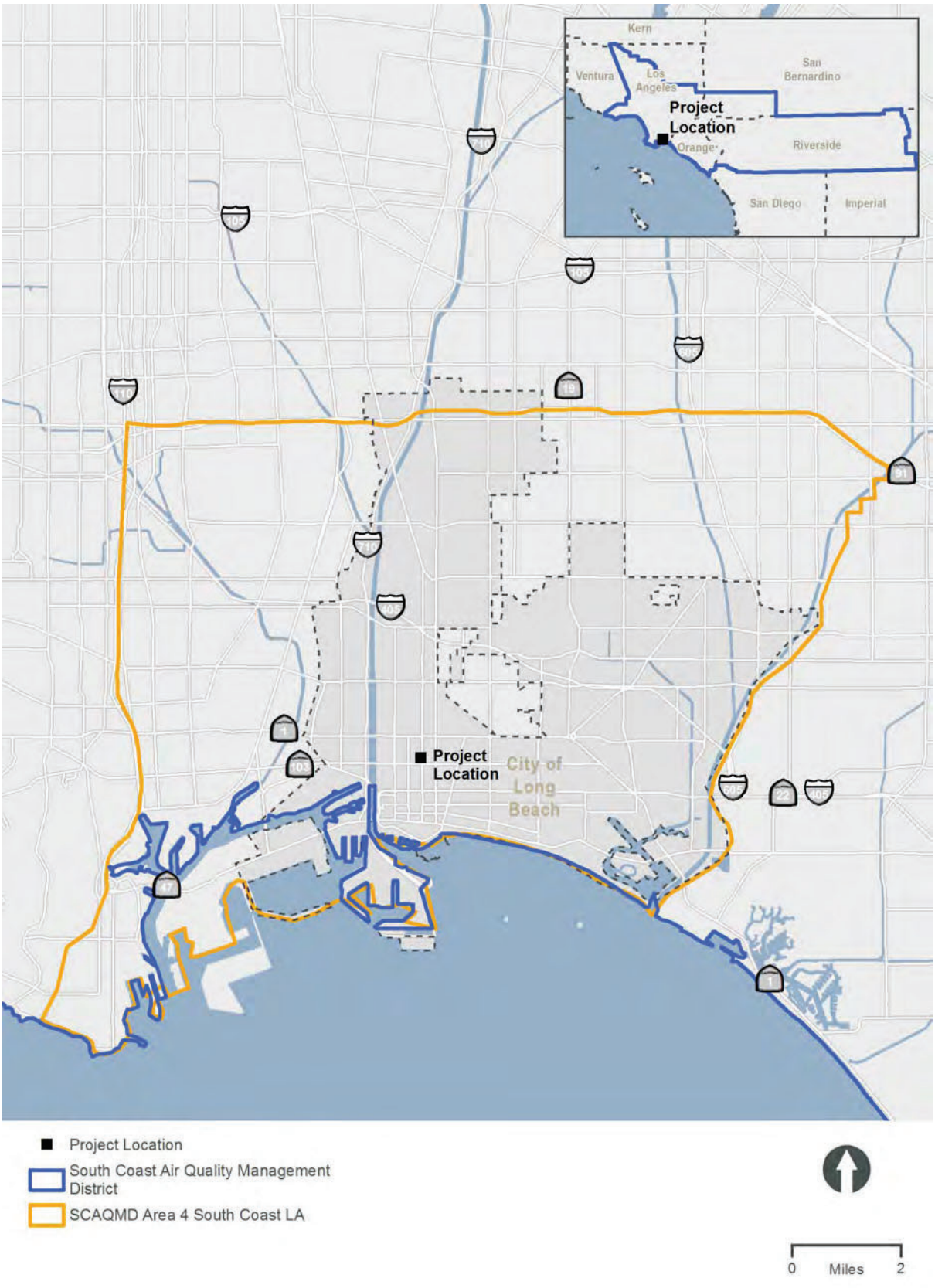
Information contained in this worksheet is summarized from the *Air Quality and Greenhouse Gas Technical Memorandum* prepared for the 14th & Long Beach Boulevard Affordable Housing Project and the Record of Non-Applicability for Clean Air Act Conformity prepared for this EA. Updated CalEEMod calculations were performed in July 2024. The project is in compliance with the Federal Clean Air Act. Emissions criteria air pollutant were estimated using existing conditions information, project construction details, and project operations information, as well as a combination of emissions factors from the following sources:

Are formal compliance steps or mitigation required?

☐ Yes

☒ No

Figure 1 Air Quality Management District



Attachment 3a. Air Quality Report

March 2021 | Air Quality and Greenhouse Gas Emissions Technical Study

14th & Long Beach Boulevard Affordable Housing Project

for Pacific6 Enterprises

Prepared for:

Pacific6 Enterprises
Contact: John C. Molina
211 E. Ocean Blvd., Suite 550
Long Beach, California 90802
562.600.7226

Prepared by:

PlaceWorks
Contact: Nicole Vermilion, Principal
3 MacArthur Place, Suite 1100
Santa Ana, California 92707
714.966.9220
info@placeworks.com
www.placeworks.com

PLACEWORKS

Table of Contents

Section **Page**

1. INTRODUCTION 1
1.1 PROJECT LOCATION 1
1.2 PROJECT DESCRIPTION 1
1.3 MODELING METHODOLOGY 2
2. REGULATORY SETTING 5
2.1 AIR QUALITY 5
2.2 GREENHOUSE GAS EMISSIONS 15
3. ENVIRONMENTAL SETTING 35
3.1 SOUTH COAST AIR BASIN 35
3.2 SoCAB AREA DESIGNATIONS 36
3.3 SoCAB MULTIPLE AIR TOXICS EXPOSURE STUDY IV 37
3.4 EXISTING AMBIENT AIR QUALITY 38
3.5 EXISTING EMISSIONS 38
3.6 SENSITIVE RECEPTORS 39
4. CEQA THRESHOLDS 41
4.1 CEQA APPENDIX G THRESHOLDS 41
4.2 SOUTH COAST AQMD SIGNIFICANCE CRITERIA 41
5. ENVIRONMENTAL IMPACTS 49
5.1 METHODOLOGY 49
5.2 ENVIRONMENTAL IMPACTS 51
5.3 ADOPTED MITIGATION MEASURES APPLICABLE TO THE PROPOSED PROJECT 66
6. REFERENCES 71

APPENDICES

Appendix A. Modeling Summaries and Assumptions
Appendix B. CalEEMod Outputs
Appendix C. Screening-Level LST Worksheets

Table of Contents

List of Figures

Figure		Page
Figure 1	Aerial Photograph	3

List of Tables

Table		Page
Table 1	Ambient Air Quality Standards for Criteria Pollutants	6
Table 2	Criteria Air Pollutant Health Effects Summary	11
Table 3	GHG Emissions and Their Relative Global Warming Potential Compared to CO_2	16
Table 4	Summary of GHG Emissions Risks to California	19
Table 5	2017 Climate Change Scoping Plan Emissions Reductions Gap	25
Table 6	2017 Climate Change Scoping Plan Emissions Change by Sector	25
Table 7	Attainment Status of Criteria Pollutants in the South Coast Air Basin	37
Table 8	Ambient Air Quality Monitoring Summary	38
Table 9	South Coast AQMD Regional Significance Thresholds	42
Table 10	South Coast AQMD Localized Significance Thresholds	45
Table 11	South Coast AQMD Screening-Level Construction Localized Significance Thresholds	45
Table 12	South Coast AQMD Toxic Air Contaminants Incremental Risk Thresholds	46
Table 13	Construction Activities, Phasing, and Equipment	51
Table 14	Maximum Daily Regional Construction Emissions	54
Table 15	Maximum Daily Regional Operation Emissions	56
Table 16	Construction Emissions Compared to the Screening-Level LSTs	57
Table 17	Project GHG Emissions Inventory	61
Table 18	Consistency with City of Long Beach Sustainable City Action Plan	63
Table 19	Consistency with City of Long Beach Proposed Climate Action and Adaptation Plan	64

1. Introduction

This Air Quality and Greenhouse Gas (GHG) Emissions Technical Study (technical study) is prepared for Pacific6 Enterprises to evaluate the potential air quality and GHG emissions impacts pursuant to the California Environmental Quality Act (CEQA) from the development and operation of the proposed residential mixed-use buildings (Proposed Project) in the City of Long Beach. Specifically, the technical study is prepared to support an Addendum to the Midtown Specific Plan Environmental Impact Report certified in 2016 (2016 Certified EIR). For purposes of this technical study, buildout of the Midtown Specific Plan is the Approved Project and serves as the CEQA baseline for the Addendum. The Approved Project allows up to 401 units and 319,000 square feet of commercial uses in Transit Node District 7 (TND7).[1] Additionally, it also contemplates partial closure of 14th Street for parklets.

1.1 PROJECT LOCATION

The 1.54-acre project site is on 14th Street, west of Long Beach Boulevard, in the City of Long Beach (City), Los Angeles County, California, and is within TND7 of the Midtown Specific Plan. As shown in Figure 1, *Aerial Photograph*, the site is bounded by industrial uses to the north, multifamily residential to the west, industrial uses and Long Beach Boulevard to the east, and retail use and 14th Street to the south. The 1.09-acre portion of the project site north of East 14th Street is currently vacant, paved, and used as parking. The 0.45-acre portion of the project site south of East 14th Street, formerly occupied by a recently demolished fast-food building, is also currently vacant.

1.2 PROJECT DESCRIPTION

Pacific6 Enterprises is proposing to develop a mixed-use and mixed-income affordable housing community on the approximately 1.54-acre project site. The Proposed Project would develop two buildings (the East Building and West Building) with a cumulative area of 183,075 building square feet that would provide a total of 160 dwelling units (DU), 4,000 square feet of commercial space, and up to 104 parking spaces over 1.09 acres of the project site. The East Building would be constructed first. It would be eight levels and 116,645 square feet. This structure would traverse both the east and west portions of the 1.09-acre project site and would include parking for both the East and West Buildings. The East Building includes 35,365 square feet of parking on the ground floor and level two (L2). The East Building would provide 85 dwelling units on the second (L2) through seventh levels (L7). The West Building would be constructed on the eastern portion of the site, on top of the ground floor of the East Building (i.e., above the western-portion parking garage). It would include five levels (four levels on top of the parking garage) and be 66,430 square feet and encompass 4,000 square feet of commercial uses on the ground floor. The West Building would provide 75 dwelling units on the second (L2)

[1] Overall, the Transit Node District supports compact, transit-oriented mixed-use and residential development centered on the three Metro Blue Line stations. This district is characterized by intense building types, including mid- and low-rise podium, mixed-use flex blocks, liners, stacked flats, and live-work units.

through fifth levels (L5). Overall, both proposed buildings would be all-electric buildings, with no combustion sources used for space heating, water heating, or cooking. In addition, a 133-kilowatt rooftop photovoltaic (PV) system would be installed, which would provide 205,954 kilowatt hours per year (kWh/yr) of renewable electricity for the Proposed Project.

The Proposed Project also includes development of the 14th Street Parklet on the remaining 0.45-acre site abutting the southeast corner of the project site. This portion of the project requires coordination with the City's Parks, Recreation and Marine; Development Services; and Public Works Departments. Creation of the park site would expand the existing 14th Street Park and require vacating a portion of 14th Street along the project boundary to expand the site. The passive park would include a wood pavilion with stage, picnic tables, and a concrete plaza.

Transit improvements include a new enhanced bus island at the northwest corner of 14th Street and Long Beach Boulevard to be used by Long Beach Transit, Metro, and other regional transit providers. The bus island would include a transit shelter, furniture, landscaping, and real-time transit schedule information adjacent to the expanded 14th Street Park and ground-floor retail space of the Project. Additionally, the proposed parklet would retain a 20-foot-wide paved pathway on the north side that would support bicycle movement and emergency vehicle access.

1.3 MODELING METHODOLOGY

This analysis evaluates the impacts of the project based on the significance criteria of the South Coast Air Quality Management District (South Coast AQMD). The analysis focuses on air pollution from regional emissions and localized pollutant concentrations. "Emission" refers to the actual quantity of pollutant, measured in pounds per day. "Concentration" refers to the amount of pollutant material per volumetric unit of air. Concentrations are measured in parts per million (ppm) or micrograms per cubic meter ($\mu g/m^3$). Transportation emissions are based on average daily vehicle trips for the Proposed Project, provided by Fehr and Peers. Emissions of the Proposed Project are modeled using the California Emissions Estimator Model (CalEEMod), Version 2016.3.2.25. Criteria air pollutant and GHG emissions modeling for construction and operational phases of the project are in the appendices of this technical report.

Figure 1 - Aerial Photograph



Project Boundary

0 100
Scale (Feet)

Source: Nearmap, 2020

1. Introduction

This page intentionally left blank.

2. Regulatory Setting

2.1 AIR QUALITY

Ambient air quality standards (AAQS) have been adopted at state and federal levels for criteria air pollutants. In addition, both the state and federal governments regulate the release of toxic air contaminants (TACs). The City of Long Beach is in the South Coast Air Basin (SoCAB) and is subject to the rules and regulations imposed by South Coast AQMD, the California AAQS adopted by the California Air Resources Board (CARB), and the National AAQS adopted by the United States Environmental Protection Agency (EPA). Federal, state, regional, and local laws, regulations, plans, or guidelines that are potentially applicable to the Proposed Project are summarized below.

2.1.1 Federal and State Laws

2.1.1.1 AMBIENT AIR QUALITY STANDARDS

The Clean Air Act was passed in 1963 by the US Congress and has been amended several times. The 1970 Clean Air Act amendments strengthened previous legislation and laid the foundation for the regulatory scheme of the 1970s and 1980s. In 1977, Congress again added several provisions, including nonattainment requirements for areas not meeting National AAQS and the Prevention of Significant Deterioration program. The 1990 amendments represent the latest in a series of federal efforts to regulate the protection of air quality in the United States. The Clean Air Act allows states to adopt more stringent standards or to include other pollutants. The California Clean Air Act, signed into law in 1988, requires all areas of the state to achieve and maintain the California AAQS by the earliest practical date. The California AAQS tend to be more restrictive than the National AAQS.

The National and California AAQS are the levels of air quality considered to provide a margin of safety in the protection of the public health and welfare. They are designed to protect "sensitive receptors" most susceptible to further respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. Healthy adults can tolerate occasional exposure to air pollutant concentrations considerably above these minimum standards before adverse effects are observed.

Both California and the federal government have established health-based AAQS for seven air pollutants, which are shown in Table 1, *Ambient Air Quality Standards for Criteria Pollutants*. These pollutants are ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), coarse inhalable particulate matter (PM_{10}), fine inhalable particulate matter ($PM_{2.5}$), and lead (Pb). In addition, the state has set standards for sulfates, hydrogen sulfide, vinyl chloride, and visibility-reducing particles.

2. Regulatory Setting

Table 1 Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard[1]	Federal Primary Standard[2]	Major Pollutant Sources
Ozone (O_3)[3]	1 hour	0.09 ppm	*	Motor vehicles, paints, coatings, and solvents.
	8 hours	0.070 ppm	0.070 ppm	
Carbon Monoxide (CO)	1 hour	20 ppm	35 ppm	Internal combustion engines, primarily gasoline-powered motor vehicles.
	8 hours	9.0 ppm	9 ppm	
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppm	0.053 ppm	Motor vehicles, petroleum-refining operations, industrial sources, aircraft, ships, and railroads.
	1 hour	0.18 ppm	0.100 ppm	
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	*	0.030 ppm	Fuel combustion, chemical plants, sulfur recovery plants, and metal processing.
	1 hour	0.25 ppm	0.075 ppm	
	24 hours	0.04 ppm	0.14 ppm[2]	
Respirable Coarse Particulate Matter (PM_{10})	Annual Arithmetic Mean	20 µg/m^3	*	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	50 µg/m^3	150 µg/m^3	
Respirable Fine Particulate Matter ($PM_{2.5}$)[4]	Annual Arithmetic Mean	12 µg/m^3	12 µg/m^3	Dust and fume-producing construction, industrial, and agricultural operations, combustion, atmospheric photochemical reactions, and natural activities (e.g., wind-raised dust and ocean sprays).
	24 hours	*	35 µg/m^3	
Lead (Pb)	30-Day Average	1.5 µg/m^3	*	Present source: lead smelters, battery manufacturing & recycling facilities. Past source: combustion of leaded gasoline.
	Calendar Quarter	*	1.5 µg/m^3	
	Rolling 3-Month Average	*	0.15 µg/m^3	
Sulfates (SO_4)[5]	24 hours	25 µg/m^3	*	Industrial processes.
Visibility Reducing Particles	8 hours	ExCo =0.23/km visibility of 10≥ miles	*	Visibility-reducing particles consist of suspended particulate matter, which is a complex mixture of tiny particles that consists of dry solid fragments, solid cores with liquid coatings, and small droplets of liquid. These particles vary greatly in shape, size and chemical composition, and can be made up of many different materials such as metals, soot, soil, dust, and salt.

Table 1 Ambient Air Quality Standards for Criteria Pollutants

Pollutant	Averaging Time	California Standard[1]	Federal Primary Standard[2]	Major Pollutant Sources
Hydrogen Sulfide	1 hour	0.03 ppm	*	Hydrogen sulfide (H_2S) is a colorless gas with the odor of rotten eggs. It is formed during bacterial decomposition of sulfur-containing organic substances. Also, it can be present in sewer gas and some natural gas, and can be emitted as the result of geothermal energy exploitation.
Vinyl Chloride	24 hour	0.01 ppm	*	Vinyl chloride (chloroethene), a chlorinated hydrocarbon, is a colorless gas with a mild, sweet odor. Most vinyl chloride is used to make polyvinyl chloride (PVC) plastic and vinyl products. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites, due to microbial breakdown of chlorinated solvents.

Source: CARB 2016.
Notes: ppm = parts per million; $\mu g/m^3$ = micrograms per cubic meter
* Standard has not been established for this pollutant/duration by this entity.
1 California standards for O_3, CO (except 8-hour Lake Tahoe), SO_2 (1 and 24 hour), NO_2, and particulate matter (PM_{10}, $PM_{2.5}$, and visibility reducing particles) are values that are not to be exceeded. All others are not to be equaled or exceeded. California AAQS are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.
2 National standards (other than O_3, PM, and those based on annual arithmetic mean) are not to be exceeded more than once a year. The O_3 standard is attained when the fourth-highest 8-hour concentration measured at each site in a year, averaged over three years, is equal to or less than the standard. For PM_{10}, the 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 $\mu g/m^3$ is equal to or less than one. For $PM_{2.5}$, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over three years, are equal to or less than the standard.
3 On October 1, 2015, the national 8-hour ozone primary and secondary standards were lowered from 0.075 to 0.070 ppm.
4 On December 14, 2012, the national annual $PM_{2.5}$ primary standard was lowered from 15 $\mu g/m^3$ to 12.0 $\mu g/m^3$. The existing national 24-hour $PM_{2.5}$ standards (primary and secondary) were maintained at 35 $\mu g/m^3$, as was the annual secondary standard of 15 $\mu g/m^3$. The existing 24-hour PM_{10} standards (primary and secondary) of 150 $\mu g/m^3$ also were maintained. The form of the annual primary and secondary standards is the annual mean averaged over 3 years.
5 On June 2, 2010, a new 1-hour SO_2 standard was established, and the existing 24-hour and annual primary standards were revoked. The 1-hour national standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the 1-hour national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is identical to 0.075 ppm.

California has also adopted a host of other regulations that reduce criteria pollutant emissions, including:

- Assembly Bill (AB) 1493: Pavley Fuel Efficiency Standards
- Title 20 California Code of Regulations (CCR): Appliance Energy Efficiency Standards
- Title 24, Part 6, CCR: Building Energy Efficiency Standards
- Title 24, Part 11, CCR: Green Building Standards Code

2.1.1.2 AIR POLLUTANTS OF CONCERN

Criteria Air Pollutants

The air pollutants emitted into the ambient air by stationary and mobile sources are regulated by federal and state law. Air pollutants are categorized as primary or secondary pollutants. Primary air pollutants are those that are emitted directly from sources. Carbon monoxide (CO), volatile organic compounds (VOC), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), coarse inhalable particulate matter (PM_{10}), fine inhalable particulate matter ($PM_{2.5}$),

2. Regulatory Setting

and lead (Pb) are primary air pollutants. Of these, CO, SO_2, NO_2, PM_{10}, and $PM_{2.5}$ are "criteria air pollutants," which means that ambient air quality standards (AAQS) have been established for them. VOC and oxides of nitrogen (NO_x) are air pollutant precursors that form secondary criteria pollutants through chemical and photochemical reactions in the atmosphere. Ozone (O_3) and NO_2 are the principal secondary pollutants. A description of each of the primary and secondary criteria air pollutants and their known health effects is presented below.

- **Carbon Monoxide (CO)** is a colorless, odorless, toxic gas produced by incomplete combustion of carbon substances, such as gasoline or diesel fuel. CO is a primary criteria air pollutant. CO concentrations tend to be the highest during winter mornings with little to no wind, when surface-based inversions trap the pollutant at ground levels. Because CO is emitted directly from internal combustion, engines and motor vehicles operating at slow speeds are the primary source of CO in the SoCAB. The highest ambient CO concentrations are generally found near traffic-congested corridors and intersections. The primary adverse health effect associated with CO is interference with normal oxygen transfer to the blood, which may result in tissue oxygen deprivation (South Coast AQMD 2005; USEPA 2021a). The SoCAB is designated under the California and National AAQS as being in attainment of CO criteria levels (CARB 2021a).

- **Volatile Organic Compounds (VOC)** are compounds composed primarily of atoms of hydrogen and carbon. Internal combustion associated with motor vehicle usage is the major source of hydrocarbons. Other sources of VOCs include evaporative emissions associated with the use of paints and solvents, the application of asphalt paving, and the use of household consumer products such as aerosols. There are no ambient air quality standards established for VOCs. However, because they contribute to the formation of ozone (O_3), South Coast AQMD has established a significance threshold for this pollutant (South Coast AQMD 2005).

- **Nitrogen Oxides (NO_x)** are a byproduct of fuel combustion and contribute to the formation of O_3, PM_{10}, and $PM_{2.5}$. The two major forms of NO_x are nitric oxide (NO) and nitrogen dioxide (NO_2). The principal form of NO_2 produced by combustion is NO, but NO reacts with oxygen to form NO_2, creating the mixture of NO and NO_2 commonly called NO_x. NO_2 acts as an acute irritant and, in equal concentrations, is more injurious than NO. At atmospheric concentrations, however, NO_2 is only potentially irritating. There is some indication of a relationship between NO_2 and chronic pulmonary fibrosis. Some increase in bronchitis in children (two and three years old) has also been observed at concentrations below 0.3 part per million (ppm). NO_2 absorbs blue light; the result is a brownish-red cast to the atmosphere and reduced visibility. NO is a colorless, odorless gas formed from atmospheric nitrogen and oxygen when combustion takes place under high temperature and/or high pressure (South Coast AQMD 2005; USEPA 2021a). The SoCAB is designated as an attainment area for NO_2 under the National AAQS California AAQS (CARB 2021a).

- **Sulfur Dioxide (SO_2)** is a colorless, pungent, irritating gas formed by the combustion of sulfurous fossil fuels. It enters the atmosphere as a result of burning high-sulfur-content fuel oils and coal and from chemical processes at chemical plants and refineries. Gasoline and natural gas have very low sulfur content and do not release significant quantities of SO_2 (South Coast AQMD 2005; USEPA 2021a). When sulfur

dioxide forms sulfates (SO_4) in the atmosphere, together these pollutants are referred to as sulfur oxides (SO_X). Thus, SO_2 is both a primary and secondary criteria air pollutant. At sufficiently high concentrations, SO_2 may irritate the upper respiratory tract. At lower concentrations and when combined with particulates, SO_2 may do greater harm by injuring lung tissue. The SoCAB is designated as attainment under the California and National AAQS (CARB 2021a).

- **Suspended Particulate Matter (PM_{10} and $PM_{2.5}$)** consists of finely divided solids or liquids such as soot, dust, aerosols, fumes, and mists. Two forms of fine particulates are now recognized and regulated. Inhalable coarse particles, or PM_{10}, include the particulate matter with an aerodynamic diameter of 10 microns (i.e., 10 millionths of a meter or 0.0004 inch) or less. Inhalable fine particles, or $PM_{2.5}$, have an aerodynamic diameter of 2.5 microns (i.e., 2.5 millionths of a meter or 0.0001 inch) or less. Particulate discharge into the atmosphere results primarily from industrial, agricultural, construction, and transportation activities. However, wind action on arid landscapes also contributes substantially to local particulate loading (i.e., fugitive dust). Both PM_{10} and $PM_{2.5}$ may adversely affect the human respiratory system, especially in people who are naturally sensitive or susceptible to breathing problems (South Coast AQMD 2005).

  The US Environmental Protection Agency's (EPA) scientific review concluded that $PM_{2.5}$, which penetrates deeply into the lungs, is more likely than PM_{10} to contribute to health effects and at concentrations that extend well below those allowed by the current PM_{10} standards. These health effects include premature death and increased hospital admissions and emergency room visits (primarily the elderly and individuals with cardiopulmonary disease); increased respiratory symptoms and disease (children and individuals with cardiopulmonary disease such as asthma); decreased lung functions (particularly in children and individuals with asthma); and alterations in lung tissue and structure and in respiratory tract defense mechanisms (South Coast AQMD 2005). There has been emerging evidence that even smaller particulates with an aerodynamic diameter of <0.1 microns or less (i.e., ≤0.1 millionths of a meter or <0.000004 inch), known as ultrafine particulates (UFPs), have human health implications, because UFPs toxic components may initiate or facilitate biological processes that may lead to adverse effects to the heart, lungs, and other organs (South Coast AQMD 2013). However, the EPA or CARB have yet to adopt AAQS to regulate these particulates. Diesel particulate matter (DPM) is classified by the CARB as a carcinogen (CARB 1998). Particulate matter can also cause environmental effects such as visibility impairment,[2] environmental damage,[3] and aesthetic damage[4] (South Coast AQMD 2005; USEPA 2021a). The SoCAB is a nonattainment area for $PM_{2.5}$ under California and National AAQS and a nonattainment area for PM_{10} under the California AAQS (CARB 2021a).[5]

[2] $PM_{2.5}$ is the main cause of reduced visibility (haze) in parts of the United States.

[3] Particulate matter can be carried over long distances by wind and then settle on ground or water, making lakes and streams acidic; changing the nutrient balance in coastal waters and large river basins; depleting the nutrients in soil; damaging sensitive forests and farm crops; and affecting the diversity of ecosystems.

[4] Particulate matter can stain and damage stone and other materials, including culturally important objects such as statues and monuments.

[5] CARB approved the South Coast AQMD's request to redesignate the SoCAB from serious nonattainment for PM_{10} to attainment for PM_{10} under the National AAQS on March 25, 2010, because the SoCAB has not violated federal 24-hour PM_{10} standards during the period from 2004 to 2007. In June 2013, the EPA approved the State of California's request to redesignate the PM_{10} nonattainment area to attainment of the PM_{10} National AAQS, effective on July 26, 2013.

2. Regulatory Setting

- **Ozone (O_3)** is commonly referred to as "smog" and is a gas that is formed when VOCs and NO_x, both by-products of internal combustion engine exhaust, undergo photochemical reactions in the presence of sunlight. O_3 is a secondary criteria air pollutant. O_3 concentrations are generally highest during the summer months when direct sunlight, light winds, and warm temperatures create favorable conditions for the formation of this pollutant. O_3 poses a health threat to those who already suffer from respiratory diseases as well as to healthy people. Breathing O_3 can trigger a variety of health problems, including chest pain, coughing, throat irritation, and congestion. It can worsen bronchitis, emphysema, and asthma. Ground-level O_3 also can reduce lung function and inflame the linings of the lungs. Repeated exposure may permanently scar lung tissue. O_3 also affects sensitive vegetation and ecosystems, including forests, parks, wildlife refuges, and wilderness areas. In particular, O_3 harms sensitive vegetation during the growing season (South Coast AQMD 2005; USEPA 2021a). The SoCAB is designated as extreme nonattainment under the California AAQS (1-hour and 8-hour) and National AAQS (8-hour) (CARB 2021a).

- **Lead (Pb)** is a metal found naturally in the environment as well as in manufactured products. Once taken into the body, lead distributes throughout the body in the blood and accumulates in the bones. Depending on the level of exposure, lead can adversely affect the nervous system, kidney function, immune system, reproductive and developmental systems, and the cardiovascular system. Lead exposure also affects the oxygen-carrying capacity of the blood. The effects of lead most commonly encountered in current populations are neurological effects in children and cardiovascular effects in adults (e.g., high blood pressure and heart disease). Infants and young children are especially sensitive to even low levels of lead, which may contribute to behavioral problems, learning deficits, and lowered IQ (South Coast AQMD 2005; USEPA 2021a). The major sources of lead emissions have historically been mobile and industrial sources. As a result of the EPA's regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector dramatically declined by 95 percent between 1980 and 1999, and levels of lead in the air decreased by 94 percent between 1980 and 1999. Today, the highest levels of lead in air are usually found near lead smelters. The major sources of lead emissions today are ore and metals processing and piston-engine aircraft operating on leaded aviation gasoline. However, in 2008 the EPA and CARB adopted stricter lead standards, and special monitoring sites immediately downwind of lead sources recorded very localized violations of the new state and federal standards.[6] As a result of these violations, the Los Angeles County portion of the SoCAB is designated nonattainment under the National AAQS for lead (South Coast AQMD 2012; CARB 2021a). Because emissions of lead are found only in projects that are permitted by South Coast AQMD, lead is not a pollutant of concern for the project.

Table 2, *Criteria Air Pollutant Health Effects Summary*, summarizes the potential health effects associated with the criteria air pollutants.

[6] Source-oriented monitors record concentrations of lead at lead-related industrial facilities in the SoCAB, which include Exide Technologies in the City of Commerce; Quemetco, Inc., in the City of Industry; Trojan Battery Company in Santa Fe Springs; and Exide Technologies in Vernon. Monitoring conducted between 2004 through 2007 showed that the Trojan Battery Company and Exide Technologies exceed the federal standards (South Coast AQMD 2012).

Table 2 Criteria Air Pollutant Health Effects Summary

Pollutant	Health Effects	Examples of Sources
Carbon Monoxide (CO)	• Chest pain in patients with heart disease • Headache • Light-headedness • Reduced mental alertness • Impairment of fetal development • Deaths at high levels of exposure	Incomplete combustion of fuels and other carbon-containing substances, such as motor vehicle exhaust; Natural events, such as decomposition of organic matter
Ozone (O_3)	• Respiratory symptoms • Worsening of lung disease leading to premature death • Damage to lung tissue • Crop, forest and ecosystem damage • Damage to a variety of materials, including rubber, plastics, fabrics, paint and metals	Atmospheric reaction of organic gases with nitrogen oxides in sunlight
Nitrogen Dioxide (NO_2)	• Lung irritation • Enhanced allergic responses • Aggravation of respiratory illness	Motor vehicle exhaust; High-temperature stationary combustion; Atmospheric reactions
Particulate Matter (PM_{10} & $PM_{2.5}$)	• Premature death • Hospitalization for worsening of cardiovascular disease • Hospitalization for respiratory disease • Asthma-related emergency room visits • Increased symptoms, increased inhaler usage • Reduced visibility and material soiling	Stationary combustion of solid fuels; Construction activities; Industrial processes; Atmospheric chemical reactions
Sulfur Dioxide (SO_2)	• Aggravation of respiratory disease (e.g., asthma and emphysema) • Reduced lung function	Combustion of sulfur-containing fossil fuels, smelting of sulfur-bearing metal ores, and industrial processes
Lead (Pb)	• Behavioral and learning disabilities in children • Nervous system impairment • Brain and kidney damage	Contaminated soil

Source: CARB 2021; South Coast AQMD 2005.

Toxic Air Contaminants

The public's exposure to air pollutants classified as toxic air contaminants (TACs) is a significant environmental health issue in California. In 1983, the California Legislature enacted a program to identify the health effects of TACs and to reduce exposure to these contaminants to protect the public health. The California Health and Safety Code defines a TAC as "an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health." A substance that is listed as a hazardous air pollutant (HAP) pursuant to Section 112(b) of the federal Clean Air Act (42 United States Code §7412[b]) is a toxic air contaminant. Under state law, the California Environmental Protection Agency (Cal/EPA), acting through CARB, is authorized to identify a substance as a TAC if it determines that the substance is an air pollutant that may cause or contribute to an increase in mortality or to an increase in serious illness, or may pose a present or potential hazard to human health.

2. Regulatory Setting

California regulates TACs primarily through Assembly Bill (AB) 1807 (Tanner Air Toxics Act) and AB 2588 (Air Toxics "Hot Spot" Information and Assessment Act of 1987). The Tanner Air Toxics Act sets forth a formal procedure for CARB to designate substances as TACs. Once a TAC is identified, CARB adopts an "airborne toxics control measure" for sources that emit designated TACs. If there is a safe threshold for a substance (i.e., a point below which there is no toxic effect), the control measure must reduce exposure to below that threshold. If there is no safe threshold, the measure must incorporate toxics best available control technology to minimize emissions. To date, CARB has established formal control measures for 11 TACs, all of which are identified as having no safe threshold.

Air toxics from stationary sources are also regulated in California under the Air Toxics "Hot Spot" Information and Assessment Act of 1987. Under AB 2588, toxic air contaminant emissions from individual facilities are quantified and prioritized by the air quality management district or air pollution control district. High priority facilities are required to perform a health risk assessment and, if specific thresholds are exceeded, are required to communicate the results to the public in the form of notices and public meetings.

By the December 1999 update to the TAC list, CARB had designated 244 compounds as TACs (CARB 1999). Subsequently, the list was updated in 2007 to include Environmental Tobacco Smoke (CARB 2021c). Additionally, CARB has implemented control measures for a number of compounds that pose high risks and show potential for effective control. The majority of the estimated health risks from TACs can be attributed to relatively few compounds, the most important being particulate matter from diesel-fueled engines.

Diesel Particulate Matter

In 1998, CARB identified particulate emissions from diesel-fueled engines (diesel PM) as a TAC. Previously, the individual chemical compounds in diesel exhaust were considered TACs. Almost all diesel exhaust particle mass is 10 microns or less in diameter. Because of their extremely small size, these particles can be inhaled and eventually trapped in the bronchial and alveolar regions of the lung.

CARB has promulgated the following specific rules to limit TAC emissions:

- 13 CCR Chapter 10, Section 2485, Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling
- 13 CCR Chapter 10, Section 2480, Airborne Toxic Control Measure to Limit School Bus Idling and Idling at Schools
- 13 CCR Section 2477 and Article 8, Airborne Toxic Control Measure for In-Use Diesel-Fueled Transport Refrigeration Units (TRU) and TRU Generator Sets and Facilities Where TRUs Operate

2.1.2 Air Quality Management Planning

South Coast AQMD is the agency responsible for improving air quality in the SoCAB and ensuring that the National and California AAQS are attained and maintained. South Coast AQMD is responsible for preparing

the air quality management plan (AQMP) for the SoCAB in coordination with the Southern California Association of Governments (SCAG). Since 1979, a number of AQMPs have been prepared.

2.1.2.1 2016 AQMP

On March 3, 2017, South Coast AQMD adopted the 2016 AQMP as an update to the 2012 AQMP. The 2016 AQMP addresses strategies and measures to attain the following National AAQS:

- 2008 National 8-hour ozone standard by 2031,
- 2012 National annual $PM_{2.5}$ standard by 2025[7],
- 2006 National 24-hour $PM_{2.5}$ standard by 2019,
- 1997 National 8-hour ozone standard by 2023, and the
- 1979 National 1-hour ozone standard by year 2022.

It is projected that total NO_X emissions in the SoCAB would need to be reduced to 150 tons per day (tpd) by year 2023 and to 100 tpd in year 2031 to meet the 1997 and 2008 federal 8-hour ozone standards. The strategy to meet the 1997 federal 8-hour ozone standard would also lead to attaining the 1979 federal 1-hour ozone standard by year 2022 (South Coast AQMD 2017), which requires reducing NO_X emissions in the SoCAB to 250 tpd. This is approximately 45 percent additional reductions above existing regulations for the 2023 ozone standard and 55 percent additional reductions above existing regulations to meet the 2031 ozone standard.

Reducing NO_X emissions would also reduce $PM_{2.5}$ concentrations in the SoCAB. However, as the goal is to meet the 2012 federal annual $PM_{2.5}$ standard no later than year 2025, South Coast AQMD is seeking to reclassify the SoCAB from "moderate" to "serious" nonattainment under this federal standard. A "moderate" non-attainment would require meeting the 2012 federal standard by no later than 2021.

Overall, the 2016 AQMP is composed of stationary and mobile-source emission reductions from regulatory control measures, incentive-based programs, co-benefits from climate programs, mobile-source strategies, and reductions from federal sources such as aircrafts, locomotives, and ocean-going vessels. Strategies outlined in the 2016 AQMP would be implemented in collaboration between CARB and the EPA (South Coast AQMD 2017).

2.1.2.2 LEAD STATE IMPLEMENTATION PLAN

In 2008, the EPA designated the Los Angeles County portion of the SoCAB as a nonattainment area under the federal lead classification due to the addition of source-specific monitoring under the new federal regulation. This designation was based on two source-specific monitors in the City of Vernon and the City of Industry that exceeded the new standard in the 2007-to-2009 period. The remainder of the SoCAB outside the Los Angeles County nonattainment area remains in attainment of the new 2008 lead standard. On May 24, 2012, CARB approved the State Implementation Plan (SIP) revision for the federal lead standard, which the EPA

[7] The 2016 AQMP requests a reclassification from moderate to serious non-attainment for the 2012 National $PM_{2.5}$ standard.

revised in 2008. Lead concentrations in this nonattainment area have been below the level of the federal standard since December 2011. The SIP revision was submitted to the EPA for approval.

2.1.3 South Coast AQMD Local Rules and Regulations

In addition to federal and state requirements new construction and operation in the SoCAB is governed by the rules and regulations of the South Coast AQMD. All projects are subject to South Coast AQMD rules and regulations in effect at the time of activity, including:

- **Rule 201: Permit to Construct.** The South Coast AQMD requires developers who build, erect, install, alter, or replace any equipment or agricultural permit unit, the use of which may cause the issuance of air contaminants or the use of which may eliminate, reduce, or control the issuance of air contaminants, to obtain a permit to construct from the Executive Officer. A permit to construct shall remain in effect until the permit to operate the equipment or agricultural permit unit for which the application was filed is granted or denied, or the application is canceled.

- **Rule 401, Visible Emissions.** This rule is intended to prevent the discharge of pollutant emissions from an emissions source that results in visible emissions. Specifically, the rule prohibits the discharge of any air contaminant into the atmosphere by a person from any single source of emission for a period or periods aggregating more than three minutes in any one hour that is as dark as or darker than designated No. 1 on the Ringelmann Chart, as published by the US Bureau of Mines.

- **Rule 402, Nuisance.** This rule is intended to prevent the discharge of pollutant emissions from an emissions source that results in a public nuisance. Specifically, this rule prohibits any person from discharging quantities of air contaminants or other material from any source such that it would result in an injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public. Additionally, the discharge of air contaminants would also be prohibited where it would endanger the comfort, repose, health, or safety of any number of persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property. This rule does not apply to odors emanating from agricultural operations necessary for the growing of crops or the raising of fowl or animals.

- **Rule 403, Fugitive Dust.** This rule is intended to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (human-made) fugitive dust sources by requiring actions to prevent, reduce, or mitigate fugitive dust emissions. Rule 403 applies to any activity or human-made condition capable of generating fugitive dust and requires best available control measures to be applied to earth moving and grading activities. In general, the rule prohibits new developments from the installation of wood-burning devices.

- **Rule 1113, Architectural Coatings.** This rule serves to limit the VOC content of architectural coatings used on projects in the South Coast AQMD. Any person who supplies, sells, offers for sale, or manufactures any architectural coating for use on projects in the South Coast AQMD must comply with the current VOC standards set in this rule.

In addition to compliance with these regional significance thresholds, the Proposed Project would be required to comply with the following South Coast AQMD rules to ensure that minimal VOC would be released during grading activities:

- **Rule 1166, Volatile Organic Compound (VOC) Emissions from Decontaminated Soil.** Under this rule, an excavation plan is required, and excavation operations are required to be monitored for VOC concentrations.

- **Rule 1466, Control of Particulate Emissions from Soils with Toxic Air Contaminants (TACs).** Minimize the amount of offsite fugitive dust emissions containing TACs by reducing particulate emissions in the ambient air as a result of earthmoving activities, including excavating, grading, handling, treating, stockpiling, transferring, and removing soil that contains applicable TACs. Components of the fugitive dust control plan are required to include the following measures: fencing that is a minimum of six feet tall and at least as tall as the height of the tallest stockpile, with a windscreen with a porosity of 50 ± 5 percent; monitoring; notification; signage; and recordkeeping.

2.2 GREENHOUSE GAS EMISSIONS

Scientists have concluded that human activities are contributing to global climate change by adding large amounts of heat-trapping gases, known as GHGs, to the atmosphere. The primary source of these GHGs is fossil fuel use. The Intergovernmental Panel on Climate Change (IPCC) has identified four major GHGs—water vapor, carbon dioxide (CO_2), methane (CH_4), and ozone (O_3)—that are the likely cause of an increase in global average temperatures observed within the 20th and 21st centuries. Other GHGs identified by the IPCC that contribute to global warming to a lesser extent are nitrous oxide (N_2O), sulfur hexafluoride (SF_6), hydrofluorocarbons, perfluorocarbons, and chlorofluorocarbons (IPCC 2001).[8,9] The major GHGs are briefly described below.

- **Carbon dioxide (CO_2)** enters the atmosphere through the burning of fossil fuels (oil, natural gas, and coal), solid waste, trees and wood products, and respiration, and also as a result of other chemical reactions (e.g., manufacture of cement). Carbon dioxide is removed from the atmosphere (sequestered) when it is absorbed by plants as part of the biological carbon cycle.

[8] Water vapor (H_2O) is the strongest GHG and the most variable in its phases (vapor, cloud droplets, ice crystals). However, water vapor is not considered a pollutant, because it is considered part of the feedback loop rather than a primary cause of change.

[9] Black carbon contributes to climate change both directly, by absorbing sunlight, and indirectly, by depositing on snow (making it melt faster) and by interacting with clouds and affecting cloud formation. Black carbon is the most strongly light-absorbing component of particulate matter emitted from burning fuels such as coal, diesel, and biomass. Reducing black carbon emissions globally can have immediate economic, climate, and public health benefits. California has been an international leader in reducing emissions of black carbon, with close to 95 percent control expected by 2020 due to existing programs that target reducing particulate matter from diesel engines and burning activities (CARB 2017a). However, state and national GHG inventories do not include black carbon yet due to ongoing work resolving the precise global warming potential of black carbon. Guidance for CEQA documents does not yet include black carbon.

- **Methane (CH_4)** is emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices and from the decay of organic waste in municipal landfills and water treatment facilities.

- **Nitrous oxide (N_2O)** is emitted during agricultural and industrial activities as well as during the combustion of fossil fuels and solid waste.

GHGs are dependent on the lifetime, or persistence, of the gas molecule in the atmosphere. Some GHGs have a stronger greenhouse effect than others. These are referred to as high GWP gases. The GWP of GHG emissions are shown in Table 3, *GHG Emissions and Their Relative Global Warming Potential Compared to CO_2*. The GWP is used to convert GHGs to CO_2-equivalence (CO_2e) to show the relative potential that different GHGs have to retain infrared radiation in the atmosphere and contribute to the greenhouse effect. For example, under IPCC's Fifth Assessment Report (AR5), GWP values for CH_4, 10 MT of CH_4 would be equivalent to 280 MT of CO_2.

Table 3 GHG Emissions and Their Relative Global Warming Potential Compared to CO_2

GHGs	Carbon Dioxide (CO_2)	Methane[1] (CH_4)	Nitrous Oxide (N_2O)
Second Assessment			
Atmospheric Lifetime (Years)	50 to 200	12 (±3)	120
Global Warming Potential Relative to CO_2[2]	1	21	310
Fourth Assessment			
Atmospheric Lifetime (Years)	50 to 200	12	114
Global Warming Potential Relative to CO_2[2]	1	25	298
Fifth Assessment			
Atmospheric Lifetime (Years)	50 to 200	12	121
Global Warming Potential Relative to CO_2[2]	1	28	265

Source: IPCC 1995; IPCC 2007; IPCC 2013.
1 The methane GWP includes direct effects and indirect effects due to the production of tropospheric ozone and stratospheric water vapor. The indirect effect due to the production of CO_2 is not included.
2 Based on 100-year time horizon of the GWP of the air pollutant compared to CO_2.

2.2.1 California's Greenhouse Gas Sources and Relative Contribution

In 2020, the statewide GHG emissions inventory was updated for 2000 to 2018 emissions using the GWPs in IPCC's AR4.[10] Based on these GWPs, California produced 425.3 $MMTCO_2e$ GHG emissions in 2018. California's transportation sector was the single largest generator of GHG emissions, producing 39.9 percent of the state's total emissions. Industrial sector emissions made up 21.0 percent, and electric power generation made up 14.8 percent of the state's emissions inventory. Other major sectors of GHG emissions include commercial and residential (9.7 percent), agriculture and forestry (7.7 percent) high GWP (4.8 percent), and recycling and waste (2.1 percent) (CARB 2020).

[10] Methodology for determining the statewide GHG inventory is not the same as the methodology used to determine statewide GHG emissions under Assembly Bill 32 (2006).

Since the peak level in 2004, California statewide GHG emissions dropped below the 2020 GHG limit of 431 $MMCO_2e$ in 2016 and have remained below the 2020 GHG limit since then. In 2018, emissions from routine GHG emitting activities statewide were 6 $MMTCO_2e$ lower than the 2020 GHG limit. Per capita GHG emissions in California have dropped from a 2001 peak of 14.0 $MTCO_2e$ per person to 10.7 $MTCO_2e$ per person in 2018, a 24 percent decrease. Transportation emissions decreased in 2018 compared to the previous year, which is the first year over year decrease since 2013. Since 2008, California's electricity sector has followed an overall downward trend in emissions. In 2018, solar power generation has continued its rapid growth since 2013. Emissions from high-GWP gases increased 2.3 percent in 2018 (2000-2018 average year-over-year increase is 6.8 percent), continuing the increasing trend as they replace Ozone Depleting Substances (ODS) being phased out under the 1987 Montreal Protocol. Overall trends in the inventory also demonstrate that the carbon intensity of California's economy (the amount of carbon pollution per million dollars of gross domestic product (GDP)) is declining, representing a 43 percent decline since the 2001 peak, while the state's GDP has grown 59 percent during this period (CARB 2020).

2.2.2 Human Influence on Climate Change

For approximately 1,000 years before the Industrial Revolution, the amount of GHGs in the atmosphere remained relatively constant. During the 20th century, however, scientists observed a rapid change in the climate and the quantity of climate change pollutants in the Earth's atmosphere that is attributable to human activities. The amount of CO_2 in the atmosphere has increased by more than 35 percent since preindustrial times and has increased at an average rate of 1.4 parts per million per year since 1960, mainly due to combustion of fossil fuels and deforestation (IPCC 2007). These recent changes in the quantity and concentration of climate change pollutants far exceed the extremes of the ice ages, and the global mean temperature is warming at a rate that cannot be explained by natural causes alone. Human activities are directly altering the chemical composition of the atmosphere through the buildup of climate change pollutants (CAT 2006). In the past, gradual changes in the earth's temperature changed the distribution of species, availability of water, etc. However, human activities are accelerating this process so that environmental impacts associated with climate change no longer occur in a geologic time frame but within a human lifetime (IPCC 2007).

Like the variability in the projections of the expected increase in global surface temperatures, the environmental consequences of gradual changes in the Earth's temperature are also hard to predict. Projections of climate change depend heavily upon future human activity. Therefore, climate models are based on different emission scenarios that account for historical trends in emissions and on observations of the climate record that assess the human influence of the trend and projections for extreme weather events. Climate-change scenarios are affected by varying degrees of uncertainty. For example, there are varying degrees of certainty on the magnitude of the trends for:

- Warmer and fewer cold days and nights over most land areas.
- Warmer and more frequent hot days and nights over most land areas.
- An increase in frequency of warm spells/heat waves over most land areas.

- An increase in frequency of heavy precipitation events (or proportion of total rainfall from heavy falls) over most areas.
- Larger areas affected by drought.
- Intense tropical cyclone activity increases.
- Increased incidence of extreme high sea level (excluding tsunamis).

2.2.3 Potential Climate Change Impacts for California

Observed changes over the last several decades across the western United States reveal clear signs of climate change. Statewide, average temperatures increased by about 1.7°F from 1895 to 2011, and warming has been greatest in the Sierra Nevada (CCCC 2012). The years from 2014 through 2016 showed unprecedented temperatures, with 2014 being the warmest (OEHHA 2018). By 2050, California is projected to warm by approximately 2.7°F above 2000 averages, a threefold increase in the rate of warming over the last century. By 2100, average temperatures could increase by 4.1 to 8.6°F, depending on emissions levels (CCCC 2012).

In California and western North America, observations of the climate have shown: 1) a trend toward warmer winter and spring temperatures; 2) a smaller fraction of precipitation falling as snow; 3) a decrease in the amount of spring snow accumulation in the lower and middle elevation mountain zones; 4) advanced shift in the timing of snowmelt of 5 to 30 days earlier in the spring; and 5) a similar shift (5 to 30 days earlier) in the timing of spring flower blooms (CAT 2006). Overall, California has become drier over time, with five of the eight years of severe to extreme drought occurring between 2007 and 2016, with unprecedented dry years in 2014 and 2015 (OEHHA 2018). Statewide precipitation has become increasingly variable from year to year, with the driest consecutive four years occurring from 2012 to 2015 (OEHHA 2018). According to the California Climate Action Team—a committee of state agency secretaries and the heads of agencies, boards, and departments, led by the Secretary of the California Environmental Protection Agency—even if actions could be taken to immediately curtail climate change emissions, the potency of emissions that have already built up, their long atmospheric lifetimes (see Table 3), and the inertia of the Earth's climate system could produce as much as 0.6°C (1.1°F) of additional warming. Consequently, some impacts from climate change are now considered unavoidable. Global climate change risks to California are shown in Table 4, *Summary of GHG Emissions Risks to California*, and include impacts to public health, water resources, agriculture, coastal sea level, forest and biological resources, and energy.

Table 4 Summary of GHG Emissions Risks to California

Impact Category	Potential Risk
Public Health Impacts	Heat waves will be more frequent, hotter, and longer Fewer extremely cold nights Poor air quality made worse Higher temperatures increase ground-level ozone levels
Water Resources Impacts	Decreasing Sierra Nevada snowpack Challenges in securing adequate water supply Potential reduction in hydropower Loss of winter recreation
Agricultural Impacts	Increasing temperature Increasing threats from pests and pathogens Expanded ranges of agricultural weeds Declining productivity Irregular blooms and harvests
Coastal Sea Level Impacts	Accelerated sea level rise Increasing coastal floods Shrinking beaches Worsened impacts on infrastructure
Forest and Biological Resource Impacts	Increased risk and severity of wildfires Lengthening of the wildfire season Movement of forest areas Conversion of forest to grassland Declining forest productivity Increasing threats from pest and pathogens Shifting vegetation and species distribution Altered timing of migration and mating habits Loss of sensitive or slow-moving species
Energy Demand Impacts	Potential reduction in hydropower Increased energy demand

Sources: CEC 2006; CEC 2009; CCCC 2012; CNRA 2014.

Specific climate change impacts that could affect the project include:

- **Water Resources Impacts.** By late this century, all projections show drying, and half of the projections suggest 30-year average precipitation will decline by more than 10 percent below the historical average. This drying trend is caused by an apparent decline in the frequency of rain and snowfall. Even in projections with relatively little or no decline in precipitation, central and southern parts of the state are expected to be drier from the warming effects alone, because the spring snowpack will melt sooner, and the moisture in soils will evaporate during long dry summer months (CCCC 2012).

- **Wildfire Risks.** Earlier snowmelt, higher temperatures, and longer dry periods over a longer fire season will directly increase wildfire risk. Indirectly, wildfire risk will also be influenced by potential climate-related changes in vegetation and ignition potential from lightning. Human activities will continue to be the biggest factor in ignition risk. The number of large fires statewide is estimated to increase from 58 percent to 128

percent above historical levels by 2085. Under the same emissions scenario, estimated burned area will increase by 57 percent to 169 percent, depending on location (CCCC 2012).

- **Health Impacts.** Many of the gravest threats to public health in California stem from the increase of extreme conditions, principally more frequent, more intense, and longer heat waves. Particular concern centers on the increasing tendency for multiple hot days in succession and simultaneous heat waves in several regions throughout the state. Public health could also be affected by climate change impacts on air quality, food production, the amount and quality of water supplies, energy pricing and availability, and the spread of infectious diseases. Higher temperatures also increase ground-level ozone levels. Furthermore, wildfires can increase particulate air pollution in the major air basins of California (CCCC 2012).

- **Increase Energy Demand.** Increases in average temperature and higher frequency of extreme heat events combined with new residential development across the state will drive up the demand for cooling in the increasingly hot and longer summer season and decrease demand for heating in the cooler season. Warmer, drier summers also increase system losses at natural gas plants (reduced efficiency in the electricity generation process at higher temperatures) and hydropower plants (lower reservoir levels). Transmission of electricity will also be affected by climate change. Transmission lines lose 7 percent to 8 percent of transmitting capacity in high temperatures while needing to transport greater loads. This means that more electricity needs to be produced to make up for the loss in capacity and the growing demand (CCCC 2012).

2.2.3.1 REGULATORY BACKGROUND

This section describes the federal, state, and local regulations applicable to GHG emissions.

Federal

The US Environmental Protection Agency (EPA) announced on December 7, 2009, that GHG emissions threaten the public health and welfare of the American people and that GHG emissions from on-road vehicles contribute to that threat. The EPA's final findings respond to the 2007 US Supreme Court decision that GHG emissions fit within the Clean Air Act definition of air pollutants. The findings do not in and of themselves impose any emission reduction requirements but allow the EPA to finalize the GHG standards proposed in 2009 for new light-duty vehicles as part of the joint rulemaking with the Department of Transportation (USEPA 2009).

To regulate GHGs from passenger vehicles, the EPA was required to issue an endangerment finding. The finding identifies emissions of six key GHGs—CO_2, CH_4, N_2O, hydrofluorocarbons, perfluorocarbons, and SF_6—that have been the subject of scrutiny and intense analysis for decades by scientists in the United States and around the world. The first three are applicable to the project's GHG emissions inventory because they constitute the majority of GHG emissions and, per South Coast AQMD guidance, are the GHG emissions that should be evaluated as part of a project's GHG emissions inventory.

2.2.3.2 US MANDATORY REPORT RULE FOR GHGs (2009)

In response to the endangerment finding, the EPA issued the Mandatory Reporting of GHG Rule that requires substantial emitters of GHG emissions (large stationary sources, etc.) to report GHG emissions data. Facilities that emit 25,000 MT or more of CO_2e per year are required to submit an annual report.

2.2.3.3 UPDATE TO CORPORATE AVERAGE FUEL ECONOMY STANDARDS (2021 TO 2026)

The federal government issued new Corporate Average Fuel Economy (CAFE) standards in 2012 for model years 2017 to 2025, which required a fleet average of 54.5 miles per gallon (MPG) and 163 grams per mile (g/mi) of CO_2 emissions for model year 2025. However, on March 30, 2020, the EPA finalized an updated CAFE and GHG emissions standards for passenger cars and light trucks and established new standards, covering model years 2021 through 2026, known as the Safer Affordable Fuel Efficient (SAFE) Vehicles Final Rule for Model Years 2021-2026 (85 Federal Register 24174 (April 30, 2020)). Under SAFE, the fuel economy standards will increase 1.5 percent per year compared to the 5 percent per year under the CAFE standards established in 2012. Overall, SAFE requires a fleet average of 40.4 MPG and 202 g/mi of CO_2 emissions for model year 2026 vehicles.

In May 2020, California, joined by 22 other states, the District of Columbia, the Cities of Los Angeles, Denver, and New York, and the Counties of San Francisco and Denver filed a lawsuit with the U.S. Court of Appeals for the District of Columbia Circuit challenging the SAFE Rule. As to date, a ruling has not been made on the lawsuit. In addition, a consortium of automakers and California have agreed on a voluntary framework to reduce emissions that can serve as an alternative path forward for clean vehicle standards nationwide. Automakers who agreed to the framework are Ford, Honda, BMW of North America, and Volkswagen Group of America. The framework supports continued annual reductions of vehicle greenhouse gas emissions through the 2026 model year, encourages innovation to accelerate the transition to electric vehicles, and gives industry the certainty needed to make investments and create jobs. The auto companies that are parties to the voluntary agreement will only sell cars in the United States that meet the CAFE standards established in 2012 for model years 2017 to 2025 (CARB 2021d).

2.2.3.4 EPA REGULATION OF STATIONARY SOURCES UNDER THE CLEAN AIR ACT (ONGOING)

Pursuant to its authority under the Clean Air Act, the EPA has been developing regulations for new, large stationary sources of emissions such as power plants and refineries. Under former President Obama's 2013 Climate Action Plan, the EPA was directed to develop regulations for existing stationary sources as well. On June 19, 2019, the EPA issued the final Affordable Clean Energy rule, which became effective on August 19, 2019. This rule was crafted under the direction of President Trump's Energy Independence Executive Order. It officially rescinds the Clean Power Plan rule issued during the Obama Administration and sets emissions guidelines for states in developing plans to limit CO_2 emissions from coal-fired power plants.

2.2.4 State Laws

Current State of California guidance and goals for reductions in GHG emissions are generally embodied in Executive Order S-03-05 and B-30-15, AB 32, Senate Bill 32 (SB 32), and SB 375.

2. Regulatory Setting

2.2.4.1 EXECUTIVE ORDER S-03-05

Executive Order S-03-05, signed June 1, 2005, set the following GHG reduction targets for the state:

- 2000 levels by 2010
- 1990 levels by 2020
- 80 percent below 1990 levels by 2050

2.2.4.2 ASSEMBLY BILL 32, THE GLOBAL WARMING SOLUTIONS ACT (2006)

Current State of California guidance and targets for reductions in GHG emissions are generally embodied in AB 32. AB 32 was passed by the California state legislature on August 31, 2006, to place the state on a course toward reducing its contribution of GHG emissions. AB 32 follows the 2020 tier of emissions reduction goals established in Executive Order S-03-05.

CARB 2008 Scoping Plan

The first Scoping Plan was adopted by the California Air Resources Board (CARB) on December 11, 2008. The 2008 Scoping Plan identified that GHG emissions in California are anticipated to be 596 $MMTCO_2e$ in 2020. In December 2007, CARB approved a 2020 emissions limit of 427 $MMTCO_2e$ (471 million tons) for the state (CARB 2008). To effectively implement the emissions cap, AB 32 directed CARB to establish a mandatory reporting system to track and monitor GHG emissions levels for large stationary sources that generate more than 25,000 $MTCO_2e$ per year, prepare a plan demonstrating how the 2020 deadline can be met, and develop appropriate regulations and programs to implement the plan by 2012.

First Update to the Scoping Plan

CARB completed a five-year update to the 2008 Scoping Plan, as required by AB 32. The First Update to the Scoping Plan, adopted May 22, 2014, highlights California's progress toward meeting the near-term 2020 GHG emission reduction goals defined in the 2008 Scoping Plan. As part of the update, CARB recalculated the 1990 GHG emission levels with the updated AR4 GWPs, and the 427 $MMTCO_2e$ 1990 emissions level and 2020 GHG emissions limit, established in response to AB 32, is slightly higher at 431 $MMTCO_2e$ (CARB 2014).

As identified in the Update to the Scoping Plan, California is on track to meet the goals of AB 32. However, the update also addresses the state's longer-term GHG goals in a post-2020 element. The post-2020 element provides a long-term strategy for meeting the 2050 GHG goal, including a recommendation for the state to adopt a midterm target. According to the Update to the Scoping Plan, local government reduction targets should chart a reduction trajectory that is consistent with or exceeds the trajectory created by statewide goals (CARB 2014). CARB identified that reducing emissions to 80 percent below 1990 levels will require a fundamental shift to efficient, clean energy in every sector of the economy. Progressing toward California's 2050 climate targets will require significant acceleration of GHG reduction rates. Emissions from 2020 to 2050 will have to decline several times faster than the rate needed to reach the 2020 emissions limit (CARB 2014).

2.2.4.3 EXECUTIVE ORDER B-30-15

Executive Order B-30-15, signed April 29, 2015, sets a goal of reducing GHG emissions in the state to 40 percent below 1990 levels by year 2030. Executive Order B-30-15 also directs CARB to update the Scoping Plan to quantify the 2030 GHG reduction goal for the state and requires state agencies to implement measures to meet the interim 2030 goal as well as the long-term goal for 2050 in Executive Order S-03-05. It also requires the Natural Resources Agency to conduct triennial updates of the California adaptation strategy, Safeguarding California, in order to ensure climate change is accounted for in state planning and investment decisions.

2.2.4.4 SENATE BILL 32 AND ASSEMBLY BILL 197

In September 2016, Governor Brown signed Senate Bill 32 and Assembly Bill 197, making the Executive Order goal for year 2030 into a statewide, mandated legislative target. AB 197 established a joint legislative committee on climate change policies and requires the CARB to prioritize direction emissions reductions rather than the market-based cap-and-trade program for large stationary, mobile, and other sources.

2017 Climate Change Scoping Plan Update

Executive Order B-30-15 and SB 32 required CARB to prepare another update to the Scoping Plan to address the 2030 target for the state. On December 24, 2017, CARB approved the 2017 Climate Change Scoping Plan Update, which outlines potential regulations and programs, including strategies consistent with AB 197 requirements, to achieve the 2030 target. The 2017 Scoping Plan establishes a new emissions limit of 260 $MMTCO_2e$ for the year 2030, which corresponds to a 40 percent decrease in 1990 levels by 2030 (CARB 2017b).

California's climate strategy will require contributions from all sectors of the economy, including enhanced focus on zero- and near-zero emission (ZE/NZE) vehicle technologies; continued investment in renewables, such as solar roofs, wind, and other types of distributed generation; greater use of low carbon fuels; integrated land conservation and development strategies; coordinated efforts to reduce emissions of short-lived climate pollutants (methane, black carbon, and fluorinated gases); and an increased focus on integrated land use planning, to support livable, transit-connected communities and conservation of agricultural and other lands. Requirements for GHG reductions at stationary sources complement local air pollution control efforts by the local air districts to tighten criteria air pollutants and TACs emissions limits on a broad spectrum of industrial sources. Major elements of the 2017 Scoping Plan framework include:

- Implementing and/or increasing the standards of the Mobile Source Strategy, which include increasing ZE buses and trucks;
- Low Carbon Fuel Standard, with an increased stringency (18 percent by 2030).
- Implementation of SB 350, which expands the Renewables Portfolio Standard (RPS) to 50 percent RPS and doubles energy efficiency savings by 2030.

2. Regulatory Setting

- California Sustainable Freight Action Plan, which improves freight system efficiency, utilizes near-zero emissions technology, and deployment of ZE trucks.
- Implementing the proposed Short-Lived Climate Pollutant Strategy, which focuses on reducing methane and hydrofluorocarbon emissions by 40 percent and anthropogenic black carbon emissions by 50 percent by year 2030.
- Post-2020 Cap-and-Trade Program that includes declining caps.
- Continued implementation of SB 375.
- Development of a Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

In addition to the statewide strategies listed above, the 2017 Climate Change Scoping Plan also identified local governments as essential partners in achieving the state's long-term GHG reduction goals and identified local actions to reduce GHG emissions. As part of the recommended actions, CARB recommends statewide targets of no more than 6 $MTCO_2e$ or less per capita by 2030 and 2 $MTCO_2e$ or less per capita by 2050. CARB recommends that local governments evaluate and adopt robust and quantitative locally-appropriate goals that align with the statewide per capita targets and the state's sustainable development objectives and develop plans to achieve the local goals. The statewide per capita goals were developed by applying the percent reductions necessary to reach the 2030 and 2050 climate goals (i.e., 40 percent and 80 percent, respectively) to the State's 1990 emissions limit established under AB 32. For CEQA projects, CARB states that lead agencies have discretion to develop evidenced-based numeric thresholds (mass emissions, per capita, or per service population)—consistent with the Scoping Plan and the state's long-term GHG goals. To the degree a project relies on GHG mitigation measures, CARB recommends that lead agencies prioritize on-site design features that reduce emissions, especially from vehicle miles traveled (VMT), and direct investments in GHG reductions within the project's region that contribute potential air quality, health, and economic co-benefits. Where further project design or regional investments are infeasible or not proven to be effective, CARB recommends mitigating potential GHG impacts through purchasing and retiring carbon credits.

The Scoping Plan scenario is set against what is called the business-as-usual (BAU) yardstick—that is, what would the GHG emissions look like if the State did nothing at all beyond the existing policies that are required and already in place to achieve the 2020 limit, as shown in Table 5, *2017 Climate Change Scoping Plan Emissions Reductions Gap*. It includes the existing renewables requirements, advanced clean cars, the "10 percent" Low Carbon Fuel Standard (LCFS), and the SB 375 program for more vibrant communities, among others. However, it does not include a range of new policies or measures that have been developed or put into statute over the past two years. Also shown in the table, the known commitments are expected to result in emissions that are 60 $MMTCO_2e$ above the target in 2030. If the estimated GHG reductions from the known commitments are not realized due to delays in implementation or technology deployment, the post-2020 Cap-and-Trade Program would deliver the additional GHG reductions in the sectors it covers to ensure the 2030 target is achieved.

Table 5 2017 Climate Change Scoping Plan Emissions Reductions Gap

Modeling Scenario	2030 GHG Emissions $MMTCO_2e$
Reference Scenario (Business-as-Usual)	389
With Known Commitments	320
2030 GHG Target	**260**
Gap to 2030 Target	**60**

Source: CARB 2017b.

Table 6, *2017 Climate Change Scoping Plan Emissions Change by Sector*, provides estimated GHG emissions by sector, showing the range of GHG emissions for each sector estimated for 2030 compared to 1990 levels, as identified in the 2017 Scoping Plan Update.

Table 6 2017 Climate Change Scoping Plan Emissions Change by Sector

Scoping Plan Sector	1990 $MMTCO_2e$	2030 Proposed Plan Ranges $MMTCO_2e$	% Change from 1990
Agricultural	26	24-25	-8% to -4%
Residential and Commercial	44	38-40	-14% to -9%
Electric Power	108	30-53	-72% to -51%
High GWP	3	8-11	267% to 367%
Industrial	98	83-90	-15% to -8%
Recycling and Waste	7	8-9	14% to 29%
Transportation (including TCU)	152	103-111	-32% to -27%
Net Sink[1]	-7	TBD	TBD
Sub Total	431	294-339	-32% to -21%
Cap-and-Trade Program	NA	24-79	NA
Total	**431**	**260**	**-40%**

Source: CARB 2017b.
Notes: TCU = Transportation, Communications, and Utilities; TBD = To Be Determined.
[1] Work is underway through 2017 to estimate the range of potential sequestration benefits from the natural and working lands sector.

2.2.4.5 SENATE BILL 375

In 2008, SB 375, the Sustainable Communities and Climate Protection Act, was adopted to connect the GHG emissions reductions targets established in the 2008 Scoping Plan for the transportation sector to local land use decisions that affect travel behavior. Its intent is to reduce GHG emissions from light-duty trucks and automobiles (excludes emissions associated with goods movement) by aligning regional long-range transportation plans, investments, and housing allocations to local land use planning to reduce VMT and vehicle trips. Specifically, SB 375 required CARB to establish GHG emissions reduction targets for each of the 18 metropolitan planning organizations (MPOs). The Southern California Association of Governments (SCAG) is the MPO for the Southern California region, which includes the counties of Los Angeles, Orange, San Bernardino, Riverside, Ventura, and Imperial.

2. Regulatory Setting

Pursuant to the recommendations of the Regional Transportation Advisory Committee, CARB adopted per capita reduction targets for each of the MPOs rather than a total magnitude reduction target. SCAG's targets are an 8 percent per capita reduction from 2005 GHG emission levels by 2020 and a 13 percent per capita reduction from 2005 GHG emission levels by 2035 (CARB 2010). The 2020 targets are smaller than the 2035 targets because a significant portion of the built environment in 2020 has been defined by decisions that have already been made. In general, the 2020 scenarios reflect that more time is needed for large land use and transportation infrastructure changes. Most of the reductions in the interim are anticipated to come from improving the efficiency of the region's transportation network. The targets would result in 3 $MMTCO_2e$ of reductions by 2020 and 15 $MMTCO_2e$ of reductions by 2035. Based on these reductions, the passenger vehicle target in CARB's Scoping Plan (for AB 32) would be met (CARB 2010).

2017 Update to the SB 375 Targets

CARB is required to update the targets for the MPOs every eight years. In June 2017, CARB released updated targets and technical methodology and recently released another update in February 2018. The updated targets consider the need to further reduce VMT, as identified in the 2017 Scoping Plan Update, while balancing the need for additional and more flexible revenue sources to incentivize positive planning and action toward sustainable communities. Like the 2010 targets, the updated SB 375 targets are in units of percent per capita reduction in GHG emissions from automobiles and light trucks relative to 2005. This excludes reductions anticipated from implementation of state technology and fuels strategies and any potential future state strategies such as statewide road user pricing.

The proposed targets call for greater per capita GHG emission reductions from SB 375 than are currently in place, which for 2035, translate into proposed targets that either match or exceed the emission reduction levels in the MPOs' currently adopted SCSs. As proposed, CARB staff's proposed targets would result in an additional reduction of over 8 $MMTCO_2e$ in 2035 compared to the current targets. For the next round of SCS updates, CARB's updated targets for the SCAG region are an 8 percent per capita passenger vehicle GHG reduction in 2020 from 2005 levels (unchanged from the 2010 target) and a 19 percent per capita passenger vehicle GHG reduction in 2035 from 2005 levels (compared to the 2010 target of 13 percent) (CARB 2018). CARB adopted the updated targets and methodology on March 22, 2018. All SCSs adopted after October 1, 2018, are subject to these new targets.

SCAG's Regional Transportation Plan/Sustainable Communities Strategy

SB 375 requires each MPO to prepare a sustainable communities strategy in its regional transportation plan. For the SCAG region, the 2020-2045 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) (Connect SoCal) was adopted on September 3, 2020, and is an update to the 2016-2040 RTP/SCS (SCAG 2020). In general, the RTP/SCS outlines a development pattern for the region that, when integrated with the transportation network and other transportation measures and policies, would reduce vehicle miles traveled from automobiles and light duty trucks and thereby reduce GHG emissions from these sources.

Connect SoCal focuses on the continued efforts of the previous RTP/SCSs to integrate transportation and land uses strategies in development of the SCAG region through horizon year 2045 (SCAG 2020). Connect SoCal forecasts that the SCAG region will meet its GHG per capita reduction targets of 8 percent by 2020 and

19 percent by 2035. Additionally, Connect SoCal also forecasts that implementation of the plan will reduce VMT per capita in year 2045 by 4.1 percent compared to baseline conditions for that year. Connect SoCal includes a "Core Vision" that centers on maintaining and better managing the transportation network for moving people and goods while expanding mobility choices by locating housing, jobs, and transit closer together, and increasing investments in transit and complete streets (SCAG 2020).

2.2.4.6 TRANSPORTATION SECTOR SPECIFIC REGULATIONS

Assembly Bill 1493

California vehicle GHG emission standards were enacted under AB 1493 (Pavley I). Pavley I is a clean-car standard that reduces GHG emissions from new passenger vehicles (light-duty auto to medium-duty vehicles) from 2009 through 2016 and is anticipated to reduce GHG emissions from new passenger vehicles by 30 percent in 2016. California implements the Pavley I standards through a waiver granted to California by the EPA. In 2012, the EPA issued a Final Rulemaking that sets even more stringent fuel economy and GHG emissions standards for model years 2017 through 2025 light-duty vehicles (see also the discussion on the update to the Corporate Average Fuel Economy standards in Section 2.2.3.3, above). In January 2012, CARB approved the Advanced Clean Cars program (formerly known as Pavley II) for model years 2017 through 2025. The program combines the control of smog, soot, and global warming gases with requirements for greater numbers of ZE vehicles into a single package of standards. Under California's Advanced Clean Car program, by 2025 new automobiles will emit 34 percent less global warming gases and 75 percent less smog-forming emissions.

However, as discussed above, under the SAFE Rule, the fuel economy standards will increase 1.5 percent per year compared to the 5 percent per year under the CAFE standards established in 2012. Additionally, the EPA also published the final rule for the One National Program Rule, which clarifies that federal law preempts state and local tailpipe GHG emissions standards as well as ZE vehicle mandates. This rule revokes the waiver granted to California in 2013 for the ACC program as it relates to GHG and ZE vehicle standards (84 Federal Register 51310 (September 27, 2019). In November 2019, California, joined by 22 other states, the District of Columbia, and the Cities of Los Angeles and New York filed a lawsuit with the U.S. Court of Appeals for the District of Columbia Circuit challenging the One National Program Rule. As to date, a ruling has not been made on the lawsuit.

Executive Order S-01-07

On January 18, 2007, the state set a new LCFS for transportation fuels sold in the state. Executive Order S-01-07 sets a declining standard for GHG emissions measured in CO_2e gram per unit of fuel energy sold in California. The LCFS requires a reduction of 2.5 percent in the carbon intensity of California's transportation fuels by 2015 and a reduction of at least 10 percent by 2020. The standard applies to refiners, blenders, producers, and importers of transportation fuels, and would use market-based mechanisms to allow these providers to choose how they reduce emissions during the "fuel cycle" using the most economically feasible methods.

2. Regulatory Setting

Executive Order B-16-2012

On March 23, 2012, the State announced that CARB, the California Energy Commission (CEC), the Public Utilities Commission, and other relevant agencies worked with the Plug-in Electric Vehicle Collaborative and the California Fuel Cell Partnership to establish benchmarks to accommodate ZE vehicles in major metropolitan areas, including infrastructure to support them (e.g., electric vehicle charging stations). The executive order also directed the number of ZE vehicles in California's state vehicle fleet to increase through the normal course of fleet replacement so that at least 10 percent of fleet purchases of light-duty vehicles are ZE by 2015 and at least 25 percent by 2020. The executive order also establishes a target for the transportation sector of reducing GHG emissions 80 percent below 1990 levels.

Executive Order N-79-20

On September 23, 2020 Governor Newsom signed Executive Order N-79-20 which identifies a goal that 100 percent of in-state sales of new passenger cars and trucks will be zero-emission by 2035. Additionally, this Executive Order identified fleet goals for trucks of 100 percent of drayage trucks be zero emissions by 2035 and 100 percent of medium- and heavy-duty vehicles in the State be zero-emission by 2045, for all operations where feasible. Additionally, the Executive Order identifies a goal for the State to transition to 100 percent zero-emission off-road vehicles and equipment by 2035 where feasible.

2.2.4.7 RENEWABLES PORTFOLIO: CARBON NEUTRALITY REGULATIONS

Senate Bills 1078, 107, X1-2, and Executive Order S-14-08

A major component of California's Renewable Energy Program is the renewables portfolio standard established under Senate Bills 1078 (Sher) and 107 (Simitian). Under the RPS, certain retail sellers of electricity were required to increase the amount of renewable energy each year by at least 1 percent in order to reach at least 20 percent by December 30, 2010. Executive Order S-14-08, signed in November 2008, expanded the State's renewable energy standard to 33 percent renewable power by 2020. This standard was adopted by the legislature in 2011 (SB X1-2). Renewable sources of electricity include wind, small hydropower, solar, geothermal, biomass, and biogas. The increase in renewable sources for electricity production will decrease indirect GHG emissions from development projects because electricity production from renewable sources is generally considered carbon neutral.

Senate Bill 350

Senate Bill 350 (de Leon), was signed into law in September 2015. SB 350 establishes tiered increases to the RPS of 40 percent by 2024, 45 percent by 2027, and 50 percent by 2030. SB 350 also set a new goal to double the energy efficiency savings in electricity and natural gas through energy efficiency and conservation measures.

Senate Bill 100

On September 10, 2018, Governor Brown signed SB 100, which replaces the SB 350 requirement of 45 percent renewable energy by 2027 with the requirement of 50 percent by 2026 and raises California's RPS requirements for 2050 from 50 percent to 60 percent. SB 100 also establishes RPS requirements for publicly owned utilities that consist of 44 percent renewable energy by 2024, 52 percent by 2027, and 60 percent by 2030. Furthermore,

the bill also establishes an overall state policy that eligible renewable energy resources and zero-carbon resources supply 100 percent of all retail sales of electricity to California end-use customers and 100 percent of electricity procured to serve all state agencies by December 31, 2045. Under the bill, the state cannot increase carbon emissions elsewhere in the western grid or allow resource shuffling to achieve the 100 percent carbon-free electricity target.

Executive Order B-55-18

Executive Order B-55-18, signed September 10, 2018, sets a goal "to achieve carbon neutrality as soon as possible, and no later than 2045, and achieve and maintain net negative emissions thereafter." Executive Order B-55-18 directs CARB to work with relevant state agencies to ensure future Scoping Plans identify and recommend measures to achieve the carbon neutrality goal. The goal of carbon neutrality by 2045 is in addition to other statewide goals, meaning not only should emissions be reduced to 80 percent below 1990 levels by 2050, but that, by no later than 2045, the remaining emissions should be offset by equivalent net removals of CO_2e from the atmosphere, including through sequestration in forests, soils, and other natural landscapes.

2.2.4.8 ENERGY EFFICIENCY REGULATIONS

California Building Code: Building Energy Efficiency Standards

Energy conservation standards for new residential and non-residential buildings were adopted by the California Energy Resources Conservation and Development Commission (now the CEC) in June 1977 (Title 24, Part 6, of the California Code of Regulations [CCR]). Title 24 requires the design of building shells and building components to conserve energy. The standards are updated periodically to allow for consideration and possible incorporation of new energy efficiency technologies and methods. The 2019 Building Energy Efficiency Standards were adopted on May 9, 2018 and went into effect on January 1, 2020.

The 2019 standards move toward cutting energy use in new homes by more than 50 percent and will require installation of solar PV systems for single-family homes and multifamily buildings of three stories and less. The 2019 standards focus on four key areas: 1) smart residential PV systems; 2) updated thermal envelope standards (preventing heat transfer from the interior to exterior and vice versa); 3) residential and nonresidential ventilation requirements; 4) and nonresidential lighting requirements (CEC 2018a). Under the 2019 standards, nonresidential buildings will be 30 percent more energy efficient compared to the 2016 standards, and single-family homes will be 7 percent more energy efficient (CEC 2018b). When accounting for the electricity generated by the solar PV system, single-family homes would use 53 percent less energy compared to homes built to the 2016 standards (CEC 2018b).

California Building Code: CALGreen

On July 17, 2008, the California Building Standards Commission adopted the nation's first green building standards. The California Green Building Standards Code (24 CCR, Part 11, known as "CALGreen") was adopted as part of the California Building Standards Code. CALGreen established planning and design standards for sustainable site development, energy efficiency (in excess of the California Energy Code requirements), water conservation, material conservation, and internal air contaminants.[11] The mandatory

[11] The green building standards became mandatory in the 2010 edition of the code.

provisions of the California Green Building Code Standards became effective January 1, 2011, and were last updated in 2019. The 2019 CALGreen standards became effective January 1, 2020.

Section 5.408 of CALGreen also requires that at least 65 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse.

2006 Appliance Efficiency Regulations

The 2006 Appliance Efficiency Regulations (20 CCR §§ 1601–1608) were adopted by the CEC on October 11, 2006 and approved by the California Office of Administrative Law on December 14, 2006. The regulations include standards for both federally regulated appliances and non–federally regulated appliances. Though these regulations are now often viewed as "business as usual," they exceed the standards imposed by all other states, and they reduce GHG emissions by reducing energy demand.

2.2.4.9 SOLID WASTE REGULATIONS

AB 939 – Integrated Waste Management Act of 1989

California's Integrated Waste Management Act of 1989 (AB 939) set a requirement for cities and counties throughout the state to divert 50 percent of all solid waste from landfills by January 1, 2000, through source reduction, recycling, and composting (Public Resources Code §§ 40050 et seq.). In 2008, the requirements were modified to reflect a per capita requirement rather than tonnage. To help achieve this, the act requires that each city and county prepare and submit a source reduction and recycling element. AB 939 also established the goal for all California counties to provide at least 15 years of ongoing landfill capacity.

AB 341

AB 341 (Chapter 476, Statutes of 2011) increased the statewide goal for waste diversion to 75 percent by 2020 and requires recycling of waste from commercial and multifamily residential land uses. Section 5.408 of the CALGreen also requires that at least 65 percent of the nonhazardous construction and demolition waste from nonresidential construction operations be recycled and/or salvaged for reuse.

AB 1327

The California Solid Waste Reuse and Recycling Access Act (AB 1327) requires areas to be set aside for collecting and loading recyclable materials in development projects (Public Resources Code §§ 42900 et seq.). The act required the California Integrated Waste Management Board to develop a model ordinance for adoption by any local agency requiring adequate areas for collection and loading of recyclable materials as part of development projects. Local agencies are required to adopt the model or an ordinance of their own.

AB 1826

In October of 2014, Governor Brown signed AB 1826, requiring businesses to recycle their organic waste on and after April 1, 2016, depending on the amount of waste they generate per week. This law also requires that on and after January 1, 2016, local jurisdictions across the state implement an organic waste recycling program to divert organic waste generated by businesses and multifamily residential dwellings that consist of five or

more units. Organic waste means food waste, green waste, landscape and pruning waste, nonhazardous wood waste, and food-soiled paper waste that is mixed in with food waste.

2.2.4.10 WATER EFFICIENCY REGULATIONS

SBX7-7

The 20x2020 Water Conservation Plan was issued by the Department of Water Resources (DWR) in 2010 pursuant to Senate Bill 7, which was adopted during the 7th Extraordinary Session of 2009–2010 and therefore dubbed "SBX7-7." SBX7-7 mandated urban water conservation and authorized the DWR to prepare a plan implementing urban water conservation requirements (20x2020 Water Conservation Plan). In addition, it required agricultural water providers to prepare agricultural water management plans, measure water deliveries to customers, and implement other efficiency measures. SBX7-7 requires urban water providers to adopt a water conservation target of 20 percent reduction in urban per capita water use by 2020 compared to 2005 baseline use.

AB 1881

The Water Conservation in Landscaping Act of 2006 (AB 1881) requires local agencies to adopt the updated DWR model ordinance or an equivalent. AB 1881 also requires the CEC to consult with the DWR to adopt, by regulation, performance standards and labeling requirements for landscape irrigation equipment, including irrigation controllers, moisture sensors, emission devices, and valves to reduce the wasteful, uneconomic, inefficient, or unnecessary consumption of energy or water.

2.2.4.11 SHORT-LIVED CLIMATE POLLUTANT STRATEGY REDUCTION

Senate Bill 1383

On September 19, 2016, the Governor signed SB 1383 to supplement the GHG reduction strategies in the Scoping Plan to consider short-lived climate pollutants, including black carbon and methane. Black carbon is the light-absorbing component of fine particulate matter produced during incomplete combustion of fuels. SB 1383 requires the state board, no later than January 1, 2018, to approve and begin implementing that comprehensive strategy to reduce emissions of short-lived climate pollutants to achieve a reduction in methane by 40 percent, hydrofluorocarbon gases by 40 percent, and anthropogenic black carbon by 50 percent below 2013 levels by 2030, as specified. The bill also establishes targets for reducing organic waste in landfill. On March 14, 2017, CARB adopted the "Final Proposed Short-Lived Climate Pollutant Reduction Strategy," which identifies the state's approach to reducing anthropogenic and biogenic sources of short-lived climate pollutants. Anthropogenic sources of black carbon include on- and off-road transportation, residential wood burning, fuel combustion (charbroiling), and industrial processes. According to CARB, ambient levels of black carbon in California are 90 percent lower than in the early 1960s despite the tripling of diesel fuel use (CARB 2017a). In-use on-road rules are expected to reduce black carbon emissions from on-road sources by 80 percent between 2000 and 2020. South Coast AQMD is one of the air districts that requires air pollution control technologies for chain-driven broilers, which reduces particulate emissions from these char broilers by over 80 percent (CARB 2017a). Additionally, South Coast AQMD Rule 445 limits installation of new fireplaces in the SoCAB.

2.2.5 Local Regulations

2.2.5.1 CITY OF LONG BEACH SUSTAINABLE CITY ACTION PLAN

The City of Long Beach adopted the Sustainable City Action Plan in February 2010 (Long Beach 2010). The Sustainable City Action Plan is meant to guide the City's future operational and policy decisions and it sets out the following environmental and sustainability goals:

- 100% of major city facilities are LEED certified (or equivalent) by 2020.
- At least 5 million square feet of privately developed LEED certified (or equivalent) green buildings by 2020.
- Double the number of LEED accredited professionals (or equivalent) in the City and community by 2012.
- 100% of city-owned vacant lots are utilized with interim green uses by 2012.
- Create at least 6 new community gardens by 2012.
- Plant at least 10,000 new trees in Long Beach by 2020.
- 100% of suitable alley and parking lot projects use permeable pavement by 2020.
- 50% of Long Beach residents work in Long Beach by 2020.
- At least 60,000 residents in the downtown by 2020.
- By 2020, at least 30% of Long Beach residents use alternative transportation to get to work.
- Reduce greenhouse gas emissions from City facilities and operations by 15% by 2020.
- Reduce electricity use in City operations by 25% by 2020.
- Reduce natural gas use in City operations by 15% by 2020.
- Facilitate the development of at least 2 Megawatts of solar energy on city facilities by 2020.
- Reduce community electricity use by 15% by 2020.
- Reduce community natural gas use by 10% by 2020.
- Facilitate the development of at least 8 Megawatts of solar energy within the community (private rooftops) by 2020.
- Identify and develop at least 2,000 green collar jobs in Long Beach by 2012.

- Enroll 100 green businesses in the Long Beach Green Business Certification Program by 2012.
- Target half of the business grants/loans for green business development by 2012.
- Increase City green spending to 100% by 2020.
- Annual increase in participation in citywide green events.
- Increase the average fuel efficiency of the gasoline-powered City fleet to 35 mpg by 2020.
- 100% of the City fleet is alternative fuel and/or low emission by 2020.
- Reduce vehicle emissions by 30% by 2020.
- Increase public transit ridership by 25% by 2016.
- Increase city employee average vehicle ridership to 1.5 by 2012.
- 100% of taxi cab fleets are alternative fuel and/or low emissions by 2016.
- Increase bike ridership from 1% to 10% by 2016.
- Create a system of at least 200 miles of interconnected bike routes (Class 1-3) by 2020.
- Reduce future port-related emissions by 47% reduction in DPM, 45% reduction in NO_x, and 52% reduction in SO_x from OGV, CHE & HDV source categories by 2011.
- Create 8 acres of open space per 1,000 residents by 2020.
- Create 100 miles of green linkages by 2020.
- Establish one or more Natural Centers along the L.A. River by 2016.
- Establish a native landscape demonstration in every park 1 acre or larger by 2020.
- Establish a community garden in every park 5 acres or larger by 2020.
- 1,200 front yards converted to native or edible landscape by 2016.
- Train 500 Habitat Stewards by 2016.
- Annual increase of youth who are trained as Long Beach Bioneers.
- Annual reduction in average pounds of solid waste generated per person per day.
- Increase the number of students participating in Traveling Recycling Education Center to 2,000 per year by 2016.

2. Regulatory Setting

- Attract and retain to total of 20 RMDZ manufacturing companies by 2020.
- Reduce per capita use of potable water, exceeding the State mandate to achieve a demand reduction of 20% in per capita water use by the year 2020.
- Facilitate the installation of rain catchment systems at 5 City facilities by 2012.
- Facilitate the development of 50 green roofs communitywide by 2016.

2.2.5.2 CITY OF LONG BEACH CLIMATE ACTION AND ADAPTATION PLAN

The City of Long Beach released its Proposed Climate Action and Adaptation Plan (CAAP) on December 10, 2020 with adoption anticipated for Fall 2021 (Long Beach 2021). The CAAP is intended to be utilized for purposes of GHG streamlining and to satisfy the requirements needed under CEQA Guidelines Section 15183 to be considered a qualified GHG reduction plan. Overall, the CAAP provides a framework for the City to reduce community-wide GHG emissions and comply with state regulations (e.g., SB 32), and to also address the effects of climate change on the community. Under the CAAP, the City aims to achieve a per service population (SP) emissions target of 3.04 $MTCO_2e$ per SP for year 2030, which would coincide with the emissions reduction target established under SB 32. To achieve this target, the City would be required to reduce emissions by 192,659 $MTCO_2e$ relative to the business-as-usual emissions forecast for year 2030. In addition to the year 2030 target, the CAAP also includes a long-term net carbon neutrality goal for year 2045. This goal would require a reduction in GHG of 1,513,047 $MTCO_2e$. To meet the 2030 reduction target, the CAAP includes 21 mitigation actions covering the transportation, building energy, and waste sectors. Full implementation of these mitigation actions would reduce emissions in the transportation, building energy, and waste sectors by 8 percent, 68 percent, and 24 percent, respectively. In addition to mitigation actions, the CAAP also includes 40 various adaptation actions that addresses extreme heat, air quality, drought, and sea level rise and flooding.

3. Environmental Setting

3.1 SOUTH COAST AIR BASIN

The Proposed Project site is in the SoCAB, which includes all of Orange County and the non-desert portions of Los Angeles, Riverside, and San Bernardino counties. The SoCAB is in a coastal plain with connecting broad valleys and low hills and is bounded by the Pacific Ocean in the southwest quadrant, with high mountains forming the remainder of the perimeter. The general region lies in the semi-permanent high-pressure zone of the eastern Pacific. As a result, the climate is mild, tempered by cool sea breezes. This usually mild weather pattern is interrupted infrequently by periods of extremely hot weather, winter storms, and Santa Ana winds (South Coast AQMD 2005).

3.1.1 Temperature and Precipitation

The annual average temperature varies little throughout the SoCAB, ranging from the low to middle 60s, measured in degrees Fahrenheit (°F). With a more pronounced oceanic influence, coastal areas show less variability in annual minimum and maximum temperatures than inland areas. The climatological station nearest to the project site area is the Long Beach, California Monitoring Station (ID No. 045082). The average low is reported at 44.8°F in January, and the average high is 80.7°F in August (WRCC 2021).

In contrast to a very steady pattern of temperature, rainfall is seasonally and annually highly variable. Almost all rain falls from November through April. Summer rainfall is normally restricted to widely scattered thundershowers near the coast, with slightly heavier shower activity in the east and over the mountains. Rainfall averages 12.72 inches per year in the project area (WRCC 2021).

3.1.2 Humidity

Although the SoCAB has a semiarid climate, the air near the earth's surface is typically moist because of a shallow marine layer. This "ocean effect" is dominant except for infrequent periods when dry, continental air is brought into the SoCAB by offshore winds. Periods of heavy fog are frequent, especially along the coast. Low clouds, often referred to as high fog, are a characteristic climatic feature. Annual average humidity is 70 percent at the coast and 57 percent in the eastern portions of the SoCAB (South Coast AQMD 1993).

3.1.3 Wind

Wind patterns across the southern coastal region are characterized by westerly or southwesterly onshore winds during the day and easterly or northeasterly breezes at night. Wind speed is somewhat greater during the dry summer months than during the rainy winter season.

Between periods of wind, periods of air stagnation may occur in the morning and evening hours. Air stagnation is one of the critical determinants of air quality conditions on any given day. During the winter and fall months,

surface high-pressure systems over the SoCAB combined with other meteorological conditions can result in very strong, downslope Santa Ana winds. These winds normally continue a few days before predominant meteorological conditions are reestablished.

The mountain ranges to the east inhibit the eastward transport and diffusion of pollutants. Air quality in the SoCAB generally ranges from fair to poor and is similar to air quality in most of coastal Southern California. The entire region experiences heavy concentrations of air pollutants during prolonged periods of stable atmospheric conditions (South Coast AQMD 2005).

3.1.4 Inversions

In conjunction with the two characteristic wind patterns that affect the rate and orientation of horizontal pollutant transport, two distinct types of temperature inversions control the vertical depth through which pollutants are mixed. These inversions are the marine/subsidence inversion and the radiation inversion. The height of the base of the inversion at any given time is known as the "mixing height." The combination of winds and inversions are critical determinants in leading to the highly degraded air quality in summer and the generally good air quality in the winter in the project area (South Coast AQMD 2005).

3.2 SoCAB AREA DESIGNATIONS

The AQMP provides the framework for air quality basins to achieve attainment of the state and federal ambient air quality standards through the State Implementation Plan. Areas are classified as attainment or nonattainment areas for particular pollutants depending on whether they meet the ambient air quality standards. Severity classifications for ozone nonattainment range in magnitude from marginal, moderate, and serious to severe and extreme.

- ***Unclassified.*** A pollutant is designated unclassified if the data are incomplete and do not support a designation of attainment or nonattainment.
- ***Attainment.*** A pollutant is in attainment if the AAQS for that pollutant was not violated at any site in the area during a three-year period.
- ***Nonattainment.*** A pollutant is in nonattainment if there was at least one violation of an AAQS for that pollutant in the area.
- ***Nonattainment/Transitional.*** A subcategory of the nonattainment designation. An area is designated nonattainment/transitional to signify that the area is close to attaining the AAQS for that pollutant.

The attainment status for the SoCAB is shown in Table 7, *Attainment Status of Criteria Pollutants in the South Coast Air Basin*. The SoCAB is designated in attainment of the California AAQS for sulfates and designated a nonattainment area for lead (Los Angeles County only) under the National AAQS.

Table 7 Attainment Status of Criteria Pollutants in the South Coast Air Basin

Pollutant	State	Federal
Ozone – 1-hour	Extreme Nonattainment	No Federal Standard
Ozone – 8-hour	Extreme Nonattainment	Extreme Nonattainment
PM_{10}	Serious Nonattainment	Attainment
$PM_{2.5}$	Nonattainment	Nonattainment
CO	Attainment	Attainment
NO_2	Attainment	Attainment/Maintenance
SO_2	Attainment	Attainment
Lead	Attainment	Nonattainment (Los Angeles County only)[1]
All others	Attainment/Unclassified	Attainment/Unclassified

Source: CARB 2021a.

[1] In 2010, the Los Angeles portion of the SoCAB was designated nonattainment for lead under the new federal and existing state AAQS as a result of large industrial emitters. Remaining areas in the SoCAB are unclassified.

3.3 SoCAB MULTIPLE AIR TOXICS EXPOSURE STUDY IV

The Multiple Air Toxics Exposure Study (MATES) is a monitoring and evaluation study on ambient concentrations of TACs and estimated the potential health risks from air toxics in the SoCAB. In 2008, South Coast AQMD conducted its third update to the MATES study (MATES III). The results showed that the overall risk for excess cancer from a lifetime exposure to ambient levels of air toxics was about 1,200 in a million. The largest contributor to this risk was diesel exhaust, accounting for 84 percent of the cancer risk (South Coast AQMD 2008b).

South Coast AQMD recently released the fourth update (MATES IV). The results showed that the overall monitored risk for excess cancer from a lifetime exposure to ambient levels of air toxics decreased to approximately 418 in one million. Compared to the 2008 MATES III, monitored excess cancer risks decreased by approximately 65 percent. Approximately 90 percent of the risk is attributed to mobile sources while 10 percent is attributed to TACs from stationary sources, such as refineries, metal processing facilities, gas stations, and chrome plating facilities. The largest contributor to this risk was diesel exhaust, accounting for approximately 68 percent of the air toxics risk. Compared to MATES III, MATES IV found substantial improvement in air quality and associated decrease in air toxics exposure. As a result, the estimated basin-wide population-weighted risk decreased by approximately 57 percent compared to the analysis done for the MATES III time period (South Coast AQMD 2015a).

The Office of Environmental Health Hazard Assessment (OEHHA) updated the guidelines for estimating cancer risks on March 6, 2015. The new method utilizes higher estimates of cancer potency during early life exposures, which result in a higher calculation of risk. There are also differences in the assumptions on breathing rates and length of residential exposures. When combined together, South Coast AQMD estimates that risks for a given inhalation exposure level to be about 2.7 times higher using the proposed updated methods identified in MATES IV (e.g., 2.7 times higher than 418 in one million overall excess cancer risk) (South Coast AQMD 2015a).

3.4 EXISTING AMBIENT AIR QUALITY

Existing levels of ambient air quality and historical trends and projections in the vicinity of the Proposed Project site are best documented by measurements taken by the South Coast AQMD. The Proposed Project is located within Source Receptor Area (SRA) 4: South Coastal LA County.[12] The air quality monitoring station closest to the Proposed Project is the Long Beach-2425 Webster Street Monitoring Station, which is one of 31 monitoring stations South Coast AQMD operates and maintains within the SoCAB.[13] Data from this station includes O_3, NO_2, and PM_{10} and is summarized in Table 8, *Ambient Air Quality Monitoring Data*. Data for $PM_{2.5}$ is supplemented by the Compton-700 North Bullis Road Monitoring Station. The data show that the area regularly exceeds the state PM_{10} standards and has exceeded the federal $PM_{2.5}$ standard.

Table 8 Ambient Air Quality Monitoring Summary

Pollutant/Standard	Number of Days Thresholds Were Exceeded and Maximum Levels				
	2015	2016	2017	2018	2019
Ozone (O_3)[1]					
State 1-Hour ≥ 0.09 ppm (days exceed threshold)	0	0	0	0	0
State 8-hour ≥ 0.07 ppm (days exceed threshold)	0	0	0	0	0
Federal 8-Hour > 0.075 ppm (days exceed threshold)[3]	0	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.087	0.079	0.082	0.074	0.075
Max. 8-Hour Conc. (ppm)	0.066	0.059	0.068	0.063	0.064
Nitrogen Dioxide (NO_2) [1]					
State 1-Hour ≥ 0.18 ppm (days exceed threshold)	1	0	0	0	0
Max. 1-Hour Conc. (ppm)	0.1018	0.0756	0.0895	0.0853	0.0718
Coarse Particulates (PM_{10})[2]					
State 24-Hour > 50 µg/m^3 (days exceed threshold)	6	8	10	4	4
Federal 24-Hour > 150 µg/m^3 (days exceed threshold)	0	0	0	0	1
Max. 24-Hour Conc. (µg/m^3)	79.0	75.3	79.0	84.0	155.9
Fine Particulates ($PM_{2.5}$) [1]					
Federal 24-Hour > 35 µg/m^3 (days exceed threshold)	3	1	5	2	1
Max. 24-Hour Conc. (µg/m^3)	41.3	36.3	66.7	49.4	39.5

Source: CARB 2021e.
Notes: ppm: parts per million; parts per billion, µg/m^3: micrograms per cubic meter
[1] Data obtained from the Long Beach-2425 Webster Street Monitoring Station.
[2] Data obtained from the Compton-700 North Bullis Road Monitoring Station.

3.5 EXISTING EMISSIONS

The project site is currently a parking lot and open space and does not generate criteria air pollutant or GHG emissions from area sources, energy use, and mobile sources.

[12] Per South Coast AQMD Rule 701, an SRA is defined as: "A source area is that area in which contaminants are discharged and a receptor area is that area in which the contaminants accumulate and are measured. Any of the areas can be a source area, a receptor area, or both a source and receptor area." There are 37 SRAs in the South Coast AQMD's jurisdiction.

[13] Locations of the SRAs and monitoring stations are shown here: http://www.aqmd.gov/docs/default-source/default-document-library/map-of-monitoring-areas.pdf.

3.6 SENSITIVE RECEPTORS

Some land uses are considered more sensitive to air pollution than others due to the types of population groups or activities involved. Sensitive population groups include children, the elderly, the acutely ill, and the chronically ill, especially those with cardiorespiratory diseases.

Residential areas are also considered sensitive receptors to air pollution because residents (including children and the elderly) tend to be at home for extended periods of time, resulting in sustained exposure to any pollutants present. Other sensitive receptors include retirement facilities, hospitals, and schools. Recreational land uses are considered moderately sensitive to air pollution. Although exposure periods are generally short, exercise places a high demand on respiratory functions, which can be impaired by air pollution. In addition, noticeable air pollution can detract from the enjoyment of recreation. Industrial, commercial, retail, and office areas are considered the least sensitive to air pollution. Exposure periods are relatively short and intermittent because the majority of the workers tend to stay indoors most of the time. In addition, the working population is generally the healthiest segment of the public. The closest air quality sensitive receptors to the site are adjacent multifamily residents on Locust Avenue, directly west of the project site. Other nearby sensitive receptors include the residences east of the project site along North Elm Avenue and the Elm Head Start also on North Elm Avenue near the intersection of North Elm Avenue and East 14th Street.

3. Environmental Setting

This page intentionally left blank.

4. CEQA Thresholds

4.1 CEQA APPENDIX G THRESHOLDS

4.1.1 Air Quality

According to Appendix G of the CEQA Guidelines, the Proposed Project would have a significant effect on the environment with respect to air quality if it would:

AQ-1 Conflict with or obstruct implementation of the applicable air quality plan.

AQ-2 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.

AQ-3 Expose sensitive receptors to substantial pollutant concentrations.

AQ-4 Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

4.1.2 Greenhouse Gas Emissions

According to Appendix G of the CEQA Guidelines, the Proposed Project would have a significant effect on the environment with respect to GHG emissions if it would:

GHG-1 Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment.

GHG-2 Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

4.2 SOUTH COAST AQMD SIGNIFICANCE CRITERIA

4.2.1 Air Quality

The analysis of the Proposed Project's air quality impacts follows the guidance and methodologies recommended in South Coast AQMD's *CEQA Air Quality Handbook* and the significance thresholds on South Coast AQMD's website (South Coast AQMD 2021). CEQA allows the significance criteria established by the applicable air quality management or air pollution control district to be used to assess impacts of a project on air quality. South Coast AQMD has established thresholds of significance for regional air quality emissions for construction activities and project operation. In addition to the daily thresholds, projects are also subject to the

4. CEQA Thresholds

AAQS. These are addressed though an analysis of localized CO impacts and localized significance thresholds (LSTs).

4.2.1.1 REGIONAL SIGNIFICANCE THRESHOLDS

The South Coast AQMD has adopted regional construction and operational emissions thresholds to determine a project's cumulative impact on air quality in the SoCAB. Table 9, *South Coast AQMD Regional Significance Thresholds*, lists South Coast AQMD's regional significance thresholds that are applicable for all projects regardless of size or scope. There is growing evidence that although ultrafine particulates contribute a very small portion of the overall atmospheric mass concentration, they represent a greater proportion of the health risk from PM. However, the EPA and CARB have not yet adopted AAQS to regulate ultrafine particulates; therefore, South Coast AQMD has not developed thresholds for them.

Table 9 South Coast AQMD Regional Significance Thresholds

Air Pollutant	Construction Phase	Operational Phase
Reactive Organic Gases (ROGs)/ Volatile Organic Compounds (VOCs)	75 lbs/day	55 lbs/day
Nitrogen Oxides (NO_X)	100 lbs/day	55 lbs/day
Carbon Monoxide (CO)	550 lbs/day	550 lbs/day
Sulfur Oxides (SO_X)	150 lbs/day	150 lbs/day
Particulates (PM_{10})	150 lbs/day	150 lbs/day
Particulates ($PM_{2.5}$)	55 lbs/day	55 lbs/day

Source: South Coast AQMD 2019.

Projects that exceed the regional significance threshold contribute to the nonattainment designation of the SoCAB. The attainment designations are based on the AAQS, which are set at levels of exposure that are determined to not result in adverse health. Exposure to fine particulate pollution and ozone causes myriad health impacts, particularly to the respiratory and cardiovascular systems:

- Linked to increased cancer risk ($PM_{2.5}$, TACs)
- Aggravates respiratory disease (O_3, $PM_{2.5}$)
- Increases bronchitis (O_3, $PM_{2.5}$)
- Causes chest discomfort, throat irritation, and increased effort to take a deep breath (O_3)
- Reduces resistance to infections and increases fatigue (O_3)
- Reduces lung growth in children ($PM_{2.5}$)
- Contributes to heart disease and heart attacks ($PM_{2.5}$)
- Contributes to premature death (O_3, $PM_{2.5}$)
- Linked to lower birth weight in newborns ($PM_{2.5}$) (South Coast AQMD 2011a)

Exposure to fine particulates and ozone aggravates asthma attacks and can amplify other lung ailments such as emphysema and chronic obstructive pulmonary disease. Exposure to current levels of $PM_{2.5}$ is responsible for an estimated 4,300 cardiopulmonary-related deaths per year in the SoCAB. In addition, University of Southern

California scientists—in a landmark children's health study—found that lung growth improved as air pollution declined for children aged 11 to 15 in five communities in the SoCAB (South Coast AQMD 2015c).

Mass Emissions and Health Effects

On December 24, 2018, the California Supreme Court determined that the EIR for the proposed Friant Ranch project failed to adequately analyze the project's air quality impacts on human health. *Sierra Club v. County of Fresno (Friant Ranch, L.P.)* (2018) 6 Cal.5th 502, Case No. S21978 (*Friant Ranch*). The EIR prepared for the project, which involved a master planned retirement community in Fresno County, showed that project-related mass emissions would exceed the San Joaquin Valley Air Pollution Control District's regional significance thresholds. In its findings, the California Supreme Court affirmed the holding of the Court of Appeals that EIRs for projects must not only identify impacts to human health, but also provide an "analysis of the correlation between the project's emissions and human health impacts" related to each criteria air pollutant that exceeds the regional significance thresholds or explain why it could not make such a connection. In general, the ruling focuses on the correlation of emissions of toxic air contaminants and criteria air pollutants and their impact to human health.

The South Coast AQMD is the primary agency responsible for ensuring the health and welfare of sensitive individuals exposed to elevated concentrations of air pollutants in the SoCAB and has established thresholds that would be protective of these individuals. To achieve the health-based standards established by the EPA, South Coast AQMD prepares an AQMP that details regional programs to attain the AAQS. Mass emissions in Table 9 are not correlated with concentrations of air pollutants but contribute to the cumulative air quality impacts in the SoCAB. Therefore, regional emissions from a single project do not single-handedly trigger a regional health impact. The South Coast AQMD CEQA significance thresholds in Table 9 are based on the trigger levels for the federal New Source Review (NSR) Program. The NSR Program was created to ensure projects are consistent with attainment of health-based federal AAQS. The federal AAQS establish the levels of air quality necessary, with an adequate margin of safety, to protect the public health of sensitive populations such as asthmatics, children, and the elderly. Therefore, projects that do not exceed the South Coast AQMD regional significance thresholds would not violate any air quality standards or contribute substantially to an existing or projected air quality violation.

If projects exceed the emissions in Table 9, emissions would cumulatively contribute to the nonattainment status and would contribute in elevating health effects associated to these criteria air pollutants. Known health effects related to ozone include worsening of bronchitis, asthma, and emphysema and a decrease in lung function. Health effects associated with particulate matter include premature death of people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, decreased lung function, and increased respiratory symptoms. Reducing emissions would further contribute to reducing possible health effects related to criteria air pollutants. However, for projects that exceed the emissions in Table 9, it is speculative to determine how exceeding the regional thresholds would affect the number of days the region is in nonattainment since mass emissions are not correlated with concentrations of emissions or how many additional individuals in the air basin would be affected by the health effects cited above.

The South Coast AQMD has not provided methodology to assess the specific correlation between mass emissions generated and the effect on health in order to address the issue raised in *Friant Ranch*. Ozone

concentrations are dependent upon a variety of complex factors, including the presence of sunlight and precursor pollutants, natural topography, nearby structures that cause building downwash, atmospheric stability, and wind patterns. Because of the complexities of predicting ground-level ozone concentrations in relation to the National AAQS and California AAQS, it is not possible to link health risks to the magnitude of emissions exceeding the significance thresholds. However, if a project within the SoCAB exceeds the regional significance thresholds, the project could contribute to an increase in health effects in the basin until such time as the attainment standards are met in the SoCAB.

4.2.1.2 CO HOTSPOTS

Areas of vehicle congestion have the potential to create pockets of CO called hotspots. These pockets have the potential to exceed the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm. Because CO is produced in greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, adherence to ambient air quality standards is typically demonstrated through an analysis of localized CO concentrations. Hotspots are typically produced at intersections, where traffic congestion is highest because vehicles queue for longer periods and are subject to reduced speeds. With the turnover of older vehicles and introduction of cleaner fuels, as well as implementation of control technology on industrial facilities, CO concentrations in the SoCAB and the state have steadily declined.

In 2007, the SoCAB was designated in attainment for CO under both the California AAQS and National AAQS. The CO hotspot analysis conducted for the attainment by South Coast AQMD did not predict a violation of CO standards at the busiest intersections in Los Angeles during the peak morning and afternoon periods.[14] As identified in South Coast AQMD's 2003 AQMP and the 1992 Federal Attainment Plan for Carbon Monoxide (1992 CO Plan), peak carbon monoxide concentrations in the SoCAB in years before redesignation were a result of unusual meteorological and topographical conditions and not of congestion at a particular intersection (South Coast AQMD 1992). Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal air does not mix—in order to generate a significant CO impact (BAAQMD 2017).

4.2.1.3 LOCALIZED SIGNIFICANCE THRESHOLDS

South Coast AQMD identifies localized significance thresholds, shown in Table 10, *South Coast AQMD Localized Significance Thresholds*. Emissions of NO_2, CO, PM_{10}, and $PM_{2.5}$ generated at a project site (offsite mobile-source emissions are not included in the LST analysis) could expose sensitive receptors to substantial concentrations of criteria air pollutants. A project that generates emissions that trigger a violation of the AAQS when added to the local background concentrations would generate a significant impact.

[14] The four intersections were: Long Beach Boulevard and Imperial Highway; Wilshire Boulevard and Veteran Avenue; Sunset Boulevard and Highland Avenue; and La Cienega Boulevard and Century Boulevard. The busiest intersection evaluated (Wilshire and Veteran) had a daily traffic volume of approximately 100,000 vehicles per day with LOS E in the morning peak hour and LOS F in the evening peak hour.

Table 10 South Coast AQMD Localized Significance Thresholds

Air Pollutant (Relevant AAQS)	Concentration
1-Hour CO Standard (CAAQS)	20 ppm
8-Hour CO Standard (CAAQS)	9.0 ppm
1-Hour NO_2 Standard (CAAQS)	0.18 ppm
Annual NO_2 Standard (CAAQS)	0.03 ppm
24-Hour PM_{10} Standard – Construction (South Coast AQMD)[1]	10.4 µg/m^3
24-Hour $PM_{2.5}$ Standard – Construction (South Coast AQMD)[1]	10.4 µg/m^3
24-Hour PM_{10} Standard – Operation (South Coast AQMD)[1]	2.5 µg/m^3
24-Hour $PM_{2.5}$ Standard – Operation (South Coast AQMD)[1]	2.5 µg/m^3
Annual Average PM_{10} Standard (South Coast AQMD)[1]	1.0 µg/m^3

Source: South Coast AQMD 2019.
ppm – parts per million; µg/m^3 – micrograms per cubic meter
[1] Threshold is based on South Coast AQMD Rule 403. Since the SoCAB is in nonattainment for PM_{10} and $PM_{2.5}$, the threshold is established as an allowable change in concentration. Therefore, background concentration is irrelevant.

To assist lead agencies, South Coast AQMD developed screening-level LSTs to back-calculate the mass amount (lbs. per day) of emissions generated onsite that would trigger the levels shown in Table 10 for projects under five acres. These "screening-level" LSTs tables are the localized significance thresholds for all projects of five acres and less; however, they can be used as screening criteria for larger projects to determine whether or not dispersion modeling may be required.

The construction screening-level LSTs in SRA 4 are shown in Table 11, *South Coast AQMD Screening-Level Localized Significance Thresholds*. For construction activities, LSTs are based on the acreage disturbed per day based on equipment use (South Coast AQMD 2011). The different types of construction activities would require different equipment mixes, resulting in multiple screening-level LSTs.

Table 11 South Coast AQMD Screening-Level Construction Localized Significance Thresholds

	Threshold (lbs/day)			
Acreage Disturbed	Nitrogen Oxides (NO_X)[1]	Carbon Monoxide (CO)[1]	Coarse Particulates (PM_{10})[2]	Fine Particulates ($PM_{2.5}$)[2]
≤1.00 Acre Disturbed per Day	57	585	4.00	3.00
1.19 Acre Disturbed per Day	68	697	5.31	3.87
1.54 Acre Disturbed per Day	71	724	5.62	4.08

Source: South Coast AQMD 2008a and South Coast AQMD 2011b.
Notes: Based on receptors in SRA 4 that are within 82 feet of the project site.

4.2.1.4 HEALTH RISK THRESHOLDS

Whenever a project would use chemical compounds identified in South Coast AQMD Rule 1401, on CARB's air toxics list pursuant to AB 1807, or on the EPA's National Emissions Standards for Hazardous Air Pollutants, a health risk assessment is required by the South Coast AQMD. Table 12, *South Coast AQMD Toxic Air Contaminants Incremental Risk Thresholds*, lists the South Coast AQMD's TAC incremental risk thresholds for

operation of a project. Projects that do not generate emissions that exceed the values in Table 12 would not substantially contribute to cumulative air quality hazards or exacerbate an existing environmental hazard.

Table 12 South Coast AQMD Toxic Air Contaminants Incremental Risk Thresholds

Maximum Incremental Cancer Risk	≥ 10 in 1 million
Cancer Burden (in areas ≥ 1 in 1 million)	> 0.5 excess cancer cases
Hazard Index (project increment)	≥ 1.0

Source: South Coast AQMD 2019.

Under the California Supreme Court's decision in *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369 (Case No. S213478), where a project will exacerbate an existing environmental hazard, CEQA requires an analysis of the worsened condition on future project residents and the public at large. Projects that do not generate emissions that exceed the values in Table 12 would not substantially contribute to cumulative air quality hazards or exacerbate an existing environmental hazard. Residential, commercial, office, and institutional uses (such as the hospital land uses) do not use substantial quantities of TACs and typically do not exacerbate existing hazards. Thus, these thresholds are typically applied to new industrial projects and are not applicable to the Proposed Project.

4.2.2 Greenhouse Gas Emissions

To provide guidance to local lead agencies on determining significance for GHG emissions in their CEQA documents, South Coast AQMD convened a GHG CEQA Significance Threshold Working Group (Working Group). Based on the last Working Group meeting (Meeting No. 15) in September 2010, South Coast AQMD identified a tiered approach for evaluating GHG emissions for development projects where South Coast AQMD is not the lead agency (South Coast AQMD 2010a).

- **Tier 1.** If a project is exempt from CEQA, project-level and cumulative GHG emissions are less than significant.
- **Tier 2.** If the project complies with a GHG emissions reduction plan or mitigation program that avoids or substantially reduces GHG emissions in the project's geographic area (i.e., city or county), project-level and cumulative GHG emissions are less than significant.
- **Tier 3.** If GHG emissions are less than the screening-level threshold, project-level and cumulative GHG emissions are less than significant.

For projects that are not exempt or where no qualifying GHG reduction plans are directly applicable, South Coast AQMD requires an assessment of GHG emissions. South Coast AQMD identified a screening-level threshold of 3,000 $MTCO_2e$ annually for all land use types or the following land-use-specific thresholds: 1,400 $MTCO_2e$ for commercial projects, 3,500 $MTCO_2e$ for residential projects, or 3,000 $MTCO_2e$ for mixed-use projects. These bright-line thresholds are based on a review of the Governor's Office of Planning and Research

database of CEQA projects. Based on a review of 711 CEQA projects, 90 percent of CEQA projects would exceed the bright-line thresholds. Therefore, projects that do not exceed the bright-line threshold would have a nominal, and therefore, less than cumulatively considerable impact on GHG emissions.

- **Tier 4.** If emissions exceed the screening threshold, a more detailed review of the project's GHG emissions is warranted.

The South Coast AQMD has identified an efficiency target for projects that exceed the bright-line threshold: a 2020 efficiency target of 4.8 $MTCO_2e$ per year per service population ($MTCO_2e$/year/SP) for project-level analyses and 6.6 $MTCO_2e$/year/SP for plan-level projects (e.g., general plans). Service population is generally defined as the sum of residential and employment population of a project. The per capita efficiency targets are based on the AB 32 GHG reduction target and 2020 GHG emissions inventory prepared for CARB's 2008 Scoping Plan.[15] Based on the latest statewide emissions inventory in the 2017 Scoping Plan, the project-level efficiency target for year 2020 is 5.2 $MTCO_2e$/year/SP.

For purposes of this analysis, the South Coast AQMD's bright-line screening-level criterion of 3,000 $MTCO_2e$ per year is utilized as the significance threshold for this project. Per South Coast AQMD, the 3,000 $MTCO_2e$ per year screening-level criterion is the recommended screening-level criterion for development projects (South Coast AQMD 2010b). If the project's operation-phase emissions exceed the bright-line screening-level criterion, GHG emissions would be considered potentially significant in the absence of mitigation measures.

[15] South Coast AQMD took the 2020 statewide GHG reduction target for "land use only" GHG emissions sectors and divided it by the 2020 statewide employment for the land use sectors to derive a per capita GHG efficiency metric that coincides with the GHG reduction targets of AB 32 for year 2020.

4. CEQA Thresholds

This page intentionally left blank.

5. Environmental Impacts

5.1 METHODOLOGY

This air quality and GHG emissions evaluation was prepared in accordance with the requirements of CEQA to determine if significant air quality impacts are likely in conjunction with the type and scale of development associated with the Proposed Project. Air quality and GHG emissions modeling was completed for the project using CalEEMod, as recommended by the South Coast AQMD.

The operational-phase, project-related emissions are based on development of the new proposed residential and commercial mixed-use project. The modeling accounts for the average daily vehicle trips generated, energy usage, water demand, and wastewater and solid waste generation from operation of the Proposed Project. Construction emissions are based on information provided for the project. Where specific information was not available, CalEEMod default values were utilized. Life cycle emissions are not included in this analysis because not enough information is available.[16]

- **Transportation.** The weekday average daily trip (ADT) generation data is provided by Fehr and Peers (2020). Saturday and Sunday trip generation data are obtained from the 10th Edition ITE Trip Generation Manual (2017) and adjusted based on the Fehr and Peers methodology used to calculate the weekday trip generation data. Overall, the Proposed Project would generate 855 ADTs, 809 ADTs, and 621 ADTs for the weekday, Saturday, and Sunday, respectively. Project-related on-road criteria air pollutants and GHG emissions are based on year 2024 emission rates. The default CalEEMod emissions rates for calendar year 2024 were updated with emission rates derived from EMFAC2017, Version 1.0.3, emission rates and CalEEMod methodology. The primary source of mobile criteria air pollutants and GHG emissions is tailpipe exhaust emissions from the combustion of fuel (i.e., gasoline and diesel). For criteria air pollutants, brake and tire wear along with fugitive dust created from vehicles traveling roadways also generate particulate matter.

- **Energy Use.** Energy demand for the Proposed Project is provided by Partner Energy. For purposes of this analysis, the proposed buildings would be all-electric and would not result in any natural gas demand. Overall, the Proposed Project would result in annual electricity demand of 488,265 kWh/yr. Additionally, the proposed PV system would provide 205,954 kWh/yr of renewable electricity (Partner Energy 2021).

[16] Life cycle emissions include indirect emissions associated with materials manufacture. However, these indirect emissions involve numerous parties, each of which is responsible for GHG emissions of their particular activity. The California Resources Agency, in adopting the CEQA Guidelines Amendments on GHG emissions found that lifecycle analysis was not warranted for project-specific CEQA analysis in most situations, for a variety of reasons, including lack of control over some sources, and the possibility of double-counting emissions (see Final Statement of Reasons for Regulatory Action, December 2009). Because the amount of materials consumed during the operation or construction of the proposed project is not known, the origin of the raw materials purchased is not known, and manufacturing information for those raw materials is also not known, calculation of life cycle emissions would be speculative. A life-cycle analysis is not warranted (OPR 2008).

5. Environmental Impacts

- **Water/Wastewater.** Water demand is provided by Partner Energy (2021). Indoor and outdoor water demand are estimated at 9,218 gallons per day (gpd) and 157 gpd, respectively. GHG emissions from this sector are attributed to the electricity used for treatment and distribution of water and wastewater.

- **Solid Waste.** Solid waste generation for the proposed uses is based on CalEEMod defaults. GHG emissions are associated with the decomposition of solid waste.

- **Area Sources.** Area source emissions from use of consumer cleaning products and VOC emissions from paints are based on CalEEMod default values and the square footage of the proposed buildings.

- **Construction.** Construction of the Proposed Project is anticipated to commence May 2022 and be completed in March 2024, a duration of approximately 23 months. Table 13, *Construction Activities, Phasing, and Equipment*, shows the assumed construction activities, phasing, and construction equipment based on information provided and CalEEMod defaults. Demolition and grading activities would result in the export of 1,286 tons of demolition debris and 400 cubic yards of soil. The requirements of Mitigation Measures AQ-1 and AQ-2 prescribed in the 2016 Certified EIR are incorporated into the emissions modeling. For purposes of this analysis, the Tier 4 requirement for off-road construction equipment of 50 horsepower or more under Mitigation Measure AQ-1 is modeled based on the Tier 4 Interim emissions standards. Emissions of VOC would primarily be from the application of paints, asphalt pavement, and operation of construction vehicles and off-road equipment. Emissions of NO_X, CO, and SO_X would primarily be generated from operation of off-road construction equipment in addition to construction worker and vendor vehicles. Coarse and fine particulate matter (PM_{10} and $PM_{2.5}$) exhaust emissions would also be generated from operation of off-road construction equipment and construction and vendor vehicle trips. In addition, fugitive dust emissions of PM_{10} and $PM_{2.5}$ would be generated from ground disturbance activities, asphalt demolition, and movement of earthen material.

Table 13 Construction Activities, Phasing, and Equipment

Activities[1]	Start/End Dates[1]	Equipment[1, 2]
Asphalt Demolition	5/1/2022 to 6/3/2022	1 Concrete/Industrial Saw, 1 Rubber Tired Dozers, 3 Tractors/Loaders/Backhoes, and 1 Water Truck
Asphalt Demolition Debris Haul	5/1/2022 to 6/3/2022	No additional equipment aside from equipment for asphalt demolition
Asphalt Demolition Debris Onsite Reprocessing	5/1/2022 to 6/3/2022	1 crushing/processing equipment
Site Preparation	6/4/2022 to 6/17/2022	1 Grader, 1 Rubber Tired Dozer, 1 Tractors/Loaders/Backhoes, and 1 Water Truck
Site Preparation Soil Haul	6/4/2022 to 6/17/2022	No additional equipment aside from equipment for site preparation
Rough Grading	6/18/2022 to 7/15/2022	1 Grader, 1 Rubber Tired Dozer, 1 Tractors/Loaders/Backhoes, and 1 Water Truck
Utility Trenching	7/16/2022 to 9/16/2022	1 Excavator
Parking Structure Construction	7/16/2022 to 12/16/2022	1 Crane, 1 Forklift, 1 Generator Set, 1 Tractors/Loaders/Backhoes, 3 Welders
Building Construction	12/17/2022 to 2/16/2024	1 Crane, 1 Forklift, 1 Generator Set, 1 Tractors/Loaders/Backhoes, 3 Welders
Architectural Coating	8/12/2023 to 2/16/2024	1 Air Compressor
Fine Grading	9/16/2023 to 2/16/2024	1 Grader, 1 Rubber Tired Dozer, 1 Tractors/Loaders/Backhoes, and 1 Water Truck
Finishing/Landscaping	12/16/2023 to 2/16/2024	1 Excavator
Asphalt Paving	2/17/2024 to 3/22/2024	1 Cement and Mortar Mixer, 1 Paver, 1 Paving Equipment, 1 Roller, 1 Tractors/Loaders/Backhoes,

Notes: n/a = not applicable
[1] Based on information provided by the Applicant. Where information was not available, CalEEMod default information was used.
[2] A water truck is assumed for the demolition, site preparation, and grading subphases.

5.2 ENVIRONMENTAL IMPACTS

5.2.1 Air Quality Impacts

5.2.1.1 SUMMARY OF IMPACTS IDENTIFIED WITH THE 2016 CERTIFIED EIR

The 2016 Certified EIR made the following air quality impact significance determinations.

Air Quality Management Plan Consistency

Impacts would be significant and unavoidable due to the potential increase in population and employment growth and in criteria air pollutant emissions associated with the increase in land use intensity. Population and employment growth associated with the Approved Project would be beyond the growth assumed for the 2012 AQMP. In addition, long-term criteria air pollutant emissions generated from operation of land uses accommodated under the Approved Project would exceed the South Coast AQMD regional significance thresholds.

5. Environmental Impacts

Regional Construction Impacts

Even with implementation of mitigation, the Approved Project would result in significant and unavoidable regional air quality impacts due to the potential for multiple developments accommodated under the Approved Project to be constructed at any one time.

Regional Operational Impacts

Even with implementation of mitigation, implementation of the Approved Project would result in significant and unavoidable long-term air quality impacts due to the magnitude of development proposed.

Localized Construction Impacts

Even with implementation of mitigation, the Approved Project would result in significant and unavoidable localized impacts because project-related construction activities may still occur close to existing sensitive receptors.

Localized Operational Impacts: Offsite

Localized operational offsite impacts associated with the Approved Project was determined to be less than significant. The Approved Project would not accommodate the types of land uses that generate substantial quantities of onsite and stationary emissions (e.g., warehousing and industrial). Additionally, implementation of the Approved Project would result in phasing out the types of land uses that could generated substantial onsite and stationary emissions for less intensive land uses. Furthermore, implementation of the Approved Project would not generate the volume of traffic at any one intersection to generate a CO hotspot.

Localized Operational Impacts: Onsite

Operational onsite impacts, i.e., impacts to sensitive uses accommodated under the Approved Project (e.g., the proposed 1,736 residential dwelling units) from existing sources (e.g., Interstate 405) would be reduced to less than significant with incorporation of mitigation. The mitigation requires preparation of a health risk assessment (HRA) for the individual land use developments accommodated under the Approved Project and implementation of measures identified in the HRA to reduce health risk impacts to below the applicable significance thresholds.

Odors

Implementation of the Approved Project would result in less than significant odor impacts. The Approved Project would not accommodate the types of land uses typically considered to generate objectionable odors (e.g., wastewater treatment plants, landfills, and compost facilities). Additionally, construction-related odors would be temporary and not expected to affect a substantial number of people.

5.2.1.2 IMPACTS ASSOCIATED WITH THE PROPOSED PROJECT

This section discusses the project-specific and cumulative impacts related to air quality.

AIR-1 Would the Proposed Project conflict with or obstruct implementation of the applicable air quality plan?

A consistency determination with the AQMP plays an important role in local agency project review by linking local planning and individual projects to the AQMP. It fulfills the CEQA goal of informing decision makers of the environmental efforts of the project under consideration early enough to ensure that air quality concerns are fully addressed. It also provides the local agency with ongoing information as to whether they are contributing to the clean air goals in the AQMP. Since certification of the 2016 EIR, the South Coast AQMD has adopted the 2016 AQMP for the SoCAB region.

The regional emissions inventory for the SoCAB is compiled by South Coast AQMD and SCAG. Regional population, housing, and employment projections developed by SCAG are based in part on cities' general plan land use designations. These projections form the foundation for the emissions inventory of the AQMP. These demographic trends are incorporated into SCAG's regional transportation plan/sustainable communities strategy to determine priority transportation projects and vehicle miles traveled in the SCAG region. The AQMP strategy is based on projections from local general plans. Additionally, only large projects have the potential to substantially affect the demographic forecasts in the AQMP.

Per CEQA Guidelines Section 15206(b), a proposed project is of statewide, regional, or area-wide significance if the project is a residential development of more than 500 dwelling units, a commercial office building of 250,000 square feet or more or that employs 1,000 or more employees, and/or a shopping center of 500,000 square feet or more. Because the Proposed Project would result in the development of only 160 DUs and 4,000 square feet of commercial space, it would not substantially affect demographic projections beyond what is accounted for in the AQMP. In addition, as discussed below under Impact AIR-2, operation of the Proposed Project would not generate regional long-term emissions that would exceed the South Coast AQMD regional significance thresholds for operation. Thus, the Proposed Project is considered consistent with the AQMP. Furthermore, the proposed uses under the Proposed Project would be consistent with the permitted uses allowed under the Approved Project. Specifically, the proposed 160 DUs and 4,000 square feet of commercial uses of the Proposed Project would be within the 401 DUs and 319,000 square feet of commercial space designated for TND7 planning area under the Approved Project. Thus, the proposed land uses of the Proposed Project would be within the overall development capacity and growth assumed under the Approved Project, and no new or greater significant impacts are anticipated to occur under the Proposed Project compared to the Approved Project.

AIR-2 Would the Proposed Project result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable federal or state ambient air quality standard?

Any project that produces a significant project-level regional air quality impact in an area that is in nonattainment adds to the cumulative impact. Due to the extent of the SoCAB area and the large number of cumulative project emissions, a project would be cumulatively significant if project-related emissions exceed the South Coast AQMD regional significance emissions thresholds (South Coast AQMD 1993).

5. Environmental Impacts

The South Coast AQMD has identified regional thresholds of significance for criteria pollutant emissions and criteria air pollutant precursors, including VOC, CO, NO_X, SO_2, PM_{10}, and $PM_{2.5}$. Development projects below the regional significance thresholds are not expected to generate sufficient criteria pollutant emissions to violate any air quality standard or contribute substantially to an existing or projected air quality violation. The following describes changes in regional emissions from short-term construction activities and long-term operation of the Proposed Project.

Regional Construction Emissions

Construction activities produce combustion emissions from various sources, such as on-site heavy-duty construction vehicles, vehicles hauling materials to and from the site, and motor vehicles transporting the construction crew. Site preparation activities produce fugitive dust emissions (PM_{10} and $PM_{2.5}$) from demolition and soil-disturbing activities, such as grading and excavation. Air pollutant emissions from construction activities onsite would vary daily as construction activity levels change.

The Proposed Project is anticipated to be constructed over an approximately 23-month period from May 2022 until March 2024. Construction air pollutant emissions are based on the preliminary information provided by the Applicant and are subject to changes during final design and as dictated by field conditions. Construction would entail demolition of existing asphalt, on-site reprocessing of demolition debris, site preparation and soil haul, rough and fine grading, utility trenching, construction of the parking structure and proposed residential units, architectural coating, paving, and finishing and landscaping. An estimate of maximum daily construction emissions for the Proposed Project is provided in Table 14, *Maximum Daily Regional Construction Emissions*.

Table 14 Maximum Daily Regional Construction Emissions

Construction Phase	Pollutants (pounds per day)[1, 2]					
	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Year 2022						
Asphalt Demolition, Debris Haul, and Onsite Reprocessing	1	16	22	<1	1	<1
Site Preparation and Soil Hauling	<1	9	11	<1	3	1
Rough Grading	<1	5	9	<1	2	1
Utility Trenching and Parking Structure Construction	1	13	20	<1	1	<1
Parking Structure Construction	1	10	15	<1	1	<1
Building Construction 2022	1	11	16	<1	1	<1
Year 2023						
Building Construction 2023	1	11	16	<1	1	<1
Building Construction 2023 and Architectural Coating 2023	5	12	19	<1	1	<1
Building Construction 2023, Architectural Coating 2023, and Fine Grading 2023	5	17	27	<1	3	2
Building Construction 2023, Architectural Coating 2023, Fine Grading 2023, and Finishing/Landscaping 2023	5	20	32	<1	4	2

Table 14 Maximum Daily Regional Construction Emissions

Construction Phase	Pollutants (pounds per day)[1, 2]					
	VOC	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
Year 2024						
Building Construction 2023, Architectural Coating 2023, Fine Grading 2023, and Finishing/Landscaping 2023	5	20	32	<1	4	2
Paving	<1	6	10	<1	<1	<1
Maximum Daily Construction Emissions						
Maximum Daily Emissions	5	20	32	<1	4	2
South Coast AQMD Regional Construction Threshold	75	100	550	150	150	55
Significant?	No	No	No	No	No	No
2016 Certified EIR for the Approved Project	150	240	256	<1	39	21

Source: CalEEMod Version 2016.3.2.25

Notes: Emissions totals may not equal 100 percent due to rounding.

[1] Based on the preliminary information provided by the Applicant. Where specific information regarding project-related construction activities was not available, construction assumptions were based on CalEEMod defaults, which are based on construction surveys conducted by South Coast AQMD of construction equipment.

[2] Includes implementation of Mitigation Measures AQ-1, which requires use of Tier 4 off-road equipment for equipment rated at 50 horsepower or higher. For purposes of this analysis, modeling is based on equipment that meets the Tier 4 Interim emissions standards. Also includes implementation of Mitigation Measure AQ-2, which requires a dust control plan to supplement the fugitive dust control measures required by South Coast AQMD under Rule 403 and Rule 1186. Fugitive dust control measures incorporated into the model include watering disturbed areas a minimum of three times per day, reducing speed limit to 15 miles per hour on unpaved surfaces, replacing ground cover quickly, and street sweeping with Rule 1186–compliant sweepers.

As shown in the table, air pollutant emissions from construction activities associated with the Proposed Project would be less than their respective South Coast AQMD regional significance threshold values. In addition, construction of Proposed Project would not generate maximum daily emissions that exceed the Approved Project maximum daily construction emissions identified in the 2016 Certified EIR. Furthermore, the proposed uses under the Proposed Project would be the type of uses permitted and considered for the project site under the Approved Project. Thus, the emissions shown in Table 14 for the Proposed Project also represent emissions that would be generated by a development project for the project site as considered under the Approved Project. Overall, the Proposed Project would not result in new or greater significant impacts than the Approved Project.

Regional Operational Emissions

Buildout of the Proposed Project would generate an increase in criteria air pollutant emissions from transportation (i.e., vehicle trips), area sources (e.g., landscaping equipment), and architectural coating. As shown in Table 15, *Maximum Daily Regional Operation Emissions*, the maximum daily emissions would be less than their respective South Coast AQMD regional significance threshold values. Projects that do not exceed the South Coast AQMD regional significance thresholds would not result in an incremental increase in health impacts in the SoCAB from project-related increases in criteria air pollutants. In addition, also as shown in the table, the Proposed Project would not generate maximum daily operational emissions that would exceed the Approved Project maximum daily operational emissions identified in the 2016 Certified EIR. Furthermore, the proposed uses under the Proposed Project would be the type of uses permitted and considered for the project site under the Approved Project. Thus, the emissions shown in Table 15 for the Proposed Project also represent emissions that would be generated by a development project for the project site as considered under the Approved Project. Overall, the Proposed Project would not result in new or greater significant impacts than the Approved Project.

5. Environmental Impacts

Table 15 Maximum Daily Regional Operation Emissions

Source	Maximum Daily Emissions (lbs/day)					
	VOC	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
Area	5	<1	36	<1	3	3
Energy	0	0	0	0	0	0
Mobile[1]	2	2	22	<1	7	2
Total	**7**	**3**	**58**	**<1**	**10**	**5**
South Coast AQMD Regional Threshold	**55**	**55**	**550**	**150**	**150**	**550**
Exceeds Threshold?	No	No	No	No	No	No
2016 Certified EIR for the Approved Project	**131**	**81**	**870**	**3**	**151**	**95**

Source: CalEEMod Version 2016.3.2.25. Highest winter or summer emissions are reported.
Notes: lbs: Pounds.
[1] Based on weekday trip generation provided by Fehr & Peers (2020) and on Saturday and Sunday vehicle trip generation rates from the ITE Trip Generation Manual (2017).

AIR-3 Would the Proposed Project expose sensitive receptors to substantial pollutant concentrations?

This impact analysis describes changes in localized impacts from short-term construction activities. The Proposed Project could expose sensitive receptors to elevated pollutant concentrations during construction activities if it would cause or contribute significantly to elevated pollutant levels. Unlike the mass of emissions shown in the regional emissions analysis in Table 14, described in pounds per day, localized concentrations refer to an amount of pollutant in a volume of air (ppm or $\mu g/m^3$) and can be correlated to potential health effects.

Construction-Phase LSTs: Offsite

Screening-level LSTs (pounds per day) are the amount of project-related mass emissions at which localized concentrations (ppm or $\mu g/m^3$) could exceed the AAQS for criteria air pollutants for which the SoCAB is designated nonattainment. The screening-level LSTs are based on the project site size and distance to the nearest sensitive receptor and are based on the California AAQS, which are the most stringent AAQS, established to protect sensitive receptors most susceptible to respiratory distress. Table 16, *Construction Emissions Compared to the Screening-Level LSTs: Project Site*, shows the maximum daily construction emissions (pounds per day) generated during on-site construction activities associated with the Proposed Project at the project site compared with the South Coast AQMD's screening-level LSTs. As shown in the table, the construction of the Proposed Project would not generate construction-related onsite emissions that would exceed the screening-level LSTs. Thus, construction activities related to the Proposed Project would not have the potential to expose offsite sensitive receptors to substantial pollutant concentrations. In addition, because the Proposed Project would develop the types of land uses considered for the project site as considered under the Approved Project, the Proposed Project would not result in new or greater significant impacts than the Approved Project.

Table 16 Construction Emissions Compared to the Screening-Level LSTs

	Pollutants(lbs/day)[1]			
	NO_X	CO	PM_{10}[2]	$PM_{2.5}$[2]
South Coast AQMD ≤1.00-acre LST	**57**	**585**	**4.00**	**3.00**
Utility Trenching and Parking Structure Construction	12	18	0.22	0.22
Parking Structure Construction	9	14	0.21	0.21
Building Construction 2022	9	14	0.21	0.21
Building Construction 2023	9	14	0.19	0.19
Building Construction 2023 and Architectural Coating 2023	10	16	0.19	0.19
Asphalt Paving	6	10	0.02	0.02
Exceeds LST?	No	No	No	No
South Coast AQMD 1.19-acre LSTs	**62**	**633**	**4.56**	**3.37**
Rough Grading	4	8	2.12	1.10
Exceeds LST?	No	No	No	No
South Coast AQMD 1.44-acre LSTs	**68**	**697**	**5.31**	**3.87**
Site Preparation and Soil Hauling	5	10	2.51	1.29
Exceeds LST?	No	No	No	No
South Coast AQMD 1.54-acre LSTs	**71**	**724**	**5.62**	**4.08**
Asphalt Demolition, Debris Haul, and Onsite Reprocessing	11	20	0.52	0.12
Building Construction 2023, Architectural Coating 2023, and Fine Grading 2023	15	24	2.31	1.29
Building Construction 2023, Architectural Coating 2023, Fine Grading 2023, and Finishing and Landscaping 2023	17	28	2.32	1.30
Building Construction 2024, Architectural Coating 2024, Fine Grading 2024, and Finishing and Landscaping 2024	17	28	2.30	1.28
Exceeds LST?	No	No	No	No

Source: CalEEMod Version 2016.3.2.25., and South Coast AQMD 2008a and 2011.

Notes: In accordance with South Coast AQMD methodology, only onsite stationary sources and mobile equipment occurring on the project site are included in the analysis. LSTs are based on receptors within 82 feet (25 meters) of the project site in Source Receptor Area (SRA) 4.

[1] Based on the preliminary information provided by the Applicant. Where specific information regarding project-related construction activities was not available, construction assumptions were based on CalEEMod defaults, which are based on construction surveys conducted by South Coast AQMD of construction equipment.

[2] Includes implementation of Mitigation Measure AQ-1, which requires use of Tier 4 off-road equipment for equipment rated at 50 horsepower or higher. For purposes of this analysis, modeling is based on equipment that meets the Tier 4 Interim emissions standards. Also includes implementation of Mitigation Measure AQ-2, which requires a dust control plan to supplement the fugitive dust control measures required by South Coast AQMD under Rule 403 and Rule 1186. Fugitive dust control measures incorporated into the model include watering disturbed areas a minimum of three times per day, reducing speed limit to 15 miles per hour on unpaved surfaces, replacing ground cover quickly, and street sweeping with Rule 1186–compliant sweepers.

5. Environmental Impacts

Construction Health Risk

The Office of Environmental Health Hazards Assessment issued updated guidance for the preparation of health risk assessments in March 2015 (OEHHA 2015). It has also developed a cancer risk factor and noncancer chronic reference exposure level for DPM based on continuous exposure over a 30-year time frame. No short-term acute exposure levels have been developed for DPM. South Coast AQMD currently does not require the evaluation of long-term excess cancer risk or chronic health impacts for a short-term project. Emissions from construction equipment primarily consist of DPM. The Approved Project did not identify any concentrations of short-term emissions that would constitute a significant health risk because there were no guidelines available at the time of certification. The Approved Project did not include a discussion on potential health risk impacts associated with construction activities. Under the Proposed Project, construction activities on the project site would occur over a 23-month period, which would limit the exposure of offsite receptors. Based on guidance from South Coast AQMD, construction risk is extrapolated based on the LST analysis (South Coast AQMD 2013 to 2020). As described above, construction activities would not exceed the screening-level construction LSTs. Thus, for the reasons stated above, it is anticipated that construction emissions would not pose as a health risk threat to offsite receptors. In addition, because the land uses that would be developed under the Proposed Project are the types of land uses considered for the project site under the Approved Project, no new or greater significant impacts are anticipated under the Proposed Project compared to the Approved Project.

Operational Phase LSTs: Offsite

Operation of the Proposed Project would not generate substantial quantities of emissions from on-site, stationary sources. Land uses that have the potential to generate substantial stationary sources of emissions require a permit from South Coast AQMD, such as chemical processing or warehousing operations where substantial truck idling could occur onsite. The Proposed Project does not fall within these categories of uses. In addition, the proposed buildings would be all-electric and not have any combustion sources used for space heating, water heating, or cooking. While operation of the Proposed Project could result in the occasional use of landscaping equipment for project site maintenance, air pollutant emissions generated would be small. Thus, operation of the Proposed Project would not have the potential to expose offsite sensitive receptors to substantial pollutant concentrations. In addition, because the Proposed Project would develop the types of land uses considered for the project site under the Approved Project, the Proposed Project would not result in new or greater significant impacts than the Approved Project.

Carbon Monoxide Hotspots

Areas of vehicle congestion have the potential to create pockets of CO called hotspots. These pockets have the potential to exceed the state one-hour standard of 20 ppm or the eight-hour standard of 9.0 ppm. Because CO is produced in greatest quantities from vehicle combustion and does not readily disperse into the atmosphere, adherence to AAQS is typically demonstrated through an analysis of localized CO concentrations. Hotspots are typically produced at intersections, where traffic congestion is highest because vehicles queue for longer periods and are subject to reduced speeds. The SoCAB has been designated as attainment under both the National and California AAQS for CO. Under existing and future vehicle emission rates, a project would have to increase traffic volumes at a single intersection by more than 44,000 vehicles per hour—or 24,000 vehicles per hour where vertical and/or horizontal mixing is substantially limited—in order to generate a

significant CO impact (BAAQMD 2017). The Proposed Project would generate up to 71 PM peak hour trips on weekdays, which is substantially below the incremental increase in peak hour vehicle trips needed to generate a significant CO impact. Additionally, the 71 PM peak hour trips would also be below the 99 PM peak hour trips associated with the TND7 planning area (Fehr and Peers 2020). Implementation of the Proposed Project would not have the potential to substantially increase CO hotspots at intersections in the vicinity of the project site. In addition, no new or greater significant impacts are anticipated under the Proposed Project compared to the Approved Project.

AIR-4	Would the Proposed Project result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?

Nuisance odors from land uses in the SoCAB are regulated under South Coast AQMD 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 have 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 2016 Certified EIR identified less than significant odor impacts for the Approved Project. For the Proposed Project, the types of land uses proposed do not fall within the aforementioned land uses typically associated with objectionable odors. Furthermore, compliance with South Coast AQMD Rule 402 would control any potential odor impacts from operation of the Proposed Project. In addition, while construction activities associated with the Proposed Project could generate odors from operation of construction equipment, such as diesel exhaust, these odors would be low in concentration, temporary, disperse rapidly, and are not expected to affect a substantial number of people. Thus, overall, similar to the Approved Project, construction and operation of the Proposed Project are not expected to generate odors that would adversely affect a substantial number of people.

5.2.2 Greenhouse Gas Emissions Impacts

5.2.2.1 SUMMARY OF IMPACTS IDENTIFIED WITH THE 2016 CERTIFIED EIR

The 2016 Certified EIR made the following GHG emissions impact significance determinations.

5. Environmental Impacts

GHG Emissions Impacts

Even with implementation of mitigation, GHG emissions impacts were determined to be significant and unavoidable. Additional statewide measures would be necessary to reduce GHG emissions associated with the Approved Project to meet the long-term GHG reduction goals.

Consistency with GHG Emissions Reduction Plans and Strategies

The Approved Project would be consistent with the applicable statewide, regional, and local plans to reduce GHG emissions, and impacts were determined to be less than significant. The Approved Project would not conflict with the CARB Scoping Plan because the plan is implemented on a statewide level. Thus, the Approved Project would comply either directly or indirectly with statewide measures identified under the Scoping Plan, such as the Building Energy Efficiency Standards. In addition, the Approved Project would be consistent with the SCAG RTP/SCS because it would increase use of alternative forms of transportation and reduce VMT. Lastly, the Approved Project would not conflict with the City of Long Beach Sustainable City Action Plan

5.2.2.2 IMPACTS ASSOCIATED WITH THE PROPOSED PROJECT

This section discusses the project-specific and cumulative impacts related to GHG emissions.

GHG-1	Would the Proposed Project generate a net increase in GHG emissions, either directly or indirectly, that would have a significant impact on the environment?

Global climate change is not confined to a particular project area and is generally accepted as the consequence of global industrialization over the last 200 years. A typical project, even a very large one, does not generate enough greenhouse gas emissions on its own to influence global climate change significantly; hence, the issue of global climate change is by definition a cumulative environmental impact.

Implementation of the Proposed Project would result in 160 new residential DUs and 4,000 square feet of commercial use, which would be within the 401 DUs and 319,000 square feet of commercial uses designated for TND7 under the Approved Project. In addition, the Proposed Project would generate 855 ADTs, which would be within the identified 3,371 ADTs associated with TND7 (Fehr and Peers 2020). Operation of the Proposed Project would generate GHG emissions from vehicle trips, water demand, wastewater and solid waste generation, area sources (e.g., consumer cleaning products), and energy usage (i.e., natural gas and electricity). The project emissions and construction-related emissions are quantified and shown in Table 17, *Project GHG Emissions Inventory*. As shown in the table, GHG emissions from the Proposed Project would not exceed South Coast AQMD's bright-line significance threshold. Additionally, emissions generated by the Proposed Project would be within the 24,149 $MTCO_2e$/yr annual emissions estimated for the overall Approved Project. Therefore, the Proposed Project would not result in new or greater significant impacts than the Approved Project.

Table 17 Project GHG Emissions Inventory

Source	GHG Emissions	
	$MTCO_2e$ per Year	Percentage
Area	9	1%
Energy[1]	68	6%
Mobile[2]	921	85%
Solid Waste	43	4%
Water	13	1%
Amortized Construction Emissions[3]	26	2%
Total All Sectors	**1,081**	**100%**
Proposed South Coast AQMD Bright-Line Threshold	3,000 $MTCO_2e$	NA
Exceeds Threshold?	**No**	**NA**
2016 Certified EIR for the Approved Project	**24,149**	**NA**

Source: CalEEMod, Version 2016.3.2.25.
Notes: Totals may not equal 100 percent due to rounding.
[1] Based on all-electric buildings and accounts for the renewable electricity that would be generated by the onsite PV system (Partner Energy 2021).
[2] Based on weekday trip generation provided by Fehr & Peers (2020) and on Saturday and Sunday vehicle trip generation rates from the ITE Trip Generation Manual (2017).
[3] Model accounts for net increase in trips associated with implementation of the Proposed Project.
[4] Construction emissions are amortized over a 30-year project lifetime per recommended South Coast AQMD methodology.

GHG-2 Would the Proposed Project conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs?

Applicable plans adopted for the purpose of reducing GHG emissions include CARB's Scoping Plan, SCAG's RTP/SCS, and the City of Long Beach Sustainable City Action Plan. A consistency analysis with these plans is presented below.

CARB Scoping Plan

CARB's Scoping Plan is California's GHG reduction strategy to achieve the state's GHG emissions reduction target established by AB 32, which is to return to 1990 emission levels by year 2020, and SB 32, which is to reduce emissions 40 percent below 1990 levels by 2030. The CARB Scoping Plan is applicable to state agencies and is not directly applicable to cities/counties and individual projects. Nonetheless, the Scoping Plan has been the primary tool used to develop performance-based and efficiency-based CEQA criteria and GHG reduction targets for climate action planning efforts. Statewide strategies to reduce GHG emissions include the Low Carbon Fuel Standard, California Appliance Energy Efficiency regulations, California Renewable Energy Portfolio standard, changes in the Corporate Average Fuel Economy standards, and other early action measures as necessary to ensure the state is on target to achieve the GHG emissions reduction goals of AB 32 and SB 32. Also, new buildings are required to comply with the current Building Energy Efficiency Standards and California Green Building Code. As stated, the 2016 Certified EIR determined the Approved Project would not conflict with implementation of the Scoping Plan. Since certification of the EIR for the Approved Project, a new Scoping Plan has been adopted to address SB 32. Similar to the Approved Project, the Proposed Project's GHG emissions would be reduced through compliance with statewide measures that have been adopted since

5. Environmental Impacts

AB 32 and SB 32 were adopted. Thus, the Proposed Project would not obstruct implementation of the CARB Scoping Plan, and no new or greater impacts would occur compared to the Approved Project.

SCAG's Regional Transportation Plan/Sustainable Communities Strategy

The RTP/SCS has been updated since preparation of the 2016 Certified EIR. Most recently, SCAG adopted the 2020-2045 RTP/SCS (Connect SoCal) in September 2020. The Connect SoCal plan identifies that land use strategies that focus on new housing and job growth in areas rich with destinations and mobility options would be consistent with a land use development pattern that supports and complements the proposed transportation network. The overarching strategy in Connect SoCal is to provide for a plan that allows the southern California region to grow in more compact communities in transit priority areas and priority growth areas; provide neighborhoods with efficient and plentiful public transit; establish abundant and safe opportunities to walk, bike, and pursue other forms of active transportation; and preserve more of the region's remaining natural lands and farmlands (SCAG 2020). The Connect SoCal plan contains transportation projects to help more efficiently distribute population, housing, and employment growth as well as projected development that is generally consistent with regional-level general plan data to promote active transport and reduce GHG emissions. The projected regional development, when integrated with the proposed regional transportation network identified in Connect SoCal, would reduce per capita vehicular travel-related GHG emissions and achieve the GHG reduction per capita targets for the SCAG region.

The SCS does not require that local general plans, specific plans, or zoning be consistent with the SCS, but provides incentives for consistency to governments and developers. As stated, the 2016 Certified EIR determined that the Approved Project would not conflict with the RTP/SCS. The land uses that would be developed under Proposed Project are consistent with land uses considered for the project site under the Approved Project. In addition, the Proposed Project is an infill development project within a Transit Priority Area that would provide new affording housing on the project site, which would contribute to reducing the vehicle miles traveled between residential and service needs.[17] Therefore, the Proposed Project would not interfere with SCAG's ability to implement the regional strategies outlined in the RTP/SCS. Furthermore, the Proposed Project would not result in new or greater significant impacts than the Approved Project.

City of Long Beach Sustainability Action Plan

The 2016 Certified EIR determined the Approved Project would be consistent with the City's Sustainable City Action Plan. Overall, as shown in Table 18, *Consistency with the City of Long Beach Sustainable City Action Plan*, the Proposed Project would also generally be consistent with the Sustainable City Action Plan. Project features such as all-electric buildings, the increase in energy efficiency over the 2019 Building Energy Efficiency Standards, installation of a PV system, installation of an enhanced bus stop, closure of segment the segments of 14th Street flanking the proposed parklet, and installation of bicycle parking and racks would support the goals to decrease energy demand and to increase alternative and active transit options. Overall, because the Proposed Project would be consistent with the Sustainable City Action Plan, it would not result in new or greater significant impacts than the Approved Project.

[17] A Transit Priority Area is defined as half a mile area around an existing major transit stop or an existing stop along a high-quality transit corridor (Fehr and Peers 2020).

Table 18 Consistency with City of Long Beach Sustainable City Action Plan

Applicable Goals	Project Compliance
Create at least 6 new community gardens by 2012	**Consistent:** The Proposed Project includes development of the proposed 0.45-acre parklet that would provide open space. Additionally, the open space areas within the proposed buildings would include raised-wood vegetable beds.
Plant at least 10,000 new trees in Long Beach by 2020	**Consistent:** The Proposed Project would include the planting of ornamental and canopy trees along the 14th Street frontage, in the proposed 0.45-acre parklet, and in the open spaces within the proposed buildings.
50% of Long Beach residents work in Long Beach by 2020	**Consistent:** Overall, the Midtown Specific Plan supports compact, transit-oriented, and mixed-use developments. Development of the Proposed Project would support implementation of the Midtown Specific Plan and would thereby support compact, transit-oriented, and mixed-use developments.
By 2020, at least 30% of Long Beach residents use alternative transportation to get to work	**Consistent:** The Midtown Specific Plan is an early leader in multimodal transportation practices, where a person can safely and easily travel by walking, riding a bike, catching a bus, taking a train, or driving a car. The Midtown Specific Plan seeks improvements to and provides more bike and pedestrian pathways and creates better overall connectivity in the public transportation and active transit system. Development of the Proposed Project would support implementation of the Midtown Specific Plan. Furthermore, the Proposed Project includes a new enhanced bus stop at the northwest corner of 14th Street and Long Beach Boulevard. In addition, eastbound and westbound roadways north and south of the proposed parklet would be closed, which would prevent vehicle through movement from Long Beach Boulevard and double the area of publicly accessible open space. The Proposed Project would also include bicycle parking in the buildings and bicycle racks within the streetscape.
Reduce community electricity use by 15% by 2020	**Consistent:** The West Building and East Building would be 1.6 percent and 4.6 percent more energy efficient, respectively, than the 2019 Building Energy Efficiency Standards. In addition, the Proposed Project would install an onsite PV system that would generate renewable electricity to offset some of the electricity demand.
Reduce community natural gas use by 10% by 2020	**Consistent:** The proposed buildings under the Proposed Project would be all electric, and no appliances or equipment would be natural gas powered.
Increase public transit ridership by 25% by 2016	**Consistent:** The Proposed Project would include a new enhanced bus stop at the northwest corner of 14th Street and Long Beach Boulevard.
Increase bike ridership from 1% to 10% by 2016	**Consistent:** The Proposed Project would include bicycle parking in the buildings and bicycle racks within the streetscape.
Create a system of at least 200 miles of interconnected bike routes (Class 1-3) by 2020	**Consistent:** The Proposed Project would include closure of the segments of East 14th Street and West 14th Street that border the proposed parklet, which would prevent vehicle through movement. In addition, the Proposed Project would also consider strategies for enhancing the 14th Street Bike Boulevard as it traverses the new park extension. The proposed enhanced bus stop would also be designed as an island in consideration of future bikeway improvements for Long Beach Boulevard.
Create 8 acres of open space per 1,000 residents by 2020	**Consistent:** The Proposed Project would develop a 0.45-acre parklet.

5. Environmental Impacts

Table 18 Consistency with City of Long Beach Sustainable City Action Plan

Applicable Goals	Project Compliance
Establish a native landscape demonstration in every park 1 acre or larger by 2020	**Consistent:** The Proposed Project landscaping would include native and adaptive plant species.
Reduce per capita use of potable water, exceeding the State mandate to achieve a demand reduction of 20% in per capita water use by the year 2020	**Consistent:** At minimum, the proposed buildings would be designed and built to meet the current water efficiency improvements required under CALGreen. Overall, compared to the current California Water Board average per household usage baseline, the Proposed Project would achieve a 60 percent water reduction per household (Partner Energy 2021).

Source: Long Beach 2010.

City of Long Beach Climate Action and Adaptation Plan

The 2016 Certified EIR did not evaluate consistency of the Approved Project with the proposed CAAP because it was prepared prior to the CAAP's release. Table 19, *Consistency with City of Long Beach Proposed Climate Action and Adaptation Plan,* evaluates consistency of the Proposed Project to the proposed CAAP. Specifically, the Proposed Project is compared to the CAAP goals that relate to and are associated with providing emissions reductions.

Table 19 Consistency with City of Long Beach Proposed Climate Action and Adaptation Plan

Objectives	Actions	Project Compliance
Building + Energy Goal: Long Beach buildings are energy-efficient and our communities run on affordable, renewable electricity.		
Transition to a carbon-free, more resilient electricity system.	**BE-1:** Provide access to renewably generated electricity. **BE-2:** Increase use of solar power. **BE-3:** Promote community solar and microgrids.	**Consistent:** The Proposed Project would include a rooftop PV system that would provide 205,954 kWh/yr of onsite renewable electricity. In addition, the West Building and East Building would be 1.6 percent and 4.6 percent more energy efficient, respectively, than the 2019 Building Energy Efficiency Standards.
Increase the energy efficiency of existing buildings/facilities.	**BE-4:** Develop a residential and commercial energy assessment benchmarking program. **BE-5:** Provide access to energy efficiency financing, rebates, and incentives for home builders. **BE-6:** Perform municipal energy and water audits.	
Ensure new buildings are low-carbon or carbon-neutral.	**BE-7:** Update building codes to incentivize electric new residential and commercial buildings.	
Reduce emissions from local oil and gas extraction.	**BE-8:** Implement short-term measures to reduce emissions related to oil and gas extraction.	

Table 19 Consistency with City of Long Beach Proposed Climate Action and Adaptation Plan

Objectives	Actions	Project Compliance
Transportation Goal: Affordable, safe, carbon-free transportation choices connect all Long Beach communities to opportunity, clean air, and improved health.		
Decrease reliance on personal motor vehicles and increase transit, biking, and walking trips.	**T-1:** Increase the frequency, speed, connectivity, and safety of transit options. **T-2:** Expand and improve pedestrian infrastructure citywide. **T-3:** Increase bikeway infrastructure citywide.	**Consistent:** As stated in Table 18, development of the Proposed Project would support implementation of the Midtown Specific Plan and result in the development of multifamily residential and commercial uses in TND7 of the Midtown Specific Plan. Furthermore, the Proposed Project includes a new enhanced bus stop at the northwest corner of 14th Street and Long Beach Boulevard. In addition, eastbound and westbound roadways north and south of the proposed parklet would be closed, which would prevent vehicle through movement from Long Beach Boulevard and double the area of publicly accessible open space. The Proposed Project would also include bicycle parking in the buildings and bicycle racks within the streetscape.
Shift to low- and zero-emissions vehicles to move people and freight.	**T-4:** Implement the Port of Long Beach Clean Trucks Program. **T-5:** Develop and Electric Vehicle Infrastructure Master Plan.	
Prioritize the development of transit-oriented neighborhoods with a mix of jobs, services, and housing.	**T-6:** Increase employment and residential development along primary transit corridors. **T-7:** Update the Transportation Demand Management Ordinance. **T-8:** Increase the density and mixing of land uses. **T-9:** Integrate SB 743 planning with the CAAP process.	
Waste Goal: Long Beach is a zero-waste City.		
Materials that can be recycled are recycled.	**W-1:** Ensure compliance with state law requirements for multifamily and commercial property recycling programs. **W-2:** Develop an organic waste collection program for City-serviced accounts.	**Not Applicable:** This goal is generally not a project-specific goal and relates to city government actions. However, the Proposed Project would comply with all state law recycling requirements under AB 939 and AB 1826. Additionally, the Proposed Project would be subject to the construction and demolition debris waste diversion requirements of Municipal Code Section 18.67.020, which requires at least 65 percent diversion of construction and demolition materials.
Collect all organic waste for composting or clean energy generation.	**W-3:** Partner with private waste haulers to expand organic waste collection community-wide. **W-4:** Identify organic waste management options.	

Source: Long Beach 2020

As discussed in the table, the Proposed Project would generally be consistent with the goals of the proposed CAAP. For example, the proposed buildings would be designed and built to be more energy efficient than required under the 2019 Building Energy Efficiency Standards. Additionally, a rooftop PV system would be installed that would generate onsite renewable electricity to offset electricity demand of the Proposed Project. These two components of the Proposed Project would support the objectives of the Building + Energy Goal of transiting to a carbon-free electricity system and ensuring new buildings are low carbon or carbon neutral. Furthermore, development of the Proposed Project in and of itself would support the objectives of the Transportation Goal to decrease reliance on personal motor vehicles and increase transit, biking, and walking trips. The Proposed Project would result in the types of development envisioned for the TND7 planning area;

install a new enhanced bus stop; provide bicycle parking and racks within the proposed buildings and streetscape; and prioritize the development of transit-oriented neighborhoods with a mix of jobs, housing, and services. Therefore, development and operation of the Proposed Project would not interfere with implementation of the City's proposed CAAP. Furthermore, because the proposed uses would be within the scope and types of land uses envisioned for the TND7 planning area, the Proposed Project would not result in new or greater significant impacts than the Approved Project.

5.3 ADOPTED MITIGATION MEASURES APPLICABLE TO THE PROPOSED PROJECT

This section includes the mitigation measures identified in the 2016 Certified EIR. Revisions to the mitigation measures where appropriate to reflect the Proposed Project are identified in ~~strikethrough~~ for deletion and double-underline for addition.

5.3.1 Air Quality

AQ-1 Applicants for new development projects within the Midtown Specific Plan area shall require the construction contractor to use equipment that meets the United Stated Environmental Protection Agency (EPA)-Certified emissions standards. All off-road diesel-powered construction equipment greater than 50 horsepower shall meet the Tier 4 emission standards. Any emissions control device used by the contractor shall achieve emissions reductions that are no less than what could be achieved by a Level 4 diesel emissions control strategy for a similarly sized engine, as defined by the California Air Resources Board's (CARB) regulations.

Prior to construction, the project engineer shall ensure that all demolition and grading plans clearly show the requirement for EPA Tier 4 or higher emissions standards for construction equipment over 50 horsepower. During construction, the construction contractor shall maintain a list of all operating equipment in use on the construction site for verification by the City of Long Beach Building Official or their designee. The construction equipment list shall state the makes, models, and numbers of construction equipment onsite. Equipment shall be properly serviced and maintained in accordance with the manufacturer's recommendations. Construction contractors shall also ensure that all nonessential idling of construction equipment is restricted to five minutes or less in compliance with California Air Resources Board's Rule 2449.

AQ-2 Applicants for new development projects within the Midtown Specific Plan area shall require the construction contractor to prepare a dust control plan and implement the following measures during ground-disturbing activities in addition to the existing requirements for fugitive dust control under South Coast Air Quality Management District (~~SCAQMD~~South Coast AQMD) Rule 403 to further reduce PM_{10} and $PM_{2.5}$ emissions. The City of Long Beach Building Official or their designee shall verify compliance that these measures have been implemented during normal construction site inspections.

- Following all grading activities, the construction contractor shall reestablish ground cover on the construction site through seeding and watering.
- During all construction activities, the construction contractor shall sweep streets with ~~SCAQMD~~South Coast AQMD Rule 1186–compliant, PM_{10}-efficient vacuum units on a daily basis if silt is carried over to adjacent public thoroughfares or occurs as a result of hauling.
- During all construction activities, the construction contractor shall maintain a minimum 24-inch freeboard on trucks hauling dirt, sand, soil, or other loose materials and tarp materials with a fabric cover or other cover that achieves the same amount of protection.
- During all construction activities, the construction contractor shall water exposed ground surfaces and disturbed areas a minimum of every three hours on the construction site and a minimum of three times per day.
- During all construction activities, the construction contractor shall limit onsite vehicle speeds on unpaved roads to no more than 15 miles per hour.

AQ-3 Applicants for new development projects within the Midtown Specific Plan area shall require the construction contractor to use coatings and solvents with a volatile organic compound (VOC) content lower than required under South Coast Air Quality Management District Rule 1113 (i.e., super compliant paints). The construction contractor shall also use precoated/natural-colored building materials, where feasible. Use of low-VOC paints and spray method shall be included as a note on architectural building plans and verified by the City of Long Beach Building Official or their designee during construction.

AQ-4 Prior to issuance of a building permit for new development projects within the Midtown Specific Plan area, the property owner/developer shall show on the building plans that all major appliances (dishwashers, refrigerators, clothes washers, and dryers) to be provided/installed are Energy Star appliances. Installation of Energy Star appliances shall be verified by the City of Long Building and Safety Bureau prior to issuance of a certificate of occupancy.

AQ-5 Prior to issuance of building permits for non-residential development projects within the Midtown Specific Plan area, the property owner/developer shall indicate on the building plans that the following features have been incorporated into the design of the building(s). Proper installation of these features shall be verified by the City of Long Beach Building and Safety Bureau prior to issuance of a certificate of occupancy.

- For buildings with more than ten tenant-occupants, changing/shower facilities shall be provided as specified in Section A5.106.4.3 (Nonresidential Voluntary Measures) of the CALGreen Code.

- Preferential parking for low-emitting, fuel-efficient, and carpool/van vehicles shall be provided as specified in Section A5.106.5.1 (Nonresidential Voluntary Measures) of the CALGreen Code.
- Facilities shall be installed to support future electric vehicle charging at each non-residential building with 30 or more parking spaces. Installation shall be consistent with Section A5.106.5.3 (Nonresidential Voluntary Measures) of the CALGreen Code.

AQ-6 Prior to issuance of building permits for development projects within the Midtown Specific Plan area that include sensitive uses (e.g., residential, day care centers), within the distances identified by the California Air Resources Board's (CARB) *Air Quality and Land Use Handbook*, the property owner/developer shall submit a health risk assessment (HRA) to the City of Long Beach Planning Bureau. The HRA shall be prepared in accordance with policies and procedures of the state Office of Environmental Health Hazard Assessment (OEHHA) and the South Coast Air Quality Management District (~~SCAQMD~~South Coast AQMD).

If the HRA shows that the incremental cancer risk exceeds one in one hundred thousand (1.0E-05) or the appropriate noncancer hazard index exceeds 1.0, the following is required prior to issuance of building permits:

- The HRA shall identify the level of high-efficiency Minimum Efficiency Reporting Value (MERV) filter required to reduce indoor air concentrations of pollutants to achieve the cancer and/or noncancer threshold.
- Installation of high efficiency MERV filters in the intake of residential ventilation systems consistent with the recommendations of the HRA, shall be shown on plans. Heating, air conditioning, and ventilation (HVAC) systems shall be installed with a fan unit designed to force air through the MERV filter.
- To ensure long-term maintenance and replacement of the MERV filters in the individual units, the property owner/developer shall record a covenant on the property that requires ongoing implementation of the actions below. The form of the covenant shall be approved by the Long Beach City Attorney's Office prior to recordation.
    - The property owner/developer shall provide notification to all future tenants or owners of the potential health risk for affected units and the increased risk of exposure to diesel particulates when windows are open.
    - For rental units, the property owner/developer shall maintain and replace MERV filters in accordance with the manufacture's recommendations.
    - For ownership units, the Homeowner's Association shall incorporate requirements for long-term maintenance in the Covenant Conditions and Restrictions and inform homeowners of their responsibility to maintain the MERV filter in accordance with the manufacturer's recommendations.

5.3.2 GHG Emissions

The 2016 Certified EIR did not identify other mitigation measures aside from Mitigation Measures AQ-1 through AQ-6 to reduce GHG emissions impacts.

5. Environmental Impacts

This page intentionally left blank.

6. References

Bay Area Air Quality Management District (BAAQMD). 2017, May. California Environmental Quality Act Air Quality Guidelines.

California Air Pollution Control Officers Association (CAPCOA). 2017. California Emissions Estimator Model (CalEEMod). Version 2016.3.2.25 Prepared by: BREEZE Software, A Division of Trinity Consultants in collaboration with South Coast Air Quality Management District and the California Air Districts.

California Air Resources Board (CARB). 1998, April 22. The Report on Diesel Exhaust. http://www.arb.ca.gov/toxics/dieseltac/de-fnds.htm.

———. 1999, December. Final Staff Report: Update to the Toxic Air Contaminant List.

———. 2008, October. Climate Change Proposed Scoping Plan: A Framework for Change.

———. 2010, August. Proposed Regional Greenhouse Gas Emission Reduction Targets for Automobiles and Light Trucks Pursuant to Senate Bill 375. Staff Report.

———. 2014, May 15. Proposed First Update to the Climate Change Scoping Plan: Building on the Framework. https://www.arb.ca.gov/cc/scopingplan/2013_update/first_update_climate_change_scoping_plan.pdf.

———. 2016, May 4. Ambient Air Quality Standards. http://www.arb.ca.gov/research/aaqs/aaqs2.pdf.

———. 2017a, March 14. Final Proposed Short-Lived Climate Pollutant Reduction Strategy. https://www.arb.ca.gov/cc/shortlived/shortlived.htm.

———. 2017b, November. California's 2017 Climate Change Scoping Plan: The Strategy for Achieving California's 2030 Greenhouse Gas Target. https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf.

———. 2018, February. Proposed Update to the SB 375 Greenhouse Gas Emission Reduction Targets. https://www.arb.ca.gov/cc/sb375/sb375_target_update_final_staff_report_feb2018.pdf.

———. 2020. 2020 California Greenhouse Gas 2000-2018 Emissions Trends and Indicators Report. https://ww3.arb.ca.gov/cc/inventory/pubs/reports/2000_2018/ghg_inventory_trends_00-18.pdf.

———. 2021a, Area Designations Maps/State and National. Accessed March 8, 2021. https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations.

6. References

———. 2021b, Common Air Pollutants. Accessed March 8, 2021. https://ww2.arb.ca.gov/resources/common-air-pollutants.

———. 2021c, September 15 (accessed). CARB Identified Toxic Air Contaminants. https://ww2.arb.ca.gov/resources/documents/carb-identified-toxic-air-contaminants.

———. 2021d. California and major automakers reach groundbreaking framework agreement on clean emission standards. Accessed March 8, 2021. https://ww2.arb.ca.gov/news/california-and-major-automakers-reach-groundbreaking-framework-agreement-clean-emission.

———. 2021e. Air Pollution Data Monitoring Cards (2015, 2016, 2017, 2018, and 2019). Accessed March 8, 2021. http://www.arb.ca.gov/adam/topfour/topfour1.php.

California Climate Action Team (CAT). 2006, March. Climate Action Team Report to Governor Schwarzenegger and the Legislature.

California Climate Change Center (CCCC). 2012, July. Our Changing Climate 2012: Vulnerability & Adaptation to the Increasing Risks from Climate Change in California.

California Energy Commission (CEC). 2006. Our Changing Climate: Assessing the Risks to California. 2006 Biennial Report. California Climate Change Center. CEC-500-2006-077.

———. 2009. The Future Is Now: An Update on Climate Change Science, Impacts, and Response Options for California. CEC-500-2008-0077.

———.2018a, May 9. Energy Commission Adopts Standards Requiring Solar Systems for New Homes, First in Nation. News Release. https://www.energy.ca.gov/news/2018-05/energy-commission-adopts-standards-requiring-solar-systems-new-homes-first.

———.2018b. 2019 Building Energy and Efficiency Standards Frequently Asked Questions. https://www.energy.ca.gov/sites/default/files/2020-03/Title_24_2019_Building_Standards_FAQ_ada.pdf.

California Natural Resources Agency. (CNRA) 2014, July. Safeguarding California: Reducing Climate Risk, An Update to the 2009 California Climate Adaptation Strategy.

Fehr and Peers. 2020, December 14. 14th & Long Beach Boulevard Affordable Housing Project Traffic Assessment Technical Memorandum.

Governor's Office of Planning and Research (OPR). 2008, June. CEQA and Climate Change: Addressing Climate Change through CEQA Review. Technical Advisory. https://opr.ca.gov/docs/june08-ceqa.pdf.

Intergovernmental Panel on Climate Change (IPCC). 1995. *Second Assessment Report: Climate Change 1995*.

———. 2001. *Third Assessment Report: Climate Change 2001*. New York: Cambridge University Press.

6. References

———. 2007. *Fourth Assessment Report: Climate Change 2007*. New York: Cambridge University Press.

———. 2013. *Fifth Assessment Report: Climate Change 2013*. New York: Cambridge University Press.

Institute of Transportation Engineers (ITE). 2017. Trip Generation Manual,10th ed.

Long Beach, City of. 2010. Sustainable City Action Plan. http://www.longbeach.gov/globalassets/sustainability/media-library/documents/nature-initiatives/action-plan/scap-final.

———. 2021. City of Long Beach Draft Climate Action and Adaptation Plan. Accessed March 3, 2021. http://www.longbeach.gov/lbds/planning/caap/

Office of Environmental Health Hazards Assessment (OEHHA). 2015, February. Air Toxics Hot Spots Program Risk Assessment Guidelines. Guidance Manual for Preparation of Health Risk Assessments. http://oehha.ca.gov/air/hot_spots/2015/2015GuidanceManual.pdf.

———. 2018, May. Indicators of Climate Change in California. https://oehha.ca.gov/media/downloads/climate-change/report/2018caindicatorsreportmay2018.pdf.

Partner Energy. 2021, February 25. Energy & Water Performance Metrics: 14th and LBB.

The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule Part One: One National Program. Vol. 84 Federal Register, No. 188 (September 27, 2019).

The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks: Final Rule, Vol. 85 Federal Register 24,174 (April 30, 2020).

South Coast Air Quality Management District (South Coast AQMD). 1992. Federal Attainment Plan for Carbon Monoxide.

———. 1993. California Environmental Quality Act Air Quality Handbook.

———. 2005, May. Guidance Document for Addressing Air Quality Issues in General Plans and Local Planning. http://www.aqmd.gov/docs/default-source/planning/air-quality-guidance/complete-guidance-document.pdf.

———. 2008a, July. Final Localized Significance Threshold Methodology.

———. 2008b, September. Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES III). https://www.aqmd.gov/home/air-quality/air-quality-studies/health-studies/mates-iii.

———. 2010a, September 28. Agenda for Meeting 15. Greenhouse Gases (GHG) CEQA Significance Thresholds Working Group. http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-main-presentation.pdf?sfvrsn=2.

6. References

———. 2010b, September 28. Minutes for the GHG CEQA Significance Threshold Stakeholder Working Group #15. http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-15/ghg-meeting-15-minutes.pdf.

———. 2011a, December. The Health Effects of Air Pollution. http://www.aqmd.gov/docs/default-source/publications/brochures/the-health-effects-of-air-pollution-brochure.pdf.

———. 2011b. Fact Sheet for Applying CalEEMod to Localized Significance Thresholds. http://www.aqmd.gov/docs/default-source/ceqa/handbook/localized-significance-thresholds/caleemod-guidance.pdf?sfvrsn=2.

———. 2012, May 4. Revised Draft: 2012 Lead State Implementation Plan, Los Angeles County. http://www.aqmd.gov/aqmp/Lead_SIP/RvsdDraftLeadSIP.pdf.

———. 2013, February. 2012 Final Air Quality Management Plan. http://www.aqmd.gov/home/library/clean-air-plans/air-quality-mgt-plan/final-2012-air-quality-management-plan.

———. 2013 to 2020. South Coast Air Quality Management District Annual Update Workshop.

———. 2015a, May. Multiple Air Toxics Exposure Study in the South Coast Air Basin (MATES IV) Final Report. http://www.aqmd.gov/docs/default-source/air-quality/air-toxic-studies/mates-iv/mates-iv-final-draft-report-4-1-15.pdf?sfvrsn=7.

———. 2015b, October. Blueprint for Clean Air: 2016 AQMP White Paper. http://www.aqmd.gov/docs/default-source/Agendas/aqmp/white-paper-working-groups/wp-blueprint-final.pdf?sfvrsn=2.

———. 2017, March 4. Final 2016 Air Quality Management Plan. https://www.aqmd.gov/home/air-quality/clean-air-plans/air-quality-mgt-plan/final-2016-aqmp.

———. 2019, April. South Coast AQMD Air Quality Significance Thresholds. http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf.

———. 2021. Air Quality Analysis Handbook. Updates to CEQA Air Quality Handbook. Accessed March 8, 2021. http://www.aqmd.gov/home/regulations/ceqa/air-quality-analysis-handbook.

Southern California Association of Governments (SCAG). 2020, September 3. Connect SoCal Plan: The 2020-2045 Regional Transportation Plan / Sustainable Communities Strategy of The Southern California Association of Governments. https://www.connectsocal.org/Pages/Connect-SoCal-Final-Plan.aspx.

United States Environmental Protection Agency (USEPA). 2009, December. EPA: Greenhouse Gases Threaten Public Health and the Environment. https://archive.epa.gov/epapages/newsroom_archive/newsreleases/08d11a451131bca585257685005bf252.html.

6. References

———. 2021a. Criteria Air Pollutants. Accessed March 8, 2021. https://www.epa.gov/criteria-air-pollutants.

———. 2021b. CARB Identified Toxic Air Contaminants. Access March 8, 2021. https://ww2.arb.ca.gov/resources/documents/carb-identified-toxic-air-contaminants.

Western Regional Climate Center (WRCC). 2021. Long Beach, California ([Station ID] 045082): Period of Record Monthly Climate Summary, 04/01/1906 to 06/09/2016. Western U.S. Climate Summaries. Accessed March 8, 2021. https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca5082.

6. References

This page intentionally left blank.

Appendix A. Modeling Summaries and Assumptions

Appendix

This page intentionally left blank.

eg onal onst uct on E ss ons o sheet

As halt e ol t on

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2022** Summer						
	Off-Road	0.463	8.5434	15.4154	0.0241	0.0375	0.0375
	Total	**4**	**54 4**	**15 4154**	**41**	**5**	**5**
Offsite							
	Hauling	0	0	0	0	0	0
	Vendor	0.02	0.6463	0.1681	1.78E-03	0.0432	0.0134
	Worker	0.0402	0.0266	0.3716	1.10E-03	0.1039	0.0283
	Total	**1**		**5**	**E**	**14 1**	**41**
TOTAL		***0.52***	***9.22***	***15.96***	***0.03***	***0.18***	***0.08***
Onsite	**2022** Winter						
	Off-Road	0.463	8.5434	15.4154	0.0241	0.0375	0.0375
	Total	**4**	**54 4**	**15 4154**	**41**	**5**	**5**
Offsite							
	Hauling	0	0	0	0	0	0
	Vendor	0.021	0.6446	0.186	1.73E-03	0.0432	0.0134
	Worker	0.0448	0.0295	0.3392	1.04E-03	0.1039	0.0283
	Total	**5**	**4**	**5 5**	**E**	**14 1**	**41**
TOTAL		***0.53***	***9.22***	***15.94***	***0.03***	***0.18***	***0.08***
Onsite	**2022**						
	Off-Road	0.46	8.54	15.42	0.02	0.04	0.04
	Total	**0.46**	**8.54**	**15.42**	**0.02**	**0.04**	**0.04**
Offsite							
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00
	Vendor	0.02	0.65	0.19	0.00	0.04	0.01
	Worker	0.04	0.03	0.37	0.00	0.10	0.03
	Total	**0.07**	**0.67**	**0.54**	**0.00**	**0.15**	**0.04**
TOTAL		***0.53***	***9.22***	***15.96***	***0.03***	***0.18***	***0.08***

As halt e ol t on e s aul

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2022** Summer						
	Fugitive Dust					0.4706	0.0713
	Off-Road	0	0	0	0	0	0
	Total					**4**	**1**
Offsite							
	Hauling	0.1245	3.6044	0.9805	0.0124	0.2889	0.0879
	Vendor	5.71E-03	0.1847	0.048	5.10E-04	0.0123	3.82E-03
	Worker	0.0402	0.0266	0.3716	1.10E-03	0.1039	0.0283
	Total	**1**	**15**	**1 4 1**	**14**	**4 51**	**1**
TOTAL		***0.17***	***3.82***	***1.40***	***0.01***	***0.88***	***0.19***
Onsite	**2022** Winter						
	Fugitive Dust					0.4706	0.0713
	Off-Road	0	0	0	0	0	0
	Total					**4**	**1**
Offsite							
	Hauling	0.1264	3.6765	1.0142	0.0122	0.289	0.088
	Vendor	5.99E-03	0.1842	0.0532	5.00E-04	0.0123	3.83E-03
	Worker	0.0448	0.0295	0.3392	1.04E-03	0.1039	0.0283
	Total	**1 1**	**1**	**1 4**	**1**	**4 5**	**1 1**
TOTAL		***0.18***	***3.89***	***1.41***	***0.01***	***0.88***	***0.19***
Onsite	**2022**						
	Fugitive Dust	0.00	0.00	0.00	0.00	0.47	0.07
	Off-Road	0.00	0.00	0.00	0.00	0.00	0.00
	Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.47**	**0.07**
Offsite							
	Hauling	0.13	3.68	1.01	0.01	0.29	0.09
	Off-Road	0.01	0.18	0.05	0.00	0.01	0.00
	Worker	0.04	0.03	0.37	0.00	0.10	0.03
	Total	**0.18**	**3.89**	**1.41**	**0.01**	**0.41**	**0.12**
TOTAL		***0.18***	***3.89***	***1.41***	***0.01***	***0.88***	***0.19***

As halt e ol t on e s ns te e ocess ng

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2022** Summer						
	Off-Road	0.1286	2.5024	4.3265	7.02E-03	9.35E-03	9.35E-03
	Total	**1**	**5 4**	**4 5**	**E**	**5E**	**5E**
Offsite							
	Hauling	0	0	0	0	0	0
	Vendor	5.71E-03	0.1847	0.048	5.10E-04	0.0123	3.82E-03
	Worker	0.0402	0.0266	0.3716	1.10E-03	0.1039	0.0283
	Total	**45**	**11**	**41**	**1 1E**	**11**	**1**
TOTAL		***0.17***	***2.71***	***4.75***	***0.01***	***0.13***	***0.04***
Onsite	**2022** Winter						
	Off-Road	0.1286	2.5024	4.3265	7.02E-03	9.35E-03	9.35E-03
	Total	**1**	**5 4**	**4 5**	**E**	**5E**	**5E**
Offsite							
	Hauling	0	0	0	0	0	0
	Vendor	5.99E-03	0.1842	0.0532	5.00E-04	0.0123	3.83E-03
	Worker	0.0448	0.0295	0.3392	1.04E-03	0.1039	0.0283
	Total	**5**	**1**		**1 54E**	**11**	**1**
TOTAL		***0.18***	***2.72***	***4.72***	***0.01***	***0.13***	***0.04***
Onsite	**2022**						
	Off-Road	0.13	2.50	4.33	0.01	0.01	0.01
	Total	**0.13**	**2.50**	**4.33**	**0.01**	**0.01**	**0.01**
Offsite							
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00
	Vendor	0.01	0.18	0.05	0.00	0.01	0.00
	Worker	0.04	0.03	0.37	0.00	0.10	0.03
	Total	**0.05**	**0.21**	**0.42**	**0.00**	**0.12**	**0.03**
TOTAL		***0.18***	***2.72***	***4.75***	***0.01***	***0.13***	***0.04***

S te e a at on

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2022** Summer						
	Fugitive Dust					2.4793	1.2627
	Off-Road	0.2998	5.0659	9.8221	0.0172	0.0281	0.0281
	Total		**5 5**	**1**	**1**	**5 4**	**1**
Offsite							
	Hauling	0	0	0	0	0	0
	Vendor	8.56E-03	0.277	0.072	7.60E-04	0.0185	5.73E-03
	Worker	0.0201	0.0133	0.1858	5.50E-04	0.052	0.0142
	Total			**5**	**1 1E**	**5**	**1**
TOTAL		***0.33***	***5.36***	***10.08***	***0.02***	***2.58***	***1.31***
Onsite	**2022** Winter						
	Fugitive Dust					2.4793	1.2627
	Off-Road	0.2998	5.0659	9.8221	0.0172	0.0281	0.0281
	Total		**5 5**	**1**	**1**	**5 4**	**1**
Offsite							
	Hauling	0	0	0	0	0	0
	Vendor	8.99E-03	0.2762	0.0797	7.40E-04	0.0185	5.74E-03
	Worker	0.0224	0.0147	0.1696	5.20E-04	0.052	0.0142
	Total	**14**	**1**	**4**	**1 E**	**5**	**1**
TOTAL		***0.33***	***5.36***	***10.07***	***0.02***	***2.58***	***1.31***
Onsite	**2022**						
	Fugitive Dust	0.00	0.00	0.00	0.00	2.48	1.26
	Off-Road	0.30	5.07	9.82	0.02	0.03	0.03
	Total	**0.30**	**5.07**	**9.82**	**0.02**	**2.51**	**1.29**
Offsite							
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00
	Vendor	0.01	0.28	0.08	0.00	0.02	0.01
	Worker	0.02	0.01	0.19	0.00	0.05	0.01
	Total	**0.03**	**0.29**	**0.26**	**0.00**	**0.07**	**0.02**
TOTAL		***0.33***	***5.36***	***10.08***	***0.02***	***2.58***	***1.31***

S te e a at on So l aul ng

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2022** Summer						
	Fugitive Dust					0	0
	Off-Road	0	0	0	0	0	0
	Total						
Offsite							
	Hauling	0.1245	3.6044	0.9805	0.0124	0.2889	0.0879
	Vendor	2.85E-03	0.0923	0.024	2.50E-04	6.17E-03	1.91E-03
	Worker	0.0201	0.0133	0.1858	5.50E-04	0.052	0.0142
	Total	14 4	1 1	1 1	1	4	1 4
TOTAL		***0.15***	***3.71***	***1.19***	***0.01***	***0.35***	***0.10***
Onsite	**2021** Winter						
	Fugitive Dust					0	0
	Off-Road	0	0	0	0	0	0
	Total						
Offsite							
	Hauling	0.1264	3.6765	1.0142	0.0122	0.289	0.088
	Vendor	3.00E-03	0.0921	0.0266	2.50E-04	6.17E-03	1.91E-03
	Worker	0.0224	0.0147	0.1696	5.20E-04	0.052	0.0142
	Total	151		1 1 4	1	4 1	1 41
TOTAL		***0.15***	***3.78***	***1.21***	***0.01***	***0.35***	***0.10***
Onsite	**2021**						
	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
	Off-Road	0.00	0.00	0.00	0.00	0.00	0.00
	Total	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**
Offsite							
	Hauling	0.13	3.68	1.01	0.01	0.29	0.09
	Vendor	0.00	0.09	0.03	0.00	0.01	0.00
	Worker	0.02	0.01	0.19	0.00	0.05	0.01
	Total	**0.15**	**3.78**	**1.21**	**0.01**	**0.35**	**0.10**
TOTAL		***0.15***	***3.78***	***1.21***	***0.01***	***0.35***	***0.10***

ough ad ng

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2022** Summer						
	Fugitive Dust					2.1008	1.0797
	Off-Road	0.2466	4.1795	8.0841	0.0141	0.023	0.023
	Total	4	4 1 5	41	141	1	1 1
Offsite							
	Hauling	0	0	0	0	0	0
	Vendor	8.56E-03	0.277	0.072	7.60E-04	0.0185	5.73E-03
	Worker	0.0803	0.0532	0.7432	2.21E-03	0.2078	0.0566
	Total			15	E		
TOTAL		***0.34***	***4.51***	***8.90***	***0.02***	***2.35***	***1.17***
Onsite	**2021** Winter						
	Fugitive Dust					2.1008	1.0797
	Off-Road	0.2466	4.1795	8.0841	0.0141	0.023	0.023
	Total	4	4 1 5	41	141	1	1 1
Offsite							
	Hauling	0	0	0	0	0	0
	Vendor	8.99E-03	0.2762	0.0797	7.40E-04	0.0185	5.74E-03
	Worker	0.0896	0.0589	0.6784	2.08E-03	0.2078	0.0566
	Total		5	5 1	E		4
TOTAL		***0.35***	***4.51***	***8.84***	***0.02***	***2.35***	***1.17***
Onsite	**2021**						
	Fugitive Dust	0.00	0.00	0.00	0.00	2.10	1.08
	Off-Road	0.25	4.18	8.08	0.01	0.02	0.02
	Total	**0.25**	**4.18**	**8.08**	**0.01**	**2.12**	**1.10**
Offsite							
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00
	Vendor	0.01	0.28	0.08	0.00	0.02	0.01
	Worker	0.09	0.06	0.74	0.00	0.21	0.06
	Total	**0.10**	**0.34**	**0.82**	**0.00**	**0.23**	**0.06**
TOTAL		***0.35***	***4.51***	***8.90***	***0.02***	***2.35***	***1.17***

t l t ench ng

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2022 Summer**						
Off-Road		0.0635	2.2767	3.918	5.17E-03	8.47E-03	8.47E-03
Total		**5**		**1**	**5 1 E**	**4 E**	**4 E**
Offsite							
Hauling		0	0	0	0	0	0
Vendor		0.0143	0.4617	0.1201	1.27E-03	0.0308	9.54E-03
Worker		0.0402	0.0266	0.3716	1.10E-03	0.1039	0.0283
Total		**544**	**4**	**4 1**	**E**	**1 4**	
TOTAL		***0.12***	***2.77***	***4.41***	***0.01***	***0.14***	***0.05***
Onsite	**2022 Winter**						
Off-Road		0.0635	2.2767	3.918	5.17E-03	8.47E-03	8.47E-03
Total		**5**		**1**	**5 1 E**	**4 E**	**4 E**
Offsite							
Hauling		0	0	0	0	0	0
Vendor		0.015	0.4604	0.1329	1.24E-03	0.0309	9.57E-03
Worker		0.0448	0.0295	0.3392	1.04E-03	0.1039	0.0283
Total		**5**	**4**	**4 1**	**E**	**1 4**	
TOTAL		***0.12***	***2.77***	***4.39***	***0.01***	***0.14***	***0.05***
Onsite	**2022**						
Off-Road		0.06	2.28	3.92	0.01	0.01	0.01
Total		**0.06**	**2.28**	**3.92**	**0.01**	**0.01**	**0.01**
Offsite							
Hauling		0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.02	0.46	0.13	0.00	0.03	0.01
Worker		0.04	0.03	0.37	0.00	0.10	0.03
Total		**0.06**	**0.49**	**0.49**	**0.00**	**0.13**	**0.04**
TOTAL		***0.12***	***2.77***	***4.41***	***0.01***	***0.14***	***0.05***

a ng St uctu e onst uct on

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2022 Summer**						
Off-Road		1.0998	9.3977	14.0755	0.0221	0.2132	0.2132
Total		**1**		**14 55**	**1**	**1**	**1**
Offsite							
Hauling		0	0	0	0	0	0
Vendor		0.0143	0.4617	0.1201	1.27E-03	0.0308	9.54E-03
Worker		0.1004	0.0665	0.929	2.76E-03	0.2598	0.0708
Total		**114**	**5**	**1 4 1**	**4 E**		
TOTAL		***1.21***	***9.93***	***15.12***	***0.03***	***0.50***	***0.29***
Onsite	**2022 Winter**						
Off-Road		1.0998	9.3977	14.0755	0.0221	0.2132	0.2132
Total		**1**		**14 55**	**1**	**1**	**1**
Offsite							
Hauling		0	0	0	0	0	0
Vendor		0.015	0.4604	0.1329	1.24E-03	0.0309	9.57E-03
Worker		0.112	0.0736	0.8479	2.60E-03	0.2598	0.0708
Total		**1**	**5 4**		**4E**		
TOTAL		***1.23***	***9.93***	***15.06***	***0.03***	***0.50***	***0.29***
Onsite	**2022**						
Off-Road		1.10	9.40	14.08	0.02	0.21	0.21
Total		**1.10**	**9.40**	**14.08**	**0.02**	**0.21**	**0.21**
Offsite							
Hauling		0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.02	0.46	0.13	0.00	0.03	0.01
Worker		0.11	0.07	0.93	0.00	0.26	0.07
Total		**0.13**	**0.53**	**1.05**	**0.00**	**0.29**	**0.08**
TOTAL		***1.23***	***9.93***	***15.12***	***0.03***	***0.50***	***0.29***

Bu ld ng onst uct on

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2022 Summer**						
	Off-Road	1.0998	9.3977	14.0755	0.0221	0.2132	0.2132
	Total	**1**		**14 55**	**1**	**1**	**1**
Offsite							
	Hauling	0	0	0	0	0	0
	Vendor	0.0571	1.8466	0.4803	5.09E-03	0.1233	0.0382
	Worker	0.2008	0.1331	1.858	5.51E-03	0.5195	0.1415
	Total	**5**	**1**		**1**	**4**	**1**
TOTAL		***1.36***	***11.38***	***16.41***	***0.03***	***0.86***	***0.39***
Onsite	**2022 Winter**						
	Off-Road	1.0998	9.3977	14.0755	0.0221	0.2132	0.2132
	Total	**1**		**14 55**	**1**	**1**	**1**
Offsite							
	Hauling	0	0	0	0	0	0
	Vendor	0.0599	1.8416	0.5315	4.96E-03	0.1234	0.0383
	Worker	0.2239	0.1473	1.6959	5.19E-03	0.5195	0.1415
	Total		**1**	**4**	**1**	**4**	**1**
TOTAL		***1.38***	***11.39***	***16.30***	***0.03***	***0.86***	***0.39***
Onsite	**2022**						
	Off-Road	1.10	9.40	14.08	0.02	0.21	0.21
	Total	**1.10**	**9.40**	**14.08**	**0.02**	**0.21**	**0.21**
Offsite							
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00
	Vendor	0.06	1.85	0.53	0.01	0.12	0.04
	Worker	0.22	0.15	1.86	0.01	0.52	0.14
	Total	**0.28**	**1.99**	**2.34**	**0.01**	**0.64**	**0.18**
TOTAL		***1.38***	***11.39***	***16.41***	***0.03***	***0.86***	***0.39***

Bu ld ng onst uct on

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2023 Summer**						
	Off-Road	1.033	9.2707	14.0218	0.0221	0.1869	0.1869
	Total	**1**		**14 1**	**1**	**1**	**1**
Offsite							
	Hauling	0	0	0	0	0	0
	Vendor	0.0423	1.4011	0.4338	4.93E-03	0.1215	0.0364
	Worker	0.1885	0.1204	1.7111	5.31E-03	0.5194	0.1414
	Total		**1 5 15**	**144**	**1**	**4**	**1**
TOTAL		***1.26***	***10.79***	***16.17***	***0.03***	***0.83***	***0.36***
Onsite	**2023 Winter**						
	Off-Road	1.033	9.2707	14.0218	0.0221	0.1869	0.1869
	Total	**1**		**14 1**	**1**	**1**	**1**
Offsite							
	Hauling	0	0	0	0	0	0
	Vendor	0.0445	1.3948	0.4723	4.79E-03	0.1215	0.0365
	Worker	0.211	0.1332	1.5588	5.00E-03	0.5194	0.1414
	Total	**555**	**1 5**	**1**	**E**	**4**	**1**
TOTAL		***1.29***	***10.80***	***16.05***	***0.03***	***0.83***	***0.36***
Onsite	**2023**						
	Off-Road	1.03	9.27	14.02	0.02	0.19	0.19
	Total	**1.03**	**9.27**	**14.02**	**0.02**	**0.19**	**0.19**
Offsite							
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00
	Vendor	0.04	1.40	0.47	0.00	0.12	0.04
	Worker	0.21	0.13	1.71	0.01	0.52	0.14
	Total	**0.26**	**1.53**	**2.14**	**0.01**	**0.64**	**0.18**
TOTAL		***1.29***	***10.80***	***16.17***	***0.03***	***0.83***	***0.36***

Bu ld ng onst uct on 4

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2024** Summer						
Off-Road		0.9771	9.1513	13.9791	0.0221	0.1639	0.1639
Total		1	151	1 1	1	1	1
Offsite							
Hauling		0	0	0	0	0	0
Vendor		0.0413	1.3958	0.4206	4.90E-03	0.1214	0.0364
Worker		0.1783	0.1098	1.5951	5.14E-03	0.5193	0.1413
Total		1	1 5 5	15	1	4	1
TOTAL		***1.20***	***10.66***	***15.99***	***0.03***	***0.80***	***0.34***
Onsite	**2024** Winter						
Off-Road		0.9771	9.1513	13.9791	0.0221	0.1639	0.1639
Total		1	151	1 1	1	1	1
Offsite							
Hauling		0	0	0	0	0	0
Vendor		0.0434	1.3898	0.458	4.77E-03	0.1215	0.0365
Worker		0.2002	0.1214	1.4512	4.84E-03	0.5193	0.1413
Total		4	1 511	1	1E	4	1
TOTAL		***1.22***	***10.66***	***15.89***	***0.03***	***0.80***	***0.34***
Onsite	**2024**						
Off-Road		0.98	9.15	13.98	0.02	0.16	0.16
Total		**0.98**	**9.15**	**13.98**	**0.02**	**0.16**	**0.16**
Offsite							
Hauling		0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.04	1.40	0.46	0.00	0.12	0.04
Worker		0.20	0.12	1.60	0.01	0.52	0.14
Total		**0.24**	**1.51**	**2.02**	**0.01**	**0.64**	**0.18**
TOTAL		***1.22***	***10.66***	***15.99***	***0.03***	***0.80***	***0.34***

A ch tectu al oat ng

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2023** Summer						
Archit. Coating		3.0894				0	0
Off-Road		0.0545	1.0598	1.8324	2.97E-03	3.96E-03	3.96E-03
Total		14	1 5	1 4	E	E	E
Offsite							
Hauling		0	0	0	0	0	0
Vendor		0.0106	0.3503	0.1084	1.23E-03	0.0304	9.10E-03
Worker		0.0754	0.0482	0.6844	2.12E-03	0.2078	0.0566
Total			4		5E	1	5
TOTAL		***3.23***	***1.46***	***2.63***	***0.01***	***0.24***	***0.07***
Onsite	**2023** Winter						
Archit. Coating		3.0894				0	0
Off-Road		0.0545	1.0598	1.8324	2.97E-03	3.96E-03	3.96E-03
Total		14	1 5	1 4	E	E	E
Offsite							
Hauling		0	0	0	0	0	0
Vendor		0.0111	0.3487	0.1181	1.20E-03	0.0304	9.12E-03
Worker		0.0844	0.0533	0.6235	2.00E-03	0.2078	0.0566
Total		55	4	41	E		5
TOTAL		***3.24***	***1.46***	***2.57***	***0.01***	***0.24***	***0.07***
Onsite	**2023**						
Archit. Coating		3.09	0.00	0.00	0.00	0.00	0.00
Off-Road		0.05	1.06	1.83	0.00	0.00	0.00
Total		**3.14**	**1.06**	**1.83**	**0.00**	**0.00**	**0.00**
Offsite							
Hauling		0.00	0.00	0.00	0.00	0.00	0.00
Vendor		0.01	0.35	0.12	0.00	0.03	0.01
Worker		0.08	0.05	0.68	0.00	0.21	0.06
Total		**0.10**	**0.40**	**0.79**	**0.00**	**0.24**	**0.07**
TOTAL		***3.24***	***1.46***	***2.63***	***0.01***	***0.24***	***0.07***

A ch tectu al oat ng 4		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2024** Summer						
	Archit. Coating	3.0894				0	0
	Off-Road	0.0545	1.0598	1.8324	2.97E-03	3.96E-03	3.96E-03
	Total	**14**	**1 5**	**1 4**	**E**	**E**	**E**
Offsite							
	Hauling	0	0	0	0	0	0
	Vendor	0.0103	0.349	0.1051	1.23E-03	0.0304	9.10E-03
	Worker	0.0713	0.0439	0.638	2.06E-03	0.2077	0.0565
	Total	**1**		**4**	**E**	**1**	**5**
TOTAL		***3.23***	***1.45***	***2.58***	***0.01***	***0.24***	***0.07***
Onsite	**2024** Winter						
	Archit. Coating	3.0894				0	0
	Off-Road	0.0545	1.0598	1.8324	2.97E-03	3.96E-03	3.96E-03
	Total	**14**	**1 5**	**1 4**	**E**	**E**	**E**
Offsite							
	Hauling	0	0	0	0	0	0
	Vendor	0.0109	0.3474	0.1145	1.19E-03	0.0304	9.11E-03
	Worker	0.0801	0.0486	0.5805	1.94E-03	0.2077	0.0565
	Total			**5**	**1 E**	**1**	**5**
TOTAL		***3.23***	***1.46***	***2.53***	***0.01***	***0.24***	***0.07***
Onsite	**2024**						
	Archit. Coating	3.09	0.00	0.00	0.00	0.00	0.00
	Off-Road	0.05	1.06	1.83	0.00	0.00	0.00
	Total	**3.14**	**1.06**	**1.83**	**0.00**	**0.00**	**0.00**
Offsite							
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00
	Vendor	0.01	0.35	0.11	0.00	0.03	0.01
	Worker	0.08	0.05	0.64	0.00	0.21	0.06
	Total	**0.09**	**0.40**	**0.74**	**0.00**	**0.24**	**0.07**
TOTAL		***3.23***	***1.46***	***2.58***	***0.01***	***0.24***	***0.07***

ne ad ng		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2023** Summer						
	Fugitive Dust					2.1008	1.0797
	Off-Road	0.2466	4.1795	8.0841	0.0141	0.023	0.023
	Total	**4**	**4 1 5**	**41**	**141**	**1**	**1 1**
Offsite							
	Hauling	0	0	0	0	0	0
	Vendor	6.35E-03	0.2102	0.0651	7.40E-04	0.0182	5.46E-03
	Worker	0.0189	0.012	0.1711	5.30E-04	0.0519	0.0141
	Total	**5**			**1 E**		**1**
TOTAL		***0.27***	***4.40***	***8.32***	***0.02***	***2.19***	***1.12***
Onsite	**2023** Winter						
	Fugitive Dust					2.1008	1.0797
	Off-Road	0.2466	4.1795	8.0841	0.0141	0.023	0.023
	Total	**4**	**4 1 5**	**41**	**141**	**1**	**1 1**
Offsite							
	Hauling	0	0	0	0	0	0
	Vendor	6.68E-03	0.2092	0.0709	7.20E-04	0.0182	5.47E-03
	Worker	0.0211	0.0133	0.1559	5.00E-04	0.0519	0.0141
	Total		**5**		**1 E**		**1**
TOTAL		***0.27***	***4.40***	***8.31***	***0.02***	***2.19***	***1.12***
Onsite	**2023**						
	Fugitive Dust	0.00	0.00	0.00	0.00	2.10	1.08
	Off-Road	0.25	4.18	8.08	0.01	0.02	0.02
	Total	**0.25**	**4.18**	**8.08**	**0.01**	**2.12**	**1.10**
Offsite							
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00
	Vendor	0.01	0.21	0.07	0.00	0.02	0.01
	Worker	0.02	0.01	0.17	0.00	0.05	0.01
	Total	**0.03**	**0.22**	**0.24**	**0.00**	**0.07**	**0.02**
TOTAL		***0.27***	***4.40***	***8.32***	***0.02***	***2.19***	***1.12***

ne ad ng 4

			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		**2024** Summer						
	Fugitive Dust						2.1008	1.0797
	Off-Road		0.2466	4.1795	8.0841	0.0141	0.023	0.023
	Total		**4**	**4 1 5**	**41**	**141**	**1**	**1 1**
Offsite								
	Hauling		0	0	0	0	0	0
	Vendor		6.20E-03	0.2094	0.0631	7.40E-04	0.0182	5.46E-03
	Worker		0.0178	0.011	0.1595	5.10E-04	0.0519	0.0141
	Total		**4**	**4**		**1 5E**		**1**
TOTAL			***0.27***	***4.40***	***8.31***	***0.02***	***2.19***	***1.12***
Onsite		**2024** Winter						
	Fugitive Dust						2.1008	1.0797
	Off-Road		0.2466	4.1795	8.0841	0.0141	0.023	0.023
	Total		**4**	**4 1 5**	**41**	**141**	**1**	**1 1**
Offsite								
	Hauling		0	0	0	0	0	0
	Vendor		6.51E-03	0.2085	0.0687	7.20E-04	0.0182	5.47E-03
	Worker		0.02	0.0121	0.1451	4.80E-04	0.0519	0.0141
	Total		**5**		**1**	**1 E**		**1**
TOTAL			***0.27***	***4.40***	***8.30***	***0.02***	***2.19***	***1.12***
Onsite		**2024**						
	Fugitive Dust		0.00	0.00	0.00	0.00	2.10	1.08
	Off-Road		0.25	4.18	8.08	0.01	0.02	0.02
	Total		**0.25**	**4.18**	**8.08**	**0.01**	**2.12**	**1.10**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.01	0.21	0.07	0.00	0.02	0.01
	Worker		0.02	0.01	0.16	0.00	0.05	0.01
	Total		**0.03**	**0.22**	**0.22**	**0.00**	**0.07**	**0.02**
TOTAL			***0.27***	***4.40***	***8.31***	***0.02***	***2.19***	***1.12***

n sh ng and Landsca ng

			ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite		**2023** Summer						
	Off-Road		0.0635	2.2767	3.918	5.17E-03	8.47E-03	8.47E-03
	Total		**5**		**1**	**5 1 E**	**4 E**	**4 E**
Offsite								
	Hauling		0	0	0	0	0	0
	Vendor		0.0212	0.7006	0.2169	2.46E-03	0.0607	0.0182
	Worker		0.0754	0.0482	0.6844	2.12E-03	0.2078	0.0566
	Total			**4**	**1**	**4 5 E**	**5**	**4**
TOTAL			***0.16***	***3.03***	***4.82***	***0.01***	***0.28***	***0.08***
Onsite		**2023** Winter						
	Off-Road		0.0635	2.2767	3.918	5.17E-03	8.47E-03	8.47E-03
	Total		**5**		**1**	**5 1 E**	**4 E**	**4 E**
Offsite								
	Hauling		0	0	0	0	0	0
	Vendor		0.0223	0.6974	0.2362	2.40E-03	0.0608	0.0182
	Worker		0.0844	0.0533	0.6235	2.00E-03	0.2078	0.0566
	Total		**1**	**5**	**5**	**4 4 E**	**5**	**4**
TOTAL			***0.17***	***3.03***	***4.78***	***0.01***	***0.28***	***0.08***
Onsite		**2023**						
	Off-Road		0.06	2.28	3.92	0.01	0.01	0.01
	Total		**0.06**	**2.28**	**3.92**	**0.01**	**0.01**	**0.01**
Offsite								
	Hauling		0.00	0.00	0.00	0.00	0.00	0.00
	Vendor		0.02	0.70	0.24	0.00	0.06	0.02
	Worker		0.08	0.05	0.68	0.00	0.21	0.06
	Total		**0.11**	**0.75**	**0.90**	**0.00**	**0.27**	**0.07**
TOTAL			***0.17***	***3.03***	***4.82***	***0.01***	***0.28***	***0.08***

n sh ng and Landsca ng 4

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2023** Summer						
	Off-Road	0.0635	2.2767	3.918	5.17E-03	8.47E-03	8.47E-03
	Total	**5**		**1**	**5 1 E**	**4 E**	**4 E**
Offsite							
	Hauling	0	0	0	0	0	0
	Vendor	0.0207	0.6979	0.2103	2.45E-03	0.0607	0.0182
	Worker	0.0713	0.0439	0.638	2.06E-03	0.2077	0.0565
	Total		**41**	**4**	**4 51E**	**5**	**4**
TOTAL		***0.16***	***3.02***	***4.77***	***0.01***	***0.28***	***0.08***
Onsite	**2023** Winter						
	Off-Road	0.0635	2.2767	3.918	5.17E-03	8.47E-03	8.47E-03
	Total	**5**		**1**	**5 1 E**	**4 E**	**4 E**
Offsite							
	Hauling	0	0	0	0	0	0
	Vendor	0.0217	0.6949	0.229	2.39E-03	0.0608	0.0182
	Worker	0.0801	0.0486	0.5805	1.94E-03	0.2077	0.0565
	Total	**1 1**	**4 5**	**5**	**4 E**	**5**	**4**
TOTAL		***0.17***	***3.02***	***4.73***	***0.01***	***0.28***	***0.08***
Onsite	**2023**						
	Off-Road	0.06	2.28	3.92	0.01	0.01	0.01
	Total	**0.06**	**2.28**	**3.92**	**0.01**	**0.01**	**0.01**
Offsite							
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00
	Vendor	0.02	0.70	0.23	0.00	0.06	0.02
	Worker	0.08	0.05	0.64	0.00	0.21	0.06
	Total	**0.10**	**0.74**	**0.85**	**0.00**	**0.27**	**0.07**
TOTAL		***0.17***	***3.02***	***4.77***	***0.01***	***0.28***	***0.08***

As halt av ng 4

		ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Onsite	**2024** Summer						
	Off-Road	0.2149	5.7133	9.8512	0.0136	0.0213	0.0213
	Paving	0.0231				0	0
	Total		**5 1**	**51**	**1**	**1**	**1**
Offsite							
	Hauling	0	0	0	0	0	0
	Vendor	0.0103	0.349	0.1051	1.23E-03	0.0304	9.10E-03
	Worker	0.0535	0.0329	0.4785	1.54E-03	0.1558	0.0424
	Total		**1**	**5**	**E**	**1**	**515**
TOTAL		***0.30***	***6.10***	***10.43***	***0.02***	***0.21***	***0.07***
Onsite	**2024** Winter						
	Off-Road	0.2149	5.7133	9.8512	0.0136	0.0213	0.0213
	Paving	0.0231				0	0
	Total		**5 1**	**51**	**1**	**1**	**1**
Offsite							
	Hauling	0	0	0	0	0	0
	Vendor	0.0109	0.3474	0.1145	1.19E-03	0.0304	9.11E-03
	Worker	0.0601	0.0364	0.4354	1.45E-03	0.1558	0.0424
	Total			**54**	**4E**	**1**	**515**
TOTAL		***0.31***	***6.10***	***10.40***	***0.02***	***0.21***	***0.07***
Onsite	**2024**						
	Off-Road	0.21	5.71	9.85	0.01	0.02	0.02
	Paving	0.02	0.00	0.00	0.00	0.00	0.00
	Total	**0.24**	**5.71**	**9.85**	**0.01**	**0.02**	**0.02**
Offsite							
	Hauling	0.00	0.00	0.00	0.00	0.00	0.00
	Vendor	0.01	0.35	0.11	0.00	0.03	0.01
	Worker	0.06	0.04	0.48	0.00	0.16	0.04
	Total	**0.07**	**0.38**	**0.58**	**0.00**	**0.19**	**0.05**
TOTAL		***0.31***	***6.10***	***10.43***	***0.02***	***0.21***	***0.07***

	ROG	NOx	CO	SO2	PM10 Total	PM2.5 Total
Asphalt Demolition, Debris Haul, and Onsite Reprocessing	***0.885***	***15.824***	***22.108***	***0.050***	***1.186***	***0.312***
Site Preparation and Soil Hauling	***0.483***	***9.140***	***11.290***	***0.032***	***2.925***	***1.415***
Rough Grading	***0.345***	***4.515***	***8.899***	***0.017***	***2.350***	***1.165***
Utility Trenching and Parking Structure Construction	***1.350***	***12.698***	***19.534***	***0.034***	***0.647***	***0.340***

Parking Structure Construction	*1.227*	*9.932*	*15.125*	*0.026*	*0.504*	*0.294*
Building Construction 2022	*1.384*	*11.387*	*16.414*	*0.033*	*0.856*	*0.393*
Building Construction 2023	*1.289*	*10.799*	*16.167*	*0.032*	*0.828*	*0.365*
Building Construction 2023 and Architectural Coating 2023	*4.528*	*12.261*	*18.792*	*0.039*	*1.070*	*0.434*
Building Construction 2023, Architectural Coating 2023, and Fine Grading 2023	*4.802*	*16.663*	*27.112*	*0.054*	*3.264*	*1.557*
Building Construction 2023, Architectural Coating 2023, Fine Grading 2023, and Finishing and Landscaping 2023	*4.972*	*19.690*	*31.932*	*0.064*	*3.541*	*1.640*
Building Construction 2024, Architectural Coating 2024, Fine Grading 2024, and Finishing and Landscaping 2024	*4.894*	*19.539*	*31.643*	*0.063*	*3.518*	*1.617*
Asphalt Paving	*0.309*	*6.097*	*10.435*	*0.016*	*0.208*	*0.073*
A A L	**5**				**4**	
eg onal h esholds	**5**	**1**	**55**	**15**	**15**	**55**
Exceeds Thresholds?	No	No	No	No	No	No

eg onal onst uct on E ss ons o sheet

As halt e ol t on

			NOx	CO	PM10 Total	PM2.5 Total
Onsite		2022				
	Off-Road		8.54	15.42	0.04	0.04
	Total		**8.54**	**15.42**	**0.04**	**0.04**
TOTAL			***8.54***	***15.42***	***0.04***	***0.04***
Onsite		2022				
	Off-Road		8.54	15.42	0.04	0.04
	Total		**8.54**	**15.42**	**0.04**	**0.04**
TOTAL			***8.54***	***15.42***	***0.04***	***0.04***
Onsite		2022				
	Off-Road		8.54	15.42	0.04	0.04
	Total		**8.54**	**15.42**	**0.04**	**0.04**
TOTAL			***8.54***	***15.42***	***0.04***	***0.04***

As halt e ol t on e s aul

			NOx	CO	PM10 Total	PM2.5 Total
Onsite		2022				
	Fugitive Dust				0.47	0.07
	Off-Road		0.00	0.00	0.00	0.00
	Total		**0.00**	**0.00**	**0.47**	**0.07**
TOTAL			***0.00***	***0.00***	***0.47***	***0.07***
Onsite		2022				
	Fugitive Dust				0.47	0.07
	Off-Road		0.00	0.00	0.00	0.00
	Total		**0.00**	**0.00**	**0.47**	**0.07**
TOTAL			***0.00***	***0.00***	***0.47***	***0.07***
Onsite		2022				
	Fugitive Dust		0.00	0.00	0.47	0.07
	Off-Road		0.00	0.00	0.00	0.00
	Total		**0.00**	**0.00**	**0.47**	**0.07**
TOTAL			***0.00***	***0.00***	***0.47***	***0.07***

As halt e ol t on e s ns te e ocess ng

			NOx	CO	PM10 Total	PM2.5 Total
Onsite		2022				
	Off-Road		2.50	4.33	0.01	0.01
	Total		**2.50**	**4.33**	**0.01**	**0.01**
TOTAL			***2.50***	***4.33***	***0.01***	***0.01***
Onsite		2022				
	Off-Road		2.50	4.33	0.01	0.01
	Total		**2.50**	**4.33**	**0.01**	**0.01**
TOTAL			***2.50***	***4.33***	***0.01***	***0.01***
Onsite		2022				
	Paving		2.50	4.33	0.01	0.01
	Total		**2.50**	**4.33**	**0.01**	**0.01**
TOTAL			***2.50***	***4.33***	***0.01***	***0.01***

S te e a at on

			NOx	CO	PM10 Total	PM2.5 Total
Onsite		2022				
	Fugitive Dust				2.48	1.26
	Off-Road		5.07	9.82	0.03	0.03
	Total		**5.07**	**9.82**	**2.51**	**1.29**
TOTAL			***5.07***	***9.82***	***2.51***	***1.29***
Onsite		2022				
	Fugitive Dust				2.48	1.26
	Off-Road		5.07	9.82	0.03	0.03
	Total		**5.07**	**9.82**	**2.51**	**1.29**
TOTAL			***5.07***	***9.82***	***2.51***	***1.29***

Onsite		2022				
	Fugitive Dust		0.00	0.00	2.48	1.26
	Off-Road		5.07	9.82	0.03	0.03
	Total		**5.07**	**9.82**	**2.51**	**1.29**
TOTAL			***5.07***	***9.82***	***2.51***	***1.29***

S te e a at on So l aul ng

			NOx	CO	PM10 Total	PM2.5 Total
Onsite		2022				
	Fugitive Dust				0.00	0.00
	Off-Road		0.00	0.00	0.00	0.00
	Total		**0.00**	**0.00**	**0.00**	**0.00**
TOTAL			***0.00***	***0.00***	***0.00***	***0.00***
Onsite		2021				
	Fugitive Dust				0.00	0.00
	Off-Road		0.00	0.00	0.00	0.00
	Total		**0.00**	**0.00**	**0.00**	**0.00**
TOTAL			***0.00***	***0.00***	***0.00***	***0.00***
Onsite		2021				
	Fugitive Dust		0.00	0.00	0.00	0.00
	Off-Road		0.00	0.00	0.00	0.00
	Total		**0.00**	**0.00**	**0.00**	**0.00**
TOTAL			***0.00***	***0.00***	***0.00***	***0.00***

ough ad ng

			NOx	CO	PM10 Total	PM2.5 Total
Onsite		2022				
	Fugitive Dust				2.10	1.08
	Off-Road		4.18	8.08	0.02	0.02
	Total		**4.18**	**8.08**	**2.12**	**1.10**
TOTAL			***4.18***	***8.08***	***2.12***	***1.10***
Onsite		2021				
	Fugitive Dust				2.10	1.08
	Off-Road		4.18	8.08	0.02	0.02
	Total		**4.18**	**8.08**	**2.12**	**1.10**
TOTAL			***4.18***	***8.08***	***2.12***	***1.10***
Onsite		2021				
	Fugitive Dust		0.00	0.00	2.10	1.08
	Off-Road		4.18	8.08	0.02	0.02
	Total		**4.18**	**8.08**	**2.12**	**1.10**
Offsite						
	Hauling		0.00	0.00	0.00	0.00
	Vendor		0.00	0.00	0.00	0.00
	Worker		0.00	0.00	0.00	0.00
	Total		**0.00**	**0.00**	**0.00**	**0.00**
TOTAL			***4.18***	***8.08***	***2.12***	***1.10***

t l t ench ng

			NOx	CO	PM10 Total	PM2.5 Total
Onsite		2022				
	Off-Road		2.28	3.92	0.01	0.01
	Total		**2.28**	**3.92**	**0.01**	**0.01**
TOTAL			***2.28***	***3.92***	***0.01***	***0.01***
Onsite		2022				
	Off-Road		2.28	3.92	0.01	0.01
	Total		**2.28**	**3.92**	**0.01**	**0.01**
TOTAL			***2.28***	***3.92***	***0.01***	***0.01***
Onsite		2022				
	Off-Road		2.28	3.92	0.01	0.01
	Total		**2.28**	**3.92**	**0.01**	**0.01**
TOTAL			***2.28***	***3.92***	***0.01***	***0.01***

a ng St uctu e onst uct on						
			NOx	CO	PM10 Total	PM2.5 Total
Onsite		2022				
	Off-Road		9.40	14.08	0.21	0.21
	Total		**9.40**	**14.08**	**0.21**	**0.21**
TOTAL			***9.40***	***14.08***	***0.21***	***0.21***
Onsite		2022				
	Off-Road		9.40	14.08	0.21	0.21
	Total		**9.40**	**14.08**	**0.21**	**0.21**
TOTAL			***9.40***	***14.08***	***0.21***	***0.21***
Onsite		2022				
	Off-Road		9.40	14.08	0.21	0.21
	Total		**9.40**	**14.08**	**0.21**	**0.21**
TOTAL			***9.40***	***14.08***	***0.21***	***0.21***

Bu ld ng onst uct on						
			NOx	CO	PM10 Total	PM2.5 Total
Onsite		2022				
	Off-Road		9.40	14.08	0.21	0.21
	Total		**9.40**	**14.08**	**0.21**	**0.21**
TOTAL			***9.40***	***14.08***	***0.21***	***0.21***
Onsite		2022				
	Off-Road		9.40	14.08	0.21	0.21
	Total		**9.40**	**14.08**	**0.21**	**0.21**
TOTAL			***9.40***	***14.08***	***0.21***	***0.21***
Onsite		2022				
	Off-Road		9.40	14.08	0.21	0.21
	Total		**9.40**	**14.08**	**0.21**	**0.21**
TOTAL			***9.40***	***14.08***	***0.21***	***0.21***

Bu ld ng onst uct on						
			NOx	CO	PM10 Total	PM2.5 Total
Onsite		2023				
	Off-Road		9.27	14.02	0.19	0.19
	Total		**9.27**	**14.02**	**0.19**	**0.19**
TOTAL			***9.27***	***14.02***	***0.19***	***0.19***
Onsite		2023				
	Off-Road		9.27	14.02	0.19	0.19
	Total		**9.27**	**14.02**	**0.19**	**0.19**
TOTAL			***9.27***	***14.02***	***0.19***	***0.19***
Onsite		2023				
	Off-Road		9.27	14.02	0.19	0.19
	Total		**9.27**	**14.02**	**0.19**	**0.19**
TOTAL			***9.27***	***14.02***	***0.19***	***0.19***

Bu ld ng onst uct on 4						
			NOx	CO	PM10 Total	PM2.5 Total
Onsite		2024				
	Off-Road		9.15	13.98	0.16	0.16
	Total		**9.15**	**13.98**	**0.16**	**0.16**
TOTAL			***9.15***	***13.98***	***0.16***	***0.16***
Onsite		2024				
	Off-Road		9.15	13.98	0.16	0.16
	Total		**9.15**	**13.98**	**0.16**	**0.16**
TOTAL			***9.15***	***13.98***	***0.16***	***0.16***
Onsite		2024				
	Off-Road		9.15	13.98	0.16	0.16
	Total		**9.15**	**13.98**	**0.16**	**0.16**
TOTAL			***9.15***	***13.98***	***0.16***	***0.16***

A ch tectu al oat ng					
		NOx	CO	PM10 Total	PM2.5 Total
Onsite	**2023**				
Archit. Coating				0.00	0.00
Off-Road		1.06	1.83	0.00	0.00
Total		**1.06**	**1.83**	**0.00**	**0.00**
TOTAL		***1.06***	***1.83***	***0.00***	***0.00***
Onsite	**2023**				
Archit. Coating				0.00	0.00
Off-Road		1.06	1.83	0.00	0.00
Total		**1.06**	**1.83**	**0.00**	**0.00**
TOTAL		***1.06***	***1.83***	***0.00***	***0.00***
Onsite	**2023**				
Archit. Coating		0.00	0.00	0.00	0.00
Off-Road		1.06	1.83	0.00	0.00
Total		**1.06**	**1.83**	**0.00**	**0.00**
TOTAL		***1.06***	***1.83***	***0.00***	***0.00***

A ch tectu al oat ng 4					
		NOx	CO	PM10 Total	PM2.5 Total
Onsite	**2024**				
Archit. Coating				0.00	0.00
Off-Road		1.06	1.83	0.00	0.00
Total		**1.06**	**1.83**	**0.00**	**0.00**
TOTAL		***1.06***	***1.83***	***0.00***	***0.00***
Onsite	**2024**				
Archit. Coating				0.00	0.00
Off-Road		1.06	1.83	0.00	0.00
Total		**1.06**	**1.83**	**0.00**	**0.00**
TOTAL		***1.06***	***1.83***	***0.00***	***0.00***
Onsite	**2024**				
Archit. Coating		0.00	0.00	0.00	0.00
Off-Road		1.06	1.83	0.00	0.00
Total		**1.06**	**1.83**	**0.00**	**0.00**
TOTAL		***1.06***	***1.83***	***0.00***	***0.00***

ne ad ng					
		NOx	CO	PM10 Total	PM2.5 Total
Onsite	**2023**				
Fugitive Dust				2.10	1.08
Off-Road		4.18	8.08	0.02	0.02
Total		**4.18**	**8.08**	**2.12**	**1.10**
TOTAL		***4.18***	***8.08***	***2.12***	***1.10***
Onsite	**2023**				
Fugitive Dust				2.10	1.08
Off-Road		4.18	8.08	0.02	0.02
Total		**4.18**	**8.08**	**2.12**	**1.10**
TOTAL		***4.18***	***8.08***	***2.12***	***1.10***
Onsite	**2023**				
Fugitive Dust		0.00	0.00	2.10	1.08
Off-Road		4.18	8.08	0.02	0.02
Total		**4.18**	**8.08**	**2.12**	**1.10**
TOTAL		***4.18***	***8.08***	***2.12***	***1.10***

ne ad ng 4						
			NOx	CO	PM10 Total	PM2.5 Total
Onsite		2024				
	Fugitive Dust				2.10	1.08
	Off-Road		4.18	8.08	0.02	0.02
	Total		**4.18**	**8.08**	**2.12**	**1.10**
TOTAL			***4.18***	***8.08***	***2.12***	***1.10***
Onsite		2024				
	Fugitive Dust				2.10	1.08
	Off-Road		4.18	8.08	0.02	0.02
	Total		**4.18**	**8.08**	**2.12**	**1.10**
TOTAL			***4.18***	***8.08***	***2.12***	***1.10***
Onsite		2024				
	Fugitive Dust		0.00	0.00	2.10	1.08
	Off-Road		4.18	8.08	0.02	0.02
	Total		**4.18**	**8.08**	**2.12**	**1.10**
TOTAL			***4.18***	***8.08***	***2.12***	***1.10***

n sh ng and Landsca ng						
			NOx	CO	PM10 Total	PM2.5 Total
Onsite		2023				
	Off-Road		2.28	3.92	0.01	0.01
	Total		**2.28**	**3.92**	**0.01**	**0.01**
TOTAL			***2.28***	***3.92***	***0.01***	***0.01***
Onsite		2023				
	Off-Road		2.28	3.92	0.01	0.01
	Total		**2.28**	**3.92**	**0.01**	**0.01**
TOTAL			***2.28***	***3.92***	***0.01***	***0.01***
Onsite		2023				
	Off-Road		2.28	3.92	0.01	0.01
	Total		**2.28**	**3.92**	**0.01**	**0.01**
TOTAL			***2.28***	***3.92***	***0.01***	***0.01***

n sh ng and Landsca ng 4						
			NOx	CO	PM10 Total	PM2.5 Total
Onsite		2023				
	Off-Road		2.28	3.92	0.01	0.01
	Total		**2.28**	**3.92**	**0.01**	**0.01**
TOTAL			***2.28***	***3.92***	***0.01***	***0.01***
Onsite		2023				
	Off-Road		2.28	3.92	0.01	0.01
	Total		**2.28**	**3.92**	**0.01**	**0.01**
TOTAL			***2.28***	***3.92***	***0.01***	***0.01***
Onsite		2023				
	Off-Road		2.28	3.92	0.01	0.01
	Total		**2.28**	**3.92**	**0.01**	**0.01**
TOTAL			***2.28***	***3.92***	***0.01***	***0.01***

As halt av ng 4						
			NOx	CO	PM10 Total	PM2.5 Total
Onsite		2024				
	Off-Road		5.71	9.85	0.02	0.02
	Paving				0.00	0.00
	Total		**5.71**	**9.85**	**0.02**	**0.02**
TOTAL			***5.71***	***9.85***	***0.02***	***0.02***
Onsite		2024				
	Off-Road		5.71	9.85	0.02	0.02
	Paving				0.00	0.00
	Total		**5.71**	**9.85**	**0.02**	**0.02**
TOTAL			***5.71***	***9.85***	***0.02***	***0.02***

Onsite	**2024**				
Off-Road		5.71	9.85	0.02	0.02
Paving		0.00	0.00	0.00	0.00
Total		**5.71**	**9.85**	**0.02**	**0.02**
TOTAL		***5.71***	***9.85***	***0.02***	***0.02***
		NOx	**CO**	**PM10 Total**	**PM2.5 Total**
Asphalt Demolition, Debris Haul, and Onsite Reprocessing		***11***	***20***	***0.52***	***0.12***
1.54 Acre LST		***71***	***724***	***5.62***	***4.08***
Exceeds LST?		***no***	***no***	***no***	***no***
Site Preparation and Soil Hauling		***5***	***10***	***2.51***	***1.29***
1.44 Acre LST		***68***	***697***	***5.31***	***3.87***
Exceeds LST?		***no***	***no***	***no***	***no***
Rough Grading		***4***	***8***	***2.12***	***1.10***
1.19 Acre LST		***62***	***633***	***4.56***	***3.37***
Exceeds LST?		***no***	***no***	***no***	***no***
Utility Trenching and Parking Structure Construction		***12***	***18***	***0.22***	***0.22***
≤ 1.00 Acre LST		***57***	***585***	***4.00***	***3.00***
Exceeds LST?		***no***	***no***	***no***	***no***
Parking Structure Construction		***9***	***14***	***0.21***	***0.21***
≤ 1.00 Acre LST		***57***	***585***	***4.00***	***3.00***
Exceeds LST?		***no***	***no***	***no***	***no***
Building Construction 2022		***9***	***14***	***0.21***	***0.21***
≤ 1.00 Acre LST		***57***	***585***	***4.00***	***3.00***
Exceeds LST?		***no***	***no***	***no***	***no***
Building Construction 2023		***9***	***14***	***0.19***	***0.19***
≤ 1.00 Acre LST		***57***	***585***	***4.00***	***3.00***
Exceeds LST?		***no***	***no***	***no***	***no***
Building Construction 2023 and Architectural Coating 2023		***10***	***16***	***0.19***	***0.19***
≤ 1.00 Acre LST		***57***	***585***	***4.00***	***3.00***
Exceeds LST?		***no***	***no***	***no***	***no***
Building Construction 2023, Architectural Coating 2023, and Fine Grading 2023		***15***	***24***	***2.31***	***1.29***
1.54 Acre LST		***71***	***724***	***5.62***	***4.08***
Exceeds LST?		***no***	***no***	***no***	***no***
Building Construction 2023, Architectural Coating 2023, Fine Grading 2023, and Finishing and Landscaping 2023		***17***	***28***	***2.32***	***1.30***
1.54 Acre LST		***71***	***724***	***5.62***	***4.08***
Exceeds LST?		***no***	***no***	***no***	***no***
Building Construction 2024, Architectural Coating 2024, Fine Grading 2024, and Finishing and Landscaping 2024		***17***	***28***	***2.30***	***1.28***
1.54 Acre LST		***71***	***724***	***5.62***	***4.08***
Exceeds LST?		***no***	***no***	***no***	***no***
Asphalt Paving		***6***	***10***	***0.02***	***0.02***
≤ 1.00 Acre LST		***57***	***585***	***4.00***	***3.00***
Exceeds LST?		***no***	***no***	***no***	***no***

eg onal e at on E ss ons o sheet Bu ldout ea 4[1]

[1] CalEEMod, Version 2016.3.2.25

a u ee da E ss ons

Su e

				S	1 otal	5 otal
Area	5.38	0.47	35.72	0.06	3.21	3.21
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	2.03	1.96	21.87	0.06	6.88	1.85
otal	**7.41**	**2.43**	**57.59**	**0.13**	**10.09**	**5.06**

nte

				S	1 otal	5 otal
Area	5.38	0.47	35.72	0.06	3.21	3.21
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	2.09	2.11	20.86	0.06	6.88	1.85
otal	**7.47**	**2.58**	**56.58**	**0.12**	**10.09**	**5.06**

a a l

				S	1 otal	5 otal
Area	5.38	0.47	35.72	0.06	3.21	3.21
Energy	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	2.09	2.11	21.87	0.06	6.88	1.85
otal	**7.47**	**2.58**	**57.59**	**0.13**	**10.09**	**5.06**

eg onal h esholds l da	**55**	**55**	**550**	**150**	**150**	**55**
Exceeds Thresholds?	No	No	No	No	No	No

GHG Emissions Inventory

Proposed Project Buildout

Construction

	$MTCO_2e$ Total Project*
2022	241
2023	437
2024	113
Total Construction	**792**

*CalEEMod, Version 2016.3.2.25

Operation*

Proposed Project		
Area	9	$MTCO_2e$/Year**
Energy	68	$MTCO_2e$/Year
Mobile	921	$MTCO_2e$/Year
Solid Waste	43	$MTCO_2e$/Year
Water	13	$MTCO_2e$/Year
Amortized Construction Emissions***	26	$MTCO_2e$/Year
Total	**1,081**	**$MTCO_2e$/Year**
SCAQMD Bright-Line Screening Threshold	3,000	$MTCO_2e$/Year
Exceed Threshold?	**No**	

*CalEEMod, Version 2016.3.2.25

** $MTCO_2e$=metric tons of carbon dioxide equivalent.

*** Total construction emissions are amortized over 30 years per SCAQMD methodology; SCAQMD. 2009, November 19. Greenhouse Gases (GHG) CEQA Significance Thresholds Working Group Meeting 14. http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/year-2008-2009/ghg-meeting-14/ghg-meeting-14-main-presentation.pdf?sfvrsn=2.

CalEEMod Inputs - 14th & LBB Project Development, Construction

Name:	14th & LBB Development Project
Project Number:	PAC6-1.0
Project Location:	14th Street & Long Beach Boulevard
County:	Los Angeles County
Source Receptor Area (SRA):	4-South Coastal LA County
Climate Zone:	9
Land Use Setting:	Urban
Operational Year:	2023
Utility Company:	SCE
Air Basin:	South Coast Air Basin
Air District:	South Coast Air Quality Management District (SCAQMD)

Proiect Site Acreage	1.54
Disturbed Site Acreage	1.54

Project Components	SQFT		Acres
Demolition			
Asphalt Demo			
New Construction			
	Number of Units	**Total SQFT**	**Acres**
West Apartment Building	75	62,430	0.31
East Apartment Building	85	81,280	0.38
West Building Amenities		4,000	0.00
TOTAL BUILDING		143,710	0.688
Parking Garage	104	35,365	0.00
Total Other Asphalt Surfaces		9,500	0.22
Total Hardscape		15,500	0.36
Total Landscape		8,500	0.20
Additional Area- Landscaping		3,633	0.08

Tons of Debris Generated	Tons of Debris Hauled Offsite	Duration (weeks)
2,236	1,286	4

Number of Stories	Building Footprint
5	13,286
7	16,664

CalEEMod Land Use Inputs

Land Use Type	Land Use Subtype	Unit Amount	Size Metric	Lot Acreage	Land Use Square Feet
Residential Housing	Apartments (Mid-Rise)	75	DU	0.31	62,430
Residential Housing	Apartments (Mid-Rise)	85	DU	0.38	81,280
Retail	Convenience Market (24Hr)	4.000	1000 sqft	0.00	4,000
Parking	Enclosed Parking Structure with Elevator	35.365	1000 sqft	0.00	35,365
Parking	Other Asphalt Surfaces	9.500	1000 sqft	0.22	9,500
Parking	Other Non-asphalt Surfaces	27.633	1000. sqft	0.63	27,633
				1.54	

Demolition

Component	Tons Demolished	Haul Truck Capacity (tons)	Haul Distance (miles)	Total Trip Ends	Duration (days)	Trip Ends/ day
Existing Asphalt	1,286	20	34	250	25	10

**34 miles to United Rock, Irwindale*

Soil Haul

Construction Activities	Haul Volume (cy)	Haul Truck Capacity (CY)	Haul Distance (miles)	Total Trip Ends	Duration (days)	Trip Ends/ day
Site Preparation (Export)	400	20	34	100	10	10

**34 miles to United Rock, Irwindale*

Architectural Coating

West Building

Percentage of Proposed Buildings' Interior Painted:	45%
Percentage of Proposed Buildings' Exterior Painted:	45%

East Building

Percentage of Proposed Buildings' Interior Painted:	40%
Percentage of Proposed Buildings' Exterior Painted:	40%

Parking Garage

Percentage of Proposed Buildings' Interior Painted:	15%
Percentage of Proposed Buildings' Exterior Painted:	15%

Rule 1113

Interior Paint VOC content:	50	grams per liter
Exterior Paing VOC content:	50	grams per liter

Residential Structures	Land Use Square Feet	CalEEMod Factor[2]	Total Paintable Surface Area	Paintable Interior Area[1]	Paintable Exterior Area[1]
West Building Residential	62,430	2.7	168,561	56,889	18,963
East Building Residential	81,280	2.7	219,456	65,837	21,946
Total Residential	**143,710**		**388,017**	**122,726**	**40,909**
West Building Amenities	4,000	2.0	8,000	2,700	900
Parking Garage	35,365	2.0	70,730	7,957	2,652
Total Non-Residential	**39,365**		**78,730**	**10,657**	**3,552**
			854,764	256,109	85,370
Parking Garage	35,365	6%	2,122	-	2,122
			2,122		2,122

[1] CalEEMod methodology calculates the paintable interior and exterior areas by multiplying the total paintable surface area by 75 and 25 percent, respectively.

[2] The program assumes the total surface for painting equals 2.7 times the floor square footage for residential and 2 times that for nonresidential square footage defined by the user. Architectural coatings for the parking lot is based on CalEEMod methodology applied to a surface parking lot (i.e., striping), in which 6% of surface area is painted.

Construction Mitigation

SCAQMD Rule 403

Replace Ground Cover	PM10:	5	% Reduction
Replace Ground Cover	PM2.5:	5	% Reduction
Water Exposed Area	Frequency:	2	per day
	PM10:	55	% Reduction
	PM25:	55	% Reduction
Unpaved Roads	Vehicle Speed:	15	mph

SCAQMD Rule 1186

	Clean Paved Road	9	% PM Reduction

Construction Activities and Schedule Assumptions: 14th & LBB Project Development

* based on info provided by applicant

CalEEMod Construction Schedule

		Construction Schedule		
Construction Activities	**Phase Type**	**Start Date**	**End Date**	**CalEEMod Duration (Workday)**
Asphalt Demolition	Demolition	5/1/2022	6/3/2022	25
Asphalt Demolition Debris Haul	Demolition	5/1/2022	6/3/2022	25
Asphalt Demolition Debris Onsite Reprocessing	Demolition	5/1/2022	6/3/2022	25
Site Preparation	Site Preparation	6/4/2022	6/17/2022	10
Site Preparation Soil Haul	Site Preparation	6/4/2022	6/17/2022	10
Rough Grading	Grading	6/18/2022	7/15/2022	20
Utility Trenching	Trenching	7/16/2022	9/16/2022	45
Parking Structure Construction	Building Construction	7/16/2022	12/16/2022	110
Building Construction	Building Construction	12/17/2022	2/16/2024	305
Architectural Coating	Architectural Coating	8/12/2023	2/16/2024	135
Fine Grading	Grading	9/16/2023	2/16/2024	110
Finishing/Landscaping	Trenching	12/16/2023	2/16/2024	45
Asphalt Paving	Paving	2/17/2024	3/22/2024	25

Overlapping Construction Schedule

	Construction Schedule		
Construction Activities	**Start Date**	**End Date**	**CalEEMod Duration (Workday)**
Asphalt Demolition, Debris Haul, and Onsite Reprocessing	5/1/2022	6/3/2022	25
Site Preparation and Soil Hauling	6/4/2022	6/17/2022	10
Rough Grading	6/18/2022	7/15/2022	20
Utility Trenching and Parking Structure Construction	7/16/2022	9/16/2022	45
Parking Structure Construction	9/17/2022	12/16/2022	65
Building Construction	12/17/2022	8/11/2023	170
Building Construction and Architectural Coating	8/12/2023	9/15/2023	25
Building Construction, Architectural Coating, and Fine Grading	9/16/2023	12/15/2023	65
Building Construction, Architectural Coating, Fine Grading, and Finishing/Landscaping	12/16/2023	2/16/2024	45
Asphalt Paving	2/17/2024	3/22/2024	25

CalEEMod Construction Off-Road Equipment Inputs

**Based on data verified by applicant, CalEEMod default used for construction equipment*

General Construction Hours: 8 hours btwn 7:00 AM to 4:00 PM (with 1 hr break), Mon-Fri

Construction Equipment Details						
Equipment	**model**	**# of Equipment**	**hr/day**	**hp**	**load factor***	**total trips**
Asphalt Demolition						
Concrete/Industrial Saws		1	8	81	0.73	
Rubber Tired Dozers		1	8	247	0.4	
Tractors/Loaders/Backhoes		3	8	97	0.37	
Worker Trips						10
Vendor Trips						5
Hauling Trips						0
Water Trucks						2
Asphalt Demolition Haul						
no additional equipment needed for Asphalt Demo Haul						
Worker Trips						10
Vendor Trips						2
Hauling Trips						250
Water Trucks						0
Asphalt Demolition Debris Onsite Reprocessing						
Crushing/Proc. Equipment		1	8	85	0.78	
Worker Trips						10
Vendor Trips						2
Hauling Trips						0
Water Trucks						0
Site Preparation						
Graders		1	8	187	0.41	
Rubber Tired Dozers		1	7	247	0.4	
Tractors/Loaders/Backhoes		1	8	97	0.37	
Worker Trips						5
Vendor Trips						1
Hauling Trips						0
Water Trucks						2
Site Preparation Soil Haul						
no additional equipment needed for Site Preparation Soil Haul						
Worker Trips						5
Vendor Trips						1
Hauling Trips						100
Rough Grading						
Graders		1	6	187	0.41	
Rubber Tired Dozers		1	6	247	0.4	
Tractors/Loaders/Backhoes		1	7	97	0.37	
Worker Trips						5
Vendor Trips						1
Hauling Trips						0
Water Trucks						2
Utilities Trenching						
Excavators		1	8	158	0.38	
Worker Trips						20
Vendor Trips						5
Hauling Trips						0
Parking Structure Construction						
Cranes		1	6	231	0.29	
Forklifts		1	6	89	0.2	
Generator Sets		1	8	84	0.74	
Tractors/Loaders/Backhoes		1	6	97	0.37	
Welders		3	8	46	0.45	
Worker Trips						15
Vendor Trips						5
Hauling Trips						0
Building Construction						
Cranes		1	6	231	0.29	
Forklifts		1	6	89	0.2	
Generator Sets		1	8	84	0.74	
Tractors/Loaders/Backhoes		1	6	97	0.37	
Welders		3	8	46	0.45	
Worker Trips						50
Vendor Trips						20
Hauling Trips						0

Architectural Coating							
	Air Compressors		1	6	78	0.48	
	Worker Trips						10
	Vendor Trips						5
	Hauling Trips						0
Fine Grading							
	Graders		1	6	187	0.41	
	Rubber Tired Dozers		1	6	247	0.4	
	Tractors/Loaders/Backhoes		1	7	97	0.37	
	Worker Trips						5
	Vendor Trips						1
	Hauling Trips						0
	Water Trucks						2
Finishing and Landscaping							
	Excavators		1	8	158	0.38	
	Worker Trips						20
	Vendor Trips						10
	Hauling Trips						0
Paving							
	Cement and Mortar Mixers		1	6	9	0.56	
	Pavers		1	6	130	0.42	
	Paving Equipment		1	8	132	0.36	
	Rollers		1	7	80	0.38	
	Tractors/Loaders/Backhoes		1	8	97	0.37	
	Worker Trips						15
	Vendor Trips						5
	Hauling Trips						0
	Water Trucks						0

Construction Trips Worksheet

Phase Name	Worker Trip Ends Per Day	Vendor Trip Ends Per Day	Haul Truck Trip Ends Per Day	Total Haul Truck Trip Ends	Start Date	End Date	Workdays
Asphalt Demolition	10	7	0	0	2022/05/01	2022/06/03	25
Asphalt Demolition Debris Haul	10	2	10	250	2022/05/01	2022/06/03	25
Asphalt Demolition Debris Onsite Reprocessing	10	2	0	0	2022/05/01	2022/06/03	25
Site Preparation	5	3	0	0	2022/06/04	2022/06/17	10
Site Preparation Soil Haul	5	1	10	100	2022/06/04	2022/06/17	10
Rough Grading	20	3	0	0	2022/06/18	2022/07/15	20
Utility Trenching	10	5	0	0	2022/07/16	2022/09/16	45
Parking Structure Construction	25	5	0	0	2022/07/16	2022/12/16	110
Building Construction	50	20	0	0	2022/12/17	2024/02/16	305
Architectural Coating	20	5	0	0	2023/08/12	2024/02/16	135
Fine Grading	5	3	0	0	2023/09/16	2024/02/16	110
Finishing/Landscaping	20	10	0	0	2023/12/16	2024/02/16	45
Asphalt Paving	15	5	0	0	2024/02/17	2024/03/22	25

Construction Scenarios	Worker Trip Ends Per Day	Vendor Trip Ends Per Day	Haul Truck Trip Ends Per Day	Total Trip Ends Per Day	Start Date	End Date	Workdays
Asphalt Demolition, Debris Haul, and Onsite Reprocessing	30	11	**10**	51	5/1/2022	6/3/2022	25
Site Preparation and Soil Hauling	10	4	**10**	24	6/4/2022	6/17/2022	10
Rough Grading	20	3	0	23	6/18/2022	7/15/2022	20
Utility Trenching and Parking Structure Construction	35	10	0	45	7/16/2022	9/16/2022	45
Parking Structure Construction	25	5	0	30	9/17/2022	12/16/2022	65
Building Construction	50	20	0	70	12/17/2022	8/11/2023	170
Building Construction and Architectural Coating	70	25	0	95	8/12/2023	9/15/2023	25
Building Construction, Architectural Coating, and Fine Grading	75	28	0	103	9/16/2023	12/15/2023	65
Building Construction, Architectural Coating, Fine Grading, and Finishing/Landscaping	**95**	**38**	0	**133**	12/16/2023	2/16/2024	45
Asphalt Paving	15	5	0	20	2/17/2024	3/22/2024	25
Maximum Daily Trips	**95**	**38**	**10**	**133**			

CalEEMod Inputs - 14th & LBB Project Development, Construction

Name: 14th & LBB Development Project
Project Number: PAC6-1.0
Project Location: 14th Street & Long Beach Boulevard
County: Los Angeles County
Source Receptor Area (SRA): 4-South Coastal LA County
Climate Zone: 9
Land Use Setting: Urban
Operational Year: 2024
Utility Company: SCE
Air Basin: South Coast Air Basin
Air District: South Coast Air Quality Management District (SCAQMD)

CalEEMod Land Use Inputs

Land Use Type	Land Use Subtype	Unit Amount	Size Metric	Lot Acreage	Land Use Square Feet
Residential Housing	Apartments (Mid-Rise)	160	DU	0.69	143,710
Retail	Convenience Market (24Hr)	4.000	1000 sqft	0.00	4,000
Parking	Enclosed Parking Structure with Elevator	35.365	1000 sqft	0.00	35,365
Parking	Other Asphalt Surfaces	9.500	1000 sqft	0.22	9,500
Parking	Other Non-asphalt Surfaces	27.633	1000. sqft	0.63	27,633
				1.54	

Daily Trips Calculation

Weekday Trips*

Land Use Type	Average Daily Trips	CalEEMod Trip Rate
Apartments (Mid-Rise)	870	**5.44**
Transit Credit (15%)	*131*	*NA*
Adjusted	740	**4.62**
Convenience Market	151	**37.75**
Internal Capture Reduction	*15*	*NA*
Transit Credit (15%)	*20*	*NA*
Net Trips	**116**	**28.88**
	855	

Saturday Trips**

Land Use Type	Average Daily Trips	CalEEMod Trip Rate
Apartments (Mid-Rise)	786	**4.91**
*Transit Credit (15%)**	*118*	*NA*
Adjusted	668	**4.17**
Convenience Market	184	**46.12**
*Internal Capture Reduction**	*18*	*NA*
*Transit Credit (15%)**	*25*	*NA*
Adjusted	**141**	**35.28**
	809	

Sunday Trips**

Land Use Type	Average Daily Trips*	CalEEMod Trip Rate
Apartments (Mid-Rise)	654	**4.09**
*Transit Credit (15%)**	*98*	*NA*
Adjusted	556	**3.48**
Convenience Market	84	**21.10**
*Internal Capture Reduction**	*8*	*NA*
*Transit Credit (15%)**	*11*	*NA*
Adjusted	**65**	**16.14**
	621	

Source: *Fehr and Peers. 2020, December 14. 14th & Long Beach Boulevard Affordable Housing Project Traffic Assessment Technical Memorandum..
** ITE. 2017. Trip Generation Manual, 10th ed.

Fireplaces
**Assumes no fireplaces and woodstoves*

Water Use

CalEEMod Inputs

Land Use	gallons/day	gallons/year
Indoor	9,218	3,364,570
Outdoor	157	57,305
Total:	74,455	**3,421,875**

Source: Partner Energy. 2021, February 25. Energy & Water Performance Metrics: 14th and LBB.
*Assumes 100% aerobic treatment.

Solid Waste CalEEMod Defaults*

Land Use	Total Solid Waste (tons/yr)
Apartments (Mid-Rise)	73.60
Convenience Market	12.02

Architectural Coating *see Construction Assumptions*

Energy

Annual Electricity Demand	488,265	kwh/yr
Annual Natural Gas*	0	therms

Source: Partner Energy. 2021, February 25. Energy & Water Performance Metrics: 14th and LBB.
**Proposed buildings would be all-electric*

Adjusted CalEEMod Energy Use

Land Use Subtype	Title-24 Electricity Energy Intensity (kWhr/size/year)*	Nontitle-24 Electricity Energy Intensity (kWhr/size/year)	Lighting Energy Intensity (KWhr/size/year)	Total Electricity	Title-24 Natural Gas Energy Intensity (KBTU/size/year)*	Nontitle-24 Natural Gas Energy Intensity (KBTU/size/year)
Apartments (Mid-Rise)	252.63	**3,054.10**	741.44	4,048.17	**7,012.17**	6,384.00
	0.06	**0.75**	0.18	1.00	na	na
Proportioned Energy	*30,470.65*	*368,366.48*	*89,427.87*	*488,265.00*	*na*	*na*
Adjusted Apartments (Mid-Rse)	**190.44**	**2,302.29**	**558.92**	**3,051.66**	**0**	0

Renewable Energy

Annual Renewable Energy:	205,954	kwh/yr

Carbon Intensity Factors

Southern California Edison Carbon Intensity Factors

SCE CO_2e Intensity Factor[1]	534	pounds per megawatt hour
CO2:[1,2]	531.43634	pounds per megawatt hour
CH4:[3]	0.029	pound per megawatt hour
N2O:[3]	0.00617	pound per megawatt hour

[1] Based on CO_2e intensity factor of 534 pounds per megawatt hour; Southern California Edison. 2019. 2019 Sustainability Report. https://www.edison.com/content/dam/eix/documents/sustainability/eix-2019-sustainability-report.pdf.

[2] Based on Intergovernmental Panel on Climate Change Fourth Assessment Report global warming potentials for CH4 and N2O; Intergovernmental Panel on Climate Change (IPCC). 2007. Fourth Assessment Report: Climate Change 2007.

[3] CalEEMod default values.

General Conversion Factors

lbs to kg	0.4536
kg to MTons	0.001
Mmbtu to Therm	0.1
Therms to kwh	29.30711111
kilowatt hrs to megawatt hrs	0.001
lbs to Tons	2000
Tons to MTon	0.9071847

Source: California Air Resources Board (CARB). 2010. Local Government Operations Protocol. Version 1.1. Appendix F, Standard Conversion Factors

Global Warming Potentials (GWP)	
CO_2	1
CH_4	25
N_2O	298

Based on Intergovernmental Panel on Climate Change Fourth Assessment Report global warming potentials for CH4 and N2O; Intergovernmental Panel on Climate Change (IPCC). 2007. Fourth Assessment Report: Climate Change 2007.

EMFAC2017 Derived CalEEMod Annual Emission Rates: Year 2024[1,2]

Season	Pollutant	LDA	LDT1	LDT2	MDV	LHDT1	LHDT2	MHDT	HHDT	OBUS	UBUS	MCY	SBUS	MH
Annual	CH4_IDLEX	0	0	0	0	0.0051328	0.003555657	0.004341561	0.027155994	0.0082738	0	0	0.0819325	0
Annual	CH4_RUNEX	0.0023644	0.0059376	0.0040133	0.0049822	0.0044577	0.003246367	0.001798809	0.081543595	0.0044178	5.8485375	0.3822794	0.006324	0.0076693
Annual	CH4_STREX	0.0424184	0.0587686	0.0574875	0.0668463	0.0134571	0.009198317	0.011420024	4.83947E-07	0.0207173	0.0097385	0.2320069	0.0073229	0.0219751
Annual	CO_IDLEX	0	0	0	0	0.185433	0.147749892	0.398038457	6.706313366	0.618036	0	0	3.2941474	0
Annual	CO_RUNEX	0.6270088	1.1806117	0.8795426	0.9817525	0.5019029	0.348445274	0.240119487	0.473570942	0.5494871	45.433003	18.742509	0.539895	0.811543
Annual	CO_STREX	1.9613928	2.1091504	2.4658161	2.7501754	1.0327596	0.675670399	1.270198945	0.008766713	2.2632731	0.7116805	8.5657765	0.9931927	1.9411132
Annual	CO2_NBIO_IDLEX	0	0	0	0	8.7403133	13.28641015	63.60979183	1109.72436	91.173114	0	0	353.50111	0
Annual	CO2_NBIO_RUNEX	260.14631	308.10048	324.46913	398.80934	641.00541	642.0256419	1014.001318	1379.15077	1333.7965	1980.9043	224.78301	1068.9208	1447.9422
Annual	CO2_NBIO_STREX	51.03173	60.851383	64.523691	78.260118	11.651954	8.819330503	11.4769055	0.079266822	18.571082	8.0471833	58.902915	6.1866555	18.294103
Annual	NOX_IDLEX	0	0	0	0	0.0504264	0.078666188	0.340177916	5.705593705	0.3579349	0	0	2.9147139	0
Annual	NOX_RUNEX	0.0319645	0.091847	0.0662416	0.0831684	0.4835885	0.617245862	1.090710456	2.723037975	1.1862263	0.4649838	1.1319879	4.1020028	1.004767
Annual	NOX_STREX[3]	0.1600953	0.2186369	0.2319512	0.2784592	0.2963143	0.203313978	1.5987152	2.348466238	0.8491737	0.07384	0.2637385	1.0077839	0.2461229
Annual	PM10_IDLEX	0	0	0	0	0.0008154	0.001305187	0.000281915	0.003055953	0.0001209	0	0	0.0032483	0
Annual	PM10_PMBW	0.03675	0.03675	0.03675	0.03675	0.07644	0.089180026	0.130340037	0.061072705	0.13034	0.0726803	0.01176	0.7448002	0.13034
Annual	PM10_PMTW	0.008	0.008	0.008	0.008	0.0097826	0.010613742	0.012000003	0.035597425	0.012	0.0318756	0.004	0.0105681	0.0130313
Annual	PM10_RUNEX	0.0016549	0.0023497	0.0017734	0.0018649	0.0057485	0.009497977	0.006149675	0.018629596	0.0073393	0.0032446	0.0025427	0.0232618	0.0172865
Annual	PM10_STREX	0.0016911	0.0022896	0.0017548	0.0018223	0.0002537	0.000143133	0.000127756	1.19274E-06	0.0002013	7.137E-05	0.0030379	6.573E-05	0.0002549
Annual	PM25_IDLEX	0	0	0	0	0.0007801	0.001248725	0.000269719	0.002923754	0.0001157	0	0	0.0031078	0
Annual	PM25_PMBW	0.01575	0.01575	0.01575	0.01575	0.03276	0.038220011	0.055860016	0.026174016	0.05586	0.0311487	0.00504	0.3192001	0.05586
Annual	PM25_PMTW	0.002	0.002	0.002	0.002	0.0024456	0.002653436	0.003000001	0.008899356	0.003	0.0079689	0.001	0.002642	0.0032578
Annual	PM25_RUNEX	0.0015241	0.002162	0.0016322	0.0017191	0.0054721	0.009071327	0.00587713	0.017823648	0.0070068	0.0030994	0.0023736	0.02224	0.0165008
Annual	PM25_STREX	0.0015549	0.0021052	0.0016135	0.0016756	0.0002332	0.000131606	0.000117467	1.09668E-06	0.0001851	6.562E-05	0.0028511	6.043E-05	0.0002344
Annual	ROG_DIURN	0.0452098	0.1064985	0.0665089	0.075922	0.00217	0.001307187	0.000566979	5.04678E-06	0.0018278	0.0004257	1.0684946	0.0010858	0.654066
Annual	ROG_HTSK	0.0897469	0.1688181	0.1097569	0.1255181	0.0697001	0.045712951	0.024180777	0.000197192	0.0222388	0.0048757	0.622239	0.0094905	0.0465898
Annual	ROG_IDLEX	0	0	0	0	0.0205969	0.016675535	0.020243064	0.452258038	0.0524679	0	0	0.378439	0
Annual	ROG_RESTL	0.0439019	0.0922397	0.0687562	0.0820156	0.0013577	0.000845306	0.000381329	3.58903E-06	0.000952	0.0002987	0.6453375	0.0005989	0.2863502
Annual	ROG_RUNEX	0.0089882	0.0259465	0.0163347	0.020965	0.0416605	0.04470595	0.013747459	0.024588966	0.0265004	0.0852165	2.6138297	0.0821524	0.0448961
Annual	ROG_RUNLS	0.1956815	0.5988093	0.3766558	0.3945658	0.4821155	0.282830305	0.126061832	0.001005903	0.2680832	0.0297869	1.8004575	0.0584963	1.1445163
Annual	ROG_STREX	0.1857535	0.2860068	0.2620651	0.3216448	0.065955	0.04493744	0.05952009	2.55594E-06	0.1087473	0.0418314	1.793	0.0422551	0.0869296
Annual	SO2_IDLEX	0	0	0	0	8.484E-05	0.000127303	0.000604609	0.010301554	0.0008673	0	0	0.0033779	0
Annual	SO2_RUNEX	0.0025217	0.002987	0.0031452	0.0038643	0.0062544	0.006209093	0.009693464	0.012508611	0.0128878	0.0013278	0.0022244	0.0102346	0.0142213
Annual	SO2_STREX	0.0004948	0.00059	0.0006256	0.0007587	0.0001153	8.72744E-05	0.000113573	7.84409E-07	0.0001838	7.963E-05	0.0005829	6.122E-05	0.000181
Annual	TOG_DIURN	0.0452098	0.1064985	0.0665089	0.075922	0.00217	0.001307187	0.000566979	5.04678E-06	0.0018278	0.0004257	1.0684946	0.0010858	0.654066
Annual	TOG_HTSK	0.0897469	0.1688181	0.1097569	0.1255181	0.0697001	0.045712951	0.024180777	0.000197192	0.0222388	0.0048757	0.622239	0.0094905	0.0465898
Annual	TOG_IDLEX	0	0	0	0	0.0290167	0.022705025	0.027993093	0.521050121	0.0683123	0	0	0.5455629	0
Annual	TOG_RESTL	0.0439019	0.0922397	0.0687562	0.0820156	0.0013577	0.000845306	0.000381329	3.58903E-06	0.000952	0.0002987	0.6453375	0.0005989	0.2863502
Annual	TOG_RUNEX	0.0130642	0.037839	0.0237769	0.0304482	0.052357	0.052934898	0.017911791	0.109017824	0.0364481	5.9707523	3.2618613	0.0986482	0.0602753
Annual	TOG_RUNLS	0.1956815	0.5988093	0.3766558	0.3945658	0.4821155	0.282830305	0.126061832	0.001005903	0.2680832	0.0297869	1.8004575	0.0584963	1.1445163
Annual	TOG_STREX	0.2033767	0.3131412	0.2869282	0.3521592	0.0722124	0.04920084	0.065167007	2.79843E-06	0.1190646	0.0458002	1.9520879	0.046264	0.095177
Summer	CH4_IDLEX	0	0	0	0	0.0051438	0.003563274	0.004121412	0.028580964	0.0083628	0	0	0.0820028	0
Summer	CH4_RUNEX	0.002527	0.0062921	0.0042736	0.0052986	0.0045391	0.003278828	0.001834652	0.081545223	0.0045133	5.8485473	0.3758074	0.006397	0.007838
Summer	CH4_STREX	0.0382283	0.0526759	0.0517379	0.060127	0.0129998	0.008886785	0.011011396	4.63615E-07	0.0199283	0.0090511	0.2077612	0.0065347	0.0210431
Summer	CO_IDLEX	0	0	0	0	0.185433	0.147749892	0.333992393	6.610735457	0.6126896	0	0	3.2615278	0

Summer	CO_RUNEX	0.6876964	1.2824599	0.9609334	1.0705645	0.5103804	0.351732563	0.243890192	0.474174569	0.5597892	45.433435	18.045998	0.5474738	0.831398
Summer	CO_STREX	1.6760992	1.7990599	2.1042638	2.3431728	0.9876077	0.646199033	1.206465564	0.008326866	2.1406236	0.6264149	7.7858139	0.8104097	1.8353873
Summer	CO2_NBIO_IDLEX	0	0	0	0	8.7403133	13.28641015	63.60441837	1097.043282	90.125572	0	0	359.94324	0
Summer	CO2_NBIO_RUNEX	271.50767	319.70451	335.59977	410.35967	641.02065	642.0314565	1014.007986	1379.151768	1333.8148	1980.9051	223.46906	1068.9344	1447.9774
Summer	CO2_NBIO_STREX	50.50451	60.243995	63.84514	77.485944	11.572311	8.767114848	11.36803721	0.078569293	18.362052	7.9016327	57.008382	5.8815732	18.114799
Summer	NOX_IDLEX	0	0	0	0	0.0504264	0.078666188	0.331847022	5.453136701	0.3401299	0	0	2.9661387	0
Summer	NOX_RUNEX	0.0281103	0.0802682	0.0580758	0.0729375	0.4536312	0.582307956	1.026682091	2.576356568	1.1107476	0.4630982	0.9893295	3.8688278	0.9354764
Summer	NOX_STREX[3]	0.1482284	0.2024721	0.2147719	0.257826	0.2839042	0.194799389	1.593999277	2.348427542	0.8392167	0.0706152	0.2501135	1.0036425	0.2353672
Summer	PM10_IDLEX	0	0	0	0	0.0008154	0.001305187	0.000240409	0.002664213	0.0001074	0	0	0.0027465	0
Summer	PM10_PMBW	0.03675	0.03675	0.03675	0.03675	0.07644	0.089180026	0.130340037	0.061072705	0.13034	0.0726803	0.01176	0.7448002	0.13034
Summer	PM10_PMTW	0.008	0.008	0.008	0.008	0.0097826	0.010613742	0.012000003	0.035597425	0.012	0.0318756	0.004	0.0105681	0.0130313
Summer	PM10_RUNEX	0.0016549	0.0023497	0.0017734	0.0018649	0.0057485	0.009497977	0.006149675	0.018629596	0.0073393	0.0032446	0.0025427	0.0232618	0.0172865
Summer	PM10_STREX	0.0016911	0.0022896	0.0017548	0.0018223	0.0002537	0.000143133	0.000127756	1.19274E-06	0.0002013	7.137E-05	0.0030379	6.573E-05	0.0002549
Summer	PM25_IDLEX	0	0	0	0	0.0007801	0.001248725	0.000230009	0.00254896	0.0001028	0	0	0.0026277	0
Summer	PM25_PMBW	0.01575	0.01575	0.01575	0.01575	0.03276	0.038220011	0.055860016	0.026174016	0.05586	0.0311487	0.00504	0.3192001	0.05586
Summer	PM25_PMTW	0.002	0.002	0.002	0.002	0.0024456	0.002653436	0.003000001	0.008899356	0.003	0.0079689	0.001	0.002642	0.0032578
Summer	PM25_RUNEX	0.0015241	0.002162	0.0016322	0.0017191	0.0054721	0.009071327	0.00587713	0.017823648	0.0070068	0.0030994	0.0023736	0.02224	0.0165008
Summer	PM25_STREX	0.0015549	0.0021052	0.0016135	0.0016756	0.0002332	0.000131606	0.000117467	1.09668E-06	0.0001851	6.562E-05	0.0028511	6.043E-05	0.0002344
Summer	ROG_DIURN	0.069468	0.1633933	0.102135	0.1165603	0.0031859	0.001923388	0.000841336	7.87354E-06	0.0026323	0.000623	1.6973785	0.001569	0.9280268
Summer	ROG_HTSK	0.0923229	0.1752381	0.1131858	0.1290811	0.0712998	0.047090624	0.024889998	0.000201189	0.0226825	0.0050779	0.6801437	0.0096318	0.0470502
Summer	ROG_IDLEX	0	0	0	0	0.0205969	0.016675535	0.019532359	0.478467867	0.0540099	0	0	0.3784537	0
Summer	ROG_RESTL	0.0605054	0.1276575	0.09428	0.1123707	0.0018617	0.001163571	0.000530925	5.3773E-06	0.0013143	0.0004211	1.0378942	0.0008259	0.3899801
Summer	ROG_RUNEX	0.009525	0.0273636	0.0172782	0.0221205	0.0420802	0.044846026	0.013907703	0.024598555	0.0269521	0.0852445	2.5559418	0.0825167	0.0457563
Summer	ROG_RUNLS	0.1838638	0.5534948	0.3493505	0.3674606	0.4664931	0.273030028	0.121298703	0.000987866	0.2610426	0.0270072	1.6815034	0.0524376	1.1181447
Summer	ROG_STREX	0.1659802	0.2544794	0.2339661	0.2869965	0.0635494	0.04329847	0.057182577	2.45556E-06	0.1043913	0.0387336	1.595072	0.0376798	0.0834379
Summer	SO2_IDLEX	0	0	0	0	8.484E-05	0.000127303	0.000604711	0.010181644	0.0008574	0	0	0.0034388	0
Summer	SO2_RUNEX	0.0026318	0.0030995	0.0032531	0.0039762	0.0062545	0.00620915	0.00969353	0.012508621	0.012888	0.0013278	0.0022114	0.0102347	0.0142217
Summer	SO2_STREX	0.0004896	0.0005841	0.000619	0.0007512	0.0001145	8.67577E-05	0.000112496	7.77507E-07	0.0001817	7.819E-05	0.0005641	5.82E-05	0.0001793
Summer	TOG_DIURN	0.069468	0.1633933	0.102135	0.1165603	0.0031859	0.001923388	0.000841336	7.87354E-06	0.0026323	0.000623	1.6973785	0.001569	0.9280268
Summer	TOG_HTSK	0.0923229	0.1752381	0.1131858	0.1290811	0.0712998	0.047090624	0.024889998	0.000201189	0.0226825	0.0050779	0.6801437	0.0096318	0.0470502
Summer	TOG_IDLEX	0	0	0	0	0.0290167	0.022705025	0.026887154	0.551096132	0.0700678	0	0	0.5455797	0
Summer	TOG_RESTL	0.0605054	0.1276575	0.09428	0.1123707	0.0018617	0.001163571	0.000530925	5.3773E-06	0.0013143	0.0004211	1.0378942	0.0008259	0.3899801
Summer	TOG_RUNEX	0.0138475	0.0399069	0.0251537	0.0321343	0.0529694	0.053139296	0.01814562	0.109031816	0.0371072	5.9707931	3.191232	0.0991798	0.0615305
Summer	TOG_RUNLS	0.1838638	0.5534948	0.3493505	0.3674606	0.4664931	0.273030028	0.121298703	0.000987866	0.2610426	0.0270072	1.6815034	0.0524376	1.1181447
Summer	TOG_STREX	0.1817275	0.2786227	0.2561633	0.3142239	0.0695786	0.047406375	0.062607725	2.68853E-06	0.1142953	0.0424084	1.7366578	0.0412546	0.091354

Winter	CH4_IDLEX	0	0	0	0	0.0051306	0.003554097	0.004659413	0.019312298	0.008171	0	0	0.081917	0
Winter	CH4_RUNEX	0.0023135	0.005825	0.0039315	0.0048813	0.0044356	0.003237606	0.001787223	0.000986559	0.0043905	5.8485351	0.3837084	0.0063019	0.0076203
Winter	CH4_STREX	0.0433662	0.0601486	0.0587898	0.0683684	0.0135565	0.009265994	0.011492988	4.88737E-07	0.0209078	0.0098939	0.2371877	0.0075038	0.0222026
Winter	CO_IDLEX	0	0	0	0	0.185433	0.147749892	0.487629697	6.732125113	0.6254191	0	0	3.3391935	0
Winter	CO_RUNEX	0.604776	1.143058	0.8496768	0.9489649	0.4996213	0.347556079	0.239037575	0.244241578	0.5465322	45.432896	18.880669	0.5375686	0.805871
Winter	CO_STREX	2.0273722	2.1809113	2.5499806	2.845045	1.0409911	0.681093419	1.282834255	0.008854017	2.2887679	0.7286724	8.7178404	1.0278341	1.9627346
Winter	CO2_NBIO_IDLEX	0	0	0	0	8.7403133	13.28641015	63.61070858	1107.92682	92.619721	0	0	344.60484	0
Winter	CO2_NBIO_RUNEX	255.94564	303.81004	320.35387	394.5386	641.00129	642.0240661	1013.999403	1323.932382	1333.7913	1980.9041	225.04832	1068.9167	1447.9321
Winter	CO2_NBIO_STREX	51.153242	60.991179	64.680907	78.439615	11.666748	8.829115837	11.49874034	0.079405284	18.615013	8.0764708	59.28547	6.2450882	18.331178
Winter	NOX_IDLEX	0	0	0	0	0.0504264	0.078666188	0.351681562	5.942391904	0.3825227	0	0	2.8436986	0
Winter	NOX_RUNEX	0.0309987	0.089235	0.0642864	0.0807205	0.4748469	0.606181131	1.069974893	2.635382723	1.1639329	0.4645819	1.105315	4.0303783	0.9850523
Winter	NOX_STREX[3]	0.1627322	0.2222478	0.2357723	0.2830551	0.2991327	0.205247274	1.599836786	2.348475437	0.8515676	0.0745839	0.266952	1.0089948	0.2487088
Winter	PM10_IDLEX	0	0	0	0	0.0008154	0.001305187	0.000339232	0.003388778	0.0001395	0	0	0.0039414	0
Winter	PM10_PMBW	0.03675	0.03675	0.03675	0.03675	0.07644	0.089180026	0.130340037	0.060040493	0.13034	0.0726803	0.01176	0.7448002	0.13034
Winter	PM10_PMTW	0.008	0.008	0.008	0.008	0.0097826	0.010613742	0.012000003	0.034995553	0.012	0.0318756	0.004	0.0105681	0.0130313
Winter	PM10_RUNEX	0.0016549	0.0023497	0.0017734	0.0018649	0.0057485	0.009497977	0.006149675	0.018533919	0.0073393	0.0032446	0.0025427	0.0232618	0.0172865
Winter	PM10_STREX	0.0016911	0.0022896	0.0017548	0.0018223	0.0002537	0.000143133	0.000127756	1.19274E-06	0.0002013	7.137E-05	0.0030379	6.573E-05	0.0002549
Winter	PM25_IDLEX	0	0	0	0	0.0007801	0.001248725	0.000324557	0.003242181	0.0001335	0	0	0.0037709	0
Winter	PM25_PMBW	0.01575	0.01575	0.01575	0.01575	0.03276	0.038220011	0.055860016	0.02573164	0.05586	0.0311487	0.00504	0.3192001	0.05586
Winter	PM25_PMTW	0.002	0.002	0.002	0.002	0.0024456	0.002653436	0.003000001	0.008748888	0.003	0.0079689	0.001	0.002642	0.0032578
Winter	PM25_RUNEX	0.0015241	0.002162	0.0016322	0.0017191	0.0054721	0.009071327	0.00587713	0.01773211	0.0070068	0.0030994	0.0023736	0.02224	0.0165008
Winter	PM25_STREX	0.0015549	0.0021052	0.0016135	0.0016756	0.0002332	0.000131606	0.000117467	1.09668E-06	0.0001851	6.562E-05	0.0028511	6.043E-05	0.0002344
Winter	ROG_DIURN	0.0437078	0.1057681	0.0633202	0.071574	0.0022616	0.001333347	0.000575907	5.21496E-06	0.0018913	0.0004301	1.1615661	0.0010829	0.7225319
Winter	ROG_HTSK	0.0962553	0.1879605	0.1180087	0.133663	0.0793122	0.050800702	0.025927166	0.000222087	0.0235071	0.0053044	0.7986776	0.0098617	0.0554969
Winter	ROG_IDLEX	0	0	0	0	0.0205969	0.016675535	0.02124214	0.41578849	0.0503383	0	0	0.3784186	0
Winter	ROG_RESTL	0.0418782	0.0881144	0.065593	0.078323	0.0013351	0.000816929	0.000370195	3.56311E-06	0.0009307	0.0002873	0.61772	0.0005729	0.2881477
Winter	ROG_RUNEX	0.0088101	0.0254726	0.0160218	0.0205708	0.0415449	0.044667386	0.01370095	0.019986164	0.0263693	0.0852095	2.6266291	0.0820404	0.0446463
Winter	ROG_RUNLS	0.2236945	0.7078356	0.4421976	0.4597755	0.5223102	0.30839326	0.13862171	0.001071914	0.2871505	0.0362962	2.0840824	0.0718164	1.2095585
Winter	ROG_STREX	0.1902043	0.2930792	0.2683895	0.3294411	0.0664751	0.045291801	0.060058414	2.57905E-06	0.1097961	0.0425328	1.8355521	0.0433048	0.0877648
Winter	SO2_IDLEX	0	0	0	0	8.484E-05	0.000127303	0.000604403	0.010467143	0.000881	0	0	0.0032939	0
Winter	SO2_RUNEX	0.002481	0.0029454	0.0031053	0.0038228	0.0062543	0.006209077	0.009693445	0.012508608	0.0128878	0.0013278	0.002227	0.0102345	0.0142212
Winter	SO2_STREX	0.0004959	0.0005913	0.0006271	0.0007605	0.0001155	8.73713E-05	0.000113789	7.8578E-07	0.0001842	7.992E-05	0.0005867	6.18E-05	0.0001814
Winter	TOG_DIURN	0.0437078	0.1057681	0.0633202	0.071574	0.0022616	0.001333347	0.000575907	5.21496E-06	0.0018913	0.0004301	1.1615661	0.0010829	0.7225319
Winter	TOG_HTSK	0.0962553	0.1879605	0.1180087	0.133663	0.0793122	0.050800702	0.025927166	0.000222087	0.0235071	0.0053044	0.7986776	0.0098617	0.0554969
Winter	TOG_IDLEX	0	0	0	0	0.0290167	0.022705025	0.029546064	0.473343546	0.065888	0	0	0.5455397	0
Winter	TOG_RESTL	0.0418782	0.0881144	0.065593	0.078323	0.0013351	0.000816929	0.000370195	3.56311E-06	0.0009307	0.0002873	0.61772	0.0005729	0.2881477
Winter	TOG_RUNEX	0.0128043	0.0371477	0.0233203	0.0298733	0.0521883	0.052878625	0.017843927	0.02287013	0.0362568	5.9707421	3.2774427	0.0984848	0.0599109
Winter	TOG_RUNLS	0.2236945	0.7078356	0.4421976	0.4597755	0.5223102	0.30839326	0.13862171	0.001071914	0.2871505	0.0362962	2.0840824	0.0718164	1.2095585
Winter	TOG_STREX	0.2082498	0.3208845	0.2938526	0.360695	0.0727819	0.049588822	0.065756404	2.82374E-06	0.1202129	0.046568	1.9984049	0.0474133	0.0960914

1 Source: California Air Resources Board. EMFAC2017 Emissions Inventory. https://arb.ca.gov/emfac/emissions-inventory/46dd3191f609dc159c01d7dc7fcbeb0c1e70897f; California Air Pollution Control Officers Association (CAPCOA). 2017, November. California Emissions Estimator Model User's Guide, Version 2016.3.2, Appendix A.

2 Unless otherwise noted, per CalEEMod methodology, the calculated CalEEMod emission rates are derived from the emission rates obtained from EMFAC2017 Version 1.0.3 for the Los Angeles County (SC) region .

3 Because EMFAC2017 provides vehicle trips data for MHDT and HHDT diesel trucks, the formula provided in Appendix A of the CalEEMod User's Guide in calculating the NO_X STREX emission rates are utilized.

Off-Model SAFE Rule Adjustment Factors for Gasoline Light Duty Vehicle (LDA, LDT1, LDT2, MDV) Emissions in EMFAC2017

Year	NOx Exh	TOG Evap	TOG Exh	PM Exh	CO Exh	CO2 Exh
2021	1.0002	1.0001	1.0002	1.0009	1.0005	1.0023
2022	1.0004	1.0003	1.0004	1.0018	1.0014	1.0065
2023	1.0007	1.0006	1.0007	1.0032	1.0027	1.0126
2024	1.0012	1.001	1.0011	1.0051	1.0044	1.0207
2025	1.0018	1.0016	1.0016	1.0074	1.0065	1.0309
2026	1.0023	1.0022	1.002	1.0091	1.0083	1.0394
2027	1.0028	1.0028	1.0024	1.0105	1.0102	1.0475
2028	1.0034	1.0035	1.0028	1.0117	1.012	1.0554
2029	1.004	1.0042	1.0032	1.0129	1.0138	1.0629
2030	1.0047	1.0051	1.0037	1.0142	1.0156	1.0702
2031	1.0054	1.0061	1.0042	1.0155	1.0173	1.077
2032	1.0061	1.0072	1.0047	1.0169	1.0189	1.0834
2033	1.0068	1.0083	1.0052	1.0182	1.0204	1.0893
2034	1.0075	1.0095	1.0058	1.0196	1.0218	1.0947
2035	1.0081	1.0108	1.0063	1.021	1.0232	1.0997
2036	1.0088	1.0121	1.0069	1.0223	1.0244	1.1041
2037	1.0094	1.0134	1.0074	1.0236	1.0255	1.108
2038	1.0099	1.0148	1.0079	1.0248	1.0265	1.1114
2039	1.0104	1.0161	1.0085	1.0259	1.0274	1.1143
2040	1.0109	1.0174	1.009	1.027	1.0281	1.1168
2041	1.0113	1.0186	1.0095	1.0279	1.0288	1.1189
2042	1.0116	1.0198	1.0099	1.0286	1.0294	1.1207
2043	1.0119	1.0207	1.0103	1.0293	1.0299	1.1221
2044	1.0122	1.0216	1.0106	1.0299	1.0303	1.1233
2045	1.0124	1.0225	1.0109	1.0303	1.0306	1.1243
2046	1.0125	1.0233	1.0111	1.0308	1.0309	1.1251
2047	1.0127	1.024	1.0113	1.0311	1.0311	1.1258
2048	1.0128	1.0246	1.0115	1.0314	1.0313	1.1263
2049	1.0128	1.0252	1.0116	1.0316	1.0315	1.1268
2050	1.0129	1.0257	1.0117	1.0318	1.0316	1.1272

Sources: California Air Resources Board. 2019, November 20. EMFAC Off-Model Adjustment Factors to Account for the SAFE Vehicles Rule Part One and the Final Safe Rule. https://ww3.arb.ca.gov/msei/emfac_off_model_adjustment_factors_final_draft.pdf; California Air Resources Board. 2020, June 26. EMFAC Off-Model Adjustment Factors for Carbon Dioxide (CO2) Emissions to Account for the SAFE Vehicles Rule Part One and the Final Safe Rule. https://ww3.arb.ca.gov/msei/emfac_off_model_co2_adjustment_factors_06262020-final.pdf.

LDA CalEEMod Emission Rate Worksheet

Vehicle Class: LDA

Pollutant	CARB SAFE Rule Adjustment Factor	Emission Rates			Population			VMT			Trips			CalEEMod Emission Rate
		Gasoline	Diesel	Electricity	LDA Gasoline	LDA Diesel	LDA Electricity	LDA Gasoline	LDA Diesel	LDA Electricity	LDA Gasoline	LDA Diesel	LDA Electricity	
CH4_IDLEX		0	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0**
CH4_RUNEX		0.002451943	0.000777723	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.002364379**
CH4_STREX		0.044016164	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.042418437**
CO_IDLEX	1.0044	0	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0**
CO_RUNEX	1.0044	0.649515816	0.278066666	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.627008753**
CO_STREX	1.0044	2.035270334	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**1.961392783**
CO2_NBIO_IDLEX	1.0207	0	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0**
CO2_NBIO_RUNEX	1.0207	268.5923545	205.1068976	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**260.1463128**
CO2_NBIO_STREX	1.0207	52.95388431	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**51.03173017**
NOX_IDLEX	1.0012	0	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0**
NOX_RUNEX	1.0012	0.03271705	0.053895784	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.031964545**
NOX_STREX	1.0012	0.166125402	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.160095275**
PM10_IDLEX	1.0051	0	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0**
PM10_PMBW		0.036750011	0.036750011	0.036750011	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.036750011**
PM10_PMTW		0.008000002	0.008000002	0.008000002	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.008000002**
PM10_RUNEX	1.0051	0.001653758	0.006827999	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.001654939**
PM10_STREX	1.0051	0.001754789	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.001691093**
PM25_IDLEX	1.0051	0	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0**
PM25_PMBW		0.015750005	0.015750005	0.015750005	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.015750005**
PM25_PMTW		0.002000001	0.002000001	0.002000001	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.002000001**
PM25_RUNEX	1.0051	0.00152057	0.006532623	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.001524088**
PM25_STREX	1.0051	0.001613464	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.001554897**
ROG_DIURN	1.001	0.220775161	0	0.022407439	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.045209821**
ROG_HTSK	1.001	0.092990337	0	0.004888026	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.089746944**
ROG_IDLEX	1.0011	0	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0**
ROG_RESTL	1.001	0.214766979	0	0.007500233	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.043901909**
ROG_RUNEX	1.0011	0.009183973	0.016743921	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.008988171**
ROG_RUNLS	1.001	0.203052051	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.195681537**
ROG_STREX	1.0011	0.192750058	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.185753492**
SO2_IDLEX		0	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0**
SO2_RUNEX		0.002604036	0.001938998	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.002521677**
SO2_STREX		0.000513394	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.000494759**
TOG_DIURN	1.001	0.220775161	0	0.022407439	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.045209821**
TOG_HTSK	1.001	0.092990337	0	0.004888026	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.089746944**
TOG_IDLEX	1.0011	0	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0**
TOG_RESTL	1.001	0.214766979	0	0.007500233	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.043901909**
TOG_RUNEX	1.0011	0.013401232	0.019061841	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.01306419**
TOG_RUNLS	1.001	0.203052051	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.195681537**
TOG_STREX	1.0011	0.211037051	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.203376693**
CH4_IDLEX		0	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0**
CH4_RUNEX		0.002621102	0.000777723	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.002526984**
CH4_STREX		0.039668218	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.038228316**
CO_IDLEX	1.0044	0	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0**
CO_RUNEX	1.0044	0.712649469	0.278066666	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.687696393**
CO_STREX	1.0044	1.739230888	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**1.676099167**
CO2_NBIO_IDLEX	1.0207	0	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0**
CO2_NBIO_RUNEX	1.0207	280.4116348	205.1068976	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**271.5076739**
CO2_NBIO_STREX	1.0207	52.4068058	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**50.50450987**
NOX_IDLEX	1.0012	0	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0**
NOX_RUNEX	1.0012	0.028736912	0.050935115	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.028110317**
NOX_STREX	1.0012	0.153811524	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.148228374**
PM10_IDLEX	1.0051	0	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0**
PM10_PMBW		0.036750011	0.036750011	0.036750011	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.036750011**
PM10_PMTW		0.008000002	0.008000002	0.008000002	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.008000002**
PM10_RUNEX	1.0051	0.001653758	0.006827999	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.001654939**
PM10_STREX	1.0051	0.001754789	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.001691093**
PM25_IDLEX	1.0051	0	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0**
PM25_PMBW		0.015750005	0.015750005	0.015750005	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.015750005**
PM25_PMTW		0.002000001	0.002000001	0.002000001	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.002000001**
PM25_RUNEX	1.0051	0.00152057	0.006532623	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.001524088**
PM25_STREX	1.0051	0.001613464	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.001554897**
ROG_DIURN	1.001	0.339062695	0	0.040970996	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.069468047**
ROG_HTSK	1.001	0.095663299	0	0.004888026	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.092322882**
ROG_IDLEX	1.0011	0	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0**
ROG_RESTL	1.001	0.295848466	0	0.015694905	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.060505399**
ROG_RUNEX	1.0011	0.009742441	0.016743921	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.009525002**
ROG_RUNLS	1.001	0.190789159	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.183863771**
ROG_STREX	1.0011	0.172232015	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.165980227**
SO2_IDLEX		0	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0**
SO2_RUNEX		0.002718625	0.001938998	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.002631826**
SO2_STREX		0.00050809	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.000489647**
TOG_DIURN	1.001	0.339062695	0	0.040970996	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.069468047**
TOG_HTSK	1.001	0.095663299	0	0.004888026	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.092322882**
TOG_IDLEX	1.0011	0	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0**
TOG_RESTL	1.001	0.295848466	0	0.015694905	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.060505399**
TOG_RUNEX	1.0011	0.014216147	0.019061841	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.013847534**
TOG_RUNLS	1.001	0.190789159	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.183863771**
TOG_STREX	1.0011	0.188572377	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.181727456**

CH4_IDLEX		0	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0**
CH4_RUNEX		0.002398995	0.000777723	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.002313483**
CH4_STREX		0.044999662	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.043366235**
CO_IDLEX	1.0044	0	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0**
CO_RUNEX	1.0044	0.626386976	0.278066666	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.604776003**
CO_STREX	1.0044	2.103734874	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**2.027372153**
CO2_NBIO_IDLEX	1.0207	0	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0**
CO2_NBIO_RUNEX	1.0207	264.2223733	205.1068976	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**255.9456396**
CO2_NBIO_STREX	1.0207	53.07997253	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**51.15324156**
NOX_IDLEX	1.0012	0	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0**
NOX_RUNEX	1.0012	0.031722473	0.052874302	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.03099874**
NOX_STREX	1.0012	0.168861654	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.162732205**
PM10_IDLEX	1.0051	0	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0**
PM10_PMBW		0.036750011	0.036750011	0.036750011	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.036750011**
PM10_PMTW		0.008000002	0.008000002	0.008000002	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.008000002**
PM10_RUNEX	1.0051	0.001653758	0.006827999	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.001654939**
PM10_STREX	1.0051	0.001754789	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.001691093**
PM25_IDLEX	1.0051	0	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0**
PM25_PMBW		0.015750005	0.015750005	0.015750005	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.015750005**
PM25_PMTW		0.002000001	0.002000001	0.002000001	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.002000001**
PM25_RUNEX	1.0051	0.00152057	0.006532623	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.001524088**
PM25_STREX	1.0051	0.001613464	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.001554897**
ROG_DIURN	1.001	0.213587087	0	0.016129757	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.043707763**
ROG_HTSK	1.001	0.099743849	0	0.004888026	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.096255313**
ROG_IDLEX	1.0011	0	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0**
ROG_RESTL	1.001	0.204935501	0	0.004571725	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.041878167**
ROG_RUNEX	1.0011	0.008998695	0.016743921	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.008810072**
ROG_RUNLS	1.001	0.232120162	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.223694515**
ROG_STREX	1.0011	0.19736851	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.190204296**
SO2_IDLEX		0	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0**
SO2_RUNEX		0.002561668	0.001938998	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.002480951**
SO2_STREX		0.000514617	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.000495937**
TOG_DIURN	1.001	0.213587087	0	0.016129757	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.043707763**
TOG_HTSK	1.001	0.099743849	0	0.004888026	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.096255313**
TOG_IDLEX	1.0011	0	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0**
TOG_RESTL	1.001	0.204935501	0	0.004571725	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.041878167**
TOG_RUNEX	1.0011	0.013130875	0.019061841	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.012804308**
TOG_RUNLS	1.001	0.232120162	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.223694515**
TOG_STREX	1.0011	0.21609367	0	0	4021900.074	38501.07281	106845.8544	148818024	1479530.051	4518575.527	18978442.95	182905.222	531934.2031	**0.208249763**

LDT1 CalEEMod Emission Rate Worksheet

Vehicle Class: LDT1

Pollutant	CARB SAFE Rule Adjustment Factor	Emission Rates			Population			VMT			Trips			CalEEMod Emission Rate
		Gas	DSL	ELEC	LDT1 Gasoline	LDT1 Diesel	LDT1 Electricity	LDT1 Gasoline	LDT1 Diesel	LDT1 Electricity	LDT1 Gasoline	LDT1 Diesel	LDT1 Electricity	
CH4_IDLEX		0	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0**
CH4_RUNEX		0.006022661	0.008011193	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.005937615**
CH4_STREX		0.059558352	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.058768569**
CO_IDLEX	1.0044	0	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0**
CO_RUNEX	1.0044	1.197703835	1.027022135	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**1.180611721**
CO_STREX	1.0044	2.137495003	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**2.109150419**
CO2_NBIO_IDLEX	1.0207	0	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0**
CO2_NBIO_RUNEX	1.0207	312.5003054	456.5855263	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**308.100476**
CO2_NBIO_STREX	1.0207	61.66915678	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**60.85138336**
NOX_IDLEX	1.0012	0	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0**
NOX_RUNEX	1.0012	0.09290501	0.924793972	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.091847036**
NOX_STREX	1.0012	0.221575148	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.218636917**
PM10_IDLEX	1.0051	0	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0**
PM10_PMBW		0.036750011	0.036750011	0.036750011	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.036750011**
PM10_PMTW		0.008000002	0.008000002	0.008000002	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.008000002**
PM10_RUNEX	1.0051	0.002343388	0.127426263	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.002349695**
PM10_STREX	1.0051	0.002320336	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.002289567**
PM25_IDLEX	1.0051	0	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0**
PM25_PMBW		0.015750005	0.015750005	0.015750005	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.015750005**
PM25_PMTW		0.002000001	0.002000001	0.002000001	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.002000001**
PM25_RUNEX	1.0051	0.002154691	0.121913859	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.002161995**
PM25_STREX	1.0051	0.0021335	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.002105209**
ROG_DIURN	1.001	0.500130021	0	0.022407439	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.106498534**
ROG_HTSK	1.001	0.1710229	0	0.004888026	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.168818061**
ROG_IDLEX	1.0011	0	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0**
ROG_RESTL	1.001	0.43331279	0	0.007500233	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.092239712**
ROG_RUNEX	1.0011	0.026273893	0.172476263	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.025946469**
ROG_RUNLS	1.001	0.606856581	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.598809265**
ROG_STREX	1.0011	0.289850391	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.286006785**
SO2_IDLEX		0	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0**
SO2_RUNEX		0.003029728	0.004316375	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.002987037**
SO2_STREX		0.00059789	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.000589962**
TOG_DIURN	1.001	0.500130021	0	0.022407439	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.106498534**
TOG_HTSK	1.001	0.1710229	0	0.004888026	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.168818061**
TOG_IDLEX	1.0011	0	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0**
TOG_RESTL	1.001	0.43331279	0	0.007500233	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.092239712**
TOG_RUNEX	1.0011	0.03833426	0.196352759	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.037839014**
TOG_RUNLS	1.001	0.606856581	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.598809265**
TOG_STREX	1.0011	0.317349414	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.313141153**
CH4_IDLEX		0	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0**
CH4_RUNEX		0.006382351	0.008011193	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.006292074**
CH4_STREX		0.053383831	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.052675927**
CO_IDLEX	1.0044	0	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0**
CO_RUNEX	1.0044	1.301055048	1.027022135	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**1.282459949**
CO_STREX	1.0044	1.823237266	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**1.799059945**
CO2_NBIO_IDLEX	1.0207	0	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0**
CO2_NBIO_RUNEX	1.0207	324.2755847	456.5855263	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**319.7045132**
CO2_NBIO_STREX	1.0207	61.05360576	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**60.24399496**
NOX_IDLEX	1.0012	0	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0**
NOX_RUNEX	1.0012	0.08117159	0.87406191	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.080268171**
NOX_STREX	1.0012	0.205193107	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.202472112**
PM10_IDLEX	1.0051	0	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0**
PM10_PMBW		0.036750011	0.036750011	0.036750011	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.036750011**
PM10_PMTW		0.008000002	0.008000002	0.008000002	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.008000002**
PM10_RUNEX	1.0051	0.002343388	0.127426263	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.002349695**
PM10_STREX	1.0051	0.002320336	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.002289567**
PM25_IDLEX	1.0051	0	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0**
PM25_PMBW		0.015750005	0.015750005	0.015750005	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.015750005**
PM25_PMTW		0.002000001	0.002000001	0.002000001	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.002000001**
PM25_RUNEX	1.0051	0.002154691	0.121913859	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.002161995**
PM25_STREX	1.0051	0.0021335	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.002105209**
ROG_DIURN	1.001	0.767234915	0	0.040970996	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.163393271**
ROG_HTSK	1.001	0.177529259	0	0.004888026	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.175238141**
ROG_IDLEX	1.0011	0	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0**
ROG_RESTL	1.001	0.599629863	0	0.015694905	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.127657463**
ROG_RUNEX	1.0011	0.027711973	0.172476263	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.027363635**
ROG_RUNLS	1.001	0.560933139	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.553494798**
ROG_STREX	1.0011	0.257899297	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.254479384**
SO2_IDLEX		0	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0**
SO2_RUNEX		0.003143891	0.004316375	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.003099539**
SO2_STREX		0.000591922	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.000584073**
TOG_DIURN	1.001	0.767234915	0	0.040970996	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.163393271**
TOG_HTSK	1.001	0.177529259	0	0.004888026	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.175238141**
TOG_IDLEX	1.0011	0	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0**
TOG_RESTL	1.001	0.599629863	0	0.015694905	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.127657463**
TOG_RUNEX	1.0011	0.040432694	0.196352759	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.039906932**
TOG_RUNLS	1.001	0.560933139	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.553494798**
TOG_STREX	1.0011	0.282367048	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.278622676**

CH4_IDLEX		0	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0**
CH4_RUNEX		0.00590835	0.008011193	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.005824967**
CH4_STREX		0.060956977	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.060148647**
CO_IDLEX	1.0044	0	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0**
CO_RUNEX	1.0044	1.15959589	1.027022135	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**1.14305796**
CO_STREX	1.0044	2.210220234	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**2.180911265**
CO2_NBIO_IDLEX	1.0207	0	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0**
CO2_NBIO_RUNEX	1.0207	308.1465516	456.5855263	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**303.8100366**
CO2_NBIO_STREX	1.0207	61.81083136	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**60.99117925**
NOX_IDLEX	1.0012	0	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0**
NOX_RUNEX	1.0012	0.090260009	0.907294277	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.089234955**
NOX_STREX	1.0012	0.225234589	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.222247831**
PM10_IDLEX	1.0051	0	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0**
PM10_PMBW		0.036750011	0.036750011	0.036750011	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.036750011**
PM10_PMTW		0.008000002	0.008000002	0.008000002	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.008000002**
PM10_RUNEX	1.0051	0.002343388	0.127426263	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.002349695**
PM10_STREX	1.0051	0.002320336	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.002289567**
PM25_IDLEX	1.0051	0	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0**
PM25_PMBW		0.015750005	0.015750005	0.015750005	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.015750005**
PM25_PMTW		0.002000001	0.002000001	0.002000001	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.002000001**
PM25_RUNEX	1.0051	0.002154691	0.121913859	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.002161995**
PM25_STREX	1.0051	0.0021335	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.002105209**
ROG_DIURN	1.001	0.496774041	0	0.016129757	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.105768143**
ROG_HTSK	1.001	0.190422581	0	0.004888026	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.18796049**
ROG_IDLEX	1.0011	0	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0**
ROG_RESTL	1.001	0.413964956	0	0.004571725	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.088114448**
ROG_RUNEX	1.0011	0.025793078	0.172476263	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.025472645**
ROG_RUNLS	1.001	0.717348063	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.707835558**
ROG_STREX	1.0011	0.29701783	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.29307918**
SO2_IDLEX		0	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0**
SO2_RUNEX		0.002987518	0.004316375	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.00294544**
SO2_STREX		0.000599264	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.000591317**
TOG_DIURN	1.001	0.496774041	0	0.016129757	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.105768143**
TOG_HTSK	1.001	0.190422581	0	0.004888026	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.18796049**
TOG_IDLEX	1.0011	0	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0**
TOG_RESTL	1.001	0.413964956	0	0.004571725	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.088114448**
TOG_RUNEX	1.0011	0.037632704	0.196352759	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.037147661**
TOG_RUNLS	1.001	0.717348063	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.707835558**
TOG_STREX	1.0011	0.32519685	0	0	486400.7655	234.7727133	5879.20802	17673621.24	5684.021112	255127.5247	2255127.586	832.856787	29473.49424	**0.320884523**

LDT2 CalEEMod Emission Rate Worksheet

Vehicle Class: LDT2

Pollutant	CARB SAFE Rule Adjustment Factor	Emission Rates			Population			VMT			Trips			CalEEMod Emission Rate
		Gasoline	Diesel	Electricity	LDT2 Gasoline	LDT2 Diesel	LDT2 Electricity	LDT2 Gasoline	LDT2 Diesel	LDT2 Electricity	LDT2 Gasoline	LDT2 Diesel	LDT2 Electricity	
CH4_IDLEX		0	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0**
CH4_RUNEX		0.004091424	0.001038057	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.004013277**
CH4_STREX		0.058907479	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.057487485**
CO_IDLEX	1.0044	0	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0**
CO_RUNEX	1.0044	0.896887531	0.200644576	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.879542611**
CO_STREX	1.0044	2.526724055	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**2.465816132**
CO2_NBIO_IDLEX	1.0207	0	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0**
CO2_NBIO_RUNEX	1.0207	329.2038347	278.6127609	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**324.4691271**
CO2_NBIO_STREX	1.0207	66.11748536	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**64.52369095**
NOX_IDLEX	1.0012	0	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0**
NOX_RUNEX	1.0012	0.067323367	0.042724198	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.06624163**
NOX_STREX	1.0012	0.237680578	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.231951171**
PM10_IDLEX	1.0051	0	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0**
PM10_PMBW		0.036750011	0.036750011	0.036750011	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.036750011**
PM10_PMTW		0.008000002	0.008000002	0.008000002	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.008000002**
PM10_RUNEX	1.0051	0.001768672	0.005292038	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.001773449**
PM10_STREX	1.0051	0.001798117	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.001754772**
PM25_IDLEX	1.0051	0	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0**
PM25_PMBW		0.015750005	0.015750005	0.015750005	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.015750005**
PM25_PMTW		0.002000001	0.002000001	0.002000001	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.002000001**
PM25_RUNEX	1.0051	0.001626238	0.005063107	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.001632201**
PM25_STREX	1.0051	0.001653313	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.001613459**
ROG_DIURN	1.001	0.320069937	0	0.022407439	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.066508883**
ROG_HTSK	1.001	0.112385093	0	0.004888026	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.109756944**
ROG_IDLEX	1.0011	0	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0**
ROG_RESTL	1.001	0.33113337	0	0.007500233	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.068756208**
ROG_RUNEX	1.0011	0.016505409	0.022348756	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.016334736**
ROG_RUNLS	1.001	0.385959556	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.376655812**
ROG_STREX	1.0011	0.268538363	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.262065114**
SO2_IDLEX		0	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0**
SO2_RUNEX		0.003191671	0.002633893	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.003145232**
SO2_STREX		0.000641017	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.000625565**
TOG_DIURN	1.001	0.320069937	0	0.022407439	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.066508883**
TOG_HTSK	1.001	0.112385093	0	0.004888026	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.109756944**
TOG_IDLEX	1.0011	0	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0**
TOG_RESTL	1.001	0.33113337	0	0.007500233	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.068756208**
TOG_RUNEX	1.0011	0.024083019	0.025442573	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.023776938**
TOG_RUNLS	1.001	0.385959556	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.376655812**
TOG_STREX	1.0011	0.294015605	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.286928214**
CH4_IDLEX		0	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0**
CH4_RUNEX		0.004357345	0.001038057	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.004273582**
CH4_STREX		0.053015843	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.05173787**
CO_IDLEX	1.0044	0	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0**
CO_RUNEX	1.0044	0.980034347	0.200644576	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.960933364**
CO_STREX	1.0044	2.156241007	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**2.10426376**
CO2_NBIO_IDLEX	1.0207	0	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0**
CO2_NBIO_RUNEX	1.0207	340.5746307	278.6127609	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**335.5997716**
CO2_NBIO_STREX	1.0207	65.42217373	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**63.84514015**
NOX_IDLEX	1.0012	0	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0**
NOX_RUNEX	1.0012	0.059000512	0.040373761	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.058075843**
NOX_STREX	1.0012	0.220076987	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.214771923**
PM10_IDLEX	1.0051	0	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0**
PM10_PMBW		0.036750011	0.036750011	0.036750011	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.036750011**
PM10_PMTW		0.008000002	0.008000002	0.008000002	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.008000002**
PM10_RUNEX	1.0051	0.001768672	0.005292038	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.001773449**
PM10_STREX	1.0051	0.001798117	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.001754772**
PM25_IDLEX	1.0051	0	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0**
PM25_PMBW		0.015750005	0.015750005	0.015750005	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.015750005**
PM25_PMTW		0.002000001	0.002000001	0.002000001	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.002000001**
PM25_RUNEX	1.0051	0.001626238	0.005063107	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.001632201**
PM25_STREX	1.0051	0.001653313	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.001613459**
ROG_DIURN	1.001	0.49141441	0	0.040970996	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.102134992**
ROG_HTSK	1.001	0.115898681	0	0.004888026	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.113185835**
ROG_IDLEX	1.0011	0	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0**
ROG_RESTL	1.001	0.453971454	0	0.015694905	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.094279996**
ROG_RUNEX	1.0011	0.017469252	0.022348756	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.017278224**
ROG_RUNLS	1.001	0.357979753	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.349350475**
ROG_STREX	1.0011	0.239745238	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.233966061**
SO2_IDLEX		0	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0**
SO2_RUNEX		0.003301912	0.002633893	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.003253145**
SO2_STREX		0.000634276	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.000618986**
TOG_DIURN	1.001	0.49141441	0	0.040970996	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.102134992**
TOG_HTSK	1.001	0.115898681	0	0.004888026	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.113185835**
TOG_IDLEX	1.0011	0	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0**
TOG_RESTL	1.001	0.453971454	0	0.015694905	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.094279996**
TOG_RUNEX	1.0011	0.025489454	0.025442573	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.025153669**
TOG_RUNLS	1.001	0.357979753	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.349350475**
TOG_STREX	1.0011	0.262490778	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.256163309**

CH4_IDLEX		0	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0**
CH4_RUNEX		0.004007832	0.001038057	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.00393145**
CH4_STREX		0.060241939	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.058789777**
CO_IDLEX	1.0044	0	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0**
CO_RUNEX	1.0044	0.866377386	0.200644576	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.849676841**
CO_STREX	1.0044	2.612967444	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**2.549980583**
CO2_NBIO_IDLEX	1.0207	0	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0**
CO2_NBIO_RUNEX	1.0207	324.9997884	278.6127609	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**320.3538703**
CO2_NBIO_STREX	1.0207	66.27858437	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**64.68090658**
NOX_IDLEX	1.0012	0	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0**
NOX_RUNEX	1.0012	0.06533259	0.04191307	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.064286442**
NOX_STREX	1.0012	0.241596042	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.235772251**
PM10_IDLEX	1.0051	0	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0**
PM10_PMBW		0.036750011	0.036750011	0.036750011	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.036750011**
PM10_PMTW		0.008000002	0.008000002	0.008000002	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.008000002**
PM10_RUNEX	1.0051	0.001768672	0.005292038	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.001773449**
PM10_STREX	1.0051	0.001798117	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.001754772**
PM25_IDLEX	1.0051	0	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0**
PM25_PMBW		0.015750005	0.015750005	0.015750005	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.015750005**
PM25_PMTW		0.002000001	0.002000001	0.002000001	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.002000001**
PM25_RUNEX	1.0051	0.001626238	0.005063107	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.001632201**
PM25_STREX	1.0051	0.001653313	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.001613459**
ROG_DIURN	1.001	0.304806879	0	0.016129757	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.063320158**
ROG_HTSK	1.001	0.120840718	0	0.004888026	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.118008741**
ROG_IDLEX	1.0011	0	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0**
ROG_RESTL	1.001	0.315940182	0	0.004571725	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.065593006**
ROG_RUNEX	1.0011	0.01618568	0.022348756	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.016021761**
ROG_RUNLS	1.001	0.453120264	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.442197578**
ROG_STREX	1.0011	0.27501892	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.268389456**
SO2_IDLEX		0	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0**
SO2_RUNEX		0.003150912	0.002633893	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.003105334**
SO2_STREX		0.000642579	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.000627089**
TOG_DIURN	1.001	0.304806879	0	0.016129757	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.063320158**
TOG_HTSK	1.001	0.120840718	0	0.004888026	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.118008741**
TOG_IDLEX	1.0011	0	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0**
TOG_RESTL	1.001	0.315940182	0	0.004571725	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.065593006**
TOG_RUNEX	1.0011	0.02361649	0.025442573	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.023320262**
TOG_RUNLS	1.001	0.453120264	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.442197578**
TOG_STREX	1.0011	0.30111100	0	0	1423190.933	10554.80961	22560.95292	52511432.89	427072.609	705898.5423	6691338.255	51733.15953	113549.0395	**0.293852568**

MDV CalEEMod Emission Rate Worksheet

Vehicle Class: MDV

Pollutant	CARB SAFE Rule Adjustment Factor	Emission Rates			Population			VMT			Trips			CalEEMod Emission Rate
		Gasoline	Diesel	Electricity	MDV Gasoline	MDV Diesel	MDV Electricity	MDV Gasoline	MDV Diesel	MDV Electricity	MDV Gasoline	MDV Diesel	MDV Electricity	
CH4_IDLEX		0	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0**
CH4_RUNEX		0.005166374	0.000654177	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.004982165**
CH4_STREX		0.069618764	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.066846343**
CO_IDLEX	1.0044	0	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0**
CO_RUNEX	1.0044	1.014104537	0.275313969	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.981752458**
CO_STREX	1.0044	2.864237627	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**2.750175378**
CO2_NBIO_IDLEX	1.0207	0	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0**
CO2_NBIO_RUNEX	1.0207	405.2663863	359.8140872	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**398.8093392**
CO2_NBIO_STREX	1.0207	81.50592022	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**78.26011811**
NOX_IDLEX	1.0012	0	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0**
NOX_RUNEX	1.0012	0.085540201	0.037005503	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.083168382**
NOX_STREX	1.0012	0.290008136	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.278459171**
PM10_IDLEX	1.0051	0	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0**
PM10_PMBW		0.036750011	0.036750011	0.036750011	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.036750011**
PM10_PMTW		0.008000002	0.008000002	0.008000002	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.008000002**
PM10_RUNEX	1.0051	0.001821544	0.004412393	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.001864941**
PM10_STREX	1.0051	0.001897893	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.001822313**
PM25_IDLEX	1.0051	0	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0**
PM25_PMBW		0.015750005	0.015750005	0.015750005	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.015750005**
PM25_PMTW		0.002000001	0.002000001	0.002000001	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.002000001**
PM25_RUNEX	1.0051	0.001674917	0.004221515	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.001719077**
PM25_STREX	1.0051	0.001745119	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.001675623**
ROG_DIURN	1.001	0.367242482	0	0.022407439	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.075921968**
ROG_HTSK	1.001	0.130646744	0	0.004888026	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.1255181**
ROG_IDLEX	1.0011	0	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0**
ROG_RESTL	1.001	0.396959524	0	0.007500233	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.082015631**
ROG_RUNEX	1.0011	0.021434682	0.014084039	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.020965004**
ROG_RUNLS	1.001	0.410930279	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.394565843**
ROG_STREX	1.0011	0.334984854	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.321644786**
SO2_IDLEX		0	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0**
SO2_RUNEX		0.003929107	0.003401537	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.003864253**
SO2_STREX		0.00079021	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.000758741**
TOG_DIURN	1.001	0.367242482	0	0.022407439	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.075921968**
TOG_HTSK	1.001	0.130646744	0	0.004888026	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.1255181**
TOG_IDLEX	1.0011	0	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0**
TOG_RESTL	1.001	0.396959524	0	0.007500233	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.082015631**
TOG_RUNEX	1.0011	0.031249528	0.016033742	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.030448214**
TOG_RUNLS	1.001	0.410930279	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.394565843**
TOG_STREX	1.0011	0.366764798	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.35215916**
CH4_IDLEX		0	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0**
CH4_RUNEX		0.005495584	0.000654177	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.005298557**
CH4_STREX		0.062620726	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.060126987**
CO_IDLEX	1.0044	0	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0**
CO_RUNEX	1.0044	1.10651461	0.275313969	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**1.070564452**
CO_STREX	1.0044	2.440354818	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**2.343172812**
CO2_NBIO_IDLEX	1.0207	0	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0**
CO2_NBIO_RUNEX	1.0207	417.284658	359.8140872	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**410.3596674**
CO2_NBIO_STREX	1.0207	80.69963782	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**77.48594421**
NOX_IDLEX	1.0012	0	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0**
NOX_RUNEX	1.0012	0.074949639	0.034971127	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.072937465**
NOX_STREX	1.0012	0.268519228	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.257826013**
PM10_IDLEX	1.0051	0	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0**
PM10_PMBW		0.036750011	0.036750011	0.036750011	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.036750011**
PM10_PMTW		0.008000002	0.008000002	0.008000002	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.008000002**
PM10_RUNEX	1.0051	0.001821544	0.004412393	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.001864941**
PM10_STREX	1.0051	0.001897893	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.001822313**
PM25_IDLEX	1.0051	0	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0**
PM25_PMBW		0.015750005	0.015750005	0.015750005	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.015750005**
PM25_PMTW		0.002000001	0.002000001	0.002000001	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.002000001**
PM25_RUNEX	1.0051	0.001674917	0.004221515	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.001719077**
PM25_STREX	1.0051	0.001745119	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.001675623**
ROG_DIURN	1.001	0.563719648	0	0.040970996	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.116560348**
ROG_HTSK	1.001	0.134357565	0	0.004888026	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.129081144**
ROG_IDLEX	1.0011	0	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0**
ROG_RESTL	1.001	0.543800991	0	0.015694905	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.112370657**
ROG_RUNEX	1.0011	0.02263696	0.014084039	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.02212047**
ROG_RUNLS	1.001	0.38270082	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.367460563**
ROG_STREX	1.0011	0.29889951	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.286996464**
SO2_IDLEX		0	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0**
SO2_RUNEX		0.004045626	0.003401537	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.003976235**
SO2_STREX		0.000782393	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.000751236**
TOG_DIURN	1.001	0.563719648	0	0.040970996	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.116560348**
TOG_HTSK	1.001	0.134357565	0	0.004888026	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.129081144**
TOG_IDLEX	1.0011	0	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0**
TOG_RESTL	1.001	0.543800991	0	0.015694905	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.112370657**
TOG_RUNEX	1.0011	0.033003947	0.016033742	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.032134322**
TOG_RUNLS	1.001	0.38270082	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.367460563**
TOG_STREX	1.0011	0.327256199	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.314223908**

CH4_IDLEX		0	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0**
CH4_RUNEX		0.005061386	0.000654177	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.004881265**
CH4_STREX		0.07120399	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.068368441**
CO_IDLEX	1.0044	0	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0**
CO_RUNEX	1.0044	0.979988608	0.275313969	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.948964866**
CO_STREX	1.0044	2.963041955	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**2.845045032**
CO2_NBIO_IDLEX	1.0207	0	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0**
CO2_NBIO_RUNEX	1.0207	400.8226226	359.8140872	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**394.5385978**
CO2_NBIO_STREX	1.0207	81.69286136	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**78.43961472**
NOX_IDLEX	1.0012	0	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0**
NOX_RUNEX	1.0012	0.083012105	0.036303525	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.080720532**
NOX_STREX	1.0012	0.294794636	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.283055059**
PM10_IDLEX	1.0051	0	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0**
PM10_PMBW		0.036750011	0.036750011	0.036750011	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.036750011**
PM10_PMTW		0.008000002	0.008000002	0.008000002	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.008000002**
PM10_RUNEX	1.0051	0.001821544	0.004412393	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.001864941**
PM10_STREX	1.0051	0.001897893	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.001822313**
PM25_IDLEX	1.0051	0	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0**
PM25_PMBW		0.015750005	0.015750005	0.015750005	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.015750005**
PM25_PMTW		0.002000001	0.002000001	0.002000001	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.002000001**
PM25_RUNEX	1.0051	0.001674917	0.004221515	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.001719077**
PM25_STREX	1.0051	0.001745119	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.001675623**
ROG_DIURN	1.001	0.346283	0	0.016129757	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.071573987**
ROG_HTSK	1.001	0.139129448	0	0.004888026	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.133662998**
ROG_IDLEX	1.0011	0	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0**
ROG_RESTL	1.001	0.379124596	0	0.004571725	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.078323031**
ROG_RUNEX	1.0011	0.021024498	0.014084039	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.020570791**
ROG_RUNLS	1.001	0.478844454	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.459775479**
ROG_STREX	1.0011	0.34310447	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.329441055**
SO2_IDLEX		0	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0**
SO2_RUNEX		0.003886024	0.003401537	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.003822848**
SO2_STREX		0.000792022	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.000760482**
TOG_DIURN	1.001	0.346283	0	0.016129757	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.071573987**
TOG_HTSK	1.001	0.139129448	0	0.004888026	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.133662998**
TOG_IDLEX	1.0011	0	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0**
TOG_RESTL	1.001	0.379124596	0	0.004571725	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.078323031**
TOG_RUNEX	1.0011	0.030651273	0.016033742	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.029873253**
TOG_RUNLS	1.001	0.478844454	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.459775479**
TOG_STREX	1.0011	0.37565469	0	0	941489.7366	23002.44645	13602.33231	32284082.37	870333.9934	437604.9715	4376581.951	112429.6903	69087.01662	**0.360695031**

LDH1 CalEEMod Emission Rate Worksheet

Vehicle Class: LHDT1

Pollutant	Emission Rates			Population			VMT			Trips			CalEEMod Emission
	Gasoline	Diesel	Electricity	LHDT1 Gasoline	LHDT1 Diesel	LHDT1 Electricity	LHDT1 Gasoline	LHDT1 Diesel	LHDT1 Electricity	LHDT1 Gasoline	LHDT1 Diesel	LHDT1 Electricity	Rate
CH4_IDLEX	0.118006954	0.005098128	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.005132845**
CH4_RUNEX	0.005838286	0.002740428	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.004457729**
CH4_STREX	0.021392912	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.013457125**
CO_IDLEX	3.756426068	0.909745076	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.185432977**
CO_RUNEX	0.673456562	0.288504151	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.501902887**
CO_STREX	1.641787213	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**1.032759626**
CO2_NBIO_IDLEX	118.4471082	126.7942031	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**8.740313286**
CO2_NBIO_RUNEX	793.7311528	451.0270695	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**641.005405**
CO2_NBIO_STREX	18.52321604	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**11.65195436**
NOX_IDLEX	0.035884306	1.65854239	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.050426439**
NOX_RUNEX	0.162138805	0.883445654	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.483588514**
NOX_STREX	0.471053482	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.296314293**
PM10_IDLEX	0	0.027649346	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.000815394**
PM10_PMBW	0.076440022	0.076440022	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.076440022**
PM10_PMTW	0.008000002	0.012000003	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.009782599**
PM10_RUNEX	0.001339938	0.011232344	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.005748479**
PM10_STREX	0.000403275	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.000253679**
PM25_IDLEX	0	0.026453247	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.000780121**
PM25_PMBW	0.032760009	0.032760009	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.032760009**
PM25_PMTW	0.002000001	0.003000001	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.00244565**
PM25_RUNEX	0.001232024	0.010746438	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.005472113**
PM25_STREX	0.000370797	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.000233248**
ROG_DIURN	0.05139462	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.002169987**
ROG_HTSK	0.110802889	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.069700111**
ROG_IDLEX	0.411160823	0.109759705	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.020596936**
ROG_RESTL	0.032155937	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.00135769**
ROG_RUNEX	0.02772121	0.058999793	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.04166048**
ROG_RUNLS	0.766423258	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.48211546**
ROG_STREX	0.104849253	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.065955**
SO2_IDLEX	0.00117213	0.001198661	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**8.48389E-05**
SO2_RUNEX	0.007854613	0.004263828	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.006254383**
SO2_STREX	0.000183302	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.000115306**
TOG_DIURN	0.05139462	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.002169987**
TOG_HTSK	0.110802889	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.069700111**
TOG_IDLEX	0.599964908	0.124954127	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.029016728**
TOG_RESTL	0.032155937	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.00135769**
TOG_RUNEX	0.040450724	0.067167342	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.052356959**
TOG_RUNLS	0.766423258	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.48211546**
TOG_STREX	0.114796735	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.072212423**
CH4_IDLEX	0.118265618	0.005098128	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.005143766**
CH4_RUNEX	0.00598509	0.002740428	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.004539109**
CH4_STREX	0.020665949	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.012999832**
CO_IDLEX	3.756426068	0.909745076	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.185432977**
CO_RUNEX	0.688749214	0.288504151	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.510380384**
CO_STREX	1.570008768	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.987607685**
CO2_NBIO_IDLEX	118.4471082	126.7942031	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**8.740313286**
CO2_NBIO_RUNEX	793.7586579	451.0270695	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**641.0206525**
CO2_NBIO_STREX	18.39660554	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**11.57231054**
NOX_IDLEX	0.035884306	1.65854239	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.050426439**
NOX_RUNEX	0.143783387	0.839056597	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.453631229**
NOX_STREX	0.451325091	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.283904229**
PM10_IDLEX	0	0.027649346	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.000815394**
PM10_PMBW	0.076440022	0.076440022	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.076440022**
PM10_PMTW	0.008000002	0.012000003	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.009782599**
PM10_RUNEX	0.001339938	0.011232344	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.005748479**
PM10_STREX	0.000403275	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.000253679**
PM25_IDLEX	0	0.026453247	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.000780121**
PM25_PMBW	0.032760009	0.032760009	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.032760009**
PM25_PMTW	0.002000001	0.003000001	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.00244565**
PM25_RUNEX	0.001232024	0.010746438	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.005472113**
PM25_STREX	0.000370797	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.000233248**
ROG_DIURN	0.075455249	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.003185877**
ROG_HTSK	0.113345892	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.071299777**
ROG_IDLEX	0.411160823	0.109759705	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.020596936**
ROG_RESTL	0.044093483	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.001861718**
ROG_RUNEX	0.028478378	0.058999793	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.042080218**
ROG_RUNLS	0.741588292	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.466493125**
ROG_STREX	0.101025041	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.063549395**
SO2_IDLEX	0.00117213	0.001198661	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**8.48389E-05**
SO2_RUNEX	0.007854885	0.004263828	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.006254534**
SO2_STREX	0.000182049	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.000114517**
TOG_DIURN	0.075455249	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.003185877**
TOG_HTSK	0.113345892	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.071299777**
TOG_IDLEX	0.599964908	0.124954127	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.029016728**
TOG_RESTL	0.044093483	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.001861718**
TOG_RUNEX	0.041555583	0.067167342	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.052969439**
TOG_RUNLS	0.741588292	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.466493125**
TOG_STREX	0.110609704	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.069578588**

CH4_IDLEX	0.117954437	0.005098128	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.005130627**
CH4_RUNEX	0.005798326	0.002740428	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.004435576**
CH4_STREX	0.021550933	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.013556527**
CO_IDLEX	3.756426068	0.909745076	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.185432977**
CO_RUNEX	0.669340735	0.288504151	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.499621274**
CO_STREX	1.654872842	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**1.040991089**
CO2_NBIO_IDLEX	118.4471082	126.7942031	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**8.740313286**
CO2_NBIO_RUNEX	793.7237296	451.0270695	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**641.00129**
CO2_NBIO_STREX	18.54673296	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**11.66674759**
NOX_IDLEX	0.035884306	1.65854239	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.050426439**
NOX_RUNEX	0.158617711	0.868210071	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.474846869**
NOX_STREX	0.47553387	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.299132664**
PM10_IDLEX	0	0.027649346	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.000815394**
PM10_PMBW	0.076440022	0.076440022	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.076440022**
PM10_PMTW	0.008000002	0.012000003	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.009782599**
PM10_RUNEX	0.001339938	0.011232344	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.005748479**
PM10_STREX	0.000403275	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.000253679**
PM25_IDLEX	0	0.026453247	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.000780121**
PM25_PMBW	0.032760009	0.032760009	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.032760009**
PM25_PMTW	0.002000001	0.003000001	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.00244565**
PM25_RUNEX	0.001232024	0.010746438	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.005472113**
PM25_STREX	0.000370797	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.000233248**
ROG_DIURN	0.053564214	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.002261592**
ROG_HTSK	0.126083354	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.079312225**
ROG_IDLEX	0.411160823	0.109759705	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.020596936**
ROG_RESTL	0.031620448	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.001335081**
ROG_RUNEX	0.027512679	0.058999793	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.041544881**
ROG_RUNLS	0.830321244	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.52231023**
ROG_STREX	0.105676057	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.066475097**
SO2_IDLEX	0.00117213	0.001198661	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**8.48389E-05**
SO2_RUNEX	0.00785454	0.004263828	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.006254342**
SO2_STREX	0.000183535	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.000115452**
TOG_DIURN	0.053564214	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.002261592**
TOG_HTSK	0.126083354	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.079312225**
TOG_IDLEX	0.599964908	0.124954127	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.029016728**
TOG_RESTL	0.031620448	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.001335081**
TOG_RUNEX	0.040146437	0.067167342	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.052188277**
TOG_RUNLS	0.830321244	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.52231023**
TOG_STREX	0.11570198	0	0	105026.6205	73357.19754	0	3766959.671	3028301.786	0	1564740.156	922741.2616	0	**0.072781864**

LDH2 CalEEMod Emission Rate Worksheet

Vehicle Class: LHDT2

Pollutant	Emission Rates			Population			VMT			Trips			CalEEMod Emission
	Gasoline	Diesel	Electricity	LHDT2 Gasoline	LHDT2 Diesel	LHDT2 Electricity	LHDT2 Gasoline	LHDT2 Diesel	LHDT2 Electricity	LHDT2 Gasoline	LHDT2 Diesel	LHDT2 Electricity	Rate
CH4_IDLEX	0.118219196	0.005098128	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.003555657**
CH4_RUNEX	0.004228016	0.002725725	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.003246367**
CH4_STREX	0.021984886	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.009198317**
CO_IDLEX	3.763353604	0.909745076	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.147749892**
CO_RUNEX	0.465604503	0.28630699	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.348445274**
CO_STREX	1.614919085	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.675670399**
CO2_NBIO_IDLEX	136.8108067	204.25865	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**13.28641015**
CO2_NBIO_RUNEX	911.1648798	499.2810167	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**642.0256419**
CO2_NBIO_STREX	21.07907222	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**8.819330503**
NOX_IDLEX	0.036025021	1.67947685	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.078666188**
NOX_RUNEX	0.162700556	0.858325164	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.617245862**
NOX_STREX	0.485940518	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.203313978**
PM10_IDLEX	0	0.028228002	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.001305187**
PM10_PMBW	0.089180026	0.089180026	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.089180026**
PM10_PMTW	0.008000002	0.012000003	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.010613742**
PM10_RUNEX	0.001220778	0.013887994	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.009497977**
PM10_STREX	0.000342103	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.000143133**
PM25_IDLEX	0	0.027006871	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.001248725**
PM25_PMBW	0.038220011	0.038220011	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.038220011**
PM25_PMTW	0.002000001	0.003000001	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.002653436**
PM25_RUNEX	0.00112246	0.013287205	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.009071327**
PM25_STREX	0.000314551	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.000131606**
ROG_DIURN	0.046547525	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.001307187**
ROG_HTSK	0.109258474	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.045712951**
ROG_IDLEX	0.413082645	0.109759705	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.016675535**
ROG_RESTL	0.030100419	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.000845306**
ROG_RUNEX	0.0183523	0.058683257	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.04470595**
ROG_RUNLS	0.675992404	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.282830305**
ROG_STREX	0.107404926	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.04493744**
SO2_IDLEX	0.001353854	0.001930979	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.000127303**
SO2_RUNEX	0.009016715	0.004720001	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.006209093**
SO2_STREX	0.000208595	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**8.72744E-05**
TOG_DIURN	0.046547525	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.001307187**
TOG_HTSK	0.109258474	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.045712951**
TOG_IDLEX	0.602769225	0.124954127	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.022705025**
TOG_RESTL	0.030100419	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.000845306**
TOG_RUNEX	0.026779634	0.066806987	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.052934898**
TOG_RUNLS	0.675992404	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.282830305**
TOG_STREX	0.117594874	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.04920084**
CH4_IDLEX	0.118490451	0.005098128	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.003563274**
CH4_RUNEX	0.004321681	0.002725725	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.003278828**
CH4_STREX	0.021240295	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.008886785**
CO_IDLEX	3.763353604	0.909745076	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.147749892**
CO_RUNEX	0.475089842	0.28630699	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.351732563**
CO_STREX	1.544479603	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.646199033**
CO2_NBIO_IDLEX	136.8108067	204.25865	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**13.28641015**
CO2_NBIO_RUNEX	911.1816578	499.2810167	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**642.0314565**
CO2_NBIO_STREX	20.95427164	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**8.767114848**
NOX_IDLEX	0.036025021	1.67947685	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.078666188**
NOX_RUNEX	0.143201917	0.815198662	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.582307956**
NOX_STREX	0.465589807	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.194799389**
PM10_IDLEX	0	0.028228002	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.001305187**
PM10_PMBW	0.089180026	0.089180026	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.089180026**
PM10_PMTW	0.008000002	0.012000003	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.010613742**
PM10_RUNEX	0.001220778	0.013887994	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.009497977**
PM10_STREX	0.000342103	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.000143133**
PM25_IDLEX	0	0.027006871	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.001248725**
PM25_PMBW	0.038220011	0.038220011	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.038220011**
PM25_PMTW	0.002000001	0.003000001	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.002653436**
PM25_RUNEX	0.00112246	0.013287205	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.009071327**
PM25_STREX	0.000314551	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.000131606**
ROG_DIURN	0.06848975	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.001923388**
ROG_HTSK	0.112551248	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.047090624**
ROG_IDLEX	0.413082645	0.109759705	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.016675535**
ROG_RESTL	0.041433504	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.001163571**
ROG_RUNEX	0.018756483	0.058683257	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.044846026**
ROG_RUNLS	0.652568772	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.273030028**
ROG_STREX	0.103487626	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.04329847**
SO2_IDLEX	0.001353854	0.001930979	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.000127303**
SO2_RUNEX	0.009016881	0.004720001	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.00620915**
SO2_STREX	0.00020736	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**8.67577E-05**
TOG_DIURN	0.06848975	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.001923388**
TOG_HTSK	0.112551248	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.047090624**
TOG_IDLEX	0.602769225	0.124954127	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.022705025**
TOG_RESTL	0.041433504	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.001163571**
TOG_RUNEX	0.027369416	0.066806987	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.053139296**
TOG_RUNLS	0.652568772	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.273030028**
TOG_STREX	0.113305924	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.047406375**

CH4_IDLEX	0.118163673	0.005098128	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.003554097**
CH4_RUNEX	0.004202738	0.002725725	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.003237606**
CH4_STREX	0.022146642	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.009265994**
CO_IDLEX	3.763353604	0.909745076	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.147749892**
CO_RUNEX	0.463038767	0.28630699	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.347556079**
CO_STREX	1.627880639	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.681093419**
CO2_NBIO_IDLEX	136.8108067	204.25865	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**13.28641015**
CO2_NBIO_RUNEX	911.1603331	499.2810167	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**642.0240661**
CO2_NBIO_STREX	21.10246014	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**8.829115837**
NOX_IDLEX	0.036025021	1.67947685	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.078666188**
NOX_RUNEX	0.158683757	0.843522388	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.606181131**
NOX_STREX	0.490561285	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.205247274**
PM10_IDLEX	0	0.028228002	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.001305187**
PM10_PMBW	0.089180026	0.089180026	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.089180026**
PM10_PMTW	0.008000002	0.012000003	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.010613742**
PM10_RUNEX	0.001220778	0.013887994	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.009497977**
PM10_STREX	0.000342103	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.000143133**
PM25_IDLEX	0	0.027006871	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.001248725**
PM25_PMBW	0.038220011	0.038220011	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.038220011**
PM25_PMTW	0.002000001	0.003000001	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.002653436**
PM25_RUNEX	0.00112246	0.013287205	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.009071327**
PM25_STREX	0.000314551	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.000131606**
ROG_DIURN	0.047479039	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.001333347**
ROG_HTSK	0.121418703	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.050800702**
ROG_IDLEX	0.413082645	0.109759705	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.016675535**
ROG_RESTL	0.029089939	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.000816929**
ROG_RUNEX	0.018241024	0.058683257	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.044667386**
ROG_RUNLS	0.737090394	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.30839326**
ROG_STREX	0.108251885	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.045291801**
SO2_IDLEX	0.001353854	0.001930979	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.000127303**
SO2_RUNEX	0.00901667	0.004720001	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.006209077**
SO2_STREX	0.000208826	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**8.73713E-05**
TOG_DIURN	0.047479039	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.001333347**
TOG_HTSK	0.121418703	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.050800702**
TOG_IDLEX	0.602769225	0.124954127	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.022705025**
TOG_RESTL	0.029089939	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.000816929**
TOG_RUNEX	0.02661726	0.066806987	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.052878625**
TOG_RUNLS	0.737090394	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.30839326**
TOG_STREX	0.118522189	0	0	18080.14015	29768.23755	0	625803.0034	1179926.342	0	269367.1488	374446.98	0	**0.049588822**

MHDT CalEEMod Emission Rate Worksheet

Vehicle Class: MHDT

Pollutant	Emission Rates			Population			VMT			Trips			CalEEMod Emission
	Gasoline	Diesel	Electricity	MHDT Gasoline	MHDT Diesel	MHDT Electricity	MHDT Gasoline	MHDT Diesel	MHDT Electricity	MHDT Gasoline	MHDT Diesel	MHDT Electricity	Rate
CH4_IDLEX	0.268810755	0.003190037	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.004341561**
CH4_RUNEX	0.009567698	0.000368374	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.001798809**
CH4_STREX	0.037260426	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.011420024**
CO_IDLEX	14.40395393	2.528640905	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.398038457**
CO_RUNEX	1.126694714	0.076880154	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.240119487**
CO_STREX	4.144313102	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**1.270198945**
CO2_NBIO_IDLEX	532.1886656	790.5212545	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**63.60979183**
CO2_NBIO_RUNEX	1630.817323	900.4309974	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**1014.001318**
CO2_NBIO_STREX	37.44601586	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**11.4769055**
NOX_IDLEX	0.089545077	4.829529787	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.340177916**
NOX_RUNEX	0.32797271	1.231148399	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**1.090710456**
NOX_STREX	0.352819877	2.149331785	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**1.5987152**
PM10_IDLEX	0	0.004018568	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.000281915**
PM10_PMBW	0.130340037	0.130340037	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.130340037**
PM10_PMTW	0.012000003	0.012000003	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.012000003**
PM10_RUNEX	0.00112353	0.007075106	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.006149675**
PM10_STREX	0.000416834	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.000127756**
PM25_IDLEX	0	0.003844727	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.000269719**
PM25_PMBW	0.055860016	0.055860016	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.055860016**
PM25_PMTW	0.003000001	0.003000001	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.003000001**
PM25_RUNEX	0.001033044	0.00676904	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.00587713**
PM25_STREX	0.000383264	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.000117467**
ROG_DIURN	0.037012775	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.000566979**
ROG_HTSK	0.078895288	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.024180777**
ROG_IDLEX	1.006948082	0.068680629	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.020243064**
ROG_RESTL	0.024893391	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.000381329**
ROG_RUNEX	0.045337532	0.007930984	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.013747459**
ROG_RUNLS	0.411305415	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.126061832**
ROG_STREX	0.194197839	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.05952009**
SO2_IDLEX	0.005266438	0.007468453	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.000604609**
SO2_RUNEX	0.016138259	0.008506826	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.009693464**
SO2_STREX	0.000370559	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.000113573**
TOG_DIURN	0.037012775	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.000566979**
TOG_HTSK	0.078895288	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.024180777**
TOG_IDLEX	1.469336277	0.078187668	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.027993093**
TOG_RESTL	0.024893391	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.000381329**
TOG_RUNEX	0.066156421	0.009028821	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.017911791**
TOG_RUNLS	0.411305415	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.126061832**
TOG_STREX	0.21262219	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.065167007**
CH4_IDLEX	0.253788188	0.003332209	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.004121412**
CH4_RUNEX	0.00979821	0.000368374	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.001834652**
CH4_STREX	0.035927186	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.011011396**
CO_IDLEX	10.47403246	2.473822702	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.333992393**
CO_RUNEX	1.150944634	0.076880154	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.243890192**
CO_STREX	3.936368444	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**1.206465564**
CO2_NBIO_IDLEX	554.4784864	785.5774991	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**63.60441837**
CO2_NBIO_RUNEX	1630.860205	900.4309974	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**1014.007986**
CO2_NBIO_STREX	37.0908083	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**11.36803721**
NOX_IDLEX	0.092707782	4.710086044	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.331847022**
NOX_RUNEX	0.287087347	1.162858863	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**1.026682091**
NOX_STREX	0.337433108	2.149331785	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**1.593999277**
PM10_IDLEX	0	0.003426926	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.000240409**
PM10_PMBW	0.130340037	0.130340037	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.130340037**
PM10_PMTW	0.012000003	0.012000003	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.012000003**
PM10_RUNEX	0.00112353	0.007075106	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.006149675**
PM10_STREX	0.000416834	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.000127756**
PM25_IDLEX	0	0.003278679	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.000230009**
PM25_PMBW	0.055860016	0.055860016	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.055860016**
PM25_PMTW	0.003000001	0.003000001	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.003000001**
PM25_RUNEX	0.001033044	0.00676904	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.00587713**
PM25_STREX	0.000383264	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.000117467**
ROG_DIURN	0.054922962	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.000841336**
ROG_HTSK	0.081209282	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.024889998**
ROG_IDLEX	0.946534915	0.07174155	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.019532359**
ROG_RESTL	0.03465916	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.000530925**
ROG_RUNEX	0.046368089	0.007930984	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.013907703**
ROG_RUNLS	0.39576462	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.121298703**
ROG_STREX	0.186571171	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.057182577**
SO2_IDLEX	0.005487014	0.007421747	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.000604711**
SO2_RUNEX	0.016138684	0.008506826	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.00969353**
SO2_STREX	0.000367044	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.000112496**
TOG_DIURN	0.054922962	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.000841336**
TOG_HTSK	0.081209282	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.024889998**
TOG_IDLEX	1.381181526	0.081672293	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.026887154**
TOG_RESTL	0.03465916	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.000530925**
TOG_RUNEX	0.067660207	0.009028821	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.01814562**
TOG_RUNLS	0.39576462	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.121298703**
TOG_STREX	0.204271948	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.062607725**

CH4_IDLEX	0.290459458	0.002993705	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.004659413**
CH4_RUNEX	0.009493186	0.000368374	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.001787223**
CH4_STREX	0.037498487	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.011492988**
CO_IDLEX	19.90584399	2.604342234	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.487629697**
CO_RUNEX	1.119736788	0.076880154	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.239037575**
CO_STREX	4.185538679	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**1.282834255**
CO2_NBIO_IDLEX	500.9829166	797.3483454	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**63.61070858**
CO2_NBIO_RUNEX	1630.805004	900.4309974	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**1013.999403**
CO2_NBIO_STREX	37.51725702	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**11.49874034**
NOX_IDLEX	0.085117291	4.994475909	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.351681562**
NOX_RUNEX	0.32016735	1.208032081	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**1.069974893**
NOX_STREX	0.356479309	2.149331785	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**1.599836786**
PM10_IDLEX	0	0.004835599	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.000339232**
PM10_PMBW	0.130340037	0.130340037	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.130340037**
PM10_PMTW	0.012000003	0.012000003	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.012000003**
PM10_RUNEX	0.00112353	0.007075106	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.006149675**
PM10_STREX	0.000416834	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.000127756**
PM25_IDLEX	0	0.004626413	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.000324557**
PM25_PMBW	0.055860016	0.055860016	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.055860016**
PM25_PMTW	0.003000001	0.003000001	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.003000001**
PM25_RUNEX	0.001033044	0.00676904	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.00587713**
PM25_STREX	0.000383264	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.000117467**
ROG_DIURN	0.037595555	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.000575907**
ROG_HTSK	0.084593278	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.025927166**
ROG_IDLEX	1.091526516	0.064453644	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.02124214**
ROG_RESTL	0.024166566	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.000370195**
ROG_RUNEX	0.045038432	0.007930984	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.01370095**
ROG_RUNLS	0.452284875	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.13862171**
ROG_STREX	0.195954244	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.060058414**
SO2_IDLEX	0.004957632	0.007532952	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.000604403**
SO2_RUNEX	0.016138138	0.008506826	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.009693445**
SO2_STREX	0.000371264	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.000113789**
TOG_DIURN	0.037595555	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.000575907**
TOG_HTSK	0.084593278	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.025927166**
TOG_IDLEX	1.59275293	0.073375567	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.029546064**
TOG_RESTL	0.024166566	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.000370195**
TOG_RUNEX	0.065719974	0.009028821	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.017843927**
TOG_RUNLS	0.452284875	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.13862171**
TOG_STREX	0.214545232	0	0	14759.51384	67593.21	0	801587.7755	4353533.246	0	295308.3529	668202.3486	0	**0.065756404**

HHD CalEEMod Emission Rate Worksheet

Vehicle Class: HHDT

Pollutant	Emission Rates			Population		VMT			Trips			CalEEMod Emission
	Gasoline	Diesel	Natural Gas	HHDT Gasoline	HHDT Diesel	HHDT Natural Gas	HHDT Gasoline	HHDT Diesel	HHDT Natural Gas	HHDT Gasoline	HHDT Diesel	HHDT Natural Gas	Rate
CH4_IDLEX	0	0.214573321	1.253805581	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.027155994**
CH4_RUNEX	0.089875403	0.000927595	4.818355641	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.081543595**
CH4_STREX	0.000280215	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**4.83947E-07**
CO_IDLEX	0	67.50948306	20.58324998	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**6.706313366**
CO_RUNEX	31.75475466	0.221549409	13.70659359	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.473570942**
CO_STREX	5.076100119	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.008766713**
CO2_NBIO_IDLEX	0	11144.6783	3932.062665	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**1109.72436**
CO2_NBIO_RUNEX	1989.46274	1345.891948	3302.778143	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**1379.15077**
CO2_NBIO_STREX	45.89705882	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.079266822**
NOX_IDLEX	0	57.20672925	22.0697421	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**5.705593705**
NOX_RUNEX	3.605072827	2.726398618	2.481104207	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**2.723037975**
NOX_STREX	0.504529663	2.397693073	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**2.348466238**
PM10_IDLEX	0	0.029469579	0.035127016	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.003055953**
PM10_PMBW	0.061740018	0.061060777	0.061740018	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.061072705**
PM10_PMTW	0.020000006	0.035603951	0.03600001	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.035597425**
PM10_RUNEX	0.001270975	0.018864126	0.005722742	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.018629596**
PM10_STREX	0.000690619	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**1.19274E-06**
PM25_IDLEX	0	0.028194738	0.033607437	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.002923754**
PM25_PMBW	0.026460008	0.026168904	0.026460008	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.026174016**
PM25_PMTW	0.005000001	0.008900988	0.009000003	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.008899356**
PM25_RUNEX	0.001168614	0.018048073	0.005475179	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.017823648**
PM25_STREX	0.000634999	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**1.09668E-06**
ROG_DIURN	0.0584671	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**5.04678E-06**
ROG_HTSK	0.114178127	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.000197192**
ROG_IDLEX	0	4.619704752	0.053795867	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.452258038**
ROG_RESTL	0.041579016	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**3.58903E-06**
ROG_RUNEX	0.437685175	0.019970876	0.275142356	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.024588966**
ROG_RUNLS	0.582437564	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.001005903**
ROG_STREX	0.001479937	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**2.55594E-06**
SO2_IDLEX	0	0.105289395	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.010301554**
SO2_RUNEX	0.019687347	0.01271532	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.012508611**
SO2_STREX	0.000454189	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**7.84409E-07**
TOG_DIURN	0.0584671	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**5.04678E-06**
TOG_HTSK	0.114178127	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.000197192**
TOG_IDLEX	0	5.259182203	1.320483199	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.521050121**
TOG_RESTL	0.041579016	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**3.58903E-06**
TOG_RUNEX	0.638669181	0.022735322	5.152536793	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.109017824**
TOG_RUNLS	0.582437564	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.001005903**
TOG_STREX	0.001620345	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**2.79843E-06**
CH4_IDLEX	0	0.227019474	1.295971793	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.028580964**
CH4_RUNEX	0.091807535	0.000927595	4.818355641	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.081545223**
CH4_STREX	0.000268442	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**4.63615E-07**
CO_IDLEX	0	66.56973608	19.84409544	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**6.610735457**
CO_RUNEX	32.47115446	0.221549409	13.70659359	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.474174569**
CO_STREX	4.821420014	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.008326866**
CO2_NBIO_IDLEX	0	11014.95487	3934.323514	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**1097.043282**
CO2_NBIO_RUNEX	1990.647364	1345.891948	3302.778143	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**1379.151768**
CO2_NBIO_STREX	45.49317604	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.078569293**
NOX_IDLEX	0	54.65135495	21.57363249	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**5.453136701**
NOX_RUNEX	3.152319534	2.579894648	2.339421392	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**2.576356568**
NOX_STREX	0.482124251	2.397693073	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**2.348427542**
PM10_IDLEX	0	0.025728534	0.029894782	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.002664213**
PM10_PMBW	0.061740018	0.061060777	0.061740018	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.061072705**
PM10_PMTW	0.020000006	0.035603951	0.03600001	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.035597425**
PM10_RUNEX	0.001270975	0.018864126	0.005722742	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.018629596**
PM10_STREX	0.000690619	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**1.19274E-06**
PM25_IDLEX	0	0.024615529	0.028601547	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.00254896**
PM25_PMBW	0.026460008	0.026168904	0.026460008	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.026174016**
PM25_PMTW	0.005000001	0.008900988	0.009000003	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.008899356**
PM25_RUNEX	0.001168614	0.018048073	0.005475179	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.017823648**
PM25_STREX	0.000634999	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**1.09668E-06**
ROG_DIURN	0.091215132	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**7.87354E-06**
ROG_HTSK	0.116492234	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.000201189**
ROG_IDLEX	0	4.887667011	0.052229403	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.478467867**
ROG_RESTL	0.062296199	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**5.3773E-06**
ROG_RUNEX	0.449065567	0.019970876	0.275142356	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.024598555**
ROG_RUNLS	0.571994168	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.000987866**
ROG_STREX	0.001421816	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**2.45556E-06**
SO2_IDLEX	0	0.104063832	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.010181644**
SO2_RUNEX	0.019699069	0.01271532	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.012508621**
SO2_STREX	0.000450192	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**7.77507E-07**
TOG_DIURN	0.091215132	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**7.87354E-06**
TOG_HTSK	0.116492234	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.000201189**
TOG_IDLEX	0	5.564236836	1.361045668	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.551096132**
TOG_RESTL	0.062296199	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**5.3773E-06**
TOG_RUNEX	0.655275421	0.022735322	5.152536793	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.109031816**
TOG_RUNLS	0.571994168	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.000987866**
TOG_STREX	0.00155671	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**2.68853E-06**

CH4_IDLEX	0	0.197385776	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.019312298**
CH4_RUNEX	0.089313026	0.000927595	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.000986559**
CH4_STREX	0.000282988	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**4.88737E-07**
CO_IDLEX	0	68.80722888	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**6.732125113**
CO_RUNEX	31.54923487	0.221549409	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.244241578**
CO_STREX	5.126651268	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.008854017**
CO2_NBIO_IDLEX	0	11323.82019	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**1107.92682**
CO2_NBIO_RUNEX	1989.122724	1345.891948	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**1323.932382**
CO2_NBIO_STREX	45.97723123	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.079405284**
NOX_IDLEX	0	60.73557948	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**5.942391904**
NOX_RUNEX	3.520235837	2.679471545	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**2.635382723**
NOX_STREX	0.509855989	2.397693073	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**2.348475437**
PM10_IDLEX	0	0.034635784	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.003388778**
PM10_PMBW	0.061740018	0.061060777	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.060040493**
PM10_PMTW	0.020000006	0.035603951	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.034995553**
PM10_RUNEX	0.001270975	0.018864126	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.018533919**
PM10_STREX	0.000690619	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**1.19274E-06**
PM25_IDLEX	0	0.033137455	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.003242181**
PM25_PMBW	0.026460008	0.026168904	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.02573164**
PM25_PMTW	0.005000001	0.008900988	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.008748888**
PM25_RUNEX	0.001168614	0.018048073	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.01773211**
PM25_STREX	0.000634999	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**1.09668E-06**
ROG_DIURN	0.060415473	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**5.21496E-06**
ROG_HTSK	0.128592798	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.000222087**
ROG_IDLEX	0	4.249661633	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.41578849**
ROG_RESTL	0.041278677	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**3.56311E-06**
ROG_RUNEX	0.434380532	0.019970876	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.019986164**
ROG_RUNLS	0.620659436	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.001071914**
ROG_STREX	0.001493323	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**2.57905E-06**
SO2_IDLEX	0	0.106981838	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.010467143**
SO2_RUNEX	0.019683982	0.01271532	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.012508608**
SO2_STREX	0.000454982	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**7.8578E-07**
TOG_DIURN	0.060415473	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**5.21496E-06**
TOG_HTSK	0.128592798	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.000222087**
TOG_IDLEX	0	4.83791628	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.473343546**
TOG_RESTL	0.041278677	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**3.56311E-06**
TOG_RUNEX	0.633847053	0.022735322	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.02287013**
TOG_RUNLS	0.620659436	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**0.001071914**
TOG_STREX	0.001635	0	0	52.04562781	58992.86024	2963.309642	6082.283607	7091846.402	120685.728	1041.328921	590351.8228	11556.9076	**2.82374E-06**

OBUS CalEEMod Emission Rate Worksheet

Vehicle Class: OBUS

Pollutant	Emission Rates			Population			VMT			Trips			CalEEMod Emission
	Gasoline	Diesel	Natural Gas	OBUS Gasoline	OBUS Diesel	OBUS Natural Gas	OBUS Gasoline	OBUS Diesel	OBUS Natural Gas	OBUS Gasoline	OBUS Diesel	OBUS Natural Gas	Rate
CH4_IDLEX	0.197024156	0.041302496	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.008273798**
CH4_RUNEX	0.01058478	0.00052466	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.004417759**
CH4_STREX	0.028817192	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.020717266**
CO_IDLEX	5.764219411	14.20964537	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.618036**
CO_RUNEX	1.226665507	0.121999837	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.549487111**
CO_STREX	3.148155493	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**2.263273119**
CO2_NBIO_IDLEX	371.5087262	2691.179037	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**91.17311418**
CO2_NBIO_RUNEX	1652.946024	1132.324741	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**1333.796534**
CO2_NBIO_STREX	25.83190358	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**18.57108174**
NOX_IDLEX	0.064944868	12.29677732	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.357934884**
NOX_RUNEX	0.395501563	1.685392708	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**1.18622625**
NOX_STREX	0.316962087	2.210417177	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.849173739**
PM10_IDLEX	0	0.004180185	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.000120884**
PM10_PMBW	0.130340037	0.130340037	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.130340037**
PM10_PMTW	0.012000003	0.012000003	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.012000003**
PM10_RUNEX	0.001036981	0.011317752	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.007339264**
PM10_STREX	0.000280013	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.000201307**
PM25_IDLEX	0	0.003999352	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.000115654**
PM25_PMBW	0.055860016	0.055860016	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.055860016**
PM25_PMTW	0.003000001	0.003000001	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.003000001**
PM25_RUNEX	0.000953466	0.010828151	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.007006812**
PM25_STREX	0.000257462	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.000185094**
ROG_DIURN	0.050868507	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.001827789**
ROG_HTSK	0.030933594	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.022238791**
ROG_IDLEX	0.74454823	0.889231416	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.052467862**
ROG_RESTL	0.026495374	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.000952022**
ROG_RUNEX	0.050585877	0.011295788	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.0265004**
ROG_RUNLS	0.372896976	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.268083233**
ROG_STREX	0.151264701	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.108747275**
SO2_IDLEX	0.00367638	0.025424925	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.000867343**
SO2_RUNEX	0.016357241	0.010697643	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.012887813**
SO2_STREX	0.000255628	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.000183776**
TOG_DIURN	0.050868507	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.001827789**
TOG_HTSK	0.030933594	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.022238791**
TOG_IDLEX	1.086443029	1.012322277	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.068312277**
TOG_RESTL	0.026495374	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.000952022**
TOG_RUNEX	0.073814794	0.012859394	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.036448122**
TOG_RUNLS	0.372896976	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.268083233**
TOG_STREX	0.165615808	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.119064578**
CH4_IDLEX	0.197508626	0.043779319	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.008362831**
CH4_RUNEX	0.010831726	0.00052466	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.004513323**
CH4_STREX	0.027719691	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.019928251**
CO_IDLEX	5.764219411	14.02476586	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.612689608**
CO_RUNEX	1.253287067	0.121999837	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.559789213**
CO_STREX	2.977553077	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**2.140623566**
CO2_NBIO_IDLEX	371.5087262	2654.954768	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**90.12557166**
CO2_NBIO_RUNEX	1652.993254	1132.324741	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**1333.814812**
CO2_NBIO_STREX	25.54114794	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**18.36205158**
NOX_IDLEX	0.064944868	11.68107842	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.340129948**
NOX_RUNEX	0.34618504	1.593398508	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**1.110747602**
NOX_STREX	0.303112069	2.210417177	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.839216679**
PM10_IDLEX	0	0.003714376	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.000107413**
PM10_PMBW	0.130340037	0.130340037	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.130340037**
PM10_PMTW	0.012000003	0.012000003	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.012000003**
PM10_RUNEX	0.001036981	0.011317752	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.007339264**
PM10_STREX	0.000280013	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.000201307**
PM25_IDLEX	0	0.003553694	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.000102767**
PM25_PMBW	0.055860016	0.055860016	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.055860016**
PM25_PMTW	0.003000001	0.003000001	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.003000001**
PM25_RUNEX	0.000953466	0.010828151	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.007006812**
PM25_STREX	0.000257462	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.000185094**
ROG_DIURN	0.073257445	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.002632261**
ROG_HTSK	0.031550811	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.02268252**
ROG_IDLEX	0.74454823	0.942556742	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.054009937**
ROG_RESTL	0.036578942	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.001314342**
ROG_RUNEX	0.051753096	0.011295788	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.026952094**
ROG_RUNLS	0.363103693	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.261042642**
ROG_STREX	0.145205592	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.104391258**
SO2_IDLEX	0.00367638	0.025082696	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.000857446**
SO2_RUNEX	0.016357708	0.010697643	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.012887994**
SO2_STREX	0.00025275	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.000181707**
TOG_DIURN	0.073257445	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.002632261**
TOG_HTSK	0.031550811	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.02268252**
TOG_IDLEX	1.086443029	1.073029103	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.070067813**
TOG_RESTL	0.036578942	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.001314342**
TOG_RUNEX	0.075517997	0.012859394	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.037107233**
TOG_RUNLS	0.363103693	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.261042642**
TOG_STREX	0.158981846	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.114295288**

CH4_IDLEX	0.196915305	0.037882121	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.008170976**
CH4_RUNEX	0.010514269	0.00052466	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.004390473**
CH4_STREX	0.029082152	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.020907752**
CO_IDLEX	5.764219411	14.46495516	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.625419113**
CO_RUNEX	1.219029815	0.121999837	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.546532226**
CO_STREX	3.183618048	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**2.288767872**
CO2_NBIO_IDLEX	371.5087262	2741.203026	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**92.61972053**
CO2_NBIO_RUNEX	1652.93246	1132.324741	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**1333.791285**
CO2_NBIO_STREX	25.89301126	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**18.61501329**
NOX_IDLEX	0.064944868	13.14702818	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.382522653**
NOX_RUNEX	0.386093098	1.654965431	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**1.163932905**
NOX_STREX	0.32029194	2.210417177	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.851567638**
PM10_IDLEX	0	0.004823445	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.000139486**
PM10_PMBW	0.130340037	0.130340037	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.130340037**
PM10_PMTW	0.012000003	0.012000003	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.012000003**
PM10_RUNEX	0.001036981	0.011317752	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.007339264**
PM10_STREX	0.000280013	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.000201307**
PM25_IDLEX	0	0.004614785	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.000133452**
PM25_PMBW	0.055860016	0.055860016	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.055860016**
PM25_PMTW	0.003000001	0.003000001	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.003000001**
PM25_RUNEX	0.000953466	0.010828151	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.007006812**
PM25_STREX	0.000257462	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.000185094**
ROG_DIURN	0.052636827	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.001891328**
ROG_HTSK	0.032697766	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.02350709**
ROG_IDLEX	0.74454823	0.815591679	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.050338329**
ROG_RESTL	0.025901783	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.000930694**
ROG_RUNEX	0.050247128	0.011295788	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.02636931**
ROG_RUNLS	0.399419054	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.287150495**
ROG_STREX	0.152723581	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.109796094**
SO2_IDLEX	0.00367638	0.025897527	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.00088101**
SO2_RUNEX	0.016357107	0.010697643	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.012887761**
SO2_STREX	0.000256232	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.000184211**
TOG_DIURN	0.052636827	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.001891328**
TOG_HTSK	0.032697766	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.02350709**
TOG_IDLEX	1.086443029	0.928489043	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.065887967**
TOG_RESTL	0.025901783	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.000930694**
TOG_RUNEX	0.073320491	0.012859394	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.036256835**
TOG_RUNLS	0.399419054	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.287150495**
TOG_STREX	0.167213098	0	0	3958.891451	3186.166914	0	155997.8277	247114.6278	0	79209.50015	30968.90515	0	**0.120212903**

UBUS CalEEMod Emission Rate Worksheet

Vehicle Class: UBUS

Pollutant	Emission Rates				Population				VMT				Trips				CalEEMod Emission Rate
	Gasoline	Diesel	Electricity	Natural Gas	UBUS Gasoline	UBUS Diesel	UBUS Electricity	UBUS Natural Gas	UBUS Gasoline	UBUS Diesel	UBUS Electricity	UBUS Natural Gas	UBUS Gasoline	UBUS Diesel	UBUS Electricity	UBUS Natural Gas	
CH4_IDLEX	0	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0**
CH4_RUNEX	0.00597	0.081191208	0	6.319002967	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**5.848537526**
CH4_STREX	0.097512	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.009738523**
CO_IDLEX	0	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0**
CO_RUNEX	0.313337	0.138155785	0	49.0688743	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**45.4330035**
CO_STREX	7.126069	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.711680545**
CO2_NBIO_IDLEX	0	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0**
CO2_NBIO_RUNEX	1860.414	1797.757998	0	1995.280075	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**1980.904296**
CO2_NBIO_STREX	80.57658	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**8.047183323**
NOX_IDLEX	0	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0**
NOX_RUNEX	0.22444	0.833128942	0	0.483278546	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.46498381**
NOX_STREX	0.739361	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.073840022**
PM10_IDLEX	0	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0**
PM10_PMBW	0.123562	0.061740037	0.130340079	0.068730263	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.07268035**
PM10_PMTW	0.011341	0.036000022	0.012000007	0.033462293	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.031875586**
PM10_RUNEX	0.001855	0.006124333	0	0.003349575	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.003244564**
PM10_STREX	0.000715	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**7.13673E-05**
PM25_IDLEX	0	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0**
PM25_PMBW	0.052955	0.026460016	0.055860034	0.029455827	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.031148721**
PM25_PMTW	0.002835	0.009000005	0.003000002	0.008365573	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.007968897**
PM25_RUNEX	0.001706	0.005859397	0	0.003204674	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.003099376**
PM25_STREX	0.000657	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**6.56196E-05**
ROG_DIURN	0.015713	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.000425723**
ROG_HTSK	0.048821	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.004875719**
ROG_IDLEX	0	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0**
ROG_RESTL	0.011965	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.000298734**
ROG_RUNEX	0.019706	0.001160062	0	0.09059097	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.085216523**
ROG_RUNLS	0.298257	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.029786892**
ROG_STREX	0.418859	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.041831438**
SO2_IDLEX	0	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0**
SO2_RUNEX	0.01841	0.016995278	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.001327763**
SO2_STREX	0.000797	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**7.96334E-05**
TOG_DIURN	0.015713	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.000425723**
TOG_HTSK	0.048821	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.004875719**
TOG_IDLEX	0	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0**
TOG_RESTL	0.011965	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.000298734**
TOG_RUNEX	0.028755	0.082861583	0	6.449338872	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**5.970752269**
TOG_RUNLS	0.298257	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.029786892**
TOG_STREX	0.458598	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.045800159**
CH4_IDLEX	0	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0**
CH4_RUNEX	0.00611	0.081191208	0	6.319002967	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**5.848547317**
CH4_STREX	0.090629	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.009051099**
CO_IDLEX	0	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0**
CO_RUNEX	0.319521	0.138155785	0	49.0688743	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**45.4334354**
CO_STREX	6.272304	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.626414949**
CO2_NBIO_IDLEX	0	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0**
CO2_NBIO_RUNEX	1860.426	1797.757998	0	1995.280075	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**1980.905101**
CO2_NBIO_STREX	79.11918	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**7.901632721**
NOX_IDLEX	0	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0**
NOX_RUNEX	0.197624	0.833128942	0	0.483264658	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.463098178**
NOX_STREX	0.707071	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.070615159**
PM10_IDLEX	0	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0**
PM10_PMBW	0.123562	0.061740037	0.130340079	0.068730263	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.07268035**
PM10_PMTW	0.011341	0.036000022	0.012000007	0.033462293	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.031875586**
PM10_RUNEX	0.001855	0.006124333	0	0.003349575	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.003244564**
PM10_STREX	0.000715	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**7.13673E-05**
PM25_IDLEX	0	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0**
PM25_PMBW	0.052955	0.026460016	0.055860034	0.029455827	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.031148721**
PM25_PMTW	0.002835	0.009000005	0.003000002	0.008365573	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.007968897**
PM25_RUNEX	0.001706	0.005859397	0	0.003204674	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.003099376**
PM25_STREX	0.000657	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**6.56196E-05**
ROG_DIURN	0.022996	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.000623045**
ROG_HTSK	0.050845	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.005077926**
ROG_IDLEX	0	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0**
ROG_RESTL	0.016866	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.00042109**
ROG_RUNEX	0.020106	0.001160062	0	0.09059097	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.085244477**
ROG_RUNLS	0.270424	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.027007246**
ROG_STREX	0.38784	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.038733591**
SO2_IDLEX	0	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0**
SO2_RUNEX	0.01841	0.016995278	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.001327771**
SO2_STREX	0.000783	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**7.81931E-05**
TOG_DIURN	0.022996	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.000623045**
TOG_HTSK	0.050845	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.005077926**
TOG_IDLEX	0	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0**
TOG_RESTL	0.016866	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.00042109**
TOG_RUNEX	0.029339	0.082861583	0	6.449338872	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**5.970793059**
TOG_RUNLS	0.270424	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.027007246**
TOG_STREX	0.424636	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.042408407**

CH4_IDLEX	0	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0**
CH4_RUNEX	0.005936	0.081191208	0	6.319002967	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**5.848535139**
CH4_STREX	0.099068	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.009893916**
CO_IDLEX	0	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0**
CO_RUNEX	0.311793	0.138155785	0	49.0688743	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**45.43289565**
CO_STREX	7.296209	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.728672409**
CO2_NBIO_IDLEX	0	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0**
CO2_NBIO_RUNEX	1860.411	1797.757998	0	1995.280075	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**1980.904095**
CO2_NBIO_STREX	80.86984	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**8.076470818**
NOX_IDLEX	0	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0**
NOX_RUNEX	0.21875	0.833128942	0	0.483273713	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.464581949**
NOX_STREX	0.74681	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.074583914**
PM10_IDLEX	0	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0**
PM10_PMBW	0.123562	0.061740037	0.130340079	0.068730263	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.07268035**
PM10_PMTW	0.011341	0.036000022	0.012000007	0.033462293	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.031875586**
PM10_RUNEX	0.001855	0.006124333	0	0.003349575	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.003244564**
PM10_STREX	0.000715	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**7.13673E-05**
PM25_IDLEX	0	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0**
PM25_PMBW	0.052955	0.026460016	0.055860034	0.029455827	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.031148721**
PM25_PMTW	0.002835	0.009000005	0.003000002	0.008365573	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.007968897**
PM25_RUNEX	0.001706	0.005859397	0	0.003204674	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.003099376**
PM25_STREX	0.000657	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**6.56196E-05**
ROG_DIURN	0.015875	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.000430116**
ROG_HTSK	0.053113	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.005304417**
ROG_IDLEX	0	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0**
ROG_RESTL	0.011508	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.000287314**
ROG_RUNEX	0.019606	0.001160062	0	0.09059097	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.085209543**
ROG_RUNLS	0.363434	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.036296155**
ROG_STREX	0.425881	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.042532779**
SO2_IDLEX	0	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0**
SO2_RUNEX	0.01841	0.016995278	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.001327761**
SO2_STREX	0.0008	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**7.99232E-05**
TOG_DIURN	0.015875	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.000430116**
TOG_HTSK	0.053113	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.005304417**
TOG_IDLEX	0	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0**
TOG_RESTL	0.011508	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.000287314**
TOG_RUNEX	0.028609	0.082861583	0	6.449338872	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**5.970742084**
TOG_RUNLS	0.363434	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.036296155**
TOG_STREX	0.466287	0	0	0	466.0453396	10.1389	12	4178.335668	33378.61148	1181.230112	1070.403311	442305.8977	1864.181359	40.5556	48	16713.34267	**0.046568039**

MCY CalEEMod Emission Rate Worksheet

Vehicle Class: MCY

Pollutant	Emission Rates			Population			VMT			Trips			CalEEMod Emission
	Gas	DSL	NG	MCY Gasoline	MCY Diesel	MCY Natural Gas	MCY Gasoline	MCY Diesel	MCY Natural Gas	MCY Gasoline	MCY Diesel	MCY Natural Gas	Rate
CH4_IDLEX	0	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0**
CH4_RUNEX	0.382279378	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.382279378**
CH4_STREX	0.23200694	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.23200694**
CO_IDLEX	0	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0**
CO_RUNEX	18.74250912	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**18.74250912**
CO_STREX	8.565776489	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**8.565776489**
CO2_NBIO_IDLEX	0	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0**
CO2_NBIO_RUNEX	224.7830144	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**224.7830144**
CO2_NBIO_STREX	58.90291479	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**58.90291479**
NOX_IDLEX	0	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0**
NOX_RUNEX	1.131987901	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**1.131987901**
NOX_STREX	0.263738498	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.263738498**
PM10_IDLEX	0	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0**
PM10_PMBW	0.011760003	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.011760003**
PM10_PMTW	0.004000001	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.004000001**
PM10_RUNEX	0.002542707	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.002542707**
PM10_STREX	0.003037883	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.003037883**
PM25_IDLEX	0	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0**
PM25_PMBW	0.005040001	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.005040001**
PM25_PMTW	0.001	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.001**
PM25_RUNEX	0.002373646	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.002373646**
PM25_STREX	0.002851095	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.002851095**
ROG_DIURN	2.136989115	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**1.068494557**
ROG_HTSK	0.622238977	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.622238977**
ROG_IDLEX	0	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0**
ROG_RESTL	1.290675097	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.645337549**
ROG_RUNEX	2.613829742	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**2.613829742**
ROG_RUNLS	1.80045745	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**1.80045745**
ROG_STREX	1.793000035	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**1.793000035**
SO2_IDLEX	0	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0**
SO2_RUNEX	0.00222441	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.00222441**
SO2_STREX	0.000582892	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.000582892**
TOG_DIURN	2.136989115	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**1.068494557**
TOG_HTSK	0.622238977	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.622238977**
TOG_IDLEX	0	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0**
TOG_RESTL	1.290675097	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.645337549**
TOG_RUNEX	3.261861277	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**3.261861277**
TOG_RUNLS	1.80045745	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**1.80045745**
TOG_STREX	1.95208792	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**1.95208792**
CH4_IDLEX	0	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0**
CH4_RUNEX	0.375807389	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.375807389**
CH4_STREX	0.207761246	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.207761246**
CO_IDLEX	0	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0**
CO_RUNEX	18.04599793	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**18.04599793**
CO_STREX	7.785813933	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**7.785813933**
CO2_NBIO_IDLEX	0	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0**
CO2_NBIO_RUNEX	223.4690605	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**223.4690605**
CO2_NBIO_STREX	57.00838224	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**57.00838224**
NOX_IDLEX	0	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0**
NOX_RUNEX	0.989329462	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.989329462**
NOX_STREX	0.250113452	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.250113452**
PM10_IDLEX	0	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0**
PM10_PMBW	0.011760003	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.011760003**
PM10_PMTW	0.004000001	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.004000001**
PM10_RUNEX	0.002542707	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.002542707**
PM10_STREX	0.003037883	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.003037883**
PM25_IDLEX	0	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0**
PM25_PMBW	0.005040001	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.005040001**
PM25_PMTW	0.001	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.001**
PM25_RUNEX	0.002373646	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.002373646**
PM25_STREX	0.002851095	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.002851095**
ROG_DIURN	3.394757077	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**1.697378538**
ROG_HTSK	0.680143671	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.680143671**
ROG_IDLEX	0	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0**
ROG_RESTL	2.075788412	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**1.037894206**
ROG_RUNEX	2.555941825	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**2.555941825**
ROG_RUNLS	1.681503426	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**1.681503426**
ROG_STREX	1.595071992	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**1.595071992**
SO2_IDLEX	0	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0**
SO2_RUNEX	0.002211408	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.002211408**
SO2_STREX	0.000564144	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.000564144**
TOG_DIURN	3.394757077	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**1.697378538**
TOG_HTSK	0.680143671	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.680143671**
TOG_IDLEX	0	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0**
TOG_RESTL	2.075788412	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**1.037894206**
TOG_RUNEX	3.191231958	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**3.191231958**
TOG_RUNLS	1.681503426	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**1.681503426**
TOG_STREX	1.736657833	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**1.736657833**
CH4_IDLEX	0	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0**
CH4_RUNEX	0.383708404	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.383708404**
CH4_STREX	0.237187688	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.237187688**
CO_IDLEX	0	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0**
CO_RUNEX	18.88066867	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**18.88066867**
CO_STREX	8.71784038	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**8.71784038**
CO2_NBIO_IDLEX	0	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0**
CO2_NBIO_RUNEX	225.0483238	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**225.0483238**
CO2_NBIO_STREX	59.28547009	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**59.28547009**
NOX_IDLEX	0	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0**
NOX_RUNEX	1.105315046	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**1.105315046**
NOX_STREX	0.266952009	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.266952009**
PM10_IDLEX	0	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0**
PM10_PMBW	0.011760003	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.011760003**
PM10_PMTW	0.004000001	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.004000001**
PM10_RUNEX	0.002542707	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.002542707**
PM10_STREX	0.003037883	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.003037883**
PM25_IDLEX	0	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0**
PM25_PMBW	0.005040001	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.005040001**
PM25_PMTW	0.001	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.001**
PM25_RUNEX	0.002373646	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.002373646**

PM25_STREX	0.002851095	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.002851095**
ROG_DIURN	2.323132125	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**1.161566062**
ROG_HTSK	0.798677561	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.798677561**
ROG_IDLEX	0	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0**
ROG_RESTL	1.235440062	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.617720031**
ROG_RUNEX	2.626629086	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**2.626629086**
ROG_RUNLS	2.084082387	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**2.084082387**
ROG_STREX	1.835552088	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**1.835552088**
SO2_IDLEX	0	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0**
SO2_RUNEX	0.002227036	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.002227036**
SO2_STREX	0.000586678	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.000586678**
TOG_DIURN	2.323132125	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**1.161566062**
TOG_HTSK	0.798677561	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.798677561**
TOG_IDLEX	0	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0**
TOG_RESTL	1.235440062	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**0.617720031**
TOG_RUNEX	3.277442651	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**3.277442651**
TOG_RUNLS	2.084082387	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**2.084082387**
TOG_STREX	1.998404929	0	0	190348.3854	0	0	1288390.153	0	0	380696.7708	0	0	**1.998404929**

SBUS CalEEMod Emission Rate Worksheet

Vehicle Class: SBUS

Pollutant	Emission Rates			Population			VMT			Trips			CalEEMod Emission
	Gasoline	Diesel	Natural Gas	SBUS Gasoline	SBUS Diesel	SBUS Natural Gas	SBUS Gasoline	SBUS Diesel	SBUS Natural Gas	SBUS Gasoline	SBUS Diesel	SBUS Natural Gas	Rate
CH4_IDLEX	2.403800125	0.012850551	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.08193251**
CH4_RUNEX	0.009079746	0.004787616	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.006324044**
CH4_STREX	0.05435066	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.007322933**
CO_IDLEX	82.10533025	7.048936627	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**3.29414735**
CO_RUNEX	0.95433605	0.308825458	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.53989503**
CO_STREX	7.371455672	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.993192665**
CO2_NBIO_IDLEX	2532.541451	3576.870046	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**353.5011113**
CO2_NBIO_RUNEX	847.0340019	1192.632741	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**1068.920824**
CO2_NBIO_STREX	45.91723048	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**6.186655466**
NOX_IDLEX	0.925002889	38.45739482	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**2.914713851**
NOX_RUNEX	0.358587122	6.189125993	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**4.102002807**
NOX_STREX	0.591372648	1.072625529	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**1.007783949**
PM10_IDLEX	0	0.043322452	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.003248341**
PM10_PMBW	0.744800204	0.744800213	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.74480021**
PM10_PMTW	0.008000002	0.012000003	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.010568147**
PM10_RUNEX	0.001164058	0.035582278	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.023261793**
PM10_STREX	0.000487813	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**6.57254E-05**
PM25_IDLEX	0	0.041448342	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.003107819**
PM25_PMBW	0.319200087	0.319200091	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.31920009**
PM25_PMTW	0.002000001	0.003000001	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.002642037**
PM25_RUNEX	0.001070308	0.034043005	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.022239965**
PM25_STREX	0.000448526	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**6.04321E-05**
ROG_DIURN	0.032234075	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.001085764**
ROG_HTSK	0.070438217	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.009490489**
ROG_IDLEX	10.61919568	0.276668841	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.378438963**
ROG_RESTL	0.017780372	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.000598909**
ROG_RUNEX	0.044624097	0.103076061	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.08215236**
ROG_RUNLS	0.434158441	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.058496313**
ROG_STREX	0.313616499	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.042255101**
SO2_IDLEX	0.025061551	0.033792495	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.003377946**
SO2_RUNEX	0.008382088	0.011267403	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.010234564**
SO2_STREX	0.000454388	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**6.1222E-05**
TOG_DIURN	0.032234075	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.001085764**
TOG_HTSK	0.070438217	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.009490489**
TOG_IDLEX	15.49550541	0.314966415	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.545562865**
TOG_RESTL	0.017780372	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.000598909**
TOG_RUNEX	0.065115377	0.117344249	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.098648191**
TOG_RUNLS	0.434158441	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.058496313**
TOG_STREX	0.343370591	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.046264017**
CH4_IDLEX	2.405866484	0.012859693	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.082002798**
CH4_RUNEX	0.009283665	0.004787616	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.00639704**
CH4_STREX	0.048500466	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.006534708**
CO_IDLEX	82.10533025	6.613895809	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**3.261527754**
CO_RUNEX	0.975507878	0.308825458	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.547473783**
CO_STREX	6.014844172	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.810409691**
CO2_NBIO_IDLEX	2532.541451	3662.787377	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**359.9432394**
CO2_NBIO_RUNEX	847.0719496	1192.632741	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**1068.934408**
CO2_NBIO_STREX	43.65291578	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**5.881573152**
NOX_IDLEX	0.925002889	39.14323714	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**2.96613868**
NOX_RUNEX	0.314326268	5.850622779	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**3.868827773**
NOX_STREX	0.560634584	1.072625529	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**1.003642458**
PM10_IDLEX	0	0.036629051	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.002746466**
PM10_PMBW	0.744800204	0.744800213	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.74480021**
PM10_PMTW	0.008000002	0.012000003	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.010568147**
PM10_RUNEX	0.001164058	0.035582278	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.023261793**
PM10_STREX	0.000487813	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**6.57254E-05**
PM25_IDLEX	0	0.035044495	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.002627655**
PM25_PMBW	0.319200087	0.319200091	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.31920009**
PM25_PMTW	0.002000001	0.003000001	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.002642037**
PM25_RUNEX	0.001070308	0.034043005	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.022239965**
PM25_STREX	0.000448526	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**6.04321E-05**
ROG_DIURN	0.046580435	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.001569003**
ROG_HTSK	0.071487083	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.009631808**
ROG_IDLEX	10.61919568	0.276865661	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.378453721**
ROG_RESTL	0.024518888	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.000825888**
ROG_RUNEX	0.045641826	0.103076061	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.082516671**
ROG_RUNLS	0.389191096	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.05243764**
ROG_STREX	0.279658724	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.037679802**
SO2_IDLEX	0.025061551	0.034604199	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.003438808**
SO2_RUNEX	0.008382464	0.011267403	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.010234698**
SO2_STREX	0.000431981	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**5.82029E-05**
TOG_DIURN	0.046580435	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.001569003**
TOG_HTSK	0.071487083	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.009631808**
TOG_IDLEX	15.49550541	0.31519048	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.545579666**
TOG_RESTL	0.024518888	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.000825888**
TOG_RUNEX	0.066600445	0.117344249	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.099179792**
TOG_RUNLS	0.389191096	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.05243764**
TOG_STREX	0.306191102	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.041254641**

CH4_IDLEX	2.403367005	0.012837927	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.081916974**
CH4_RUNEX	0.009017858	0.004787616	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.006301891**
CH4_STREX	0.055693419	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.00750385**
CO_IDLEX	82.10533025	7.649707281	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**3.33919346**
CO_RUNEX	0.947836923	0.308825458	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.537568577**
CO_STREX	7.628563601	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**1.027834088**
CO2_NBIO_IDLEX	2532.541451	3458.222302	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**344.6048392**
CO2_NBIO_RUNEX	847.0223516	1192.632741	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**1068.916653**
CO2_NBIO_STREX	46.35091675	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**6.245088161**
NOX_IDLEX	0.925002889	37.51027922	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**2.843698611**
NOX_RUNEX	0.351521827	6.081506856	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**4.030378329**
NOX_STREX	0.600359196	1.072625529	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**1.008994752**
PM10_IDLEX	0	0.052565719	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.003941406**
PM10_PMBW	0.744800204	0.744800213	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.74480021**
PM10_PMTW	0.008000002	0.012000003	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.010568147**
PM10_RUNEX	0.001164058	0.035582278	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.023261793**
PM10_STREX	0.000487813	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**6.57254E-05**
PM25_IDLEX	0	0.050291749	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.003770903**
PM25_PMBW	0.319200087	0.319200091	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.31920009**
PM25_PMTW	0.002000001	0.003000001	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.002642037**
PM25_RUNEX	0.001070308	0.034043005	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.022239965**
PM25_STREX	0.000448526	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**6.04321E-05**
ROG_DIURN	0.032148548	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.001082883**
ROG_HTSK	0.073193637	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.009861741**
ROG_IDLEX	10.61919568	0.276397042	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.378418583**
ROG_RESTL	0.017008227	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.000572901**
ROG_RUNEX	0.044311345	0.103076061	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.082040406**
ROG_RUNLS	0.533019795	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.071816392**
ROG_STREX	0.321407362	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.043304803**
SO2_IDLEX	0.025061551	0.03267157	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.003293899**
SO2_RUNEX	0.008381973	0.011267403	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.010234523**
SO2_STREX	0.00045868	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**6.18002E-05**
TOG_DIURN	0.032148548	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.001082883**
TOG_HTSK	0.073193637	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.009861741**
TOG_IDLEX	15.49550541	0.314656992	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.545539664**
TOG_RESTL	0.017008227	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.000572901**
TOG_RUNEX	0.06465901	0.117344249	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.098484829**
TOG_RUNLS	0.533019795	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.071816392**
TOG_STREX	0.351900606	0	0	1584.677682	3527.518186	0	62194.10493	111549.9025	0	6338.710727	40707.0708	0	**0.047413308**

MH CalEEMod Emission Rate Worksheet

Vehicle Class: MH

Pollutant	Emission Rates			Population			VMT			Trips			CalEEMod Emission
	Gasoline	Diesel	Natural Gas	MH Gasoline	MH Diesel	MH Natural Gas	MH Gasoline	MH Diesel	MH Natural Gas	MH Gasoline	MH Diesel	MH Natural Gas	Rate
CH4_IDLEX	0	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0**
CH4_RUNEX	0.009311626	0.002941401	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.007669305**
CH4_STREX	0.029514685	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.021975069**
CO_IDLEX	0	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0**
CO_RUNEX	1.008935616	0.24329025	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.81154297**
CO_STREX	2.607106498	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**1.941113181**
CO2_NBIO_IDLEX	0	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0**
CO2_NBIO_RUNEX	1624.126723	940.7432934	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**1447.9422**
CO2_NBIO_STREX	24.57078502	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**18.29410295**
NOX_IDLEX	0	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0**
NOX_RUNEX	0.258376036	3.15347278	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**1.00476703**
NOX_STREX	0.33056731	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.246122881**
PM10_IDLEX	0	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0**
PM10_PMBW	0.130340037	0.130340037	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.130340037**
PM10_PMTW	0.012000003	0.016000005	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.013031252**
PM10_RUNEX	0.00137278	0.063098969	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.017286539**
PM10_STREX	0.000342405	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.000254936**
PM25_IDLEX	0	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0**
PM25_PMBW	0.055860016	0.055860016	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.055860016**
PM25_PMTW	0.003000001	0.004000001	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.003257813**
PM25_RUNEX	0.00126222	0.060369335	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.01650075**
PM25_STREX	0.000314828	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.000234405**
ROG_DIURN	0.087882654	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.654065991**
ROG_HTSK	0.062574667	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.046589777**
ROG_IDLEX	0	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0**
ROG_RESTL	0.038475042	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.286350213**
ROG_RUNEX	0.038493878	0.063326642	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.044896065**
ROG_RUNLS	1.537198321	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**1.144516316**
ROG_STREX	0.116755041	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.086929609**
SO2_IDLEX	0	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0**
SO2_RUNEX	0.016072051	0.008893407	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.014221309**
SO2_STREX	0.000243148	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.000181035**
TOG_DIURN	0.087882654	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.654065991**
TOG_HTSK	0.062574667	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.046589777**
TOG_IDLEX	0	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0**
TOG_RESTL	0.038475042	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.286350213**
TOG_RUNEX	0.056170176	0.072093172	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.060275317**
TOG_RUNLS	1.537198321	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**1.144516316**
TOG_STREX	0.127832073	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.09517698**
CH4_IDLEX	0	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0**
CH4_RUNEX	0.009538889	0.002941401	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.007837977**
CH4_STREX	0.0282629	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.021043056**
CO_IDLEX	0	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0**
CO_RUNEX	1.035687694	0.24329025	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.831398038**
CO_STREX	2.465106207	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**1.835387298**
CO2_NBIO_IDLEX	0	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0**
CO2_NBIO_RUNEX	1624.174125	940.7432934	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**1447.977381**
CO2_NBIO_STREX	24.32996222	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**18.11479907**
NOX_IDLEX	0	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0**
NOX_RUNEX	0.225770714	2.978572647	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.935476384**
NOX_STREX	0.316121344	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.235367182**
PM10_IDLEX	0	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0**
PM10_PMBW	0.130340037	0.130340037	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.130340037**
PM10_PMTW	0.012000003	0.016000005	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.013031252**
PM10_RUNEX	0.00137278	0.063098969	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.017286539**
PM10_STREX	0.000342405	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.000254936**
PM25_IDLEX	0	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0**
PM25_PMBW	0.055860016	0.055860016	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.055860016**
PM25_PMTW	0.003000001	0.004000001	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.003257813**
PM25_RUNEX	0.00126222	0.060369335	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.01650075**
PM25_STREX	0.000314828	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.000234405**
ROG_DIURN	0.124693009	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.92802678**
ROG_HTSK	0.063193039	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.047050184**
ROG_IDLEX	0	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0**
ROG_RESTL	0.052399123	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.389980079**
ROG_RUNEX	0.03965287	0.063326642	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.045756255**
ROG_RUNLS	1.501778675	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**1.118144727**
ROG_STREX	0.112065279	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.083437861**
SO2_IDLEX	0	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0**
SO2_RUNEX	0.01607252	0.008893407	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.014221658**
SO2_STREX	0.000240765	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.000179261**
TOG_DIURN	0.124693009	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.92802678**
TOG_HTSK	0.063193039	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.047050184**
TOG_IDLEX	0	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0**
TOG_RESTL	0.052399123	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.389980079**
TOG_RUNEX	0.057861375	0.072093172	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.061530504**
TOG_RUNLS	1.501778675	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**1.118144727**
TOG_STREX	0.122697375	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.091353956**

CH4_IDLEX	0	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0**
CH4_RUNEX	0.009245532	0.002941401	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.007620251**
CH4_STREX	0.029820264	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.022202587**
CO_IDLEX	0	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0**
CO_RUNEX	1.001293411	0.24329025	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.805871018**
CO_STREX	2.636146153	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**1.962734568**
CO2_NBIO_IDLEX	0	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0**
CO2_NBIO_RUNEX	1624.113158	940.7432934	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**1447.932133**
CO2_NBIO_STREX	24.62058022	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**18.33117782**
NOX_IDLEX	0	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0**
NOX_RUNEX	0.252340028	3.094379829	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.9850523**
NOX_STREX	0.334040433	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.248708785**
PM10_IDLEX	0	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0**
PM10_PMBW	0.130340037	0.130340037	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.130340037**
PM10_PMTW	0.012000003	0.016000005	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.013031252**
PM10_RUNEX	0.00137278	0.063098969	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.017286539**
PM10_STREX	0.000342405	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.000254936**
PM25_IDLEX	0	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0**
PM25_PMBW	0.055860016	0.055860016	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.055860016**
PM25_PMTW	0.003000001	0.004000001	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.003257813**
PM25_RUNEX	0.00126222	0.060369335	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.01650075**
PM25_STREX	0.000314828	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.000234405**
ROG_DIURN	0.097081973	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.722531856**
ROG_HTSK	0.074537774	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.055496872**
ROG_IDLEX	0	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0**
ROG_RESTL	0.038716562	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.288147718**
ROG_RUNEX	0.038157397	0.063326642	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.044646333**
ROG_RUNLS	1.624556452	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**1.209558545**
ROG_STREX	0.117876765	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.087764786**
SO2_IDLEX	0	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0**
SO2_RUNEX	0.016071916	0.008893407	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.01422121**
SO2_STREX	0.000243641	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.000181402**
TOG_DIURN	0.097081973	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.722531856**
TOG_HTSK	0.074537774	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.055496872**
TOG_IDLEX	0	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0**
TOG_RESTL	0.038716562	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.288147718**
TOG_RUNEX	0.055679184	0.072093172	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.059910908**
TOG_RUNLS	1.624556452	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**1.209558545**
TOG_STREX	0.129060221	0	0	18822.07195	6460.410652	0	191782.5832	66619.07665	0	1882.960078	646.0410652	0	**0.096091393**

Appendix B. CalEEMod Outputs

Appendix

This page intentionally left blank.

14th & LBB Development Project Construction Run

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	35.37	1000sqft	0.00	35,365.00	0
Other Asphalt Surfaces	9.50	1000sqft	0.22	9,500.00	0
Other Non-Asphalt Surfaces	27.63	1000sqft	0.63	27,633.00	0
Apartments High Rise	85.00	Dwelling Unit	0.38	81,280.00	243
Apartments Mid Rise	75.00	Dwelling Unit	0.31	62,430.00	215
Convenience Market (24 Hour)	4.00	1000sqft	0.00	4,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	531.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - 2019 SCE Sustainability Report

Land Use - based on info provided by applicant.

Construction Phase - based on info provided by applicant

Off-road Equipment -

Off-road Equipment - no additional equipment needed for Asphalt Demo Haul

Off-road Equipment - assuming 1 crusher for onsite reprocessing

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - assuming 1 excavator for F/L

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - no additional equipment needed for Site Preparation Soil Haul

Off-road Equipment - assuming 1 excavator for trenching

Trips and VMT - based on info provided by applicant

Demolition -

Grading -

Architectural Coating - based on info provided by applicant

Energy Use -

Construction Off-road Equipment Mitigation - SCAQMD Rule 403 and 1186 and Mitigation Measures AQ-1 and AQ-2

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	2,000.00	3,552.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	6,000.00	10,657.00
tblArchitecturalCoating	ConstArea_Parking	4,350.00	2,122.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	97,004.00	40,909.00
tblArchitecturalCoating	ConstArea_Residential_Interior	291,013.00	122,726.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00

tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_Nonresidential_Exterior	2000	1738
tblAreaCoating	Area_Nonresidential_Interior	6000	5213
tblAreaCoating	Area_Residential_Exterior	97004	97359
tblAreaCoating	Area_Residential_Interior	291013	292076
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	61	55
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	61	55
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim

tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	20.00	25.00
tblConstructionPhase	NumDays	20.00	25.00
tblConstructionPhase	NumDays	20.00	25.00
tblConstructionPhase	NumDays	2.00	10.00
tblConstructionPhase	NumDays	2.00	10.00
tblConstructionPhase	NumDays	4.00	20.00
tblConstructionPhase	NumDays	200.00	110.00
tblConstructionPhase	NumDays	200.00	305.00
tblConstructionPhase	NumDays	10.00	135.00
tblConstructionPhase	NumDays	4.00	110.00
tblConstructionPhase	NumDays	10.00	25.00
tblGrading	MaterialExported	0.00	400.00
tblLandUse	LandUseSquareFeet	35,370.00	35,365.00
tblLandUse	LandUseSquareFeet	27,630.00	27,633.00
tblLandUse	LandUseSquareFeet	85,000.00	81,280.00
tblLandUse	LandUseSquareFeet	75,000.00	62,430.00

tblLandUse	LotAcreage	0.81	0.00
tblLandUse	LotAcreage	1.37	0.38
tblLandUse	LotAcreage	1.97	0.31
tblLandUse	LotAcreage	0.09	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	531.44
tblSolidWaste	SolidWasteGenerationRate	12.02	10.46
tblTripsAndVMT	HaulingTripLength	20.00	34.00
tblTripsAndVMT	HaulingTripLength	20.00	34.00
tblTripsAndVMT	HaulingTripNumber	127.00	250.00
tblTripsAndVMT	HaulingTripNumber	40.00	100.00
tblTripsAndVMT	VendorTripNumber	0.00	7.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	3.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	3.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	30.00	5.00

tblTripsAndVMT	VendorTripNumber	30.00	20.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	3.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	WorkerTripNumber	13.00	10.00
tblTripsAndVMT	WorkerTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	3.00	10.00
tblTripsAndVMT	WorkerTripNumber	8.00	5.00
tblTripsAndVMT	WorkerTripNumber	0.00	5.00
tblTripsAndVMT	WorkerTripNumber	8.00	20.00
tblTripsAndVMT	WorkerTripNumber	3.00	10.00
tblTripsAndVMT	WorkerTripNumber	147.00	25.00
tblTripsAndVMT	WorkerTripNumber	147.00	50.00
tblTripsAndVMT	WorkerTripNumber	29.00	20.00
tblTripsAndVMT	WorkerTripNumber	8.00	5.00
tblTripsAndVMT	WorkerTripNumber	3.00	20.00
tblTripsAndVMT	WorkerTripNumber	13.00	15.00
tblWater	IndoorWaterUseRate	296,290.09	257,772.37
tblWater	OutdoorWaterUseRate	181,597.15	157,989.52

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.4447	24.5466	20.6512	0.0496	6.2341	1.0345	6.8701	3.0721	0.9786	3.6578	0.0000	4,959.8588	4,959.8588	0.7476	0.0000	4,978.5477
2023	6.3652	27.6318	27.3068	0.0637	6.2194	1.0924	7.3118	2.8773	1.0343	3.9115	0.0000	6,156.5188	6,156.5188	1.0385	0.0000	6,182.4821
2024	6.2009	26.2759	26.9689	0.0634	6.2194	0.9917	7.2111	2.8773	0.9376	3.8149	0.0000	6,121.4699	6,121.4699	1.0281	0.0000	6,147.1732
Maximum	**6.3652**	**27.6318**	**27.3068**	**0.0637**	**6.2341**	**1.0924**	**7.3118**	**3.0721**	**1.0343**	**3.9115**	**0.0000**	**6,156.5188**	**6,156.5188**	**1.0385**	**0.0000**	**6,182.4821**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	1.3576	15.7457	22.1014	0.0496	2.8832	0.2265	2.9248	1.3737	0.2262	1.4146	0.0000	4,959.8588	4,959.8588	0.7476	0.0000	4,978.5477
2023	4.9257	19.6776	31.9315	0.0637	3.3073	0.2335	3.5408	1.4071	0.2327	1.6399	0.0000	6,156.5188	6,156.5188	1.0385	0.0000	6,182.4821
2024	4.8485	19.5279	31.6434	0.0634	3.3073	0.2104	3.5177	1.4071	0.2096	1.6167	0.0000	6,121.4699	6,121.4699	1.0281	0.0000	6,147.1732
Maximum	**4.9257**	**19.6776**	**31.9315**	**0.0637**	**3.3073**	**0.2335**	**3.5408**	**1.4071**	**0.2327**	**1.6399**	**0.0000**	**6,156.5188**	**6,156.5188**	**1.0385**	**0.0000**	**6,182.4821**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**25.84**	**29.96**	**-14.35**	**0.00**	**49.14**	**78.50**	**53.33**	**52.55**	**77.34**	**58.97**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Asphalt Demolition	Demolition	5/1/2022	6/3/2022	5	25	a
2	Asphalt Demolition Debris Haul	Demolition	5/1/2022	6/3/2022	5	25	b
3	Asphalt Demolition Debris Onsite Reprocessing	Demolition	5/1/2022	6/3/2022	5	25	c
4	Site Preparation	Site Preparation	6/4/2022	6/17/2022	5	10	d
5	Site Preparation Soil Haul	Site Preparation	6/4/2022	6/17/2022	5	10	e
6	Rough Grading	Grading	6/18/2022	7/15/2022	5	20	f
7	Utility Trenching	Trenching	7/16/2022	9/16/2022	5	45	h
8	Parking Structure Construction	Building Construction	7/16/2022	12/16/2022	5	110	j
9	Building Construction	Building Construction	12/17/2022	2/16/2024	5	305	i
10	Architectural Coating	Architectural Coating	8/12/2023	2/16/2024	5	135	l
11	Fine Grading	Grading	9/16/2023	2/16/2024	5	110	g
12	Finishing/Landscaping	Trenching	12/16/2023	2/16/2024	5	45	m
13	Asphalt Paving	Paving	2/17/2024	3/22/2024	5	25	k

Acres of Grading (Site Preparation Phase): 5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.85

Residential Indoor: 122,726; Residential Outdoor: 40,909; Non-Residential Indoor: 10,657; Non-Residential Outdoor: 3,552; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Asphalt Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Asphalt Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Asphalt Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Asphalt Demolition Debris Haul	Concrete/Industrial Saws	0	8.00	81	0.73
Asphalt Demolition Debris Haul	Rubber Tired Dozers	0	8.00	247	0.40
Asphalt Demolition Debris Haul	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Asphalt Demolition Debris Onsite Reprocessing	Concrete/Industrial Saws	0	8.00	81	0.73
Asphalt Demolition Debris Onsite Reprocessing	Crushing/Proc. Equipment	1	8.00	85	0.78
Asphalt Demolition Debris Onsite Reprocessing	Rubber Tired Dozers	0	8.00	247	0.40
Asphalt Demolition Debris Onsite Reprocessing	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation Soil Haul	Graders	0	8.00	187	0.41
Site Preparation Soil Haul	Rubber Tired Dozers	0	7.00	247	0.40
Site Preparation Soil Haul	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Rough Grading	Graders	1	6.00	187	0.41
Rough Grading	Rubber Tired Dozers	1	6.00	247	0.40
Rough Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Utility Trenching	Excavators	1	8.00	158	0.38
Parking Structure Construction	Cranes	1	6.00	231	0.29
Parking Structure Construction	Forklifts	1	6.00	89	0.20
Parking Structure Construction	Generator Sets	1	8.00	84	0.74
Parking Structure Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Parking Structure Construction	Welders	3	8.00	46	0.45

Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Fine Grading	Graders	1	6.00	187	0.41
Fine Grading	Rubber Tired Dozers	1	6.00	247	0.40
Fine Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Finishing/Landscaping	Excavators	1	8.00	158	0.38
Asphalt Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Asphalt Paving	Pavers	1	6.00	130	0.42
Asphalt Paving	Paving Equipment	1	8.00	132	0.36
Asphalt Paving	Rollers	1	7.00	80	0.38
Asphalt Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Asphalt Demolition	5	10.00	7.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Asphalt Demolition Debris Haul	0	10.00	2.00	250.00	14.70	6.90	34.00	LD_Mix	HDT_Mix	HHDT
Asphalt Demolition Debris Onsite	1	10.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	5.00	3.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation Soil Haul	0	5.00	1.00	100.00	14.70	6.90	34.00	LD_Mix	HDT_Mix	HHDT
Rough Grading	3	20.00	3.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Utility Trenching	1	10.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Parking Structure Construction	7	25.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Building Construction	7	50.00	20.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	20.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading	3	5.00	3.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Finishing/Landscaping	1	20.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Asphalt Paving	5	15.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Asphalt Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829		2,323.4168	2,323.4168	0.5921		2,338.2191
Total	**1.6889**	**16.6217**	**13.9605**	**0.0241**		**0.8379**	**0.8379**		**0.7829**	**0.7829**		**2,323.4168**	**2,323.4168**	**0.5921**		**2,338.2191**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0200	0.6463	0.1681	1.7800e-003	0.0448	1.2100e-003	0.0460	0.0129	1.1600e-003	0.0141		190.7401	190.7401	0.0110		191.0138
Worker	0.0402	0.0266	0.3716	1.1000e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		109.8712	109.8712	3.0300e-003		109.9470
Total	**0.0601**	**0.6729**	**0.5397**	**2.8800e-003**	**0.1566**	**2.0800e-003**	**0.1587**	**0.0425**	**1.9700e-003**	**0.0445**		**300.6114**	**300.6114**	**0.0140**		**300.9608**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4630	8.5434	15.4154	0.0241		0.0375	0.0375		0.0375	0.0375	0.0000	2,323.4168	2,323.4168	0.5921		2,338.2191
Total	**0.4630**	**8.5434**	**15.4154**	**0.0241**		**0.0375**	**0.0375**		**0.0375**	**0.0375**	**0.0000**	**2,323.4168**	**2,323.4168**	**0.5921**		**2,338.2191**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0200	0.6463	0.1681	1.7800e-003	0.0419	1.2100e-003	0.0432	0.0122	1.1600e-003	0.0134		190.7401	190.7401	0.0110		191.0138
Worker	0.0402	0.0266	0.3716	1.1000e-003	0.1030	8.7000e-004	0.1039	0.0275	8.1000e-004	0.0283		109.8712	109.8712	3.0300e-003		109.9470
Total	**0.0601**	**0.6729**	**0.5397**	**2.8800e-003**	**0.1450**	**2.0800e-003**	**0.1471**	**0.0397**	**1.9700e-003**	**0.0417**		**300.6114**	**300.6114**	**0.0140**		**300.9608**

3.3 Asphalt Demolition Debris Haul - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.1008	0.0000	1.1008	0.1667	0.0000	0.1667			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.1008**	**0.0000**	**1.1008**	**0.1667**	**0.0000**	**0.1667**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1245	3.6044	0.9805	0.0124	0.2971	0.0120	0.3091	0.0814	0.0114	0.0929		1,342.5636	1,342.5636	0.0859		1,344.7113
Vendor	5.7100e-003	0.1847	0.0480	5.1000e-004	0.0128	3.5000e-004	0.0132	3.6900e-003	3.3000e-004	4.0200e-003		54.4972	54.4972	3.1300e-003		54.5754
Worker	0.0402	0.0266	0.3716	1.1000e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		109.8712	109.8712	3.0300e-003		109.9470
Total	**0.1703**	**3.8157**	**1.4001**	**0.0140**	**0.4217**	**0.0132**	**0.4349**	**0.1148**	**0.0126**	**0.1273**		**1,506.9321**	**1,506.9321**	**0.0921**		**1,509.2337**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.4706	0.0000	0.4706	0.0713	0.0000	0.0713			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.4706**	**0.0000**	**0.4706**	**0.0713**	**0.0000**	**0.0713**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1245	3.6044	0.9805	0.0124	0.2769	0.0120	0.2889	0.0765	0.0114	0.0879		1,342.5636	1,342.5636	0.0859		1,344.7113
Vendor	5.7100e-003	0.1847	0.0480	5.1000e-004	0.0120	3.5000e-004	0.0123	3.4900e-003	3.3000e-004	3.8200e-003		54.4972	54.4972	3.1300e-003		54.5754
Worker	0.0402	0.0266	0.3716	1.1000e-003	0.1030	8.7000e-004	0.1039	0.0275	8.1000e-004	0.0283		109.8712	109.8712	3.0300e-003		109.9470
Total	**0.1703**	**3.8157**	**1.4001**	**0.0140**	**0.3919**	**0.0132**	**0.4051**	**0.1075**	**0.0126**	**0.1200**		**1,506.9321**	**1,506.9321**	**0.0921**		**1,509.2337**

3.4 Asphalt Demolition Debris Onsite Reprocessing - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4794	3.2250	4.3312	7.0200e-003		0.1801	0.1801		0.1801	0.1801		664.5301	664.5301	0.0433		665.6118
Total	**0.4794**	**3.2250**	**4.3312**	**7.0200e-003**		**0.1801**	**0.1801**		**0.1801**	**0.1801**		**664.5301**	**664.5301**	**0.0433**		**665.6118**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	5.7100e-003	0.1847	0.0480	5.1000e-004	0.0128	3.5000e-004	0.0132	3.6900e-003	3.3000e-004	4.0200e-003		54.4972	54.4972	3.1300e-003		54.5754
Worker	0.0402	0.0266	0.3716	1.1000e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		109.8712	109.8712	3.0300e-003		109.9470
Total	**0.0459**	**0.2113**	**0.4196**	**1.6100e-003**	**0.1246**	**1.2200e-003**	**0.1258**	**0.0333**	**1.1400e-003**	**0.0345**		**164.3684**	**164.3684**	**6.1600e-003**		**164.5224**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1286	2.5024	4.3265	7.0200e-003		9.3500e-003	9.3500e-003		9.3500e-003	9.3500e-003	0.0000	664.5301	664.5301	0.0433		665.6118
Total	**0.1286**	**2.5024**	**4.3265**	**7.0200e-003**		**9.3500e-003**	**9.3500e-003**		**9.3500e-003**	**9.3500e-003**	**0.0000**	**664.5301**	**664.5301**	**0.0433**		**665.6118**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	5.7100e-003	0.1847	0.0480	5.1000e-004	0.0120	3.5000e-004	0.0123	3.4900e-003	3.3000e-004	3.8200e-003		54.4972	54.4972	3.1300e-003		54.5754
Worker	0.0402	0.0266	0.3716	1.1000e-003	0.1030	8.7000e-004	0.1039	0.0275	8.1000e-004	0.0283		109.8712	109.8712	3.0300e-003		109.9470
Total	**0.0459**	**0.2113**	**0.4196**	**1.6100e-003**	**0.1150**	**1.2200e-003**	**0.1162**	**0.0310**	**1.1400e-003**	**0.0321**		**164.3684**	**164.3684**	**6.1600e-003**		**164.5224**

3.5 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	1.3122	14.6277	7.0939	0.0172		0.6225	0.6225		0.5727	0.5727		1,666.1738	1,666.1738	0.5389		1,679.6457
Total	**1.3122**	**14.6277**	**7.0939**	**0.0172**	**5.7996**	**0.6225**	**6.4221**	**2.9537**	**0.5727**	**3.5264**		**1,666.1738**	**1,666.1738**	**0.5389**		**1,679.6457**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.5600e-003	0.2770	0.0720	7.6000e-004	0.0192	5.2000e-004	0.0197	5.5300e-003	5.0000e-004	6.0300e-003		81.7458	81.7458	4.6900e-003		81.8630
Worker	0.0201	0.0133	0.1858	5.5000e-004	0.0559	4.4000e-004	0.0563	0.0148	4.0000e-004	0.0152		54.9356	54.9356	1.5200e-003		54.9735
Total	**0.0286**	**0.2903**	**0.2578**	**1.3100e-003**	**0.0751**	**9.6000e-004**	**0.0761**	**0.0204**	**9.0000e-004**	**0.0213**		**136.6814**	**136.6814**	**6.2100e-003**		**136.8366**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.4793	0.0000	2.4793	1.2627	0.0000	1.2627			0.0000			0.0000
Off-Road	0.2998	5.0659	9.8221	0.0172		0.0281	0.0281		0.0281	0.0281	0.0000	1,666.1738	1,666.1738	0.5389		1,679.6457
Total	**0.2998**	**5.0659**	**9.8221**	**0.0172**	**2.4793**	**0.0281**	**2.5074**	**1.2627**	**0.0281**	**1.2908**	**0.0000**	**1,666.1738**	**1,666.1738**	**0.5389**		**1,679.6457**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.5600e-003	0.2770	0.0720	7.6000e-004	0.0180	5.2000e-004	0.0185	5.2300e-003	5.0000e-004	5.7300e-003		81.7458	81.7458	4.6900e-003		81.8630
Worker	0.0201	0.0133	0.1858	5.5000e-004	0.0515	4.4000e-004	0.0520	0.0138	4.0000e-004	0.0142		54.9356	54.9356	1.5200e-003		54.9735
Total	**0.0286**	**0.2903**	**0.2578**	**1.3100e-003**	**0.0695**	**9.6000e-004**	**0.0705**	**0.0190**	**9.0000e-004**	**0.0199**		**136.6814**	**136.6814**	**6.2100e-003**		**136.8366**

3.6 Site Preparation Soil Haul - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1245	3.6044	0.9805	0.0124	0.2971	0.0120	0.3091	0.0814	0.0114	0.0929		1,342.5636	1,342.5636	0.0859		1,344.7113
Vendor	2.8500e-003	0.0923	0.0240	2.5000e-004	6.4000e-003	1.7000e-004	6.5800e-003	1.8400e-003	1.7000e-004	2.0100e-003		27.2486	27.2486	1.5600e-003		27.2877
Worker	0.0201	0.0133	0.1858	5.5000e-004	0.0559	4.4000e-004	0.0563	0.0148	4.0000e-004	0.0152		54.9356	54.9356	1.5200e-003		54.9735
Total	**0.1474**	**3.7101**	**1.1903**	**0.0132**	**0.3594**	**0.0126**	**0.3720**	**0.0981**	**0.0120**	**0.1101**		**1,424.7479**	**1,424.7479**	**0.0890**		**1,426.9725**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1245	3.6044	0.9805	0.0124	0.2769	0.0120	0.2889	0.0765	0.0114	0.0879		1,342.5636	1,342.5636	0.0859		1,344.7113
Vendor	2.8500e-003	0.0923	0.0240	2.5000e-004	5.9900e-003	1.7000e-004	6.1700e-003	1.7400e-003	1.7000e-004	1.9100e-003		27.2486	27.2486	1.5600e-003		27.2877
Worker	0.0201	0.0133	0.1858	5.5000e-004	0.0515	4.4000e-004	0.0520	0.0138	4.0000e-004	0.0142		54.9356	54.9356	1.5200e-003		54.9735
Total	**0.1474**	**3.7101**	**1.1903**	**0.0132**	**0.3344**	**0.0126**	**0.3470**	**0.0920**	**0.0120**	**0.1040**		**1,424.7479**	**1,424.7479**	**0.0890**		**1,426.9725**

3.7 Rough Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9143	0.0000	4.9143	2.5256	0.0000	2.5256			0.0000			0.0000
Off-Road	1.0832	12.0046	5.9360	0.0141		0.5173	0.5173		0.4759	0.4759		1,364.8198	1,364.8198	0.4414		1,375.8551
Total	**1.0832**	**12.0046**	**5.9360**	**0.0141**	**4.9143**	**0.5173**	**5.4315**	**2.5256**	**0.4759**	**3.0015**		**1,364.8198**	**1,364.8198**	**0.4414**		**1,375.8551**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.5600e-003	0.2770	0.0720	7.6000e-004	0.0192	5.2000e-004	0.0197	5.5300e-003	5.0000e-004	6.0300e-003		81.7458	81.7458	4.6900e-003		81.8630
Worker	0.0803	0.0532	0.7432	2.2100e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6100e-003	0.0609		219.7425	219.7425	6.0600e-003		219.8941
Total	**0.0889**	**0.3302**	**0.8153**	**2.9700e-003**	**0.2428**	**2.2700e-003**	**0.2450**	**0.0648**	**2.1100e-003**	**0.0669**		**301.4882**	**301.4882**	**0.0108**		**301.7571**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.1008	0.0000	2.1008	1.0797	0.0000	1.0797			0.0000			0.0000
Off-Road	0.2466	4.1795	8.0841	0.0141		0.0230	0.0230		0.0230	0.0230	0.0000	1,364.8198	1,364.8198	0.4414		1,375.8551
Total	**0.2466**	**4.1795**	**8.0841**	**0.0141**	**2.1008**	**0.0230**	**2.1238**	**1.0797**	**0.0230**	**1.1027**	**0.0000**	**1,364.8198**	**1,364.8198**	**0.4414**		**1,375.8551**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.5600e-003	0.2770	0.0720	7.6000e-004	0.0180	5.2000e-004	0.0185	5.2300e-003	5.0000e-004	5.7300e-003		81.7458	81.7458	4.6900e-003		81.8630
Worker	0.0803	0.0532	0.7432	2.2100e-003	0.2061	1.7500e-003	0.2078	0.0550	1.6100e-003	0.0566		219.7425	219.7425	6.0600e-003		219.8941
Total	**0.0889**	**0.3302**	**0.8153**	**2.9700e-003**	**0.2240**	**2.2700e-003**	**0.2263**	**0.0602**	**2.1100e-003**	**0.0623**		**301.4882**	**301.4882**	**0.0108**		**301.7571**

3.8 Utility Trenching - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2024	1.7770	3.2551	5.1700e-003		0.0859	0.0859		0.0790	0.0790		500.0153	500.0153	0.1617		504.0582
Total	**0.2024**	**1.7770**	**3.2551**	**5.1700e-003**		**0.0859**	**0.0859**		**0.0790**	**0.0790**		**500.0153**	**500.0153**	**0.1617**		**504.0582**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0143	0.4617	0.1201	1.2700e-003	0.0320	8.7000e-004	0.0329	9.2200e-003	8.3000e-004	0.0101		136.2429	136.2429	7.8200e-003		136.4384
Worker	0.0402	0.0266	0.3716	1.1000e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		109.8712	109.8712	3.0300e-003		109.9470
Total	**0.0544**	**0.4883**	**0.4917**	**2.3700e-003**	**0.1438**	**1.7400e-003**	**0.1455**	**0.0389**	**1.6400e-003**	**0.0405**		**246.1142**	**246.1142**	**0.0109**		**246.3855**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0635	2.2767	3.9180	5.1700e-003		8.4700e-003	8.4700e-003		8.4700e-003	8.4700e-003	0.0000	500.0153	500.0153	0.1617		504.0582
Total	**0.0635**	**2.2767**	**3.9180**	**5.1700e-003**		**8.4700e-003**	**8.4700e-003**		**8.4700e-003**	**8.4700e-003**	**0.0000**	**500.0153**	**500.0153**	**0.1617**		**504.0582**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0143	0.4617	0.1201	1.2700e-003	0.0300	8.7000e-004	0.0308	8.7100e-003	8.3000e-004	9.5400e-003		136.2429	136.2429	7.8200e-003		136.4384
Worker	0.0402	0.0266	0.3716	1.1000e-003	0.1030	8.7000e-004	0.1039	0.0275	8.1000e-004	0.0283		109.8712	109.8712	3.0300e-003		109.9470
Total	**0.0544**	**0.4883**	**0.4917**	**2.3700e-003**	**0.1330**	**1.7400e-003**	**0.1347**	**0.0362**	**1.6400e-003**	**0.0378**		**246.1142**	**246.1142**	**0.0109**		**246.3855**

3.9 Parking Structure Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6487	12.5031	12.7264	0.0221		0.5889	0.5889		0.5689	0.5689		2,001.5429	2,001.5429	0.3486		2,010.2581
Total	**1.6487**	**12.5031**	**12.7264**	**0.0221**		**0.5889**	**0.5889**		**0.5689**	**0.5689**		**2,001.5429**	**2,001.5429**	**0.3486**		**2,010.2581**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0143	0.4617	0.1201	1.2700e-003	0.0320	8.7000e-004	0.0329	9.2200e-003	8.3000e-004	0.0101		136.2429	136.2429	7.8200e-003		136.4384
Worker	0.1004	0.0665	0.9290	2.7600e-003	0.2794	2.1900e-003	0.2816	0.0741	2.0100e-003	0.0761		274.6781	274.6781	7.5800e-003		274.8676
Total	**0.1146**	**0.5282**	**1.0491**	**4.0300e-003**	**0.3115**	**3.0600e-003**	**0.3145**	**0.0833**	**2.8400e-003**	**0.0862**		**410.9210**	**410.9210**	**0.0154**		**411.3060**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0998	9.3977	14.0755	0.0221		0.2132	0.2132		0.2132	0.2132	0.0000	2,001.5429	2,001.5429	0.3486		2,010.2581
Total	**1.0998**	**9.3977**	**14.0755**	**0.0221**		**0.2132**	**0.2132**		**0.2132**	**0.2132**	**0.0000**	**2,001.5429**	**2,001.5429**	**0.3486**		**2,010.2581**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0143	0.4617	0.1201	1.2700e-003	0.0300	8.7000e-004	0.0308	8.7100e-003	8.3000e-004	9.5400e-003		136.2429	136.2429	7.8200e-003		136.4384
Worker	0.1004	0.0665	0.9290	2.7600e-003	0.2576	2.1900e-003	0.2598	0.0687	2.0100e-003	0.0708		274.6781	274.6781	7.5800e-003		274.8676
Total	**0.1146**	**0.5282**	**1.0491**	**4.0300e-003**	**0.2875**	**3.0600e-003**	**0.2906**	**0.0775**	**2.8400e-003**	**0.0803**		**410.9210**	**410.9210**	**0.0154**		**411.3060**

3.10 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6487	12.5031	12.7264	0.0221		0.5889	0.5889		0.5689	0.5689		2,001.5429	2,001.5429	0.3486		2,010.2581
Total	**1.6487**	**12.5031**	**12.7264**	**0.0221**		**0.5889**	**0.5889**		**0.5689**	**0.5689**		**2,001.5429**	**2,001.5429**	**0.3486**		**2,010.2581**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0571	1.8466	0.4803	5.0900e-003	0.1281	3.4700e-003	0.1315	0.0369	3.3200e-003	0.0402		544.9718	544.9718	0.0313		545.7536
Worker	0.2008	0.1331	1.8580	5.5100e-003	0.5589	4.3700e-003	0.5633	0.1482	4.0300e-003	0.1523		549.3562	549.3562	0.0152		549.7352
Total	**0.2578**	**1.9797**	**2.3383**	**0.0106**	**0.6869**	**7.8400e-003**	**0.6948**	**0.1851**	**7.3500e-003**	**0.1924**		**1,094.3279**	**1,094.3279**	**0.0464**		**1,095.4888**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0998	9.3977	14.0755	0.0221		0.2132	0.2132		0.2132	0.2132	0.0000	2,001.5429	2,001.5429	0.3486		2,010.2581
Total	**1.0998**	**9.3977**	**14.0755**	**0.0221**		**0.2132**	**0.2132**		**0.2132**	**0.2132**	**0.0000**	**2,001.5429**	**2,001.5429**	**0.3486**		**2,010.2581**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0571	1.8466	0.4803	5.0900e-003	0.1198	3.4700e-003	0.1233	0.0349	3.3200e-003	0.0382		544.9718	544.9718	0.0313		545.7536
Worker	0.2008	0.1331	1.8580	5.5100e-003	0.5152	4.3700e-003	0.5195	0.1375	4.0300e-003	0.1415		549.3562	549.3562	0.0152		549.7352
Total	**0.2578**	**1.9797**	**2.3383**	**0.0106**	**0.6350**	**7.8400e-003**	**0.6428**	**0.1723**	**7.3500e-003**	**0.1797**		**1,094.3279**	**1,094.3279**	**0.0464**		**1,095.4888**

3.10 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5233	11.7104	12.6111	0.0221		0.5145	0.5145		0.4968	0.4968		2,001.7877	2,001.7877	0.3399		2,010.2858
Total	**1.5233**	**11.7104**	**12.6111**	**0.0221**		**0.5145**	**0.5145**		**0.4968**	**0.4968**		**2,001.7877**	**2,001.7877**	**0.3399**		**2,010.2858**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0423	1.4011	0.4338	4.9300e-003	0.1281	1.6200e-003	0.1297	0.0369	1.5500e-003	0.0384		527.8149	527.8149	0.0277		528.5077
Worker	0.1885	0.1204	1.7111	5.3100e-003	0.5589	4.2500e-003	0.5631	0.1482	3.9100e-003	0.1521		529.2410	529.2410	0.0137		529.5828
Total	**0.2309**	**1.5215**	**2.1448**	**0.0102**	**0.6869**	**5.8700e-003**	**0.6928**	**0.1851**	**5.4600e-003**	**0.1905**		**1,057.0559**	**1,057.0559**	**0.0414**		**1,058.0905**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0330	9.2707	14.0218	0.0221		0.1869	0.1869		0.1869	0.1869	0.0000	2,001.7877	2,001.7877	0.3399		2,010.2858
Total	**1.0330**	**9.2707**	**14.0218**	**0.0221**		**0.1869**	**0.1869**		**0.1869**	**0.1869**	**0.0000**	**2,001.7877**	**2,001.7877**	**0.3399**		**2,010.2858**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0423	1.4011	0.4338	4.9300e-003	0.1198	1.6200e-003	0.1215	0.0349	1.5500e-003	0.0364		527.8149	527.8149	0.0277		528.5077
Worker	0.1885	0.1204	1.7111	5.3100e-003	0.5152	4.2500e-003	0.5194	0.1375	3.9100e-003	0.1414		529.2410	529.2410	0.0137		529.5828
Total	**0.2309**	**1.5215**	**2.1448**	**0.0102**	**0.6350**	**5.8700e-003**	**0.6409**	**0.1723**	**5.4600e-003**	**0.1778**		**1,057.0559**	**1,057.0559**	**0.0414**		**1,058.0905**

3.10 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4200	11.0639	12.5172	0.0221		0.4506	0.4506		0.4348	0.4348		2,001.9214	2,001.9214	0.3334		2,010.2563
Total	**1.4200**	**11.0639**	**12.5172**	**0.0221**		**0.4506**	**0.4506**		**0.4348**	**0.4348**		**2,001.9214**	**2,001.9214**	**0.3334**		**2,010.2563**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0413	1.3958	0.4206	4.9000e-003	0.1281	1.6000e-003	0.1297	0.0369	1.5300e-003	0.0384		525.6729	525.6729	0.0273		526.3558
Worker	0.1783	0.1098	1.5951	5.1400e-003	0.5589	4.1900e-003	0.5631	0.1482	3.8600e-003	0.1521		512.8391	512.8391	0.0125		513.1527
Total	**0.2197**	**1.5056**	**2.0157**	**0.0100**	**0.6869**	**5.7900e-003**	**0.6927**	**0.1851**	**5.3900e-003**	**0.1905**		**1,038.5120**	**1,038.5120**	**0.0399**		**1,039.5085**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9771	9.1513	13.9791	0.0221		0.1639	0.1639		0.1639	0.1639	0.0000	2,001.9214	2,001.9214	0.3334		2,010.2563
Total	**0.9771**	**9.1513**	**13.9791**	**0.0221**		**0.1639**	**0.1639**		**0.1639**	**0.1639**	**0.0000**	**2,001.9214**	**2,001.9214**	**0.3334**		**2,010.2563**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0413	1.3958	0.4206	4.9000e-003	0.1198	1.6000e-003	0.1214	0.0349	1.5300e-003	0.0364		525.6729	525.6729	0.0273		526.3558
Worker	0.1783	0.1098	1.5951	5.1400e-003	0.5152	4.1900e-003	0.5193	0.1375	3.8600e-003	0.1413		512.8391	512.8391	0.0125		513.1527
Total	**0.2197**	**1.5056**	**2.0157**	**0.0100**	**0.6350**	**5.7900e-003**	**0.6408**	**0.1723**	**5.3900e-003**	**0.1777**		**1,038.5120**	**1,038.5120**	**0.0399**		**1,039.5085**

3.11 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.0894					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**3.2811**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0106	0.3503	0.1084	1.2300e-003	0.0320	4.0000e-004	0.0324	9.2200e-003	3.9000e-004	9.6000e-003		131.9537	131.9537	6.9300e-003		132.1269
Worker	0.0754	0.0482	0.6844	2.1200e-003	0.2236	1.7000e-003	0.2253	0.0593	1.5700e-003	0.0609		211.6964	211.6964	5.4700e-003		211.8331
Total	**0.0860**	**0.3984**	**0.7929**	**3.3500e-003**	**0.2556**	**2.1000e-003**	**0.2577**	**0.0685**	**1.9600e-003**	**0.0705**		**343.6501**	**343.6501**	**0.0124**		**343.9600**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.0894					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0545	1.0598	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**3.1439**	**1.0598**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0106	0.3503	0.1084	1.2300e-003	0.0300	4.0000e-004	0.0304	8.7100e-003	3.9000e-004	9.1000e-003		131.9537	131.9537	6.9300e-003		132.1269
Worker	0.0754	0.0482	0.6844	2.1200e-003	0.2061	1.7000e-003	0.2078	0.0550	1.5700e-003	0.0566		211.6964	211.6964	5.4700e-003		211.8331
Total	**0.0860**	**0.3984**	**0.7929**	**3.3500e-003**	**0.2360**	**2.1000e-003**	**0.2381**	**0.0637**	**1.9600e-003**	**0.0657**		**343.6501**	**343.6501**	**0.0124**		**343.9600**

3.11 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.0894					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**3.2702**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0103	0.3490	0.1051	1.2300e-003	0.0320	4.0000e-004	0.0324	9.2200e-003	3.8000e-004	9.6000e-003		131.4182	131.4182	6.8300e-003		131.5890
Worker	0.0713	0.0439	0.6380	2.0600e-003	0.2236	1.6800e-003	0.2252	0.0593	1.5400e-003	0.0608		205.1357	205.1357	5.0200e-003		205.2611
Total	**0.0817**	**0.3929**	**0.7432**	**3.2900e-003**	**0.2556**	**2.0800e-003**	**0.2576**	**0.0685**	**1.9200e-003**	**0.0704**		**336.5539**	**336.5539**	**0.0119**		**336.8500**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.0894					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0545	1.0598	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**3.1439**	**1.0598**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0103	0.3490	0.1051	1.2300e-003	0.0300	4.0000e-004	0.0304	8.7100e-003	3.8000e-004	9.1000e-003		131.4182	131.4182	6.8300e-003		131.5890
Worker	0.0713	0.0439	0.6380	2.0600e-003	0.2061	1.6800e-003	0.2077	0.0550	1.5400e-003	0.0565		205.1357	205.1357	5.0200e-003		205.2611
Total	**0.0817**	**0.3929**	**0.7432**	**3.2900e-003**	**0.2360**	**2.0800e-003**	**0.2381**	**0.0637**	**1.9200e-003**	**0.0656**		**336.5539**	**336.5539**	**0.0119**		**336.8500**

3.12 Fine Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9143	0.0000	4.9143	2.5256	0.0000	2.5256			0.0000			0.0000
Off-Road	0.9335	10.1789	5.5516	0.0141		0.4201	0.4201		0.3865	0.3865		1,364.7713	1,364.7713	0.4414		1,375.8062
Total	**0.9335**	**10.1789**	**5.5516**	**0.0141**	**4.9143**	**0.4201**	**5.3343**	**2.5256**	**0.3865**	**2.9121**		**1,364.7713**	**1,364.7713**	**0.4414**		**1,375.8062**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	6.3500e-003	0.2102	0.0651	7.4000e-004	0.0192	2.4000e-004	0.0195	5.5300e-003	2.3000e-004	5.7600e-003		79.1722	79.1722	4.1600e-003		79.2762
Worker	0.0189	0.0120	0.1711	5.3000e-004	0.0559	4.3000e-004	0.0563	0.0148	3.9000e-004	0.0152		52.9241	52.9241	1.3700e-003		52.9583
Total	**0.0252**	**0.2222**	**0.2362**	**1.2700e-003**	**0.0751**	**6.7000e-004**	**0.0758**	**0.0204**	**6.2000e-004**	**0.0210**		**132.0963**	**132.0963**	**5.5300e-003**		**132.2344**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.1008	0.0000	2.1008	1.0797	0.0000	1.0797			0.0000			0.0000
Off-Road	0.2466	4.1795	8.0841	0.0141		0.0230	0.0230		0.0230	0.0230	0.0000	1,364.7713	1,364.7713	0.4414		1,375.8062
Total	**0.2466**	**4.1795**	**8.0841**	**0.0141**	**2.1008**	**0.0230**	**2.1238**	**1.0797**	**0.0230**	**1.1027**	**0.0000**	**1,364.7713**	**1,364.7713**	**0.4414**		**1,375.8062**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	6.3500e-003	0.2102	0.0651	7.4000e-004	0.0180	2.4000e-004	0.0182	5.2300e-003	2.3000e-004	5.4600e-003		79.1722	79.1722	4.1600e-003		79.2762
Worker	0.0189	0.0120	0.1711	5.3000e-004	0.0515	4.3000e-004	0.0519	0.0138	3.9000e-004	0.0141		52.9241	52.9241	1.3700e-003		52.9583
Total	**0.0252**	**0.2222**	**0.2362**	**1.2700e-003**	**0.0695**	**6.7000e-004**	**0.0702**	**0.0190**	**6.2000e-004**	**0.0196**		**132.0963**	**132.0963**	**5.5300e-003**		**132.2344**

3.12 Fine Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9143	0.0000	4.9143	2.5256	0.0000	2.5256			0.0000			0.0000
Off-Road	0.9132	9.7297	5.5468	0.0141		0.4001	0.4001		0.3681	0.3681		1,364.6623	1,364.6623	0.4414		1,375.6962
Total	**0.9132**	**9.7297**	**5.5468**	**0.0141**	**4.9143**	**0.4001**	**5.3144**	**2.5256**	**0.3681**	**2.8937**		**1,364.6623**	**1,364.6623**	**0.4414**		**1,375.6962**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	6.2000e-003	0.2094	0.0631	7.4000e-004	0.0192	2.4000e-004	0.0195	5.5300e-003	2.3000e-004	5.7600e-003		78.8509	78.8509	4.1000e-003		78.9534
Worker	0.0178	0.0110	0.1595	5.1000e-004	0.0559	4.2000e-004	0.0563	0.0148	3.9000e-004	0.0152		51.2839	51.2839	1.2500e-003		51.3153
Total	**0.0240**	**0.2204**	**0.2226**	**1.2500e-003**	**0.0751**	**6.6000e-004**	**0.0758**	**0.0204**	**6.2000e-004**	**0.0210**		**130.1348**	**130.1348**	**5.3500e-003**		**130.2686**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.1008	0.0000	2.1008	1.0797	0.0000	1.0797			0.0000			0.0000
Off-Road	0.2466	4.1795	8.0841	0.0141		0.0230	0.0230		0.0230	0.0230	0.0000	1,364.6623	1,364.6623	0.4414		1,375.6962
Total	**0.2466**	**4.1795**	**8.0841**	**0.0141**	**2.1008**	**0.0230**	**2.1238**	**1.0797**	**0.0230**	**1.1027**	**0.0000**	**1,364.6623**	**1,364.6623**	**0.4414**		**1,375.6962**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	6.2000e-003	0.2094	0.0631	7.4000e-004	0.0180	2.4000e-004	0.0182	5.2300e-003	2.3000e-004	5.4600e-003		78.8509	78.8509	4.1000e-003		78.9534
Worker	0.0178	0.0110	0.1595	5.1000e-004	0.0515	4.2000e-004	0.0519	0.0138	3.9000e-004	0.0141		51.2839	51.2839	1.2500e-003		51.3153
Total	**0.0240**	**0.2204**	**0.2226**	**1.2500e-003**	**0.0695**	**6.6000e-004**	**0.0702**	**0.0190**	**6.2000e-004**	**0.0196**		**130.1348**	**130.1348**	**5.3500e-003**		**130.2686**

3.13 Finishing/Landscaping - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1887	1.5486	3.2578	5.1700e-003		0.0758	0.0758		0.0697	0.0697		500.1056	500.1056	0.1617		504.1492
Total	**0.1887**	**1.5486**	**3.2578**	**5.1700e-003**		**0.0758**	**0.0758**		**0.0697**	**0.0697**		**500.1056**	**500.1056**	**0.1617**		**504.1492**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0212	0.7006	0.2169	2.4600e-003	0.0640	8.1000e-004	0.0648	0.0184	7.7000e-004	0.0192		263.9074	263.9074	0.0139		264.2539
Worker	0.0754	0.0482	0.6844	2.1200e-003	0.2236	1.7000e-003	0.2253	0.0593	1.5700e-003	0.0609		211.6964	211.6964	5.4700e-003		211.8331
Total	**0.0966**	**0.7487**	**0.9013**	**4.5800e-003**	**0.2876**	**2.5100e-003**	**0.2901**	**0.0777**	**2.3400e-003**	**0.0801**		**475.6038**	**475.6038**	**0.0193**		**476.0870**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0635	2.2767	3.9180	5.1700e-003		8.4700e-003	8.4700e-003		8.4700e-003	8.4700e-003	0.0000	500.1056	500.1056	0.1617		504.1492
Total	**0.0635**	**2.2767**	**3.9180**	**5.1700e-003**		**8.4700e-003**	**8.4700e-003**		**8.4700e-003**	**8.4700e-003**	**0.0000**	**500.1056**	**500.1056**	**0.1617**		**504.1492**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0212	0.7006	0.2169	2.4600e-003	0.0599	8.1000e-004	0.0607	0.0174	7.7000e-004	0.0182		263.9074	263.9074	0.0139		264.2539
Worker	0.0754	0.0482	0.6844	2.1200e-003	0.2061	1.7000e-003	0.2078	0.0550	1.5700e-003	0.0566		211.6964	211.6964	5.4700e-003		211.8331
Total	**0.0966**	**0.7487**	**0.9013**	**4.5800e-003**	**0.2660**	**2.5100e-003**	**0.2685**	**0.0724**	**2.3400e-003**	**0.0748**		**475.6038**	**475.6038**	**0.0193**		**476.0870**

3.13 Finishing/Landscaping - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1803	1.4029	3.2650	5.1700e-003		0.0691	0.0691		0.0636	0.0636		500.2654	500.2654	0.1618		504.3103
Total	**0.1803**	**1.4029**	**3.2650**	**5.1700e-003**		**0.0691**	**0.0691**		**0.0636**	**0.0636**		**500.2654**	**500.2654**	**0.1618**		**504.3103**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0207	0.6979	0.2103	2.4500e-003	0.0640	8.0000e-004	0.0648	0.0184	7.6000e-004	0.0192		262.8364	262.8364	0.0137		263.1779
Worker	0.0713	0.0439	0.6380	2.0600e-003	0.2236	1.6800e-003	0.2252	0.0593	1.5400e-003	0.0608		205.1357	205.1357	5.0200e-003		205.2611
Total	**0.0920**	**0.7418**	**0.8483**	**4.5100e-003**	**0.2876**	**2.4800e-003**	**0.2901**	**0.0777**	**2.3000e-003**	**0.0800**		**467.9721**	**467.9721**	**0.0187**		**468.4390**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0635	2.2767	3.9180	5.1700e-003		8.4700e-003	8.4700e-003		8.4700e-003	8.4700e-003	0.0000	500.2654	500.2654	0.1618		504.3103
Total	**0.0635**	**2.2767**	**3.9180**	**5.1700e-003**		**8.4700e-003**	**8.4700e-003**		**8.4700e-003**	**8.4700e-003**	**0.0000**	**500.2654**	**500.2654**	**0.1618**		**504.3103**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0207	0.6979	0.2103	2.4500e-003	0.0599	8.0000e-004	0.0607	0.0174	7.6000e-004	0.0182		262.8364	262.8364	0.0137		263.1779
Worker	0.0713	0.0439	0.6380	2.0600e-003	0.2061	1.6800e-003	0.2077	0.0550	1.5400e-003	0.0565		205.1357	205.1357	5.0200e-003		205.2611
Total	**0.0920**	**0.7418**	**0.8483**	**4.5100e-003**	**0.2660**	**2.4800e-003**	**0.2685**	**0.0724**	**2.3000e-003**	**0.0747**		**467.9721**	**467.9721**	**0.0187**		**468.4390**

3.14 Asphalt Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6180	5.8607	8.8253	0.0136		0.2810	0.2810		0.2594	0.2594		1,297.8688	1,297.8688	0.4114		1,308.1547
Paving	0.0231					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6410**	**5.8607**	**8.8253**	**0.0136**		**0.2810**	**0.2810**		**0.2594**	**0.2594**		**1,297.8688**	**1,297.8688**	**0.4114**		**1,308.1547**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0103	0.3490	0.1051	1.2300e-003	0.0320	4.0000e-004	0.0324	9.2200e-003	3.8000e-004	9.6000e-003		131.4182	131.4182	6.8300e-003		131.5890
Worker	0.0535	0.0329	0.4785	1.5400e-003	0.1677	1.2600e-003	0.1689	0.0445	1.1600e-003	0.0456		153.8517	153.8517	3.7600e-003		153.9458
Total	**0.0638**	**0.3819**	**0.5837**	**2.7700e-003**	**0.1997**	**1.6600e-003**	**0.2013**	**0.0537**	**1.5400e-003**	**0.0552**		**285.2700**	**285.2700**	**0.0106**		**285.5348**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2149	5.7133	9.8512	0.0136		0.0213	0.0213		0.0213	0.0213	0.0000	1,297.8688	1,297.8688	0.4114		1,308.1547
Paving	0.0231					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2379**	**5.7133**	**9.8512**	**0.0136**		**0.0213**	**0.0213**		**0.0213**	**0.0213**	**0.0000**	**1,297.8688**	**1,297.8688**	**0.4114**		**1,308.1547**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0103	0.3490	0.1051	1.2300e-003	0.0300	4.0000e-004	0.0304	8.7100e-003	3.8000e-004	9.1000e-003		131.4182	131.4182	6.8300e-003		131.5890
Worker	0.0535	0.0329	0.4785	1.5400e-003	0.1546	1.2600e-003	0.1558	0.0413	1.1600e-003	0.0424		153.8517	153.8517	3.7600e-003		153.9458
Total	**0.0638**	**0.3819**	**0.5837**	**2.7700e-003**	**0.1845**	**1.6600e-003**	**0.1862**	**0.0500**	**1.5400e-003**	**0.0515**		**285.2700**	**285.2700**	**0.0106**		**285.5348**

14th & LBB Development Project Construction Run

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	35.37	1000sqft	0.00	35,365.00	0
Other Asphalt Surfaces	9.50	1000sqft	0.22	9,500.00	0
Other Non-Asphalt Surfaces	27.63	1000sqft	0.63	27,633.00	0
Apartments High Rise	85.00	Dwelling Unit	0.38	81,280.00	243
Apartments Mid Rise	75.00	Dwelling Unit	0.31	62,430.00	215
Convenience Market (24 Hour)	4.00	1000sqft	0.00	4,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	531.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - 2019 SCE Sustainability Report

Land Use - based on info provided by applicant.

Construction Phase - based on info provided by applicant

Off-road Equipment -

Off-road Equipment - no additional equipment needed for Asphalt Demo Haul

Off-road Equipment - assuming 1 crusher for onsite reprocessing

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - assuming 1 excavator for F/L

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - no additional equipment needed for Site Preparation Soil Haul

Off-road Equipment - assuming 1 excavator for trenching

Trips and VMT - based on info provided by applicant

Demolition -

Grading -

Architectural Coating - based on info provided by applicant

Energy Use -

Construction Off-road Equipment Mitigation - SCAQMD Rule 403 and 1186 and Mitigation Measures AQ-1 and AQ-2

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	2,000.00	3,552.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	6,000.00	10,657.00
tblArchitecturalCoating	ConstArea_Parking	4,350.00	2,122.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	97,004.00	40,909.00
tblArchitecturalCoating	ConstArea_Residential_Interior	291,013.00	122,726.00
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00

tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_Nonresidential_Exterior	2000	1738
tblAreaCoating	Area_Nonresidential_Interior	6000	5213
tblAreaCoating	Area_Residential_Exterior	97004	97359
tblAreaCoating	Area_Residential_Interior	291013	292076
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	61	55
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	61	55
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim

tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	20.00	25.00
tblConstructionPhase	NumDays	20.00	25.00
tblConstructionPhase	NumDays	20.00	25.00
tblConstructionPhase	NumDays	2.00	10.00
tblConstructionPhase	NumDays	2.00	10.00
tblConstructionPhase	NumDays	4.00	20.00
tblConstructionPhase	NumDays	200.00	110.00
tblConstructionPhase	NumDays	200.00	305.00
tblConstructionPhase	NumDays	10.00	135.00
tblConstructionPhase	NumDays	4.00	110.00
tblConstructionPhase	NumDays	10.00	25.00
tblGrading	MaterialExported	0.00	400.00
tblLandUse	LandUseSquareFeet	35,370.00	35,365.00
tblLandUse	LandUseSquareFeet	27,630.00	27,633.00
tblLandUse	LandUseSquareFeet	85,000.00	81,280.00
tblLandUse	LandUseSquareFeet	75,000.00	62,430.00

tblLandUse	LotAcreage	0.81	0.00
tblLandUse	LotAcreage	1.37	0.38
tblLandUse	LotAcreage	1.97	0.31
tblLandUse	LotAcreage	0.09	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	531.44
tblSolidWaste	SolidWasteGenerationRate	12.02	10.46
tblTripsAndVMT	HaulingTripLength	20.00	34.00
tblTripsAndVMT	HaulingTripLength	20.00	34.00
tblTripsAndVMT	HaulingTripNumber	127.00	250.00
tblTripsAndVMT	HaulingTripNumber	40.00	100.00
tblTripsAndVMT	VendorTripNumber	0.00	7.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	3.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	3.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	30.00	5.00

tblTripsAndVMT	VendorTripNumber	30.00	20.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	3.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	WorkerTripNumber	13.00	10.00
tblTripsAndVMT	WorkerTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	3.00	10.00
tblTripsAndVMT	WorkerTripNumber	8.00	5.00
tblTripsAndVMT	WorkerTripNumber	0.00	5.00
tblTripsAndVMT	WorkerTripNumber	8.00	20.00
tblTripsAndVMT	WorkerTripNumber	3.00	10.00
tblTripsAndVMT	WorkerTripNumber	147.00	25.00
tblTripsAndVMT	WorkerTripNumber	147.00	50.00
tblTripsAndVMT	WorkerTripNumber	29.00	20.00
tblTripsAndVMT	WorkerTripNumber	8.00	5.00
tblTripsAndVMT	WorkerTripNumber	3.00	20.00
tblTripsAndVMT	WorkerTripNumber	13.00	15.00
tblWater	IndoorWaterUseRate	296,290.09	257,772.37
tblWater	OutdoorWaterUseRate	181,597.15	157,989.52

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	2.4620	24.6244	20.6158	0.0492	6.2341	1.0346	6.8703	3.0721	0.9788	3.6579	0.0000	4,917.7305	4,917.7305	0.7501	0.0000	4,936.4815
2023	6.4120	27.6440	27.0908	0.0629	6.2194	1.0925	7.3119	2.8773	1.0344	3.9117	0.0000	6,070.6142	6,070.6142	1.0400	0.0000	6,096.6136
2024	6.2464	26.2865	26.7667	0.0626	6.2194	0.9918	7.2113	2.8773	0.9377	3.8150	0.0000	6,037.6439	6,037.6439	1.0296	0.0000	6,063.3835
Maximum	**6.4120**	**27.6440**	**27.0908**	**0.0629**	**6.2341**	**1.0925**	**7.3119**	**3.0721**	**1.0344**	**3.9117**	**0.0000**	**6,070.6142**	**6,070.6142**	**1.0400**	**0.0000**	**6,096.6136**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2022	1.3836	15.8235	22.0661	0.0492	2.8832	0.2265	2.9249	1.3737	0.2262	1.4148	0.0000	4,917.7305	4,917.7305	0.7501	0.0000	4,936.4815
2023	4.9725	19.6898	31.7155	0.0629	3.3073	0.2337	3.5410	1.4071	0.2329	1.6400	0.0000	6,070.6142	6,070.6142	1.0400	0.0000	6,096.6136
2024	4.8940	19.5386	31.4411	0.0626	3.3073	0.2105	3.5178	1.4071	0.2097	1.6169	0.0000	6,037.6439	6,037.6439	1.0296	0.0000	6,063.3835
Maximum	**4.9725**	**19.6898**	**31.7155**	**0.0629**	**3.3073**	**0.2337**	**3.5410**	**1.4071**	**0.2329**	**1.6400**	**0.0000**	**6,070.6142**	**6,070.6142**	**1.0400**	**0.0000**	**6,096.6136**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**25.60**	**29.92**	**-14.43**	**0.00**	**49.14**	**78.50**	**53.33**	**52.55**	**77.34**	**58.97**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Asphalt Demolition	Demolition	5/1/2022	6/3/2022	5	25	a
2	Asphalt Demolition Debris Haul	Demolition	5/1/2022	6/3/2022	5	25	b
3	Asphalt Demolition Debris Onsite Reprocessing	Demolition	5/1/2022	6/3/2022	5	25	c
4	Site Preparation	Site Preparation	6/4/2022	6/17/2022	5	10	d
5	Site Preparation Soil Haul	Site Preparation	6/4/2022	6/17/2022	5	10	e
6	Rough Grading	Grading	6/18/2022	7/15/2022	5	20	f
7	Utility Trenching	Trenching	7/16/2022	9/16/2022	5	45	h
8	Parking Structure Construction	Building Construction	7/16/2022	12/16/2022	5	110	j
9	Building Construction	Building Construction	12/17/2022	2/16/2024	5	305	i
10	Architectural Coating	Architectural Coating	8/12/2023	2/16/2024	5	135	l
11	Fine Grading	Grading	9/16/2023	2/16/2024	5	110	g
12	Finishing/Landscaping	Trenching	12/16/2023	2/16/2024	5	45	m
13	Asphalt Paving	Paving	2/17/2024	3/22/2024	5	25	k

Acres of Grading (Site Preparation Phase): 5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.85

Residential Indoor: 122,726; Residential Outdoor: 40,909; Non-Residential Indoor: 10,657; Non-Residential Outdoor: 3,552; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Asphalt Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Asphalt Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Asphalt Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Asphalt Demolition Debris Haul	Concrete/Industrial Saws	0	8.00	81	0.73
Asphalt Demolition Debris Haul	Rubber Tired Dozers	0	8.00	247	0.40
Asphalt Demolition Debris Haul	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Asphalt Demolition Debris Onsite Reprocessing	Concrete/Industrial Saws	0	8.00	81	0.73
Asphalt Demolition Debris Onsite Reprocessing	Crushing/Proc. Equipment	1	8.00	85	0.78
Asphalt Demolition Debris Onsite Reprocessing	Rubber Tired Dozers	0	8.00	247	0.40
Asphalt Demolition Debris Onsite Reprocessing	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation Soil Haul	Graders	0	8.00	187	0.41
Site Preparation Soil Haul	Rubber Tired Dozers	0	7.00	247	0.40
Site Preparation Soil Haul	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Rough Grading	Graders	1	6.00	187	0.41
Rough Grading	Rubber Tired Dozers	1	6.00	247	0.40
Rough Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Utility Trenching	Excavators	1	8.00	158	0.38
Parking Structure Construction	Cranes	1	6.00	231	0.29
Parking Structure Construction	Forklifts	1	6.00	89	0.20
Parking Structure Construction	Generator Sets	1	8.00	84	0.74
Parking Structure Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Parking Structure Construction	Welders	3	8.00	46	0.45

Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Fine Grading	Graders	1	6.00	187	0.41
Fine Grading	Rubber Tired Dozers	1	6.00	247	0.40
Fine Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Finishing/Landscaping	Excavators	1	8.00	158	0.38
Asphalt Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Asphalt Paving	Pavers	1	6.00	130	0.42
Asphalt Paving	Paving Equipment	1	8.00	132	0.36
Asphalt Paving	Rollers	1	7.00	80	0.38
Asphalt Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Asphalt Demolition	5	10.00	7.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Asphalt Demolition Debris Haul	0	10.00	2.00	250.00	14.70	6.90	34.00	LD_Mix	HDT_Mix	HHDT
Asphalt Demolition Debris Onsite	1	10.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	5.00	3.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation Soil Haul	0	5.00	1.00	100.00	14.70	6.90	34.00	LD_Mix	HDT_Mix	HHDT
Rough Grading	3	20.00	3.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Utility Trenching	1	10.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

Parking Structure Construction	7	25.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	50.00	20.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	20.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading	3	5.00	3.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Finishing/Landscaping	1	20.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Asphalt Paving	5	15.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Asphalt Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6889	16.6217	13.9605	0.0241		0.8379	0.8379		0.7829	0.7829		2,323.4168	2,323.4168	0.5921		2,338.2191
Total	**1.6889**	**16.6217**	**13.9605**	**0.0241**		**0.8379**	**0.8379**		**0.7829**	**0.7829**		**2,323.4168**	**2,323.4168**	**0.5921**		**2,338.2191**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0210	0.6446	0.1860	1.7300e-003	0.0448	1.2500e-003	0.0461	0.0129	1.2000e-003	0.0141		185.4792	185.4792	0.0117		185.7706
Worker	0.0448	0.0295	0.3392	1.0400e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		103.4570	103.4570	2.8500e-003		103.5282
Total	**0.0658**	**0.6740**	**0.5252**	**2.7700e-003**	**0.1566**	**2.1200e-003**	**0.1587**	**0.0425**	**2.0100e-003**	**0.0446**		**288.9362**	**288.9362**	**0.0145**		**289.2988**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4630	8.5434	15.4154	0.0241		0.0375	0.0375		0.0375	0.0375	0.0000	2,323.4168	2,323.4168	0.5921		2,338.2191
Total	**0.4630**	**8.5434**	**15.4154**	**0.0241**		**0.0375**	**0.0375**		**0.0375**	**0.0375**	**0.0000**	**2,323.4168**	**2,323.4168**	**0.5921**		**2,338.2191**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0210	0.6446	0.1860	1.7300e-003	0.0419	1.2500e-003	0.0432	0.0122	1.2000e-003	0.0134		185.4792	185.4792	0.0117		185.7706
Worker	0.0448	0.0295	0.3392	1.0400e-003	0.1030	8.7000e-004	0.1039	0.0275	8.1000e-004	0.0283		103.4570	103.4570	2.8500e-003		103.5282
Total	**0.0658**	**0.6740**	**0.5252**	**2.7700e-003**	**0.1450**	**2.1200e-003**	**0.1471**	**0.0397**	**2.0100e-003**	**0.0417**		**288.9362**	**288.9362**	**0.0145**		**289.2988**

3.3 Asphalt Demolition Debris Haul - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					1.1008	0.0000	1.1008	0.1667	0.0000	0.1667			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**1.1008**	**0.0000**	**1.1008**	**0.1667**	**0.0000**	**0.1667**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1264	3.6765	1.0142	0.0122	0.2971	0.0121	0.3092	0.0814	0.0116	0.0930		1,327.9454	1,327.9454	0.0878		1,330.1410
Vendor	5.9900e-003	0.1842	0.0532	5.0000e-004	0.0128	3.6000e-004	0.0132	3.6900e-003	3.4000e-004	4.0300e-003		52.9941	52.9941	3.3300e-003		53.0773
Worker	0.0448	0.0295	0.3392	1.0400e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		103.4570	103.4570	2.8500e-003		103.5282
Total	**0.1771**	**3.8901**	**1.4066**	**0.0138**	**0.4217**	**0.0133**	**0.4350**	**0.1148**	**0.0127**	**0.1275**		**1,484.3964**	**1,484.3964**	**0.0940**		**1,486.7465**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.4706	0.0000	0.4706	0.0713	0.0000	0.0713			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.4706**	**0.0000**	**0.4706**	**0.0713**	**0.0000**	**0.0713**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1264	3.6765	1.0142	0.0122	0.2769	0.0121	0.2890	0.0765	0.0116	0.0880		1,327.9454	1,327.9454	0.0878		1,330.1410
Vendor	5.9900e-003	0.1842	0.0532	5.0000e-004	0.0120	3.6000e-004	0.0123	3.4900e-003	3.4000e-004	3.8300e-003		52.9941	52.9941	3.3300e-003		53.0773
Worker	0.0448	0.0295	0.3392	1.0400e-003	0.1030	8.7000e-004	0.1039	0.0275	8.1000e-004	0.0283		103.4570	103.4570	2.8500e-003		103.5282
Total	**0.1771**	**3.8901**	**1.4066**	**0.0138**	**0.3919**	**0.0133**	**0.4052**	**0.1075**	**0.0127**	**0.1201**		**1,484.3964**	**1,484.3964**	**0.0940**		**1,486.7465**

3.4 Asphalt Demolition Debris Onsite Reprocessing - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.4794	3.2250	4.3312	7.0200e-003		0.1801	0.1801		0.1801	0.1801		664.5301	664.5301	0.0433		665.6118
Total	**0.4794**	**3.2250**	**4.3312**	**7.0200e-003**		**0.1801**	**0.1801**		**0.1801**	**0.1801**		**664.5301**	**664.5301**	**0.0433**		**665.6118**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	5.9900e-003	0.1842	0.0532	5.0000e-004	0.0128	3.6000e-004	0.0132	3.6900e-003	3.4000e-004	4.0300e-003		52.9941	52.9941	3.3300e-003		53.0773
Worker	0.0448	0.0295	0.3392	1.0400e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		103.4570	103.4570	2.8500e-003		103.5282
Total	**0.0508**	**0.2136**	**0.3923**	**1.5400e-003**	**0.1246**	**1.2300e-003**	**0.1258**	**0.0333**	**1.1500e-003**	**0.0345**		**156.4510**	**156.4510**	**6.1800e-003**		**156.6055**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1286	2.5024	4.3265	7.0200e-003		9.3500e-003	9.3500e-003		9.3500e-003	9.3500e-003	0.0000	664.5301	664.5301	0.0433		665.6118
Total	**0.1286**	**2.5024**	**4.3265**	**7.0200e-003**		**9.3500e-003**	**9.3500e-003**		**9.3500e-003**	**9.3500e-003**	**0.0000**	**664.5301**	**664.5301**	**0.0433**		**665.6118**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	5.9900e-003	0.1842	0.0532	5.0000e-004	0.0120	3.6000e-004	0.0123	3.4900e-003	3.4000e-004	3.8300e-003		52.9941	52.9941	3.3300e-003		53.0773
Worker	0.0448	0.0295	0.3392	1.0400e-003	0.1030	8.7000e-004	0.1039	0.0275	8.1000e-004	0.0283		103.4570	103.4570	2.8500e-003		103.5282
Total	**0.0508**	**0.2136**	**0.3923**	**1.5400e-003**	**0.1150**	**1.2300e-003**	**0.1163**	**0.0310**	**1.1500e-003**	**0.0321**		**156.4510**	**156.4510**	**6.1800e-003**		**156.6055**

3.5 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					5.7996	0.0000	5.7996	2.9537	0.0000	2.9537			0.0000			0.0000
Off-Road	1.3122	14.6277	7.0939	0.0172		0.6225	0.6225		0.5727	0.5727		1,666.1738	1,666.1738	0.5389		1,679.6457
Total	**1.3122**	**14.6277**	**7.0939**	**0.0172**	**5.7996**	**0.6225**	**6.4221**	**2.9537**	**0.5727**	**3.5264**		**1,666.1738**	**1,666.1738**	**0.5389**		**1,679.6457**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.9900e-003	0.2762	0.0797	7.4000e-004	0.0192	5.4000e-004	0.0197	5.5300e-003	5.1000e-004	6.0400e-003		79.4911	79.4911	5.0000e-003		79.6160
Worker	0.0224	0.0147	0.1696	5.2000e-004	0.0559	4.4000e-004	0.0563	0.0148	4.0000e-004	0.0152		51.7285	51.7285	1.4200e-003		51.7641
Total	**0.0314**	**0.2910**	**0.2493**	**1.2600e-003**	**0.0751**	**9.8000e-004**	**0.0761**	**0.0204**	**9.1000e-004**	**0.0213**		**131.2196**	**131.2196**	**6.4200e-003**		**131.3801**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.4793	0.0000	2.4793	1.2627	0.0000	1.2627			0.0000			0.0000
Off-Road	0.2998	5.0659	9.8221	0.0172		0.0281	0.0281		0.0281	0.0281	0.0000	1,666.1738	1,666.1738	0.5389		1,679.6457
Total	**0.2998**	**5.0659**	**9.8221**	**0.0172**	**2.4793**	**0.0281**	**2.5074**	**1.2627**	**0.0281**	**1.2908**	**0.0000**	**1,666.1738**	**1,666.1738**	**0.5389**		**1,679.6457**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.9900e-003	0.2762	0.0797	7.4000e-004	0.0180	5.4000e-004	0.0185	5.2300e-003	5.1000e-004	5.7400e-003		79.4911	79.4911	5.0000e-003		79.6160
Worker	0.0224	0.0147	0.1696	5.2000e-004	0.0515	4.4000e-004	0.0520	0.0138	4.0000e-004	0.0142		51.7285	51.7285	1.4200e-003		51.7641
Total	**0.0314**	**0.2910**	**0.2493**	**1.2600e-003**	**0.0695**	**9.8000e-004**	**0.0705**	**0.0190**	**9.1000e-004**	**0.0199**		**131.2196**	**131.2196**	**6.4200e-003**		**131.3801**

3.6 Site Preparation Soil Haul - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**		**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1264	3.6765	1.0142	0.0122	0.2971	0.0121	0.3092	0.0814	0.0116	0.0930		1,327.9454	1,327.9454	0.0878		1,330.1410
Vendor	3.0000e-003	0.0921	0.0266	2.5000e-004	6.4000e-003	1.8000e-004	6.5800e-003	1.8400e-003	1.7000e-004	2.0100e-003		26.4970	26.4970	1.6700e-003		26.5387
Worker	0.0224	0.0147	0.1696	5.2000e-004	0.0559	4.4000e-004	0.0563	0.0148	4.0000e-004	0.0152		51.7285	51.7285	1.4200e-003		51.7641
Total	**0.1518**	**3.7833**	**1.2104**	**0.0130**	**0.3594**	**0.0127**	**0.3721**	**0.0981**	**0.0121**	**0.1102**		**1,406.1709**	**1,406.1709**	**0.0909**		**1,408.4437**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000			0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.1264	3.6765	1.0142	0.0122	0.2769	0.0121	0.2890	0.0765	0.0116	0.0880		1,327.9454	1,327.9454	0.0878		1,330.1410
Vendor	3.0000e-003	0.0921	0.0266	2.5000e-004	5.9900e-003	1.8000e-004	6.1700e-003	1.7400e-003	1.7000e-004	1.9100e-003		26.4970	26.4970	1.6700e-003		26.5387
Worker	0.0224	0.0147	0.1696	5.2000e-004	0.0515	4.4000e-004	0.0520	0.0138	4.0000e-004	0.0142		51.7285	51.7285	1.4200e-003		51.7641
Total	**0.1518**	**3.7833**	**1.2104**	**0.0130**	**0.3344**	**0.0127**	**0.3471**	**0.0920**	**0.0121**	**0.1041**		**1,406.1709**	**1,406.1709**	**0.0909**		**1,408.4437**

3.7 Rough Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9143	0.0000	4.9143	2.5256	0.0000	2.5256			0.0000			0.0000
Off-Road	1.0832	12.0046	5.9360	0.0141		0.5173	0.5173		0.4759	0.4759		1,364.8198	1,364.8198	0.4414		1,375.8551
Total	**1.0832**	**12.0046**	**5.9360**	**0.0141**	**4.9143**	**0.5173**	**5.4315**	**2.5256**	**0.4759**	**3.0015**		**1,364.8198**	**1,364.8198**	**0.4414**		**1,375.8551**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.9900e-003	0.2762	0.0797	7.4000e-004	0.0192	5.4000e-004	0.0197	5.5300e-003	5.1000e-004	6.0400e-003		79.4911	79.4911	5.0000e-003		79.6160
Worker	0.0896	0.0589	0.6784	2.0800e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6100e-003	0.0609		206.9139	206.9139	5.7000e-003		207.0563
Total	**0.0986**	**0.3352**	**0.7581**	**2.8200e-003**	**0.2428**	**2.2900e-003**	**0.2450**	**0.0648**	**2.1200e-003**	**0.0669**		**286.4050**	**286.4050**	**0.0107**		**286.6723**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.1008	0.0000	2.1008	1.0797	0.0000	1.0797			0.0000			0.0000
Off-Road	0.2466	4.1795	8.0841	0.0141		0.0230	0.0230		0.0230	0.0230	0.0000	1,364.8198	1,364.8198	0.4414		1,375.8551
Total	**0.2466**	**4.1795**	**8.0841**	**0.0141**	**2.1008**	**0.0230**	**2.1238**	**1.0797**	**0.0230**	**1.1027**	**0.0000**	**1,364.8198**	**1,364.8198**	**0.4414**		**1,375.8551**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	8.9900e-003	0.2762	0.0797	7.4000e-004	0.0180	5.4000e-004	0.0185	5.2300e-003	5.1000e-004	5.7400e-003		79.4911	79.4911	5.0000e-003		79.6160
Worker	0.0896	0.0589	0.6784	2.0800e-003	0.2061	1.7500e-003	0.2078	0.0550	1.6100e-003	0.0566		206.9139	206.9139	5.7000e-003		207.0563
Total	**0.0986**	**0.3352**	**0.7581**	**2.8200e-003**	**0.2240**	**2.2900e-003**	**0.2263**	**0.0602**	**2.1200e-003**	**0.0624**		**286.4050**	**286.4050**	**0.0107**		**286.6723**

3.8 Utility Trenching - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2024	1.7770	3.2551	5.1700e-003		0.0859	0.0859		0.0790	0.0790		500.0153	500.0153	0.1617		504.0582
Total	**0.2024**	**1.7770**	**3.2551**	**5.1700e-003**		**0.0859**	**0.0859**		**0.0790**	**0.0790**		**500.0153**	**500.0153**	**0.1617**		**504.0582**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0150	0.4604	0.1329	1.2400e-003	0.0320	9.0000e-004	0.0329	9.2200e-003	8.6000e-004	0.0101		132.4851	132.4851	8.3300e-003		132.6933
Worker	0.0448	0.0295	0.3392	1.0400e-003	0.1118	8.7000e-004	0.1127	0.0296	8.1000e-004	0.0305		103.4570	103.4570	2.8500e-003		103.5282
Total	**0.0598**	**0.4899**	**0.4721**	**2.2800e-003**	**0.1438**	**1.7700e-003**	**0.1456**	**0.0389**	**1.6700e-003**	**0.0405**		**235.9421**	**235.9421**	**0.0112**		**236.2215**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0635	2.2767	3.9180	5.1700e-003		8.4700e-003	8.4700e-003		8.4700e-003	8.4700e-003	0.0000	500.0153	500.0153	0.1617		504.0582
Total	**0.0635**	**2.2767**	**3.9180**	**5.1700e-003**		**8.4700e-003**	**8.4700e-003**		**8.4700e-003**	**8.4700e-003**	**0.0000**	**500.0153**	**500.0153**	**0.1617**		**504.0582**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0150	0.4604	0.1329	1.2400e-003	0.0300	9.0000e-004	0.0309	8.7100e-003	8.6000e-004	9.5700e-003		132.4851	132.4851	8.3300e-003		132.6933
Worker	0.0448	0.0295	0.3392	1.0400e-003	0.1030	8.7000e-004	0.1039	0.0275	8.1000e-004	0.0283		103.4570	103.4570	2.8500e-003		103.5282
Total	**0.0598**	**0.4899**	**0.4721**	**2.2800e-003**	**0.1330**	**1.7700e-003**	**0.1348**	**0.0362**	**1.6700e-003**	**0.0379**		**235.9421**	**235.9421**	**0.0112**		**236.2215**

3.9 Parking Structure Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6487	12.5031	12.7264	0.0221		0.5889	0.5889		0.5689	0.5689		2,001.5429	2,001.5429	0.3486		2,010.2581
Total	**1.6487**	**12.5031**	**12.7264**	**0.0221**		**0.5889**	**0.5889**		**0.5689**	**0.5689**		**2,001.5429**	**2,001.5429**	**0.3486**		**2,010.2581**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0150	0.4604	0.1329	1.2400e-003	0.0320	9.0000e-004	0.0329	9.2200e-003	8.6000e-004	0.0101		132.4851	132.4851	8.3300e-003		132.6933
Worker	0.1120	0.0736	0.8479	2.6000e-003	0.2794	2.1900e-003	0.2816	0.0741	2.0100e-003	0.0761		258.6424	258.6424	7.1200e-003		258.8204
Total	**0.1269**	**0.5340**	**0.9808**	**3.8400e-003**	**0.3115**	**3.0900e-003**	**0.3145**	**0.0833**	**2.8700e-003**	**0.0862**		**391.1275**	**391.1275**	**0.0155**		**391.5137**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0998	9.3977	14.0755	0.0221		0.2132	0.2132		0.2132	0.2132	0.0000	2,001.5429	2,001.5429	0.3486		2,010.2581
Total	**1.0998**	**9.3977**	**14.0755**	**0.0221**		**0.2132**	**0.2132**		**0.2132**	**0.2132**	**0.0000**	**2,001.5429**	**2,001.5429**	**0.3486**		**2,010.2581**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0150	0.4604	0.1329	1.2400e-003	0.0300	9.0000e-004	0.0309	8.7100e-003	8.6000e-004	9.5700e-003		132.4851	132.4851	8.3300e-003		132.6933
Worker	0.1120	0.0736	0.8479	2.6000e-003	0.2576	2.1900e-003	0.2598	0.0687	2.0100e-003	0.0708		258.6424	258.6424	7.1200e-003		258.8204
Total	**0.1269**	**0.5340**	**0.9808**	**3.8400e-003**	**0.2875**	**3.0900e-003**	**0.2906**	**0.0775**	**2.8700e-003**	**0.0803**		**391.1275**	**391.1275**	**0.0155**		**391.5137**

3.10 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.6487	12.5031	12.7264	0.0221		0.5889	0.5889		0.5689	0.5689		2,001.5429	2,001.5429	0.3486		2,010.2581
Total	**1.6487**	**12.5031**	**12.7264**	**0.0221**		**0.5889**	**0.5889**		**0.5689**	**0.5689**		**2,001.5429**	**2,001.5429**	**0.3486**		**2,010.2581**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0599	1.8416	0.5315	4.9600e-003	0.1281	3.5800e-003	0.1316	0.0369	3.4300e-003	0.0403		529.9406	529.9406	0.0333		530.7732
Worker	0.2239	0.1473	1.6959	5.1900e-003	0.5589	4.3700e-003	0.5633	0.1482	4.0300e-003	0.1523		517.2847	517.2847	0.0142		517.6408
Total	**0.2838**	**1.9889**	**2.2274**	**0.0102**	**0.6869**	**7.9500e-003**	**0.6949**	**0.1851**	**7.4600e-003**	**0.1926**		**1,047.2253**	**1,047.2253**	**0.0476**		**1,048.4140**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0998	9.3977	14.0755	0.0221		0.2132	0.2132		0.2132	0.2132	0.0000	2,001.5429	2,001.5429	0.3486		2,010.2581
Total	**1.0998**	**9.3977**	**14.0755**	**0.0221**		**0.2132**	**0.2132**		**0.2132**	**0.2132**	**0.0000**	**2,001.5429**	**2,001.5429**	**0.3486**		**2,010.2581**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0599	1.8416	0.5315	4.9600e-003	0.1198	3.5800e-003	0.1234	0.0349	3.4300e-003	0.0383		529.9406	529.9406	0.0333		530.7732
Worker	0.2239	0.1473	1.6959	5.1900e-003	0.5152	4.3700e-003	0.5195	0.1375	4.0300e-003	0.1415		517.2847	517.2847	0.0142		517.6408
Total	**0.2838**	**1.9889**	**2.2274**	**0.0102**	**0.6350**	**7.9500e-003**	**0.6430**	**0.1723**	**7.4600e-003**	**0.1798**		**1,047.2253**	**1,047.2253**	**0.0476**		**1,048.4140**

3.10 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5233	11.7104	12.6111	0.0221		0.5145	0.5145		0.4968	0.4968		2,001.7877	2,001.7877	0.3399		2,010.2858
Total	**1.5233**	**11.7104**	**12.6111**	**0.0221**		**0.5145**	**0.5145**		**0.4968**	**0.4968**		**2,001.7877**	**2,001.7877**	**0.3399**		**2,010.2858**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0445	1.3948	0.4723	4.7900e-003	0.1281	1.7000e-003	0.1298	0.0369	1.6300e-003	0.0385		513.4826	513.4826	0.0293		514.2156
Worker	0.2110	0.1332	1.5588	5.0000e-003	0.5589	4.2500e-003	0.5631	0.1482	3.9100e-003	0.1521		498.3603	498.3603	0.0128		498.6809
Total	**0.2555**	**1.5280**	**2.0312**	**9.7900e-003**	**0.6869**	**5.9500e-003**	**0.6929**	**0.1851**	**5.5400e-003**	**0.1906**		**1,011.8429**	**1,011.8429**	**0.0422**		**1,012.8965**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0330	9.2707	14.0218	0.0221		0.1869	0.1869		0.1869	0.1869	0.0000	2,001.7877	2,001.7877	0.3399		2,010.2858
Total	**1.0330**	**9.2707**	**14.0218**	**0.0221**		**0.1869**	**0.1869**		**0.1869**	**0.1869**	**0.0000**	**2,001.7877**	**2,001.7877**	**0.3399**		**2,010.2858**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0445	1.3948	0.4723	4.7900e-003	0.1198	1.7000e-003	0.1215	0.0349	1.6300e-003	0.0365		513.4826	513.4826	0.0293		514.2156
Worker	0.2110	0.1332	1.5588	5.0000e-003	0.5152	4.2500e-003	0.5194	0.1375	3.9100e-003	0.1414		498.3603	498.3603	0.0128		498.6809
Total	**0.2555**	**1.5280**	**2.0312**	**9.7900e-003**	**0.6350**	**5.9500e-003**	**0.6409**	**0.1723**	**5.5400e-003**	**0.1779**		**1,011.8429**	**1,011.8429**	**0.0422**		**1,012.8965**

3.10 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.4200	11.0639	12.5172	0.0221		0.4506	0.4506		0.4348	0.4348		2,001.9214	2,001.9214	0.3334		2,010.2563
Total	**1.4200**	**11.0639**	**12.5172**	**0.0221**		**0.4506**	**0.4506**		**0.4348**	**0.4348**		**2,001.9214**	**2,001.9214**	**0.3334**		**2,010.2563**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0434	1.3898	0.4580	4.7700e-003	0.1281	1.6700e-003	0.1297	0.0369	1.6000e-003	0.0385		511.4911	511.4911	0.0289		512.2130
Worker	0.2002	0.1214	1.4512	4.8400e-003	0.5589	4.1900e-003	0.5631	0.1482	3.8600e-003	0.1521		482.9019	482.9019	0.0118		483.1957
Total	**0.2436**	**1.5112**	**1.9092**	**9.6100e-003**	**0.6869**	**5.8600e-003**	**0.6928**	**0.1851**	**5.4600e-003**	**0.1905**		**994.3930**	**994.3930**	**0.0406**		**995.4087**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9771	9.1513	13.9791	0.0221		0.1639	0.1639		0.1639	0.1639	0.0000	2,001.9214	2,001.9214	0.3334		2,010.2563
Total	**0.9771**	**9.1513**	**13.9791**	**0.0221**		**0.1639**	**0.1639**		**0.1639**	**0.1639**	**0.0000**	**2,001.9214**	**2,001.9214**	**0.3334**		**2,010.2563**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0434	1.3898	0.4580	4.7700e-003	0.1198	1.6700e-003	0.1215	0.0349	1.6000e-003	0.0365		511.4911	511.4911	0.0289		512.2130
Worker	0.2002	0.1214	1.4512	4.8400e-003	0.5152	4.1900e-003	0.5193	0.1375	3.8600e-003	0.1413		482.9019	482.9019	0.0118		483.1957
Total	**0.2436**	**1.5112**	**1.9092**	**9.6100e-003**	**0.6350**	**5.8600e-003**	**0.6409**	**0.1723**	**5.4600e-003**	**0.1778**		**994.3930**	**994.3930**	**0.0406**		**995.4087**

3.11 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.0894					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1917	1.3030	1.8111	2.9700e-003		0.0708	0.0708		0.0708	0.0708		281.4481	281.4481	0.0168		281.8690
Total	**3.2811**	**1.3030**	**1.8111**	**2.9700e-003**		**0.0708**	**0.0708**		**0.0708**	**0.0708**		**281.4481**	**281.4481**	**0.0168**		**281.8690**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0111	0.3487	0.1181	1.2000e-003	0.0320	4.3000e-004	0.0324	9.2200e-003	4.1000e-004	9.6200e-003		128.3707	128.3707	7.3300e-003		128.5539
Worker	0.0844	0.0533	0.6235	2.0000e-003	0.2236	1.7000e-003	0.2253	0.0593	1.5700e-003	0.0609		199.3441	199.3441	5.1300e-003		199.4724
Total	**0.0955**	**0.4020**	**0.7416**	**3.2000e-003**	**0.2556**	**2.1300e-003**	**0.2577**	**0.0685**	**1.9800e-003**	**0.0705**		**327.7148**	**327.7148**	**0.0125**		**328.0263**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.0894					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0545	1.0598	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0168		281.8690
Total	**3.1439**	**1.0598**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0168**		**281.8690**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0111	0.3487	0.1181	1.2000e-003	0.0300	4.3000e-004	0.0304	8.7100e-003	4.1000e-004	9.1200e-003		128.3707	128.3707	7.3300e-003		128.5539
Worker	0.0844	0.0533	0.6235	2.0000e-003	0.2061	1.7000e-003	0.2078	0.0550	1.5700e-003	0.0566		199.3441	199.3441	5.1300e-003		199.4724
Total	**0.0955**	**0.4020**	**0.7416**	**3.2000e-003**	**0.2360**	**2.1300e-003**	**0.2382**	**0.0637**	**1.9800e-003**	**0.0657**		**327.7148**	**327.7148**	**0.0125**		**328.0263**

3.11 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.0894					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**3.2702**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0109	0.3474	0.1145	1.1900e-003	0.0320	4.2000e-004	0.0324	9.2200e-003	4.0000e-004	9.6200e-003		127.8728	127.8728	7.2200e-003		128.0533
Worker	0.0801	0.0486	0.5805	1.9400e-003	0.2236	1.6800e-003	0.2252	0.0593	1.5400e-003	0.0608		193.1608	193.1608	4.7000e-003		193.2783
Total	**0.0909**	**0.3960**	**0.6950**	**3.1300e-003**	**0.2556**	**2.1000e-003**	**0.2577**	**0.0685**	**1.9400e-003**	**0.0705**		**321.0336**	**321.0336**	**0.0119**		**321.3315**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	3.0894					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.0545	1.0598	1.8324	2.9700e-003		3.9600e-003	3.9600e-003		3.9600e-003	3.9600e-003	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**3.1439**	**1.0598**	**1.8324**	**2.9700e-003**		**3.9600e-003**	**3.9600e-003**		**3.9600e-003**	**3.9600e-003**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0109	0.3474	0.1145	1.1900e-003	0.0300	4.2000e-004	0.0304	8.7100e-003	4.0000e-004	9.1100e-003		127.8728	127.8728	7.2200e-003		128.0533
Worker	0.0801	0.0486	0.5805	1.9400e-003	0.2061	1.6800e-003	0.2077	0.0550	1.5400e-003	0.0565		193.1608	193.1608	4.7000e-003		193.2783
Total	**0.0909**	**0.3960**	**0.6950**	**3.1300e-003**	**0.2360**	**2.1000e-003**	**0.2381**	**0.0637**	**1.9400e-003**	**0.0657**		**321.0336**	**321.0336**	**0.0119**		**321.3315**

3.12 Fine Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9143	0.0000	4.9143	2.5256	0.0000	2.5256			0.0000			0.0000
Off-Road	0.9335	10.1789	5.5516	0.0141		0.4201	0.4201		0.3865	0.3865		1,364.7713	1,364.7713	0.4414		1,375.8062
Total	**0.9335**	**10.1789**	**5.5516**	**0.0141**	**4.9143**	**0.4201**	**5.3343**	**2.5256**	**0.3865**	**2.9121**		**1,364.7713**	**1,364.7713**	**0.4414**		**1,375.8062**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	6.6800e-003	0.2092	0.0709	7.2000e-004	0.0192	2.6000e-004	0.0195	5.5300e-003	2.4000e-004	5.7700e-003		77.0224	77.0224	4.4000e-003		77.1323
Worker	0.0211	0.0133	0.1559	5.0000e-004	0.0559	4.3000e-004	0.0563	0.0148	3.9000e-004	0.0152		49.8360	49.8360	1.2800e-003		49.8681
Total	**0.0278**	**0.2225**	**0.2267**	**1.2200e-003**	**0.0751**	**6.9000e-004**	**0.0758**	**0.0204**	**6.3000e-004**	**0.0210**		**126.8584**	**126.8584**	**5.6800e-003**		**127.0004**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.1008	0.0000	2.1008	1.0797	0.0000	1.0797			0.0000			0.0000
Off-Road	0.2466	4.1795	8.0841	0.0141		0.0230	0.0230		0.0230	0.0230	0.0000	1,364.7713	1,364.7713	0.4414		1,375.8062
Total	**0.2466**	**4.1795**	**8.0841**	**0.0141**	**2.1008**	**0.0230**	**2.1238**	**1.0797**	**0.0230**	**1.1027**	**0.0000**	**1,364.7713**	**1,364.7713**	**0.4414**		**1,375.8062**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	6.6800e-003	0.2092	0.0709	7.2000e-004	0.0180	2.6000e-004	0.0182	5.2300e-003	2.4000e-004	5.4700e-003		77.0224	77.0224	4.4000e-003		77.1323
Worker	0.0211	0.0133	0.1559	5.0000e-004	0.0515	4.3000e-004	0.0519	0.0138	3.9000e-004	0.0141		49.8360	49.8360	1.2800e-003		49.8681
Total	**0.0278**	**0.2225**	**0.2267**	**1.2200e-003**	**0.0695**	**6.9000e-004**	**0.0702**	**0.0190**	**6.3000e-004**	**0.0196**		**126.8584**	**126.8584**	**5.6800e-003**		**127.0004**

3.12 Fine Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					4.9143	0.0000	4.9143	2.5256	0.0000	2.5256			0.0000			0.0000
Off-Road	0.9132	9.7297	5.5468	0.0141		0.4001	0.4001		0.3681	0.3681		1,364.6623	1,364.6623	0.4414		1,375.6962
Total	**0.9132**	**9.7297**	**5.5468**	**0.0141**	**4.9143**	**0.4001**	**5.3144**	**2.5256**	**0.3681**	**2.8937**		**1,364.6623**	**1,364.6623**	**0.4414**		**1,375.6962**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	6.5100e-003	0.2085	0.0687	7.2000e-004	0.0192	2.5000e-004	0.0195	5.5300e-003	2.4000e-004	5.7700e-003		76.7237	76.7237	4.3300e-003		76.8320
Worker	0.0200	0.0121	0.1451	4.8000e-004	0.0559	4.2000e-004	0.0563	0.0148	3.9000e-004	0.0152		48.2902	48.2902	1.1800e-003		48.3196
Total	**0.0265**	**0.2206**	**0.2138**	**1.2000e-003**	**0.0751**	**6.7000e-004**	**0.0758**	**0.0204**	**6.3000e-004**	**0.0210**		**125.0139**	**125.0139**	**5.5100e-003**		**125.1515**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					2.1008	0.0000	2.1008	1.0797	0.0000	1.0797			0.0000			0.0000
Off-Road	0.2466	4.1795	8.0841	0.0141		0.0230	0.0230		0.0230	0.0230	0.0000	1,364.6623	1,364.6623	0.4414		1,375.6962
Total	**0.2466**	**4.1795**	**8.0841**	**0.0141**	**2.1008**	**0.0230**	**2.1238**	**1.0797**	**0.0230**	**1.1027**	**0.0000**	**1,364.6623**	**1,364.6623**	**0.4414**		**1,375.6962**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	6.5100e-003	0.2085	0.0687	7.2000e-004	0.0180	2.5000e-004	0.0182	5.2300e-003	2.4000e-004	5.4700e-003		76.7237	76.7237	4.3300e-003		76.8320
Worker	0.0200	0.0121	0.1451	4.8000e-004	0.0515	4.2000e-004	0.0519	0.0138	3.9000e-004	0.0141		48.2902	48.2902	1.1800e-003		48.3196
Total	**0.0265**	**0.2206**	**0.2138**	**1.2000e-003**	**0.0695**	**6.7000e-004**	**0.0702**	**0.0190**	**6.3000e-004**	**0.0196**		**125.0139**	**125.0139**	**5.5100e-003**		**125.1515**

3.13 Finishing/Landscaping - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1887	1.5486	3.2578	5.1700e-003		0.0758	0.0758		0.0697	0.0697		500.1056	500.1056	0.1617		504.1492
Total	**0.1887**	**1.5486**	**3.2578**	**5.1700e-003**		**0.0758**	**0.0758**		**0.0697**	**0.0697**		**500.1056**	**500.1056**	**0.1617**		**504.1492**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0223	0.6974	0.2362	2.4000e-003	0.0640	8.5000e-004	0.0649	0.0184	8.1000e-004	0.0193		256.7413	256.7413	0.0147		257.1078
Worker	0.0844	0.0533	0.6235	2.0000e-003	0.2236	1.7000e-003	0.2253	0.0593	1.5700e-003	0.0609		199.3441	199.3441	5.1300e-003		199.4724
Total	**0.1066**	**0.7507**	**0.8597**	**4.4000e-003**	**0.2876**	**2.5500e-003**	**0.2901**	**0.0777**	**2.3800e-003**	**0.0801**		**456.0854**	**456.0854**	**0.0198**		**456.5802**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0635	2.2767	3.9180	5.1700e-003		8.4700e-003	8.4700e-003		8.4700e-003	8.4700e-003	0.0000	500.1056	500.1056	0.1617		504.1492
Total	**0.0635**	**2.2767**	**3.9180**	**5.1700e-003**		**8.4700e-003**	**8.4700e-003**		**8.4700e-003**	**8.4700e-003**	**0.0000**	**500.1056**	**500.1056**	**0.1617**		**504.1492**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0223	0.6974	0.2362	2.4000e-003	0.0599	8.5000e-004	0.0608	0.0174	8.1000e-004	0.0182		256.7413	256.7413	0.0147		257.1078
Worker	0.0844	0.0533	0.6235	2.0000e-003	0.2061	1.7000e-003	0.2078	0.0550	1.5700e-003	0.0566		199.3441	199.3441	5.1300e-003		199.4724
Total	**0.1066**	**0.7507**	**0.8597**	**4.4000e-003**	**0.2660**	**2.5500e-003**	**0.2685**	**0.0724**	**2.3800e-003**	**0.0748**		**456.0854**	**456.0854**	**0.0198**		**456.5802**

3.13 Finishing/Landscaping - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.1803	1.4029	3.2650	5.1700e-003		0.0691	0.0691		0.0636	0.0636		500.2654	500.2654	0.1618		504.3103
Total	**0.1803**	**1.4029**	**3.2650**	**5.1700e-003**		**0.0691**	**0.0691**		**0.0636**	**0.0636**		**500.2654**	**500.2654**	**0.1618**		**504.3103**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0217	0.6949	0.2290	2.3900e-003	0.0640	8.4000e-004	0.0649	0.0184	8.0000e-004	0.0192		255.7456	255.7456	0.0144		256.1065
Worker	0.0801	0.0486	0.5805	1.9400e-003	0.2236	1.6800e-003	0.2252	0.0593	1.5400e-003	0.0608		193.1608	193.1608	4.7000e-003		193.2783
Total	**0.1018**	**0.7435**	**0.8095**	**4.3300e-003**	**0.2876**	**2.5200e-003**	**0.2901**	**0.0777**	**2.3400e-003**	**0.0801**		**448.9063**	**448.9063**	**0.0191**		**449.3848**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.0635	2.2767	3.9180	5.1700e-003		8.4700e-003	8.4700e-003		8.4700e-003	8.4700e-003	0.0000	500.2654	500.2654	0.1618		504.3103
Total	**0.0635**	**2.2767**	**3.9180**	**5.1700e-003**		**8.4700e-003**	**8.4700e-003**		**8.4700e-003**	**8.4700e-003**	**0.0000**	**500.2654**	**500.2654**	**0.1618**		**504.3103**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0217	0.6949	0.2290	2.3900e-003	0.0599	8.4000e-004	0.0608	0.0174	8.0000e-004	0.0182		255.7456	255.7456	0.0144		256.1065
Worker	0.0801	0.0486	0.5805	1.9400e-003	0.2061	1.6800e-003	0.2077	0.0550	1.5400e-003	0.0565		193.1608	193.1608	4.7000e-003		193.2783
Total	**0.1018**	**0.7435**	**0.8095**	**4.3300e-003**	**0.2660**	**2.5200e-003**	**0.2685**	**0.0724**	**2.3400e-003**	**0.0748**		**448.9063**	**448.9063**	**0.0191**		**449.3848**

3.14 Asphalt Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.6180	5.8607	8.8253	0.0136		0.2810	0.2810		0.2594	0.2594		1,297.8688	1,297.8688	0.4114		1,308.1547
Paving	0.0231					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.6410**	**5.8607**	**8.8253**	**0.0136**		**0.2810**	**0.2810**		**0.2594**	**0.2594**		**1,297.8688**	**1,297.8688**	**0.4114**		**1,308.1547**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0109	0.3474	0.1145	1.1900e-003	0.0320	4.2000e-004	0.0324	9.2200e-003	4.0000e-004	9.6200e-003		127.8728	127.8728	7.2200e-003		128.0533
Worker	0.0601	0.0364	0.4354	1.4500e-003	0.1677	1.2600e-003	0.1689	0.0445	1.1600e-003	0.0456		144.8706	144.8706	3.5300e-003		144.9587
Total	**0.0709**	**0.3839**	**0.5499**	**2.6400e-003**	**0.1997**	**1.6800e-003**	**0.2014**	**0.0537**	**1.5600e-003**	**0.0552**		**272.7434**	**272.7434**	**0.0108**		**273.0120**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.2149	5.7133	9.8512	0.0136		0.0213	0.0213		0.0213	0.0213	0.0000	1,297.8688	1,297.8688	0.4114		1,308.1547
Paving	0.0231					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.2379**	**5.7133**	**9.8512**	**0.0136**		**0.0213**	**0.0213**		**0.0213**	**0.0213**	**0.0000**	**1,297.8688**	**1,297.8688**	**0.4114**		**1,308.1547**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0109	0.3474	0.1145	1.1900e-003	0.0300	4.2000e-004	0.0304	8.7100e-003	4.0000e-004	9.1100e-003		127.8728	127.8728	7.2200e-003		128.0533
Worker	0.0601	0.0364	0.4354	1.4500e-003	0.1546	1.2600e-003	0.1558	0.0413	1.1600e-003	0.0424		144.8706	144.8706	3.5300e-003		144.9587
Total	**0.0709**	**0.3839**	**0.5499**	**2.6400e-003**	**0.1845**	**1.6800e-003**	**0.1862**	**0.0500**	**1.5600e-003**	**0.0515**		**272.7434**	**272.7434**	**0.0108**		**273.0120**

14th & LBB Development Project Construction Run

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	35.37	1000sqft	0.00	35,365.00	0
Other Asphalt Surfaces	9.50	1000sqft	0.22	9,500.00	0
Other Non-Asphalt Surfaces	27.63	1000sqft	0.63	27,633.00	0
Apartments High Rise	85.00	Dwelling Unit	0.38	81,280.00	243
Apartments Mid Rise	75.00	Dwelling Unit	0.31	62,430.00	215
Convenience Market (24 Hour)	4.00	1000sqft	0.00	4,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	531.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - 2019 SCE Sustainability Report

Land Use - based on info provided by applicant.

Construction Phase - based on info provided by applicant

Off-road Equipment -

Off-road Equipment - no additional equipment needed for Asphalt Demo Haul

Off-road Equipment - assuming 1 crusher for onsite reprocessing

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - assuming 1 excavator for F/L

Off-road Equipment -

Off-road Equipment -

Off-road Equipment -

Off-road Equipment - no additional equipment needed for Site Preparation Soil Haul

Off-road Equipment - assuming 1 excavator for trenching

Trips and VMT - based on info provided by applicant

Demolition -

Grading -

Architectural Coating - based on info provided by applicant

Energy Use -

Construction Off-road Equipment Mitigation - SCAQMD Rule 403 and 1186 and Mitigation Measures AQ-1 and AQ-2

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	ConstArea_Nonresidential_Exterior	2,000.00	3,552.00
tblArchitecturalCoating	ConstArea_Nonresidential_Interior	6,000.00	10,657.00
tblArchitecturalCoating	ConstArea_Parking	4,350.00	2,122.00
tblArchitecturalCoating	ConstArea_Residential_Exterior	97,004.00	40,909.00
tblArchitecturalCoating	ConstArea_Residential_Interior	291,013.00	122,726.00

tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblAreaCoating	Area_Nonresidential_Exterior	2000	1738
tblAreaCoating	Area_Nonresidential_Interior	6000	5213
tblAreaCoating	Area_Residential_Exterior	97004	97359
tblAreaCoating	Area_Residential_Interior	291013	292076
tblConstDustMitigation	CleanPavedRoadPercentReduction	0	9
tblConstDustMitigation	WaterExposedAreaPM10PercentReduction	61	55
tblConstDustMitigation	WaterExposedAreaPM25PercentReduction	61	55
tblConstDustMitigation	WaterUnpavedRoadVehicleSpeed	0	15
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	2.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	3.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	1.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	4.00
tblConstEquipMitigation	NumberOfEquipmentMitigated	0.00	9.00
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim

tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstEquipMitigation	Tier	No Change	Tier 4 Interim
tblConstructionPhase	NumDays	20.00	25.00
tblConstructionPhase	NumDays	20.00	25.00
tblConstructionPhase	NumDays	20.00	25.00
tblConstructionPhase	NumDays	2.00	10.00
tblConstructionPhase	NumDays	2.00	10.00
tblConstructionPhase	NumDays	4.00	20.00
tblConstructionPhase	NumDays	200.00	110.00
tblConstructionPhase	NumDays	200.00	305.00
tblConstructionPhase	NumDays	10.00	135.00
tblConstructionPhase	NumDays	4.00	110.00
tblConstructionPhase	NumDays	10.00	25.00
tblGrading	MaterialExported	0.00	400.00
tblLandUse	LandUseSquareFeet	35,370.00	35,365.00
tblLandUse	LandUseSquareFeet	27,630.00	27,633.00
tblLandUse	LandUseSquareFeet	85,000.00	81,280.00

tblLandUse	LandUseSquareFeet	75,000.00	62,430.00
tblLandUse	LotAcreage	0.81	0.00
tblLandUse	LotAcreage	1.37	0.38
tblLandUse	LotAcreage	1.97	0.31
tblLandUse	LotAcreage	0.09	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	531.44
tblSolidWaste	SolidWasteGenerationRate	12.02	10.46
tblTripsAndVMT	HaulingTripLength	20.00	34.00
tblTripsAndVMT	HaulingTripLength	20.00	34.00
tblTripsAndVMT	HaulingTripNumber	127.00	250.00
tblTripsAndVMT	HaulingTripNumber	40.00	100.00
tblTripsAndVMT	VendorTripNumber	0.00	7.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	2.00
tblTripsAndVMT	VendorTripNumber	0.00	3.00
tblTripsAndVMT	VendorTripNumber	0.00	1.00
tblTripsAndVMT	VendorTripNumber	0.00	3.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00

tblTripsAndVMT	VendorTripNumber	30.00	5.00
tblTripsAndVMT	VendorTripNumber	30.00	20.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	VendorTripNumber	0.00	3.00
tblTripsAndVMT	VendorTripNumber	0.00	10.00
tblTripsAndVMT	VendorTripNumber	0.00	5.00
tblTripsAndVMT	WorkerTripNumber	13.00	10.00
tblTripsAndVMT	WorkerTripNumber	0.00	10.00
tblTripsAndVMT	WorkerTripNumber	3.00	10.00
tblTripsAndVMT	WorkerTripNumber	8.00	5.00
tblTripsAndVMT	WorkerTripNumber	0.00	5.00
tblTripsAndVMT	WorkerTripNumber	8.00	20.00
tblTripsAndVMT	WorkerTripNumber	3.00	10.00
tblTripsAndVMT	WorkerTripNumber	147.00	25.00
tblTripsAndVMT	WorkerTripNumber	147.00	50.00
tblTripsAndVMT	WorkerTripNumber	29.00	20.00
tblTripsAndVMT	WorkerTripNumber	8.00	5.00
tblTripsAndVMT	WorkerTripNumber	3.00	20.00
tblTripsAndVMT	WorkerTripNumber	13.00	15.00
tblWater	IndoorWaterUseRate	296,290.09	257,772.37
tblWater	OutdoorWaterUseRate	181,597.15	157,989.52

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.1621	1.3678	1.2810	2.7000e-003	0.1284	0.0588	0.1872	0.0519	0.0561	0.1080	0.0000	234.2985	234.2985	0.0389	0.0000	235.2721
2023	0.4341	2.2117	2.2724	5.1000e-003	0.2956	0.0875	0.3830	0.1236	0.0838	0.2074	0.0000	440.4287	440.4287	0.0623	0.0000	441.9869
2024	0.1174	0.5390	0.5865	1.3000e-003	0.1258	0.0209	0.1467	0.0525	0.0197	0.0722	0.0000	114.2035	114.2035	0.0211	0.0000	114.7313
Maximum	**0.4341**	**2.2117**	**2.2724**	**5.1000e-003**	**0.2956**	**0.0875**	**0.3830**	**0.1236**	**0.0838**	**0.2074**	**0.0000**	**440.4287**	**440.4287**	**0.0623**	**0.0000**	**441.9869**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2022	0.0929	0.9566	1.4301	2.7000e-003	0.0730	0.0145	0.0875	0.0272	0.0145	0.0416	0.0000	234.2983	234.2983	0.0389	0.0000	235.2719
2023	0.3371	1.6610	2.5551	5.1000e-003	0.1782	0.0263	0.2045	0.0670	0.0263	0.0933	0.0000	440.4283	440.4283	0.0623	0.0000	441.9866
2024	0.0887	0.4191	0.6811	1.3000e-003	0.0661	3.9700e-003	0.0701	0.0258	3.9500e-003	0.0298	0.0000	114.2034	114.2034	0.0211	0.0000	114.7312
Maximum	**0.3371**	**1.6610**	**2.5551**	**5.1000e-003**	**0.1782**	**0.0263**	**0.2045**	**0.0670**	**0.0263**	**0.0933**	**0.0000**	**440.4283**	**440.4283**	**0.0623**	**0.0000**	**441.9866**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**27.31**	**26.27**	**-12.72**	**0.00**	**42.27**	**73.23**	**49.49**	**47.38**	**72.02**	**57.52**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	5-1-2022	7-31-2022	0.7781	0.4808
2	8-1-2022	10-31-2022	0.5286	0.4146
3	11-1-2022	1-31-2023	0.4976	0.3856
4	2-1-2023	4-30-2023	0.4770	0.3839
5	5-1-2023	7-31-2023	0.4924	0.3961
6	8-1-2023	10-31-2023	0.8262	0.6090
7	11-1-2023	1-31-2024	1.0604	0.7564
8	2-1-2024	4-30-2024	0.2729	0.2197
		Highest	1.0604	0.7564

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Asphalt Demolition	Demolition	5/1/2022	6/3/2022	5	25	a
2	Asphalt Demolition Debris Haul	Demolition	5/1/2022	6/3/2022	5	25	b
3	Asphalt Demolition Debris Onsite Reprocessing	Demolition	5/1/2022	6/3/2022	5	25	c
4	Site Preparation	Site Preparation	6/4/2022	6/17/2022	5	10	d
5	Site Preparation Soil Haul	Site Preparation	6/4/2022	6/17/2022	5	10	e
6	Rough Grading	Grading	6/18/2022	7/15/2022	5	20	f
7	Utility Trenching	Trenching	7/16/2022	9/16/2022	5	45	h
8	Parking Structure Construction	Building Construction	7/16/2022	12/16/2022	5	110	j
9	Building Construction	Building Construction	12/17/2022	2/16/2024	5	305	i
10	Architectural Coating	Architectural Coating	8/12/2023	2/16/2024	5	135	l
11	Fine Grading	Grading	9/16/2023	2/16/2024	5	110	g
12	Finishing/Landscaping	Trenching	12/16/2023	2/16/2024	5	45	m

13	Asphalt Paving	Paving	2/17/2024	3/22/2024	5	25	k

Acres of Grading (Site Preparation Phase): 5

Acres of Grading (Grading Phase): 0

Acres of Paving: 0.85

Residential Indoor: 122,726; Residential Outdoor: 40,909; Non-Residential Indoor: 10,657; Non-Residential Outdoor: 3,552; Striped

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Asphalt Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Asphalt Demolition	Rubber Tired Dozers	1	8.00	247	0.40
Asphalt Demolition	Tractors/Loaders/Backhoes	3	8.00	97	0.37
Asphalt Demolition Debris Haul	Concrete/Industrial Saws	0	8.00	81	0.73
Asphalt Demolition Debris Haul	Rubber Tired Dozers	0	8.00	247	0.40
Asphalt Demolition Debris Haul	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Asphalt Demolition Debris Onsite Reprocessing	Concrete/Industrial Saws	0	8.00	81	0.73
Asphalt Demolition Debris Onsite Reprocessing	Crushing/Proc. Equipment	1	8.00	85	0.78
Asphalt Demolition Debris Onsite Reprocessing	Rubber Tired Dozers	0	8.00	247	0.40
Asphalt Demolition Debris Onsite Reprocessing	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Graders	1	8.00	187	0.41
Site Preparation	Rubber Tired Dozers	1	7.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	1	8.00	97	0.37
Site Preparation Soil Haul	Graders	0	8.00	187	0.41
Site Preparation Soil Haul	Rubber Tired Dozers	0	7.00	247	0.40
Site Preparation Soil Haul	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Rough Grading	Graders	1	6.00	187	0.41
Rough Grading	Rubber Tired Dozers	1	6.00	247	0.40

Rough Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Utility Trenching	Excavators	1	8.00	158	0.38
Parking Structure Construction	Cranes	1	6.00	231	0.29
Parking Structure Construction	Forklifts	1	6.00	89	0.20
Parking Structure Construction	Generator Sets	1	8.00	84	0.74
Parking Structure Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Parking Structure Construction	Welders	3	8.00	46	0.45
Building Construction	Cranes	1	6.00	231	0.29
Building Construction	Forklifts	1	6.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	1	6.00	97	0.37
Building Construction	Welders	3	8.00	46	0.45
Architectural Coating	Air Compressors	1	6.00	78	0.48
Fine Grading	Graders	1	6.00	187	0.41
Fine Grading	Rubber Tired Dozers	1	6.00	247	0.40
Fine Grading	Tractors/Loaders/Backhoes	1	7.00	97	0.37
Finishing/Landscaping	Excavators	1	8.00	158	0.38
Asphalt Paving	Cement and Mortar Mixers	1	6.00	9	0.56
Asphalt Paving	Pavers	1	6.00	130	0.42
Asphalt Paving	Paving Equipment	1	8.00	132	0.36
Asphalt Paving	Rollers	1	7.00	80	0.38
Asphalt Paving	Tractors/Loaders/Backhoes	1	8.00	97	0.37

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Asphalt Demolition	5	10.00	7.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Asphalt Demolition Debris Haul	0	10.00	2.00	250.00	14.70	6.90	34.00	LD_Mix	HDT_Mix	HHDT
Asphalt Demolition Debris Onsite	1	10.00	2.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	3	5.00	3.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation Soil Haul	0	5.00	1.00	100.00	14.70	6.90	34.00	LD_Mix	HDT_Mix	HHDT
Rough Grading	3	20.00	3.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Utility Trenching	1	10.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Parking Structure Construction	7	25.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	7	50.00	20.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	20.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading	3	5.00	3.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Finishing/Landscaping	1	20.00	10.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Asphalt Paving	5	15.00	5.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Use Cleaner Engines for Construction Equipment

Replace Ground Cover

Water Exposed Area

Reduce Vehicle Speed on Unpaved Roads

Clean Paved Roads

3.2 Asphalt Demolition - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0211	0.2078	0.1745	3.0000e-004		0.0105	0.0105		9.7900e-003	9.7900e-003	0.0000	26.3471	26.3471	6.7100e-003	0.0000	26.5150
Total	**0.0211**	**0.2078**	**0.1745**	**3.0000e-004**		**0.0105**	**0.0105**		**9.7900e-003**	**9.7900e-003**	**0.0000**	**26.3471**	**26.3471**	**6.7100e-003**	**0.0000**	**26.5150**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.6000e-004	8.2000e-003	2.2200e-003	2.0000e-005	5.5000e-004	2.0000e-005	5.7000e-004	1.6000e-004	1.0000e-005	1.7000e-004	0.0000	2.1379	2.1379	1.3000e-004	0.0000	2.1411
Worker	5.0000e-004	3.8000e-004	4.3600e-003	1.0000e-005	1.3700e-003	1.0000e-005	1.3800e-003	3.6000e-004	1.0000e-005	3.7000e-004	0.0000	1.1927	1.1927	3.0000e-005	0.0000	1.1935
Total	**7.6000e-004**	**8.5800e-003**	**6.5800e-003**	**3.0000e-005**	**1.9200e-003**	**3.0000e-005**	**1.9500e-003**	**5.2000e-004**	**2.0000e-005**	**5.4000e-004**	**0.0000**	**3.3306**	**3.3306**	**1.6000e-004**	**0.0000**	**3.3346**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.7900e-003	0.1068	0.1927	3.0000e-004		4.7000e-004	4.7000e-004		4.7000e-004	4.7000e-004	0.0000	26.3471	26.3471	6.7100e-003	0.0000	26.5149
Total	**5.7900e-003**	**0.1068**	**0.1927**	**3.0000e-004**		**4.7000e-004**	**4.7000e-004**		**4.7000e-004**	**4.7000e-004**	**0.0000**	**26.3471**	**26.3471**	**6.7100e-003**	**0.0000**	**26.5149**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.6000e-004	8.2000e-003	2.2200e-003	2.0000e-005	5.2000e-004	2.0000e-005	5.3000e-004	1.5000e-004	1.0000e-005	1.7000e-004	0.0000	2.1379	2.1379	1.3000e-004	0.0000	2.1411
Worker	5.0000e-004	3.8000e-004	4.3600e-003	1.0000e-005	1.2600e-003	1.0000e-005	1.2700e-003	3.4000e-004	1.0000e-005	3.5000e-004	0.0000	1.1927	1.1927	3.0000e-005	0.0000	1.1935
Total	**7.6000e-004**	**8.5800e-003**	**6.5800e-003**	**3.0000e-005**	**1.7800e-003**	**3.0000e-005**	**1.8000e-003**	**4.9000e-004**	**2.0000e-005**	**5.2000e-004**	**0.0000**	**3.3306**	**3.3306**	**1.6000e-004**	**0.0000**	**3.3346**

3.3 Asphalt Demolition Debris Haul - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0138	0.0000	0.0138	2.0800e-003	0.0000	2.0800e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0138**	**0.0000**	**0.0138**	**2.0800e-003**	**0.0000**	**2.0800e-003**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.5700e-003	0.0468	0.0124	1.5000e-004	3.6500e-003	1.5000e-004	3.8000e-003	1.0000e-003	1.4000e-004	1.1500e-003	0.0000	15.1548	15.1548	9.8000e-004	0.0000	15.1794
Vendor	7.0000e-005	2.3400e-003	6.3000e-004	1.0000e-005	1.6000e-004	0.0000	1.6000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.6108	0.6108	4.0000e-005	0.0000	0.6117
Worker	5.0000e-004	3.8000e-004	4.3600e-003	1.0000e-005	1.3700e-003	1.0000e-005	1.3800e-003	3.6000e-004	1.0000e-005	3.7000e-004	0.0000	1.1927	1.1927	3.0000e-005	0.0000	1.1935
Total	**2.1400e-003**	**0.0495**	**0.0174**	**1.7000e-004**	**5.1800e-003**	**1.6000e-004**	**5.3400e-003**	**1.4100e-003**	**1.5000e-004**	**1.5700e-003**	**0.0000**	**16.9583**	**16.9583**	**1.0500e-003**	**0.0000**	**16.9846**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.8800e-003	0.0000	5.8800e-003	8.9000e-004	0.0000	8.9000e-004	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**5.8800e-003**	**0.0000**	**5.8800e-003**	**8.9000e-004**	**0.0000**	**8.9000e-004**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	1.5700e-003	0.0468	0.0124	1.5000e-004	3.4000e-003	1.5000e-004	3.5500e-003	9.4000e-004	1.4000e-004	1.0900e-003	0.0000	15.1548	15.1548	9.8000e-004	0.0000	15.1794
Vendor	7.0000e-005	2.3400e-003	6.3000e-004	1.0000e-005	1.5000e-004	0.0000	1.5000e-004	4.0000e-005	0.0000	5.0000e-005	0.0000	0.6108	0.6108	4.0000e-005	0.0000	0.6117
Worker	5.0000e-004	3.8000e-004	4.3600e-003	1.0000e-005	1.2600e-003	1.0000e-005	1.2700e-003	3.4000e-004	1.0000e-005	3.5000e-004	0.0000	1.1927	1.1927	3.0000e-005	0.0000	1.1935
Total	**2.1400e-003**	**0.0495**	**0.0174**	**1.7000e-004**	**4.8100e-003**	**1.6000e-004**	**4.9700e-003**	**1.3200e-003**	**1.5000e-004**	**1.4900e-003**	**0.0000**	**16.9583**	**16.9583**	**1.0500e-003**	**0.0000**	**16.9846**

3.4 Asphalt Demolition Debris Onsite Reprocessing - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.9900e-003	0.0403	0.0541	9.0000e-005		2.2500e-003	2.2500e-003		2.2500e-003	2.2500e-003	0.0000	7.5356	7.5356	4.9000e-004	0.0000	7.5479
Total	**5.9900e-003**	**0.0403**	**0.0541**	**9.0000e-005**		**2.2500e-003**	**2.2500e-003**		**2.2500e-003**	**2.2500e-003**	**0.0000**	**7.5356**	**7.5356**	**4.9000e-004**	**0.0000**	**7.5479**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.0000e-005	2.3400e-003	6.3000e-004	1.0000e-005	1.6000e-004	0.0000	1.6000e-004	5.0000e-005	0.0000	5.0000e-005	0.0000	0.6108	0.6108	4.0000e-005	0.0000	0.6117
Worker	5.0000e-004	3.8000e-004	4.3600e-003	1.0000e-005	1.3700e-003	1.0000e-005	1.3800e-003	3.6000e-004	1.0000e-005	3.7000e-004	0.0000	1.1927	1.1927	3.0000e-005	0.0000	1.1935
Total	**5.7000e-004**	**2.7200e-003**	**4.9900e-003**	**2.0000e-005**	**1.5300e-003**	**1.0000e-005**	**1.5400e-003**	**4.1000e-004**	**1.0000e-005**	**4.2000e-004**	**0.0000**	**1.8035**	**1.8035**	**7.0000e-005**	**0.0000**	**1.8053**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.6100e-003	0.0313	0.0541	9.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	7.5356	7.5356	4.9000e-004	0.0000	7.5479
Total	**1.6100e-003**	**0.0313**	**0.0541**	**9.0000e-005**		**1.2000e-004**	**1.2000e-004**		**1.2000e-004**	**1.2000e-004**	**0.0000**	**7.5356**	**7.5356**	**4.9000e-004**	**0.0000**	**7.5479**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.0000e-005	2.3400e-003	6.3000e-004	1.0000e-005	1.5000e-004	0.0000	1.5000e-004	4.0000e-005	0.0000	5.0000e-005	0.0000	0.6108	0.6108	4.0000e-005	0.0000	0.6117
Worker	5.0000e-004	3.8000e-004	4.3600e-003	1.0000e-005	1.2600e-003	1.0000e-005	1.2700e-003	3.4000e-004	1.0000e-005	3.5000e-004	0.0000	1.1927	1.1927	3.0000e-005	0.0000	1.1935
Total	**5.7000e-004**	**2.7200e-003**	**4.9900e-003**	**2.0000e-005**	**1.4100e-003**	**1.0000e-005**	**1.4200e-003**	**3.8000e-004**	**1.0000e-005**	**4.0000e-004**	**0.0000**	**1.8035**	**1.8035**	**7.0000e-005**	**0.0000**	**1.8053**

3.5 Site Preparation - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0290	0.0000	0.0290	0.0148	0.0000	0.0148	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.5600e-003	0.0731	0.0355	9.0000e-005		3.1100e-003	3.1100e-003		2.8600e-003	2.8600e-003	0.0000	7.5576	7.5576	2.4400e-003	0.0000	7.6187
Total	**6.5600e-003**	**0.0731**	**0.0355**	**9.0000e-005**	**0.0290**	**3.1100e-003**	**0.0321**	**0.0148**	**2.8600e-003**	**0.0176**	**0.0000**	**7.5576**	**7.5576**	**2.4400e-003**	**0.0000**	**7.6187**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0000e-005	1.4100e-003	3.8000e-004	0.0000	9.0000e-005	0.0000	1.0000e-004	3.0000e-005	0.0000	3.0000e-005	0.0000	0.3665	0.3665	2.0000e-005	0.0000	0.3670
Worker	1.0000e-004	8.0000e-005	8.7000e-004	0.0000	2.7000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2385	0.2385	1.0000e-005	0.0000	0.2387
Total	**1.4000e-004**	**1.4900e-003**	**1.2500e-003**	**0.0000**	**3.6000e-004**	**0.0000**	**3.8000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**0.6050**	**0.6050**	**3.0000e-005**	**0.0000**	**0.6057**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0124	0.0000	0.0124	6.3100e-003	0.0000	6.3100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	1.5000e-003	0.0253	0.0491	9.0000e-005		1.4000e-004	1.4000e-004		1.4000e-004	1.4000e-004	0.0000	7.5576	7.5576	2.4400e-003	0.0000	7.6187
Total	**1.5000e-003**	**0.0253**	**0.0491**	**9.0000e-005**	**0.0124**	**1.4000e-004**	**0.0125**	**6.3100e-003**	**1.4000e-004**	**6.4500e-003**	**0.0000**	**7.5576**	**7.5576**	**2.4400e-003**	**0.0000**	**7.6187**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	4.0000e-005	1.4100e-003	3.8000e-004	0.0000	9.0000e-005	0.0000	9.0000e-005	3.0000e-005	0.0000	3.0000e-005	0.0000	0.3665	0.3665	2.0000e-005	0.0000	0.3670
Worker	1.0000e-004	8.0000e-005	8.7000e-004	0.0000	2.5000e-004	0.0000	2.5000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2385	0.2385	1.0000e-005	0.0000	0.2387
Total	**1.4000e-004**	**1.4900e-003**	**1.2500e-003**	**0.0000**	**3.4000e-004**	**0.0000**	**3.4000e-004**	**1.0000e-004**	**0.0000**	**1.0000e-004**	**0.0000**	**0.6050**	**0.6050**	**3.0000e-005**	**0.0000**	**0.6057**

3.6 Site Preparation Soil Haul - 2022

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.3000e-004	0.0187	4.9700e-003	6.0000e-005	1.4600e-003	6.0000e-005	1.5200e-003	4.0000e-004	6.0000e-005	4.6000e-004	0.0000	6.0619	6.0619	3.9000e-004	0.0000	6.0718
Vendor	1.0000e-005	4.7000e-004	1.3000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1222	0.1222	1.0000e-005	0.0000	0.1224
Worker	1.0000e-004	8.0000e-005	8.7000e-004	0.0000	2.7000e-004	0.0000	2.8000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2385	0.2385	1.0000e-005	0.0000	0.2387
Total	**7.4000e-004**	**0.0193**	**5.9700e-003**	**6.0000e-005**	**1.7600e-003**	**6.0000e-005**	**1.8300e-003**	**4.8000e-004**	**6.0000e-005**	**5.4000e-004**	**0.0000**	**6.4226**	**6.4226**	**4.1000e-004**	**0.0000**	**6.4328**

Mitigated Construction On-Site

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

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	6.3000e-004	0.0187	4.9700e-003	6.0000e-005	1.3600e-003	6.0000e-005	1.4200e-003	3.8000e-004	6.0000e-005	4.3000e-004	0.0000	6.0619	6.0619	3.9000e-004	0.0000	6.0718
Vendor	1.0000e-005	4.7000e-004	1.3000e-004	0.0000	3.0000e-005	0.0000	3.0000e-005	1.0000e-005	0.0000	1.0000e-005	0.0000	0.1222	0.1222	1.0000e-005	0.0000	0.1224
Worker	1.0000e-004	8.0000e-005	8.7000e-004	0.0000	2.5000e-004	0.0000	2.5000e-004	7.0000e-005	0.0000	7.0000e-005	0.0000	0.2385	0.2385	1.0000e-005	0.0000	0.2387
Total	**7.4000e-004**	**0.0193**	**5.9700e-003**	**6.0000e-005**	**1.6400e-003**	**6.0000e-005**	**1.7000e-003**	**4.6000e-004**	**6.0000e-005**	**5.1000e-004**	**0.0000**	**6.4226**	**6.4226**	**4.1000e-004**	**0.0000**	**6.4328**

3.7 Rough Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0491	0.0000	0.0491	0.0253	0.0000	0.0253	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0108	0.1201	0.0594	1.4000e-004		5.1700e-003	5.1700e-003		4.7600e-003	4.7600e-003	0.0000	12.3814	12.3814	4.0000e-003	0.0000	12.4816
Total	**0.0108**	**0.1201**	**0.0594**	**1.4000e-004**	**0.0491**	**5.1700e-003**	**0.0543**	**0.0253**	**4.7600e-003**	**0.0300**	**0.0000**	**12.3814**	**12.3814**	**4.0000e-003**	**0.0000**	**12.4816**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.0000e-005	2.8100e-003	7.6000e-004	1.0000e-005	1.9000e-004	1.0000e-005	1.9000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.7330	0.7330	4.0000e-005	0.0000	0.7341
Worker	8.1000e-004	6.1000e-004	6.9700e-003	2.0000e-005	2.1900e-003	2.0000e-005	2.2100e-003	5.8000e-004	2.0000e-005	6.0000e-004	0.0000	1.9083	1.9083	5.0000e-005	0.0000	1.9096
Total	**9.0000e-004**	**3.4200e-003**	**7.7300e-003**	**3.0000e-005**	**2.3800e-003**	**3.0000e-005**	**2.4000e-003**	**6.3000e-004**	**3.0000e-005**	**6.6000e-004**	**0.0000**	**2.6413**	**2.6413**	**9.0000e-005**	**0.0000**	**2.6437**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0210	0.0000	0.0210	0.0108	0.0000	0.0108	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.4700e-003	0.0418	0.0808	1.4000e-004		2.3000e-004	2.3000e-004		2.3000e-004	2.3000e-004	0.0000	12.3814	12.3814	4.0000e-003	0.0000	12.4815
Total	**2.4700e-003**	**0.0418**	**0.0808**	**1.4000e-004**	**0.0210**	**2.3000e-004**	**0.0212**	**0.0108**	**2.3000e-004**	**0.0110**	**0.0000**	**12.3814**	**12.3814**	**4.0000e-003**	**0.0000**	**12.4815**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	9.0000e-005	2.8100e-003	7.6000e-004	1.0000e-005	1.8000e-004	1.0000e-005	1.8000e-004	5.0000e-005	1.0000e-005	6.0000e-005	0.0000	0.7330	0.7330	4.0000e-005	0.0000	0.7341
Worker	8.1000e-004	6.1000e-004	6.9700e-003	2.0000e-005	2.0200e-003	2.0000e-005	2.0400e-003	5.4000e-004	2.0000e-005	5.6000e-004	0.0000	1.9083	1.9083	5.0000e-005	0.0000	1.9096
Total	**9.0000e-004**	**3.4200e-003**	**7.7300e-003**	**3.0000e-005**	**2.2000e-003**	**3.0000e-005**	**2.2200e-003**	**5.9000e-004**	**3.0000e-005**	**6.2000e-004**	**0.0000**	**2.6413**	**2.6413**	**9.0000e-005**	**0.0000**	**2.6437**

3.8 Utility Trenching - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	4.5500e-003	0.0400	0.0732	1.2000e-004		1.9300e-003	1.9300e-003		1.7800e-003	1.7800e-003	0.0000	10.2061	10.2061	3.3000e-003	0.0000	10.2887
Total	**4.5500e-003**	**0.0400**	**0.0732**	**1.2000e-004**		**1.9300e-003**	**1.9300e-003**		**1.7800e-003**	**1.7800e-003**	**0.0000**	**10.2061**	**10.2061**	**3.3000e-003**	**0.0000**	**10.2887**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.3000e-004	0.0106	2.8500e-003	3.0000e-005	7.1000e-004	2.0000e-005	7.3000e-004	2.0000e-004	2.0000e-005	2.2000e-004	0.0000	2.7487	2.7487	1.6000e-004	0.0000	2.7528
Worker	9.1000e-004	6.8000e-004	7.8400e-003	2.0000e-005	2.4700e-003	2.0000e-005	2.4900e-003	6.5000e-004	2.0000e-005	6.7000e-004	0.0000	2.1469	2.1469	6.0000e-005	0.0000	2.1483
Total	**1.2400e-003**	**0.0112**	**0.0107**	**5.0000e-005**	**3.1800e-003**	**4.0000e-005**	**3.2200e-003**	**8.5000e-004**	**4.0000e-005**	**8.9000e-004**	**0.0000**	**4.8956**	**4.8956**	**2.2000e-004**	**0.0000**	**4.9012**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.4300e-003	0.0512	0.0882	1.2000e-004		1.9000e-004	1.9000e-004		1.9000e-004	1.9000e-004	0.0000	10.2061	10.2061	3.3000e-003	0.0000	10.2887
Total	**1.4300e-003**	**0.0512**	**0.0882**	**1.2000e-004**		**1.9000e-004**	**1.9000e-004**		**1.9000e-004**	**1.9000e-004**	**0.0000**	**10.2061**	**10.2061**	**3.3000e-003**	**0.0000**	**10.2887**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.3000e-004	0.0106	2.8500e-003	3.0000e-005	6.6000e-004	2.0000e-005	6.8000e-004	1.9000e-004	2.0000e-005	2.1000e-004	0.0000	2.7487	2.7487	1.6000e-004	0.0000	2.7528
Worker	9.1000e-004	6.8000e-004	7.8400e-003	2.0000e-005	2.2700e-003	2.0000e-005	2.2900e-003	6.1000e-004	2.0000e-005	6.3000e-004	0.0000	2.1469	2.1469	6.0000e-005	0.0000	2.1483
Total	**1.2400e-003**	**0.0112**	**0.0107**	**5.0000e-005**	**2.9300e-003**	**4.0000e-005**	**2.9700e-003**	**8.0000e-004**	**4.0000e-005**	**8.4000e-004**	**0.0000**	**4.8956**	**4.8956**	**2.2000e-004**	**0.0000**	**4.9012**

3.9 Parking Structure Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0907	0.6877	0.7000	1.2100e-003		0.0324	0.0324		0.0313	0.0313	0.0000	99.8673	99.8673	0.0174	0.0000	100.3022
Total	**0.0907**	**0.6877**	**0.7000**	**1.2100e-003**		**0.0324**	**0.0324**		**0.0313**	**0.0313**	**0.0000**	**99.8673**	**99.8673**	**0.0174**	**0.0000**	**100.3022**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.0000e-004	0.0258	6.9600e-003	7.0000e-005	1.7300e-003	5.0000e-005	1.7800e-003	5.0000e-004	5.0000e-005	5.5000e-004	0.0000	6.7191	6.7191	4.0000e-004	0.0000	6.7292
Worker	5.5500e-003	4.1600e-003	0.0479	1.5000e-004	0.0151	1.2000e-004	0.0152	4.0000e-003	1.1000e-004	4.1100e-003	0.0000	13.1196	13.1196	3.6000e-004	0.0000	13.1287
Total	**6.3500e-003**	**0.0299**	**0.0549**	**2.2000e-004**	**0.0168**	**1.7000e-004**	**0.0170**	**4.5000e-003**	**1.6000e-004**	**4.6600e-003**	**0.0000**	**19.8388**	**19.8388**	**7.6000e-004**	**0.0000**	**19.8578**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0605	0.5169	0.7742	1.2100e-003		0.0117	0.0117		0.0117	0.0117	0.0000	99.8672	99.8672	0.0174	0.0000	100.3020
Total	**0.0605**	**0.5169**	**0.7742**	**1.2100e-003**		**0.0117**	**0.0117**		**0.0117**	**0.0117**	**0.0000**	**99.8672**	**99.8672**	**0.0174**	**0.0000**	**100.3020**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	8.0000e-004	0.0258	6.9600e-003	7.0000e-005	1.6200e-003	5.0000e-005	1.6700e-003	4.7000e-004	5.0000e-005	5.2000e-004	0.0000	6.7191	6.7191	4.0000e-004	0.0000	6.7292
Worker	5.5500e-003	4.1600e-003	0.0479	1.5000e-004	0.0139	1.2000e-004	0.0140	3.7100e-003	1.1000e-004	3.8200e-003	0.0000	13.1196	13.1196	3.6000e-004	0.0000	13.1287
Total	**6.3500e-003**	**0.0299**	**0.0549**	**2.2000e-004**	**0.0155**	**1.7000e-004**	**0.0157**	**4.1800e-003**	**1.6000e-004**	**4.3400e-003**	**0.0000**	**19.8388**	**19.8388**	**7.6000e-004**	**0.0000**	**19.8578**

3.10 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	8.2400e-003	0.0625	0.0636	1.1000e-004		2.9400e-003	2.9400e-003		2.8400e-003	2.8400e-003	0.0000	9.0789	9.0789	1.5800e-003	0.0000	9.1184
Total	**8.2400e-003**	**0.0625**	**0.0636**	**1.1000e-004**		**2.9400e-003**	**2.9400e-003**		**2.8400e-003**	**2.8400e-003**	**0.0000**	**9.0789**	**9.0789**	**1.5800e-003**	**0.0000**	**9.1184**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.9000e-004	9.3800e-003	2.5300e-003	3.0000e-005	6.3000e-004	2.0000e-005	6.5000e-004	1.8000e-004	2.0000e-005	2.0000e-004	0.0000	2.4433	2.4433	1.5000e-004	0.0000	2.4470
Worker	1.0100e-003	7.6000e-004	8.7100e-003	3.0000e-005	2.7400e-003	2.0000e-005	2.7600e-003	7.3000e-004	2.0000e-005	7.5000e-004	0.0000	2.3854	2.3854	7.0000e-005	0.0000	2.3870
Total	**1.3000e-003**	**0.0101**	**0.0112**	**6.0000e-005**	**3.3700e-003**	**4.0000e-005**	**3.4100e-003**	**9.1000e-004**	**4.0000e-005**	**9.5000e-004**	**0.0000**	**4.8287**	**4.8287**	**2.2000e-004**	**0.0000**	**4.8340**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	5.5000e-003	0.0470	0.0704	1.1000e-004		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	9.0788	9.0788	1.5800e-003	0.0000	9.1184
Total	**5.5000e-003**	**0.0470**	**0.0704**	**1.1000e-004**		**1.0700e-003**	**1.0700e-003**		**1.0700e-003**	**1.0700e-003**	**0.0000**	**9.0788**	**9.0788**	**1.5800e-003**	**0.0000**	**9.1184**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.9000e-004	9.3800e-003	2.5300e-003	3.0000e-005	5.9000e-004	2.0000e-005	6.1000e-004	1.7000e-004	2.0000e-005	1.9000e-004	0.0000	2.4433	2.4433	1.5000e-004	0.0000	2.4470
Worker	1.0100e-003	7.6000e-004	8.7100e-003	3.0000e-005	2.5300e-003	2.0000e-005	2.5500e-003	6.8000e-004	2.0000e-005	7.0000e-004	0.0000	2.3854	2.3854	7.0000e-005	0.0000	2.3870
Total	**1.3000e-003**	**0.0101**	**0.0112**	**6.0000e-005**	**3.1200e-003**	**4.0000e-005**	**3.1600e-003**	**8.5000e-004**	**4.0000e-005**	**8.9000e-004**	**0.0000**	**4.8287**	**4.8287**	**2.2000e-004**	**0.0000**	**4.8340**

3.10 Building Construction - 2023

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.6300e-003	0.1842	0.0591	6.3000e-004	0.0164	2.1000e-004	0.0166	4.7300e-003	2.1000e-004	4.9300e-003	0.0000	61.5374	61.5374	3.3500e-003	0.0000	61.6213
Worker	0.0247	0.0178	0.2083	6.6000e-004	0.0712	5.5000e-004	0.0718	0.0189	5.1000e-004	0.0194	0.0000	59.7506	59.7506	1.5400e-003	0.0000	59.7890
Total	**0.0303**	**0.2020**	**0.2673**	**1.2900e-003**	**0.0876**	**7.6000e-004**	**0.0884**	**0.0237**	**7.2000e-004**	**0.0244**	**0.0000**	**121.2880**	**121.2880**	**4.8900e-003**	**0.0000**	**121.4103**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1343	1.2052	1.8228	2.8700e-003		0.0243	0.0243		0.0243	0.0243	0.0000	236.0786	236.0786	0.0401	0.0000	237.0808
Total	**0.1343**	**1.2052**	**1.8228**	**2.8700e-003**		**0.0243**	**0.0243**		**0.0243**	**0.0243**	**0.0000**	**236.0786**	**236.0786**	**0.0401**	**0.0000**	**237.0808**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.6300e-003	0.1842	0.0591	6.3000e-004	0.0153	2.1000e-004	0.0156	4.4700e-003	2.1000e-004	4.6800e-003	0.0000	61.5374	61.5374	3.3500e-003	0.0000	61.6213
Worker	0.0247	0.0178	0.2083	6.6000e-004	0.0657	5.5000e-004	0.0662	0.0176	5.1000e-004	0.0181	0.0000	59.7506	59.7506	1.5400e-003	0.0000	59.7890
Total	**0.0303**	**0.2020**	**0.2673**	**1.2900e-003**	**0.0810**	**7.6000e-004**	**0.0818**	**0.0220**	**7.2000e-004**	**0.0227**	**0.0000**	**121.2880**	**121.2880**	**4.8900e-003**	**0.0000**	**121.4103**

3.10 Building Construction - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0249	0.1936	0.2191	3.9000e-004		7.8900e-003	7.8900e-003		7.6100e-003	7.6100e-003	0.0000	31.7820	31.7820	5.2900e-003	0.0000	31.9143
Total	**0.0249**	**0.1936**	**0.2191**	**3.9000e-004**		**7.8900e-003**	**7.8900e-003**		**7.6100e-003**	**7.6100e-003**	**0.0000**	**31.7820**	**31.7820**	**5.2900e-003**	**0.0000**	**31.9143**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.4000e-004	0.0247	7.7100e-003	8.0000e-005	2.2000e-003	3.0000e-005	2.2300e-003	6.4000e-004	3.0000e-005	6.6000e-004	0.0000	8.2509	8.2509	4.4000e-004	0.0000	8.2620
Worker	3.1400e-003	2.1800e-003	0.0261	9.0000e-005	9.5900e-003	7.0000e-005	9.6600e-003	2.5500e-003	7.0000e-005	2.6100e-003	0.0000	7.7940	7.7940	1.9000e-004	0.0000	7.7987
Total	**3.8800e-003**	**0.0269**	**0.0338**	**1.7000e-004**	**0.0118**	**1.0000e-004**	**0.0119**	**3.1900e-003**	**1.0000e-004**	**3.2700e-003**	**0.0000**	**16.0448**	**16.0448**	**6.3000e-004**	**0.0000**	**16.0607**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0171	0.1602	0.2446	3.9000e-004		2.8700e-003	2.8700e-003		2.8700e-003	2.8700e-003	0.0000	31.7819	31.7819	5.2900e-003	0.0000	31.9143
Total	**0.0171**	**0.1602**	**0.2446**	**3.9000e-004**		**2.8700e-003**	**2.8700e-003**		**2.8700e-003**	**2.8700e-003**	**0.0000**	**31.7819**	**31.7819**	**5.2900e-003**	**0.0000**	**31.9143**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	7.4000e-004	0.0247	7.7100e-003	8.0000e-005	2.0600e-003	3.0000e-005	2.0900e-003	6.0000e-004	3.0000e-005	6.3000e-004	0.0000	8.2509	8.2509	4.4000e-004	0.0000	8.2620
Worker	3.1400e-003	2.1800e-003	0.0261	9.0000e-005	8.8400e-003	7.0000e-005	8.9100e-003	2.3600e-003	7.0000e-005	2.4300e-003	0.0000	7.7940	7.7940	1.9000e-004	0.0000	7.7987
Total	**3.8800e-003**	**0.0269**	**0.0338**	**1.7000e-004**	**0.0109**	**1.0000e-004**	**0.0110**	**2.9600e-003**	**1.0000e-004**	**3.0600e-003**	**0.0000**	**16.0448**	**16.0448**	**6.3000e-004**	**0.0000**	**16.0607**

3.11 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1545					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.5800e-003	0.0652	0.0906	1.5000e-004		3.5400e-003	3.5400e-003		3.5400e-003	3.5400e-003	0.0000	12.7663	12.7663	7.6000e-004	0.0000	12.7854
Total	**0.1641**	**0.0652**	**0.0906**	**1.5000e-004**		**3.5400e-003**	**3.5400e-003**		**3.5400e-003**	**3.5400e-003**	**0.0000**	**12.7663**	**12.7663**	**7.6000e-004**	**0.0000**	**12.7854**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.4000e-004	0.0177	5.6800e-003	6.0000e-005	1.5700e-003	2.0000e-005	1.6000e-003	4.5000e-004	2.0000e-005	4.7000e-004	0.0000	5.9171	5.9171	3.2000e-004	0.0000	5.9251
Worker	3.7900e-003	2.7400e-003	0.0320	1.0000e-004	0.0110	9.0000e-005	0.0110	2.9100e-003	8.0000e-005	2.9900e-003	0.0000	9.1924	9.1924	2.4000e-004	0.0000	9.1983
Total	**4.3300e-003**	**0.0205**	**0.0377**	**1.6000e-004**	**0.0125**	**1.1000e-004**	**0.0126**	**3.3600e-003**	**1.0000e-004**	**3.4600e-003**	**0.0000**	**15.1095**	**15.1095**	**5.6000e-004**	**0.0000**	**15.1234**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1545					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.7200e-003	0.0530	0.0916	1.5000e-004		2.0000e-004	2.0000e-004		2.0000e-004	2.0000e-004	0.0000	12.7663	12.7663	7.6000e-004	0.0000	12.7854
Total	**0.1572**	**0.0530**	**0.0916**	**1.5000e-004**		**2.0000e-004**	**2.0000e-004**		**2.0000e-004**	**2.0000e-004**	**0.0000**	**12.7663**	**12.7663**	**7.6000e-004**	**0.0000**	**12.7854**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	5.4000e-004	0.0177	5.6800e-003	6.0000e-005	1.4700e-003	2.0000e-005	1.5000e-003	4.3000e-004	2.0000e-005	4.5000e-004	0.0000	5.9171	5.9171	3.2000e-004	0.0000	5.9251
Worker	3.7900e-003	2.7400e-003	0.0320	1.0000e-004	0.0101	9.0000e-005	0.0102	2.7000e-003	8.0000e-005	2.7800e-003	0.0000	9.1924	9.1924	2.4000e-004	0.0000	9.1983
Total	**4.3300e-003**	**0.0205**	**0.0377**	**1.6000e-004**	**0.0116**	**1.1000e-004**	**0.0117**	**3.1300e-003**	**1.0000e-004**	**3.2300e-003**	**0.0000**	**15.1095**	**15.1095**	**5.6000e-004**	**0.0000**	**15.1234**

3.11 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0541					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.1600e-003	0.0213	0.0317	5.0000e-005		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	4.4682	4.4682	2.5000e-004	0.0000	4.4745
Total	**0.0572**	**0.0213**	**0.0317**	**5.0000e-005**		**1.0700e-003**	**1.0700e-003**		**1.0700e-003**	**1.0700e-003**	**0.0000**	**4.4682**	**4.4682**	**2.5000e-004**	**0.0000**	**4.4745**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.8000e-004	6.1800e-003	1.9300e-003	2.0000e-005	5.5000e-004	1.0000e-005	5.6000e-004	1.6000e-004	1.0000e-005	1.7000e-004	0.0000	2.0627	2.0627	1.1000e-004	0.0000	2.0655
Worker	1.2600e-003	8.7000e-004	0.0104	3.0000e-005	3.8400e-003	3.0000e-005	3.8600e-003	1.0200e-003	3.0000e-005	1.0500e-003	0.0000	3.1176	3.1176	8.0000e-005	0.0000	3.1195
Total	**1.4400e-003**	**7.0500e-003**	**0.0124**	**5.0000e-005**	**4.3900e-003**	**4.0000e-005**	**4.4200e-003**	**1.1800e-003**	**4.0000e-005**	**1.2200e-003**	**0.0000**	**5.1803**	**5.1803**	**1.9000e-004**	**0.0000**	**5.1850**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.0541					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.5000e-004	0.0186	0.0321	5.0000e-005		7.0000e-005	7.0000e-005		7.0000e-005	7.0000e-005	0.0000	4.4682	4.4682	2.5000e-004	0.0000	4.4745
Total	**0.0550**	**0.0186**	**0.0321**	**5.0000e-005**		**7.0000e-005**	**7.0000e-005**		**7.0000e-005**	**7.0000e-005**	**0.0000**	**4.4682**	**4.4682**	**2.5000e-004**	**0.0000**	**4.4745**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.8000e-004	6.1800e-003	1.9300e-003	2.0000e-005	5.2000e-004	1.0000e-005	5.2000e-004	1.5000e-004	1.0000e-005	1.6000e-004	0.0000	2.0627	2.0627	1.1000e-004	0.0000	2.0655
Worker	1.2600e-003	8.7000e-004	0.0104	3.0000e-005	3.5400e-003	3.0000e-005	3.5700e-003	9.5000e-004	3.0000e-005	9.7000e-004	0.0000	3.1176	3.1176	8.0000e-005	0.0000	3.1195
Total	**1.4400e-003**	**7.0500e-003**	**0.0124**	**5.0000e-005**	**4.0600e-003**	**4.0000e-005**	**4.0900e-003**	**1.1000e-003**	**4.0000e-005**	**1.1300e-003**	**0.0000**	**5.1803**	**5.1803**	**1.9000e-004**	**0.0000**	**5.1850**

3.12 Fine Grading - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1912	0.0000	0.1912	0.0955	0.0000	0.0955	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0350	0.3817	0.2082	5.3000e-004		0.0158	0.0158		0.0145	0.0145	0.0000	46.4287	46.4287	0.0150	0.0000	46.8041
Total	**0.0350**	**0.3817**	**0.2082**	**5.3000e-004**	**0.1912**	**0.0158**	**0.2070**	**0.0955**	**0.0145**	**0.1100**	**0.0000**	**46.4287**	**46.4287**	**0.0150**	**0.0000**	**46.8041**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.4000e-004	7.9700e-003	2.5600e-003	3.0000e-005	7.1000e-004	1.0000e-005	7.2000e-004	2.0000e-004	1.0000e-005	2.1000e-004	0.0000	2.6627	2.6627	1.5000e-004	0.0000	2.6663
Worker	7.1000e-004	5.1000e-004	6.0100e-003	2.0000e-005	2.0500e-003	2.0000e-005	2.0700e-003	5.5000e-004	1.0000e-005	5.6000e-004	0.0000	1.7236	1.7236	4.0000e-005	0.0000	1.7247
Total	**9.5000e-004**	**8.4800e-003**	**8.5700e-003**	**5.0000e-005**	**2.7600e-003**	**3.0000e-005**	**2.7900e-003**	**7.5000e-004**	**2.0000e-005**	**7.7000e-004**	**0.0000**	**4.3863**	**4.3863**	**1.9000e-004**	**0.0000**	**4.3910**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0818	0.0000	0.0818	0.0408	0.0000	0.0408	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	9.2500e-003	0.1567	0.3032	5.3000e-004		8.6000e-004	8.6000e-004		8.6000e-004	8.6000e-004	0.0000	46.4287	46.4287	0.0150	0.0000	46.8041
Total	**9.2500e-003**	**0.1567**	**0.3032**	**5.3000e-004**	**0.0818**	**8.6000e-004**	**0.0826**	**0.0408**	**8.6000e-004**	**0.0417**	**0.0000**	**46.4287**	**46.4287**	**0.0150**	**0.0000**	**46.8041**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	2.4000e-004	7.9700e-003	2.5600e-003	3.0000e-005	6.6000e-004	1.0000e-005	6.7000e-004	1.9000e-004	1.0000e-005	2.0000e-004	0.0000	2.6627	2.6627	1.5000e-004	0.0000	2.6663
Worker	7.1000e-004	5.1000e-004	6.0100e-003	2.0000e-005	1.8900e-003	2.0000e-005	1.9100e-003	5.1000e-004	1.0000e-005	5.2000e-004	0.0000	1.7236	1.7236	4.0000e-005	0.0000	1.7247
Total	**9.5000e-004**	**8.4800e-003**	**8.5700e-003**	**5.0000e-005**	**2.5500e-003**	**3.0000e-005**	**2.5800e-003**	**7.0000e-004**	**2.0000e-005**	**7.2000e-004**	**0.0000**	**4.3863**	**4.3863**	**1.9000e-004**	**0.0000**	**4.3910**

3.12 Fine Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1009	0.0000	0.1009	0.0458	0.0000	0.0458	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0160	0.1703	0.0971	2.5000e-004		7.0000e-003	7.0000e-003		6.4400e-003	6.4400e-003	0.0000	21.6650	21.6650	7.0100e-003	0.0000	21.8402
Total	**0.0160**	**0.1703**	**0.0971**	**2.5000e-004**	**0.1009**	**7.0000e-003**	**0.1079**	**0.0458**	**6.4400e-003**	**0.0523**	**0.0000**	**21.6650**	**21.6650**	**7.0100e-003**	**0.0000**	**21.8402**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1000e-004	3.7100e-003	1.1600e-003	1.0000e-005	3.3000e-004	0.0000	3.4000e-004	1.0000e-004	0.0000	1.0000e-004	0.0000	1.2376	1.2376	7.0000e-005	0.0000	1.2393
Worker	3.1000e-004	2.2000e-004	2.6100e-003	1.0000e-005	9.6000e-004	1.0000e-005	9.7000e-004	2.5000e-004	1.0000e-005	2.6000e-004	0.0000	0.7794	0.7794	2.0000e-005	0.0000	0.7799
Total	**4.2000e-004**	**3.9300e-003**	**3.7700e-003**	**2.0000e-005**	**1.2900e-003**	**1.0000e-005**	**1.3100e-003**	**3.5000e-004**	**1.0000e-005**	**3.6000e-004**	**0.0000**	**2.0170**	**2.0170**	**9.0000e-005**	**0.0000**	**2.0192**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0431	0.0000	0.0431	0.0196	0.0000	0.0196	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	4.3200e-003	0.0731	0.1415	2.5000e-004		4.0000e-004	4.0000e-004		4.0000e-004	4.0000e-004	0.0000	21.6650	21.6650	7.0100e-003	0.0000	21.8402
Total	**4.3200e-003**	**0.0731**	**0.1415**	**2.5000e-004**	**0.0431**	**4.0000e-004**	**0.0435**	**0.0196**	**4.0000e-004**	**0.0200**	**0.0000**	**21.6650**	**21.6650**	**7.0100e-003**	**0.0000**	**21.8402**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1000e-004	3.7100e-003	1.1600e-003	1.0000e-005	3.1000e-004	0.0000	3.1000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	1.2376	1.2376	7.0000e-005	0.0000	1.2393
Worker	3.1000e-004	2.2000e-004	2.6100e-003	1.0000e-005	8.8000e-004	1.0000e-005	8.9000e-004	2.4000e-004	1.0000e-005	2.4000e-004	0.0000	0.7794	0.7794	2.0000e-005	0.0000	0.7799
Total	**4.2000e-004**	**3.9300e-003**	**3.7700e-003**	**2.0000e-005**	**1.1900e-003**	**1.0000e-005**	**1.2000e-003**	**3.3000e-004**	**1.0000e-005**	**3.3000e-004**	**0.0000**	**2.0170**	**2.0170**	**9.0000e-005**	**0.0000**	**2.0192**

3.13 Finishing/Landscaping - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	9.4000e-004	7.7400e-003	0.0163	3.0000e-005		3.8000e-004	3.8000e-004		3.5000e-004	3.5000e-004	0.0000	2.2684	2.2684	7.3000e-004	0.0000	2.2868
Total	**9.4000e-004**	**7.7400e-003**	**0.0163**	**3.0000e-005**		**3.8000e-004**	**3.8000e-004**		**3.5000e-004**	**3.5000e-004**	**0.0000**	**2.2684**	**2.2684**	**7.3000e-004**	**0.0000**	**2.2868**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1000e-004	3.5400e-003	1.1400e-003	1.0000e-005	3.1000e-004	0.0000	3.2000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	1.1834	1.1834	6.0000e-005	0.0000	1.1850
Worker	3.8000e-004	2.7000e-004	3.2000e-003	1.0000e-005	1.1000e-003	1.0000e-005	1.1000e-003	2.9000e-004	1.0000e-005	3.0000e-004	0.0000	0.9192	0.9192	2.0000e-005	0.0000	0.9198
Total	**4.9000e-004**	**3.8100e-003**	**4.3400e-003**	**2.0000e-005**	**1.4100e-003**	**1.0000e-005**	**1.4200e-003**	**3.8000e-004**	**1.0000e-005**	**3.9000e-004**	**0.0000**	**2.1027**	**2.1027**	**8.0000e-005**	**0.0000**	**2.1049**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.2000e-004	0.0114	0.0196	3.0000e-005		4.0000e-005	4.0000e-005		4.0000e-005	4.0000e-005	0.0000	2.2684	2.2684	7.3000e-004	0.0000	2.2868
Total	**3.2000e-004**	**0.0114**	**0.0196**	**3.0000e-005**		**4.0000e-005**	**4.0000e-005**		**4.0000e-005**	**4.0000e-005**	**0.0000**	**2.2684**	**2.2684**	**7.3000e-004**	**0.0000**	**2.2868**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.1000e-004	3.5400e-003	1.1400e-003	1.0000e-005	2.9000e-004	0.0000	3.0000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	1.1834	1.1834	6.0000e-005	0.0000	1.1850
Worker	3.8000e-004	2.7000e-004	3.2000e-003	1.0000e-005	1.0100e-003	1.0000e-005	1.0200e-003	2.7000e-004	1.0000e-005	2.8000e-004	0.0000	0.9192	0.9192	2.0000e-005	0.0000	0.9198
Total	**4.9000e-004**	**3.8100e-003**	**4.3400e-003**	**2.0000e-005**	**1.3000e-003**	**1.0000e-005**	**1.3200e-003**	**3.6000e-004**	**1.0000e-005**	**3.7000e-004**	**0.0000**	**2.1027**	**2.1027**	**8.0000e-005**	**0.0000**	**2.1049**

3.13 Finishing/Landscaping - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	3.1500e-003	0.0246	0.0571	9.0000e-005		1.2100e-003	1.2100e-003		1.1100e-003	1.1100e-003	0.0000	7.9421	7.9421	2.5700e-003	0.0000	8.0063
Total	**3.1500e-003**	**0.0246**	**0.0571**	**9.0000e-005**		**1.2100e-003**	**1.2100e-003**		**1.1100e-003**	**1.1100e-003**	**0.0000**	**7.9421**	**7.9421**	**2.5700e-003**	**0.0000**	**8.0063**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.7000e-004	0.0124	3.8500e-003	4.0000e-005	1.1000e-003	1.0000e-005	1.1200e-003	3.2000e-004	1.0000e-005	3.3000e-004	0.0000	4.1254	4.1254	2.2000e-004	0.0000	4.1310
Worker	1.2600e-003	8.7000e-004	0.0104	3.0000e-005	3.8400e-003	3.0000e-005	3.8600e-003	1.0200e-003	3.0000e-005	1.0500e-003	0.0000	3.1176	3.1176	8.0000e-005	0.0000	3.1195
Total	**1.6300e-003**	**0.0132**	**0.0143**	**7.0000e-005**	**4.9400e-003**	**4.0000e-005**	**4.9800e-003**	**1.3400e-003**	**4.0000e-005**	**1.3800e-003**	**0.0000**	**7.2430**	**7.2430**	**3.0000e-004**	**0.0000**	**7.2505**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	1.1100e-003	0.0398	0.0686	9.0000e-005		1.5000e-004	1.5000e-004		1.5000e-004	1.5000e-004	0.0000	7.9421	7.9421	2.5700e-003	0.0000	8.0063
Total	**1.1100e-003**	**0.0398**	**0.0686**	**9.0000e-005**		**1.5000e-004**	**1.5000e-004**		**1.5000e-004**	**1.5000e-004**	**0.0000**	**7.9421**	**7.9421**	**2.5700e-003**	**0.0000**	**8.0063**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	3.7000e-004	0.0124	3.8500e-003	4.0000e-005	1.0300e-003	1.0000e-005	1.0500e-003	3.0000e-004	1.0000e-005	3.1000e-004	0.0000	4.1254	4.1254	2.2000e-004	0.0000	4.1310
Worker	1.2600e-003	8.7000e-004	0.0104	3.0000e-005	3.5400e-003	3.0000e-005	3.5700e-003	9.5000e-004	3.0000e-005	9.7000e-004	0.0000	3.1176	3.1176	8.0000e-005	0.0000	3.1195
Total	**1.6300e-003**	**0.0132**	**0.0143**	**7.0000e-005**	**4.5700e-003**	**4.0000e-005**	**4.6200e-003**	**1.2500e-003**	**4.0000e-005**	**1.2800e-003**	**0.0000**	**7.2430**	**7.2430**	**3.0000e-004**	**0.0000**	**7.2505**

3.14 Asphalt Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.7200e-003	0.0733	0.1103	1.7000e-004		3.5100e-003	3.5100e-003		3.2400e-003	3.2400e-003	0.0000	14.7176	14.7176	4.6700e-003	0.0000	14.8342
Paving	2.9000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**8.0100e-003**	**0.0733**	**0.1103**	**1.7000e-004**		**3.5100e-003**	**3.5100e-003**		**3.2400e-003**	**3.2400e-003**	**0.0000**	**14.7176**	**14.7176**	**4.6700e-003**	**0.0000**	**14.8342**

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3000e-004	4.4100e-003	1.3800e-003	2.0000e-005	3.9000e-004	1.0000e-005	4.0000e-004	1.1000e-004	0.0000	1.2000e-004	0.0000	1.4734	1.4734	8.0000e-005	0.0000	1.4754
Worker	6.7000e-004	4.7000e-004	5.5900e-003	2.0000e-005	2.0500e-003	2.0000e-005	2.0700e-003	5.5000e-004	1.0000e-005	5.6000e-004	0.0000	1.6701	1.6701	4.0000e-005	0.0000	1.6712
Total	**8.0000e-004**	**4.8800e-003**	**6.9700e-003**	**4.0000e-005**	**2.4400e-003**	**3.0000e-005**	**2.4700e-003**	**6.6000e-004**	**1.0000e-005**	**6.8000e-004**	**0.0000**	**3.1435**	**3.1435**	**1.2000e-004**	**0.0000**	**3.1465**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	2.6900e-003	0.0714	0.1231	1.7000e-004		2.7000e-004	2.7000e-004		2.7000e-004	2.7000e-004	0.0000	14.7176	14.7176	4.6700e-003	0.0000	14.8342
Paving	2.9000e-004					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**2.9800e-003**	**0.0714**	**0.1231**	**1.7000e-004**		**2.7000e-004**	**2.7000e-004**		**2.7000e-004**	**2.7000e-004**	**0.0000**	**14.7176**	**14.7176**	**4.6700e-003**	**0.0000**	**14.8342**

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	1.3000e-004	4.4100e-003	1.3800e-003	2.0000e-005	3.7000e-004	1.0000e-005	3.7000e-004	1.1000e-004	0.0000	1.1000e-004	0.0000	1.4734	1.4734	8.0000e-005	0.0000	1.4754
Worker	6.7000e-004	4.7000e-004	5.5900e-003	2.0000e-005	1.8900e-003	2.0000e-005	1.9100e-003	5.1000e-004	1.0000e-005	5.2000e-004	0.0000	1.6701	1.6701	4.0000e-005	0.0000	1.6712
Total	**8.0000e-004**	**4.8800e-003**	**6.9700e-003**	**4.0000e-005**	**2.2600e-003**	**3.0000e-005**	**2.2800e-003**	**6.2000e-004**	**1.0000e-005**	**6.3000e-004**	**0.0000**	**3.1435**	**3.1435**	**1.2000e-004**	**0.0000**	**3.1465**

14th & LBB Development Project Construction Run

Los Angeles-South Coast County, Mitigation Report

Construction Mitigation Summary

Phase	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.04	0.13	-0.01	0.00	0.91	0.91	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Demolition	0.70	0.47	-0.10	0.00	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Demolition Debris Haul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Demolition Debris Onsite Reprocessing	0.67	0.21	0.00	0.00	0.94	0.94	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Paving	0.57	0.02	-0.11	0.00	0.92	0.91	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	0.28	0.18	-0.10	0.00	0.63	0.62	0.00	0.00	0.00	0.00	0.00	0.00
Fine Grading	0.71	0.57	-0.44	0.00	0.94	0.94	0.00	0.00	0.00	0.00	0.00	0.00
Finishing/Landscaping	0.43	-0.38	-0.16	0.00	0.85	0.84	0.00	0.00	0.00	0.00	0.00	0.00
Parking Structure Construction	0.31	0.24	-0.10	0.00	0.63	0.62	0.00	0.00	0.00	0.00	0.00	0.00
Rough Grading	0.71	0.63	-0.32	0.00	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation	0.76	0.64	-0.37	0.00	0.95	0.95	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation Soil Haul	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Utility Trenching	0.54	-0.22	-0.18	0.00	0.88	0.87	0.00	0.00	0.00	0.00	0.00	0.00

OFFROAD Equipment Mitigation

Equipment Type	Fuel Type	Tier	Number Mitigated	Total Number of Equipment	DPF	Oxidation Catalyst
Air Compressors	Diesel	Tier 4 Interim	1	1	No Change	0.00
Cement and Mortar Mixers	Diesel	Tier 4 Interim	1	1	No Change	0.00
Concrete/Industrial Saws	Diesel	Tier 4 Interim	1	1	No Change	0.00
Cranes	Diesel	Tier 4 Interim	2	2	No Change	0.00
Crushing/Proc. Equipment	Diesel	Tier 4 Interim	1	1	No Change	0.00
Excavators	Diesel	Tier 4 Interim	2	2	No Change	0.00
Forklifts	Diesel	Tier 4 Interim	2	2	No Change	0.00
Generator Sets	Diesel	Tier 4 Interim	2	2	No Change	0.00
Graders	Diesel	Tier 4 Interim	3	3	No Change	0.00
Pavers	Diesel	Tier 4 Interim	1	1	No Change	0.00
Paving Equipment	Diesel	Tier 4 Interim	1	1	No Change	0.00
Rollers	Diesel	Tier 4 Interim	1	1	No Change	0.00
Rubber Tired Dozers	Diesel	Tier 4 Interim	4	4	No Change	0.00
Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	9	9	No Change	0.00
Welders	Diesel	No Change	0	6	No Change	0.00

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Unmitigated tons/yr						Unmitigated mt/yr					
Air Compressors	1.27500E-002	8.64800E-002	1.22230E-001	2.00000E-004	4.61000E-003	4.61000E-003	0.00000E+000	1.72345E+001	1.72345E+001	1.02000E-003	0.00000E+000	1.72599E+001
Cement and Mortar Mixers	5.50000E-004	3.45000E-003	2.89000E-003	1.00000E-005	1.30000E-004	1.30000E-004	0.00000E+000	4.29630E-001	4.29630E-001	4.00000E-005	0.00000E+000	4.30750E-001
Concrete/Industrial Saws	4.47000E-003	3.50100E-002	4.58100E-002	8.00000E-005	1.88000E-003	1.88000E-003	0.00000E+000	6.72070E+000	6.72070E+000	3.70000E-004	0.00000E+000	6.72987E+000
Cranes	5.54000E-002	6.06300E-001	2.87300E-001	9.00000E-004	2.52700E-002	2.32500E-002	0.00000E+000	7.88948E+001	7.88948E+001	2.55200E-002	0.00000E+000	7.95327E+001
Crushing/Proc. Equipment	5.99000E-003	4.03100E-002	5.41400E-002	9.00000E-005	2.25000E-003	2.25000E-003	0.00000E+000	7.53564E+000	7.53564E+000	4.90000E-004	0.00000E+000	7.54791E+000
Excavators	8.65000E-003	7.22700E-002	1.46670E-001	2.30000E-004	3.52000E-003	3.24000E-003	0.00000E+000	2.04167E+001	2.04167E+001	6.60000E-003	0.00000E+000	2.05817E+001
Forklifts	1.63500E-002	1.52640E-001	1.78490E-001	2.40000E-004	9.60000E-003	8.83000E-003	0.00000E+000	2.08991E+001	2.08991E+001	6.76000E-003	0.00000E+000	2.10681E+001
Generator Sets	6.45500E-002	5.73250E-001	7.61690E-001	1.36000E-003	2.74300E-002	2.74300E-002	0.00000E+000	1.17281E+002	1.17281E+002	5.24000E-003	0.00000E+000	1.17412E+002

Graders	2.06300E-002	2.51130E-001	9.08700E-002	3.60000E-004	8.10000E-003	7.45000E-003	0.00000E+000	3.12495E+001	3.12495E+001	1.01100E-002	0.00000E+000	3.15022E+001
Pavers	1.72000E-003	1.63300E-002	2.71200E-002	4.00000E-005	7.60000E-004	7.00000E-004	0.00000E+000	3.87109E+000	3.87109E+000	1.25000E-003	0.00000E+000	3.90239E+000
Paving Equipment	2.06000E-003	1.87000E-002	3.21200E-002	5.00000E-005	9.00000E-004	8.30000E-004	0.00000E+000	4.47317E+000	4.47317E+000	1.45000E-003	0.00000E+000	4.50933E+000
Rollers	1.59000E-003	1.66700E-002	2.02400E-002	3.00000E-005	8.80000E-004	8.10000E-004	0.00000E+000	2.52172E+000	2.52172E+000	8.20000E-004	0.00000E+000	2.54211E+000
Rubber Tired Dozers	4.87800E-002	5.08350E-001	2.15770E-001	5.60000E-004	2.34100E-002	2.15400E-002	0.00000E+000	4.92352E+001	4.92352E+001	1.59200E-002	0.00000E+000	4.96333E+001
Tractors/Loaders/Backhoes	4.14700E-002	4.20690E-001	5.97690E-001	8.30000E-004	2.12700E-002	1.95700E-002	0.00000E+000	7.31617E+001	7.31617E+001	2.36600E-002	0.00000E+000	7.37533E+001
Welders	1.61440E-001	8.89820E-001	1.04699E+000	1.59000E-003	3.54900E-002	3.54900E-002	0.00000E+000	1.17167E+002	1.17167E+002	1.30700E-002	0.00000E+000	1.17494E+002

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	Mitigated tons/yr						Mitigated mt/yr					
Air Compressors	3.68000E-003	7.15400E-002	1.23690E-001	2.00000E-004	2.70000E-004	2.70000E-004	0.00000E+000	1.72344E+001	1.72344E+001	1.02000E-003	0.00000E+000	1.72598E+001
Cement and Mortar Mixers	0.00000E+000	0.00000E+000	0.00000E+000	1.00000E-005	0.00000E+000	0.00000E+000	0.00000E+000	4.29630E-001	4.29630E-001	4.00000E-005	0.00000E+000	4.30750E-001
Concrete/Industrial Saws	1.43000E-003	2.79000E-002	4.82300E-002	8.00000E-005	1.00000E-004	1.00000E-004	0.00000E+000	6.72070E+000	6.72070E+000	3.70000E-004	0.00000E+000	6.72986E+000
Cranes	1.47100E-002	2.37190E-001	4.78060E-001	9.00000E-004	1.47000E-003	1.47000E-003	0.00000E+000	7.88947E+001	7.88947E+001	2.55200E-002	0.00000E+000	7.95326E+001
Crushing/Proc. Equipment	1.61000E-003	3.12800E-002	5.40800E-002	9.00000E-005	1.20000E-004	1.20000E-004	0.00000E+000	7.53564E+000	7.53564E+000	4.90000E-004	0.00000E+000	7.54790E+000
Excavators	2.86000E-003	1.02450E-001	1.76310E-001	2.30000E-004	3.80000E-004	3.80000E-004	0.00000E+000	2.04166E+001	2.04166E+001	6.60000E-003	0.00000E+000	2.05817E+001
Forklifts	5.37000E-003	1.04550E-001	1.80770E-001	2.40000E-004	3.90000E-004	3.90000E-004	0.00000E+000	2.08991E+001	2.08991E+001	6.76000E-003	0.00000E+000	2.10680E+001
Generator Sets	2.50200E-002	4.86820E-001	8.41690E-001	1.36000E-003	1.82000E-003	1.82000E-003	0.00000E+000	1.17280E+002	1.17280E+002	5.24000E-003	0.00000E+000	1.17412E+002
Graders	5.81000E-003	9.37600E-002	1.88970E-001	3.60000E-004	5.80000E-004	5.80000E-004	0.00000E+000	3.12495E+001	3.12495E+001	1.01100E-002	0.00000E+000	3.15022E+001
Pavers	5.40000E-004	1.94100E-002	3.34000E-002	4.00000E-005	7.00000E-005	7.00000E-005	0.00000E+000	3.87108E+000	3.87108E+000	1.25000E-003	0.00000E+000	3.90238E+000
Paving Equipment	6.30000E-004	2.25200E-002	3.87600E-002	5.00000E-005	8.00000E-005	8.00000E-005	0.00000E+000	4.47316E+000	4.47316E+000	1.45000E-003	0.00000E+000	4.50933E+000
Rollers	6.50000E-004	1.25500E-002	2.17000E-002	3.00000E-005	5.00000E-005	5.00000E-005	0.00000E+000	2.52172E+000	2.52172E+000	8.20000E-004	0.00000E+000	2.54210E+000
Rubber Tired Dozers	9.15000E-003	1.47520E-001	2.97320E-001	5.60000E-004	9.10000E-004	9.10000E-004	0.00000E+000	4.92351E+001	4.92351E+001	1.59200E-002	0.00000E+000	4.96332E+001
Tractors/Loaders/Backhoes	1.86300E-002	3.62360E-001	6.26500E-001	8.30000E-004	1.35000E-003	1.35000E-003	0.00000E+000	7.31617E+001	7.31617E+001	2.36600E-002	0.00000E+000	7.37532E+001
Welders	1.61440E-001	8.89820E-001	1.04698E+000	1.59000E-003	3.54900E-002	3.54900E-002	0.00000E+000	1.17167E+002	1.17167E+002	1.30700E-002	0.00000E+000	1.17494E+002

Equipment Type	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Air Compressors	7.11373E-001	1.72757E-001	-1.19447E-002	0.00000E+000	9.41432E-001	9.41432E-001	0.00000E+000	1.16047E-006	1.16047E-006	0.00000E+000	0.00000E+000	1.15876E-006
Cement and Mortar Mixers	1.00000E+000	1.00000E+000	1.00000E+000	0.00000E+000	1.00000E+000	1.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000
Concrete/Industrial Saws	6.80089E-001	2.03085E-001	-5.28269E-002	0.00000E+000	9.46809E-001	9.46809E-001	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.48591E-006
Cranes	7.34477E-001	6.08791E-001	-6.63975E-001	0.00000E+000	9.41828E-001	9.36774E-001	0.00000E+000	1.14076E-006	1.14076E-006	0.00000E+000	0.00000E+000	1.25734E-006
Crushing/Proc. Equipment	7.31219E-001	2.24014E-001	1.10824E-003	0.00000E+000	9.46667E-001	9.46667E-001	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.32487E-006
Excavators	6.69364E-001	-4.17601E-001	-2.02086E-001	0.00000E+000	8.92045E-001	8.82716E-001	0.00000E+000	9.79592E-007	9.79592E-007	0.00000E+000	0.00000E+000	9.71735E-007
Forklifts	6.71560E-001	3.15055E-001	-1.27738E-002	0.00000E+000	9.59375E-001	9.55832E-001	0.00000E+000	1.43547E-006	1.43547E-006	0.00000E+000	0.00000E+000	9.49304E-007
Generator Sets	6.12393E-001	1.50772E-001	-1.05030E-001	0.00000E+000	9.33649E-001	9.33649E-001	0.00000E+000	1.19372E-006	1.19372E-006	0.00000E+000	0.00000E+000	1.19239E-006
Graders	7.18371E-001	6.26648E-001	-1.07956E+000	0.00000E+000	9.28395E-001	9.22148E-001	0.00000E+000	1.28002E-006	1.28002E-006	0.00000E+000	0.00000E+000	1.26975E-006
Pavers	6.86047E-001	-1.88610E-001	-2.31563E-001	0.00000E+000	9.07895E-001	9.00000E-001	0.00000E+000	2.58325E-006	2.58325E-006	0.00000E+000	0.00000E+000	2.56253E-006
Paving Equipment	6.94175E-001	-2.04278E-001	-2.06725E-001	0.00000E+000	9.11111E-001	9.03614E-001	0.00000E+000	2.23555E-006	2.23555E-006	0.00000E+000	0.00000E+000	0.00000E+000
Rollers	5.91195E-001	2.47151E-001	-7.21344E-002	0.00000E+000	9.43182E-001	9.38272E-001	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	3.93374E-006
Rubber Tired Dozers	8.12423E-001	7.09806E-001	-3.77949E-001	0.00000E+000	9.61128E-001	9.57753E-001	0.00000E+000	1.21864E-006	1.21864E-006	0.00000E+000	0.00000E+000	1.20887E-006
Tractors/Loaders/Backhoes	5.50760E-001	1.38653E-001	-4.82022E-002	0.00000E+000	9.36530E-001	9.31017E-001	0.00000E+000	1.23015E-006	1.23015E-006	0.00000E+000	0.00000E+000	1.22028E-006
Welders	0.00000E+000	0.00000E+000	9.55119E-006	0.00000E+000	0.00000E+000	0.00000E+000	0.00000E+000	1.19487E-006	1.19487E-006	0.00000E+000	0.00000E+000	1.19155E-006

Fugitive Dust Mitigation

Yes/No	Mitigation Measure	Mitigation Input		Mitigation Input		Mitigation Input	
No	Soil Stabilizer for unpaved Roads	PM10 Reduction	0.00	PM2.5 Reduction	0.00		
Yes	Replace Ground Cover of Area Disturbed	PM10 Reduction	5.00	PM2.5 Reduction	5.00		
Yes	Water Exposed Area	PM10 Reduction	61.00	PM2.5 Reduction	61.00	Frequency (per day)	3.00
No	Unpaved Road Mitigation	Moisture Content %	0.00	Vehicle Speed (mph)	15.00		
Yes	Clean Paved Road	% PM Reduction	9.00				

		Unmitigated		Mitigated		Percent Reduction	
Phase	Source	PM10	PM2.5	PM10	PM2.5	PM10	PM2.5
Architectural Coating	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Architectural Coating	Roads	0.02	0.00	0.02	0.00	0.08	0.07
Asphalt Demolition	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Demolition	Roads	0.00	0.00	0.00	0.00	0.07	0.06
Asphalt Demolition Debris Haul	Fugitive Dust	0.01	0.00	0.01	0.00	0.63	0.63
Asphalt Demolition Debris Haul	Roads	0.01	0.00	0.00	0.00	0.07	0.06
Asphalt Demolition Debris Onsite Reprocessing	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Demolition Debris Onsite Reprocessing	Roads	0.00	0.00	0.00	0.00	0.08	0.07
Asphalt Paving	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Asphalt Paving	Roads	0.00	0.00	0.00	0.00	0.07	0.06
Building Construction	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Building Construction	Roads	0.10	0.03	0.10	0.03	0.08	0.07
Fine Grading	Fugitive Dust	0.29	0.14	0.11	0.05	0.63	0.63
Fine Grading	Roads	0.00	0.00	0.00	0.00	0.07	0.07
Finishing/Landscaping	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Finishing/Landscaping	Roads	0.01	0.00	0.01	0.00	0.07	0.06
Parking Structure Construction	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Parking Structure Construction	Roads	0.02	0.00	0.02	0.00	0.08	0.07
Rough Grading	Fugitive Dust	0.05	0.03	0.02	0.01	0.63	0.63
Rough Grading	Roads	0.00	0.00	0.00	0.00	0.08	0.06
Site Preparation	Fugitive Dust	0.03	0.01	0.01	0.01	0.63	0.63
Site Preparation	Roads	0.00	0.00	0.00	0.00	0.06	0.00
Site Preparation Soil Haul	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Site Preparation Soil Haul	Roads	0.00	0.00	0.00	0.00	0.07	0.04
Utility Trenching	Fugitive Dust	0.00	0.00	0.00	0.00	0.00	0.00
Utility Trenching	Roads	0.00	0.00	0.00	0.00	0.08	0.06

Operation - Los Angeles-South Coast County, Summer

Operation

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	35.37	1000sqft	0.00	35,365.00	0
Other Asphalt Surfaces	9.50	1000sqft	0.22	9,500.00	0
Other Non-Asphalt Surfaces	27.63	1000sqft	0.63	0.00	0
Apartments Mid Rise	160.00	Dwelling Unit	0.69	143,710.00	458
Convenience Market (24 Hour)	4.00	1000sqft	0.00	4,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	531.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Based on SCE 2019 Sustainability Report.

Land Use - See assumptions file.

Construction Phase -

Vehicle Trips - See assumptions file.

Vehicle Emission Factors - Updated with emissions data derived from EMFAC2017 and CalEEMod methodology.

Vehicle Emission Factors - Updated with emissions data derived from EMFAC2017 and CalEEMod methodology.

Vehicle Emission Factors - Updated with emissions data derived from EMFAC2017 and CalEEMod methodology.

Woodstoves - Assumes no woodburning stoves or fireplaces.

Area Coating - See assumptions file.

Energy Use - Assumes all-electric buildings. All energy demand accounted in Apartments Mid Rise land use.

Water And Wastewater - See assumptions file. All water use accounted in Apartments Mid Rise land use.

Energy Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Exterior	2000	3552
tblAreaCoating	Area_Nonresidential_Interior	6000	10657
tblAreaCoating	Area_Parking	2692	2122
tblAreaCoating	Area_Residential_Exterior	97004	40909
tblAreaCoating	Area_Residential_Interior	291013	122726
tblEnergyUse	LightingElect	741.44	558.92
tblEnergyUse	LightingElect	6.26	0.00
tblEnergyUse	LightingElect	1.75	0.00
tblEnergyUse	NT24E	3,054.10	2,302.29
tblEnergyUse	NT24E	3.23	0.00
tblEnergyUse	NT24E	0.19	0.00
tblEnergyUse	NT24NG	6,384.00	0.00
tblEnergyUse	NT24NG	0.49	0.00
tblEnergyUse	T24E	252.63	190.44
tblEnergyUse	T24E	4.01	0.00
tblEnergyUse	T24E	3.92	0.00

tblEnergyUse	T24NG	7,012.17	0.00
tblEnergyUse	T24NG	1.15	0.00
tblFireplaces	NumberGas	136.00	0.00
tblFireplaces	NumberNoFireplace	16.00	160.00
tblFireplaces	NumberWood	8.00	0.00
tblFleetMix	HHD	0.03	4.3130e-003
tblFleetMix	LDA	0.55	0.66
tblFleetMix	LDT1	0.04	0.05
tblFleetMix	LDT2	0.21	0.25
tblFleetMix	LHD1	0.02	2.0380e-003
tblFleetMix	LHD2	6.2530e-003	8.4900e-004
tblFleetMix	MCY	5.2170e-003	6.8380e-003
tblFleetMix	MDV	0.12	0.02
tblFleetMix	MH	8.5000e-004	0.00
tblFleetMix	MHD	0.02	2.8000e-003
tblFleetMix	OBUS	2.5600e-003	0.00
tblFleetMix	SBUS	6.9600e-004	0.00
tblFleetMix	UBUS	2.0710e-003	0.00
tblLandUse	LandUseSquareFeet	35,370.00	35,365.00
tblLandUse	LandUseSquareFeet	27,630.00	0.00
tblLandUse	LandUseSquareFeet	160,000.00	143,710.00
tblLandUse	LotAcreage	0.81	0.00
tblLandUse	LotAcreage	4.21	0.69
tblLandUse	LotAcreage	0.09	0.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	531.44
tblVehicleEF	HHD	0.47	0.03
tblVehicleEF	HHD	0.09	0.08

tblVehicleEF	HHD	0.07	0.00
tblVehicleEF	HHD	1.60	6.71
tblVehicleEF	HHD	1.08	0.47
tblVehicleEF	HHD	3.29	8.7670e-003
tblVehicleEF	HHD	4,415.48	1,109.72
tblVehicleEF	HHD	1,567.39	1,379.15
tblVehicleEF	HHD	10.70	0.08
tblVehicleEF	HHD	13.98	5.71
tblVehicleEF	HHD	2.11	2.72
tblVehicleEF	HHD	19.48	2.35
tblVehicleEF	HHD	8.9530e-003	3.0560e-003
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	6.2770e-003	0.02
tblVehicleEF	HHD	9.2000e-005	1.0000e-006
tblVehicleEF	HHD	8.5660e-003	2.9240e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8420e-003	8.8990e-003
tblVehicleEF	HHD	6.0050e-003	0.02
tblVehicleEF	HHD	8.5000e-005	1.0000e-006
tblVehicleEF	HHD	9.9000e-005	5.0000e-006
tblVehicleEF	HHD	4.3090e-003	1.9700e-004
tblVehicleEF	HHD	0.41	0.45
tblVehicleEF	HHD	7.6000e-005	4.0000e-006
tblVehicleEF	HHD	0.09	0.02
tblVehicleEF	HHD	3.5500e-004	1.0060e-003
tblVehicleEF	HHD	0.07	3.0000e-006

tblVehicleEF	HHD	0.04	0.01
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	1.6100e-004	1.0000e-006
tblVehicleEF	HHD	9.9000e-005	5.0000e-006
tblVehicleEF	HHD	4.3090e-003	1.9700e-004
tblVehicleEF	HHD	0.48	0.52
tblVehicleEF	HHD	7.6000e-005	4.0000e-006
tblVehicleEF	HHD	0.20	0.11
tblVehicleEF	HHD	3.5500e-004	1.0060e-003
tblVehicleEF	HHD	0.08	3.0000e-006
tblVehicleEF	HHD	0.44	0.03
tblVehicleEF	HHD	0.09	0.08
tblVehicleEF	HHD	0.06	0.00
tblVehicleEF	HHD	1.17	6.61
tblVehicleEF	HHD	1.08	0.47
tblVehicleEF	HHD	3.12	8.3270e-003
tblVehicleEF	HHD	4,677.81	1,097.04
tblVehicleEF	HHD	1,567.39	1,379.15
tblVehicleEF	HHD	10.70	0.08
tblVehicleEF	HHD	14.43	5.45
tblVehicleEF	HHD	2.00	2.58
tblVehicleEF	HHD	19.47	2.35
tblVehicleEF	HHD	7.5480e-003	2.6640e-003
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	6.2770e-003	0.02
tblVehicleEF	HHD	9.2000e-005	1.0000e-006

tblVehicleEF	HHD	7.2220e-003	2.5490e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8420e-003	8.8990e-003
tblVehicleEF	HHD	6.0050e-003	0.02
tblVehicleEF	HHD	8.5000e-005	1.0000e-006
tblVehicleEF	HHD	1.5000e-004	8.0000e-006
tblVehicleEF	HHD	4.4160e-003	2.0100e-004
tblVehicleEF	HHD	0.38	0.48
tblVehicleEF	HHD	1.0700e-004	5.0000e-006
tblVehicleEF	HHD	0.09	0.02
tblVehicleEF	HHD	3.4300e-004	9.8800e-004
tblVehicleEF	HHD	0.07	2.0000e-006
tblVehicleEF	HHD	0.04	0.01
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	1.5800e-004	1.0000e-006
tblVehicleEF	HHD	1.5000e-004	8.0000e-006
tblVehicleEF	HHD	4.4160e-003	2.0100e-004
tblVehicleEF	HHD	0.45	0.55
tblVehicleEF	HHD	1.0700e-004	5.0000e-006
tblVehicleEF	HHD	0.20	0.11
tblVehicleEF	HHD	3.4300e-004	9.8800e-004
tblVehicleEF	HHD	0.07	3.0000e-006
tblVehicleEF	HHD	0.50	0.02
tblVehicleEF	HHD	0.09	9.8700e-004
tblVehicleEF	HHD	0.07	0.00
tblVehicleEF	HHD	2.21	6.73
tblVehicleEF	HHD	1.08	0.24

tblVehicleEF	HHD	3.32	8.8540e-003
tblVehicleEF	HHD	4,053.22	1,107.93
tblVehicleEF	HHD	1,567.39	1,323.93
tblVehicleEF	HHD	10.70	0.08
tblVehicleEF	HHD	13.36	5.94
tblVehicleEF	HHD	2.08	2.64
tblVehicleEF	HHD	19.48	2.35
tblVehicleEF	HHD	0.01	3.3890e-003
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.03
tblVehicleEF	HHD	6.2770e-003	0.02
tblVehicleEF	HHD	9.2000e-005	1.0000e-006
tblVehicleEF	HHD	0.01	3.2420e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8420e-003	8.7490e-003
tblVehicleEF	HHD	6.0050e-003	0.02
tblVehicleEF	HHD	8.5000e-005	1.0000e-006
tblVehicleEF	HHD	9.6000e-005	5.0000e-006
tblVehicleEF	HHD	4.5590e-003	2.2200e-004
tblVehicleEF	HHD	0.44	0.42
tblVehicleEF	HHD	7.3000e-005	4.0000e-006
tblVehicleEF	HHD	0.09	0.02
tblVehicleEF	HHD	3.8700e-004	1.0720e-003
tblVehicleEF	HHD	0.07	3.0000e-006
tblVehicleEF	HHD	0.04	0.01
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	1.6100e-004	1.0000e-006

tblVehicleEF	HHD	9.6000e-005	5.0000e-006
tblVehicleEF	HHD	4.5590e-003	2.2200e-004
tblVehicleEF	HHD	0.52	0.47
tblVehicleEF	HHD	7.3000e-005	4.0000e-006
tblVehicleEF	HHD	0.20	0.02
tblVehicleEF	HHD	3.8700e-004	1.0720e-003
tblVehicleEF	HHD	0.08	3.0000e-006
tblVehicleEF	LDA	4.4230e-003	2.3640e-003
tblVehicleEF	LDA	4.1600e-003	0.04
tblVehicleEF	LDA	0.57	0.63
tblVehicleEF	LDA	0.95	1.96
tblVehicleEF	LDA	253.91	260.15
tblVehicleEF	LDA	52.79	51.03
tblVehicleEF	LDA	0.04	0.03
tblVehicleEF	LDA	0.05	0.16
tblVehicleEF	LDA	2.0900e-003	1.6550e-003
tblVehicleEF	LDA	2.2190e-003	1.6910e-003
tblVehicleEF	LDA	1.9260e-003	1.5240e-003
tblVehicleEF	LDA	2.0400e-003	1.5550e-003
tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.01	8.9880e-003
tblVehicleEF	LDA	0.04	0.20
tblVehicleEF	LDA	0.06	0.19
tblVehicleEF	LDA	2.5430e-003	2.5220e-003
tblVehicleEF	LDA	5.4400e-004	4.9500e-004

tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.02	0.01
tblVehicleEF	LDA	0.04	0.20
tblVehicleEF	LDA	0.06	0.20
tblVehicleEF	LDA	4.7040e-003	2.5270e-003
tblVehicleEF	LDA	3.7040e-003	0.04
tblVehicleEF	LDA	0.63	0.69
tblVehicleEF	LDA	0.81	1.68
tblVehicleEF	LDA	265.72	271.51
tblVehicleEF	LDA	52.79	50.50
tblVehicleEF	LDA	0.04	0.03
tblVehicleEF	LDA	0.05	0.15
tblVehicleEF	LDA	2.0900e-003	1.6550e-003
tblVehicleEF	LDA	2.2190e-003	1.6910e-003
tblVehicleEF	LDA	1.9260e-003	1.5240e-003
tblVehicleEF	LDA	2.0400e-003	1.5550e-003
tblVehicleEF	LDA	0.05	0.07
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.04	0.06
tblVehicleEF	LDA	0.01	9.5250e-003
tblVehicleEF	LDA	0.03	0.18
tblVehicleEF	LDA	0.05	0.17
tblVehicleEF	LDA	2.6610e-003	2.6320e-003
tblVehicleEF	LDA	5.4100e-004	4.9000e-004
tblVehicleEF	LDA	0.05	0.07

tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.04	0.06
tblVehicleEF	LDA	0.02	0.01
tblVehicleEF	LDA	0.03	0.18
tblVehicleEF	LDA	0.05	0.18
tblVehicleEF	LDA	4.3320e-003	2.3130e-003
tblVehicleEF	LDA	4.2560e-003	0.04
tblVehicleEF	LDA	0.55	0.60
tblVehicleEF	LDA	0.98	2.03
tblVehicleEF	LDA	249.59	255.95
tblVehicleEF	LDA	52.79	51.15
tblVehicleEF	LDA	0.04	0.03
tblVehicleEF	LDA	0.06	0.16
tblVehicleEF	LDA	2.0900e-003	1.6550e-003
tblVehicleEF	LDA	2.2190e-003	1.6910e-003
tblVehicleEF	LDA	1.9260e-003	1.5240e-003
tblVehicleEF	LDA	2.0400e-003	1.5550e-003
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.01	8.8100e-003
tblVehicleEF	LDA	0.04	0.22
tblVehicleEF	LDA	0.06	0.19
tblVehicleEF	LDA	2.4990e-003	2.4810e-003
tblVehicleEF	LDA	5.4400e-004	4.9600e-004
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.10	0.10

tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.02	0.01
tblVehicleEF	LDA	0.04	0.22
tblVehicleEF	LDA	0.06	0.21
tblVehicleEF	LDT1	0.01	5.9380e-003
tblVehicleEF	LDT1	0.01	0.06
tblVehicleEF	LDT1	1.40	1.18
tblVehicleEF	LDT1	2.25	2.11
tblVehicleEF	LDT1	322.00	308.10
tblVehicleEF	LDT1	65.45	60.85
tblVehicleEF	LDT1	0.13	0.09
tblVehicleEF	LDT1	0.13	0.22
tblVehicleEF	LDT1	3.2340e-003	2.3500e-003
tblVehicleEF	LDT1	3.1500e-003	2.2900e-003
tblVehicleEF	LDT1	2.9770e-003	2.1620e-003
tblVehicleEF	LDT1	2.8970e-003	2.1050e-003
tblVehicleEF	LDT1	0.11	0.11
tblVehicleEF	LDT1	0.23	0.17
tblVehicleEF	LDT1	0.09	0.09
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.16	0.60
tblVehicleEF	LDT1	0.15	0.29
tblVehicleEF	LDT1	3.2370e-003	2.9870e-003
tblVehicleEF	LDT1	6.9400e-004	5.9000e-004
tblVehicleEF	LDT1	0.11	0.11
tblVehicleEF	LDT1	0.23	0.17
tblVehicleEF	LDT1	0.09	0.09

tblVehicleEF	LDT1	0.05	0.04
tblVehicleEF	LDT1	0.16	0.60
tblVehicleEF	LDT1	0.16	0.31
tblVehicleEF	LDT1	0.01	6.2920e-003
tblVehicleEF	LDT1	9.8770e-003	0.05
tblVehicleEF	LDT1	1.52	1.28
tblVehicleEF	LDT1	1.91	1.80
tblVehicleEF	LDT1	336.08	319.70
tblVehicleEF	LDT1	65.45	60.24
tblVehicleEF	LDT1	0.11	0.08
tblVehicleEF	LDT1	0.12	0.20
tblVehicleEF	LDT1	3.2340e-003	2.3500e-003
tblVehicleEF	LDT1	3.1500e-003	2.2900e-003
tblVehicleEF	LDT1	2.9770e-003	2.1620e-003
tblVehicleEF	LDT1	2.8970e-003	2.1050e-003
tblVehicleEF	LDT1	0.17	0.16
tblVehicleEF	LDT1	0.24	0.18
tblVehicleEF	LDT1	0.13	0.13
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.14	0.55
tblVehicleEF	LDT1	0.13	0.25
tblVehicleEF	LDT1	3.3800e-003	3.1000e-003
tblVehicleEF	LDT1	6.8800e-004	5.8400e-004
tblVehicleEF	LDT1	0.17	0.16
tblVehicleEF	LDT1	0.24	0.18
tblVehicleEF	LDT1	0.13	0.13
tblVehicleEF	LDT1	0.05	0.04

tblVehicleEF	LDT1	0.14	0.55
tblVehicleEF	LDT1	0.15	0.28
tblVehicleEF	LDT1	0.01	5.8250e-003
tblVehicleEF	LDT1	0.01	0.06
tblVehicleEF	LDT1	1.36	1.14
tblVehicleEF	LDT1	2.32	2.18
tblVehicleEF	LDT1	316.82	303.81
tblVehicleEF	LDT1	65.45	60.99
tblVehicleEF	LDT1	0.13	0.09
tblVehicleEF	LDT1	0.13	0.22
tblVehicleEF	LDT1	3.2340e-003	2.3500e-003
tblVehicleEF	LDT1	3.1500e-003	2.2900e-003
tblVehicleEF	LDT1	2.9770e-003	2.1620e-003
tblVehicleEF	LDT1	2.8970e-003	2.1050e-003
tblVehicleEF	LDT1	0.11	0.11
tblVehicleEF	LDT1	0.26	0.19
tblVehicleEF	LDT1	0.09	0.09
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.18	0.71
tblVehicleEF	LDT1	0.15	0.29
tblVehicleEF	LDT1	3.1850e-003	2.9450e-003
tblVehicleEF	LDT1	6.9500e-004	5.9100e-004
tblVehicleEF	LDT1	0.11	0.11
tblVehicleEF	LDT1	0.26	0.19
tblVehicleEF	LDT1	0.09	0.09
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.18	0.71

tblVehicleEF	LDT1	0.17	0.32
tblVehicleEF	LDT2	6.1600e-003	4.0130e-003
tblVehicleEF	LDT2	5.0900e-003	0.06
tblVehicleEF	LDT2	0.76	0.88
tblVehicleEF	LDT2	1.14	2.47
tblVehicleEF	LDT2	357.41	324.47
tblVehicleEF	LDT2	72.80	64.52
tblVehicleEF	LDT2	0.07	0.07
tblVehicleEF	LDT2	0.08	0.23
tblVehicleEF	LDT2	2.1810e-003	1.7730e-003
tblVehicleEF	LDT2	2.3970e-003	1.7550e-003
tblVehicleEF	LDT2	2.0060e-003	1.6320e-003
tblVehicleEF	LDT2	2.2040e-003	1.6130e-003
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.09	0.11
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.38
tblVehicleEF	LDT2	0.07	0.26
tblVehicleEF	LDT2	3.5800e-003	3.1450e-003
tblVehicleEF	LDT2	7.4700e-004	6.2600e-004
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.09	0.11
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.38
tblVehicleEF	LDT2	0.08	0.29

tblVehicleEF	LDT2	6.5370e-003	4.2740e-003
tblVehicleEF	LDT2	4.5360e-003	0.05
tblVehicleEF	LDT2	0.83	0.96
tblVehicleEF	LDT2	0.98	2.10
tblVehicleEF	LDT2	373.41	335.60
tblVehicleEF	LDT2	72.80	63.85
tblVehicleEF	LDT2	0.06	0.06
tblVehicleEF	LDT2	0.08	0.21
tblVehicleEF	LDT2	2.1810e-003	1.7730e-003
tblVehicleEF	LDT2	2.3970e-003	1.7550e-003
tblVehicleEF	LDT2	2.0060e-003	1.6320e-003
tblVehicleEF	LDT2	2.2040e-003	1.6130e-003
tblVehicleEF	LDT2	0.06	0.10
tblVehicleEF	LDT2	0.09	0.11
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.05	0.35
tblVehicleEF	LDT2	0.06	0.23
tblVehicleEF	LDT2	3.7410e-003	3.2530e-003
tblVehicleEF	LDT2	7.4400e-004	6.1900e-004
tblVehicleEF	LDT2	0.06	0.10
tblVehicleEF	LDT2	0.09	0.11
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.05	0.35
tblVehicleEF	LDT2	0.07	0.26
tblVehicleEF	LDT2	6.0370e-003	3.9310e-003

tblVehicleEF	LDT2	5.2090e-003	0.06
tblVehicleEF	LDT2	0.73	0.85
tblVehicleEF	LDT2	1.18	2.55
tblVehicleEF	LDT2	351.53	320.35
tblVehicleEF	LDT2	72.80	64.68
tblVehicleEF	LDT2	0.07	0.06
tblVehicleEF	LDT2	0.08	0.24
tblVehicleEF	LDT2	2.1810e-003	1.7730e-003
tblVehicleEF	LDT2	2.3970e-003	1.7550e-003
tblVehicleEF	LDT2	2.0060e-003	1.6320e-003
tblVehicleEF	LDT2	2.2040e-003	1.6130e-003
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.10	0.12
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.01	0.02
tblVehicleEF	LDT2	0.07	0.44
tblVehicleEF	LDT2	0.07	0.27
tblVehicleEF	LDT2	3.5210e-003	3.1050e-003
tblVehicleEF	LDT2	7.4800e-004	6.2700e-004
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.10	0.12
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.44
tblVehicleEF	LDT2	0.08	0.29
tblVehicleEF	LHD1	4.9880e-003	5.1330e-003
tblVehicleEF	LHD1	9.2560e-003	4.4580e-003

tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	0.19
tblVehicleEF	LHD1	0.66	0.50
tblVehicleEF	LHD1	2.37	1.03
tblVehicleEF	LHD1	8.95	8.74
tblVehicleEF	LHD1	588.36	641.01
tblVehicleEF	LHD1	31.02	11.65
tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.78	0.48
tblVehicleEF	LHD1	0.89	0.30
tblVehicleEF	LHD1	8.3700e-004	8.1500e-004
tblVehicleEF	LHD1	0.01	9.7830e-003
tblVehicleEF	LHD1	8.5610e-003	5.7480e-003
tblVehicleEF	LHD1	8.8500e-004	2.5400e-004
tblVehicleEF	LHD1	8.0100e-004	7.8000e-004
tblVehicleEF	LHD1	2.5540e-003	2.4460e-003
tblVehicleEF	LHD1	8.1660e-003	5.4720e-003
tblVehicleEF	LHD1	8.1400e-004	2.3300e-004
tblVehicleEF	LHD1	2.7900e-003	2.1700e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.7340e-003	1.3580e-003
tblVehicleEF	LHD1	0.06	0.04
tblVehicleEF	LHD1	0.29	0.48
tblVehicleEF	LHD1	0.22	0.07
tblVehicleEF	LHD1	8.9000e-005	8.5000e-005
tblVehicleEF	LHD1	5.7670e-003	6.2540e-003

tblVehicleEF	LHD1	3.5400e-004	1.1500e-004
tblVehicleEF	LHD1	2.7900e-003	2.1700e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.7340e-003	1.3580e-003
tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.29	0.48
tblVehicleEF	LHD1	0.24	0.07
tblVehicleEF	LHD1	4.9880e-003	5.1440e-003
tblVehicleEF	LHD1	9.4510e-003	4.5390e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	0.19
tblVehicleEF	LHD1	0.67	0.51
tblVehicleEF	LHD1	2.26	0.99
tblVehicleEF	LHD1	8.95	8.74
tblVehicleEF	LHD1	588.36	641.02
tblVehicleEF	LHD1	31.02	11.57
tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.73	0.45
tblVehicleEF	LHD1	0.85	0.28
tblVehicleEF	LHD1	8.3700e-004	8.1500e-004
tblVehicleEF	LHD1	0.01	9.7830e-003
tblVehicleEF	LHD1	8.5610e-003	5.7480e-003
tblVehicleEF	LHD1	8.8500e-004	2.5400e-004
tblVehicleEF	LHD1	8.0100e-004	7.8000e-004
tblVehicleEF	LHD1	2.5540e-003	2.4460e-003
tblVehicleEF	LHD1	8.1660e-003	5.4720e-003

tblVehicleEF	LHD1	8.1400e-004	2.3300e-004
tblVehicleEF	LHD1	4.1640e-003	3.1860e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	2.4160e-003	1.8620e-003
tblVehicleEF	LHD1	0.06	0.04
tblVehicleEF	LHD1	0.28	0.47
tblVehicleEF	LHD1	0.21	0.06
tblVehicleEF	LHD1	8.9000e-005	8.5000e-005
tblVehicleEF	LHD1	5.7670e-003	6.2550e-003
tblVehicleEF	LHD1	3.5200e-004	1.1500e-004
tblVehicleEF	LHD1	4.1640e-003	3.1860e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	2.4160e-003	1.8620e-003
tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.28	0.47
tblVehicleEF	LHD1	0.23	0.07
tblVehicleEF	LHD1	4.9880e-003	5.1310e-003
tblVehicleEF	LHD1	9.2060e-003	4.4360e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	0.19
tblVehicleEF	LHD1	0.66	0.50
tblVehicleEF	LHD1	2.39	1.04
tblVehicleEF	LHD1	8.95	8.74
tblVehicleEF	LHD1	588.36	641.00
tblVehicleEF	LHD1	31.02	11.67

tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.76	0.47
tblVehicleEF	LHD1	0.89	0.30
tblVehicleEF	LHD1	8.3700e-004	8.1500e-004
tblVehicleEF	LHD1	0.01	9.7830e-003
tblVehicleEF	LHD1	8.5610e-003	5.7480e-003
tblVehicleEF	LHD1	8.8500e-004	2.5400e-004
tblVehicleEF	LHD1	8.0100e-004	7.8000e-004
tblVehicleEF	LHD1	2.5540e-003	2.4460e-003
tblVehicleEF	LHD1	8.1660e-003	5.4720e-003
tblVehicleEF	LHD1	8.1400e-004	2.3300e-004
tblVehicleEF	LHD1	2.9050e-003	2.2620e-003
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.7020e-003	1.3350e-003
tblVehicleEF	LHD1	0.06	0.04
tblVehicleEF	LHD1	0.31	0.52
tblVehicleEF	LHD1	0.22	0.07
tblVehicleEF	LHD1	8.9000e-005	8.5000e-005
tblVehicleEF	LHD1	5.7670e-003	6.2540e-003
tblVehicleEF	LHD1	3.5400e-004	1.1500e-004
tblVehicleEF	LHD1	2.9050e-003	2.2620e-003
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.7020e-003	1.3350e-003
tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.31	0.52

tblVehicleEF	LHD1	0.24	0.07
tblVehicleEF	LHD2	3.5180e-003	3.5560e-003
tblVehicleEF	LHD2	3.4110e-003	3.2460e-003
tblVehicleEF	LHD2	6.5620e-003	9.1980e-003
tblVehicleEF	LHD2	0.13	0.15
tblVehicleEF	LHD2	0.28	0.35
tblVehicleEF	LHD2	1.17	0.68
tblVehicleEF	LHD2	13.57	13.29
tblVehicleEF	LHD2	605.98	642.03
tblVehicleEF	LHD2	26.15	8.82
tblVehicleEF	LHD2	0.09	0.08
tblVehicleEF	LHD2	0.46	0.62
tblVehicleEF	LHD2	0.46	0.20
tblVehicleEF	LHD2	1.1260e-003	1.3050e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	8.0770e-003	9.4980e-003
tblVehicleEF	LHD2	4.2100e-004	1.4300e-004
tblVehicleEF	LHD2	1.0770e-003	1.2490e-003
tblVehicleEF	LHD2	2.6710e-003	2.6530e-003
tblVehicleEF	LHD2	7.7140e-003	9.0710e-003
tblVehicleEF	LHD2	3.8700e-004	1.3200e-004
tblVehicleEF	LHD2	9.3900e-004	1.3070e-003
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	6.4000e-004	8.4500e-004
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.07	0.28

tblVehicleEF	LHD2	0.09	0.04
tblVehicleEF	LHD2	1.3300e-004	1.2700e-004
tblVehicleEF	LHD2	5.9000e-003	6.2090e-003
tblVehicleEF	LHD2	2.8200e-004	8.7000e-005
tblVehicleEF	LHD2	9.3900e-004	1.3070e-003
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	6.4000e-004	8.4500e-004
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.07	0.28
tblVehicleEF	LHD2	0.10	0.05
tblVehicleEF	LHD2	3.5180e-003	3.5630e-003
tblVehicleEF	LHD2	3.4510e-003	3.2790e-003
tblVehicleEF	LHD2	6.3490e-003	8.8870e-003
tblVehicleEF	LHD2	0.13	0.15
tblVehicleEF	LHD2	0.28	0.35
tblVehicleEF	LHD2	1.12	0.65
tblVehicleEF	LHD2	13.57	13.29
tblVehicleEF	LHD2	605.98	642.03
tblVehicleEF	LHD2	26.15	8.77
tblVehicleEF	LHD2	0.09	0.08
tblVehicleEF	LHD2	0.44	0.58
tblVehicleEF	LHD2	0.44	0.19
tblVehicleEF	LHD2	1.1260e-003	1.3050e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	8.0770e-003	9.4980e-003
tblVehicleEF	LHD2	4.2100e-004	1.4300e-004

tblVehicleEF	LHD2	1.0770e-003	1.2490e-003
tblVehicleEF	LHD2	2.6710e-003	2.6530e-003
tblVehicleEF	LHD2	7.7140e-003	9.0710e-003
tblVehicleEF	LHD2	3.8700e-004	1.3200e-004
tblVehicleEF	LHD2	1.3970e-003	1.9230e-003
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	8.8800e-004	1.1640e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.06	0.27
tblVehicleEF	LHD2	0.09	0.04
tblVehicleEF	LHD2	1.3300e-004	1.2700e-004
tblVehicleEF	LHD2	5.9000e-003	6.2090e-003
tblVehicleEF	LHD2	2.8100e-004	8.7000e-005
tblVehicleEF	LHD2	1.3970e-003	1.9230e-003
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	8.8800e-004	1.1640e-003
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.06	0.27
tblVehicleEF	LHD2	0.09	0.05
tblVehicleEF	LHD2	3.5180e-003	3.5540e-003
tblVehicleEF	LHD2	3.4000e-003	3.2380e-003
tblVehicleEF	LHD2	6.6050e-003	9.2660e-003
tblVehicleEF	LHD2	0.13	0.15
tblVehicleEF	LHD2	0.28	0.35
tblVehicleEF	LHD2	1.18	0.68

tblVehicleEF	LHD2	13.57	13.29
tblVehicleEF	LHD2	605.98	642.02
tblVehicleEF	LHD2	26.15	8.83
tblVehicleEF	LHD2	0.09	0.08
tblVehicleEF	LHD2	0.46	0.61
tblVehicleEF	LHD2	0.46	0.21
tblVehicleEF	LHD2	1.1260e-003	1.3050e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	8.0770e-003	9.4980e-003
tblVehicleEF	LHD2	4.2100e-004	1.4300e-004
tblVehicleEF	LHD2	1.0770e-003	1.2490e-003
tblVehicleEF	LHD2	2.6710e-003	2.6530e-003
tblVehicleEF	LHD2	7.7140e-003	9.0710e-003
tblVehicleEF	LHD2	3.8700e-004	1.3200e-004
tblVehicleEF	LHD2	9.4200e-004	1.3330e-003
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	6.1900e-004	8.1700e-004
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.07	0.31
tblVehicleEF	LHD2	0.09	0.05
tblVehicleEF	LHD2	1.3300e-004	1.2700e-004
tblVehicleEF	LHD2	5.9000e-003	6.2090e-003
tblVehicleEF	LHD2	2.8200e-004	8.7000e-005
tblVehicleEF	LHD2	9.4200e-004	1.3330e-003
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	LHD2	0.02	0.02

tblVehicleEF	LHD2	6.1900e-004	8.1700e-004
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.07	0.31
tblVehicleEF	LHD2	0.10	0.05
tblVehicleEF	MCY	0.55	0.38
tblVehicleEF	MCY	0.15	0.23
tblVehicleEF	MCY	18.62	18.74
tblVehicleEF	MCY	9.70	8.57
tblVehicleEF	MCY	190.93	224.78
tblVehicleEF	MCY	43.78	58.90
tblVehicleEF	MCY	1.13	1.13
tblVehicleEF	MCY	0.31	0.26
tblVehicleEF	MCY	2.5350e-003	2.5430e-003
tblVehicleEF	MCY	3.5080e-003	3.0380e-003
tblVehicleEF	MCY	2.3660e-003	2.3740e-003
tblVehicleEF	MCY	3.2930e-003	2.8510e-003
tblVehicleEF	MCY	1.05	1.07
tblVehicleEF	MCY	0.61	0.62
tblVehicleEF	MCY	0.64	0.65
tblVehicleEF	MCY	2.60	2.61
tblVehicleEF	MCY	0.56	1.80
tblVehicleEF	MCY	2.03	1.79
tblVehicleEF	MCY	2.2930e-003	2.2240e-003
tblVehicleEF	MCY	6.5600e-004	5.8300e-004
tblVehicleEF	MCY	1.05	1.07
tblVehicleEF	MCY	0.61	0.62
tblVehicleEF	MCY	0.64	0.65

tblVehicleEF	MCY	3.25	3.26
tblVehicleEF	MCY	0.56	1.80
tblVehicleEF	MCY	2.21	1.95
tblVehicleEF	MCY	0.54	0.38
tblVehicleEF	MCY	0.13	0.21
tblVehicleEF	MCY	17.96	18.05
tblVehicleEF	MCY	8.84	7.79
tblVehicleEF	MCY	190.93	223.47
tblVehicleEF	MCY	43.78	57.01
tblVehicleEF	MCY	0.99	0.99
tblVehicleEF	MCY	0.29	0.25
tblVehicleEF	MCY	2.5350e-003	2.5430e-003
tblVehicleEF	MCY	3.5080e-003	3.0380e-003
tblVehicleEF	MCY	2.3660e-003	2.3740e-003
tblVehicleEF	MCY	3.2930e-003	2.8510e-003
tblVehicleEF	MCY	1.71	1.70
tblVehicleEF	MCY	0.67	0.68
tblVehicleEF	MCY	1.05	1.04
tblVehicleEF	MCY	2.54	2.56
tblVehicleEF	MCY	0.53	1.68
tblVehicleEF	MCY	1.81	1.60
tblVehicleEF	MCY	2.2810e-003	2.2110e-003
tblVehicleEF	MCY	6.3500e-004	5.6400e-004
tblVehicleEF	MCY	1.71	1.70
tblVehicleEF	MCY	0.67	0.68
tblVehicleEF	MCY	1.05	1.04
tblVehicleEF	MCY	3.18	3.19

tblVehicleEF	MCY	0.53	1.68
tblVehicleEF	MCY	1.97	1.74
tblVehicleEF	MCY	0.55	0.38
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	18.72	18.88
tblVehicleEF	MCY	9.85	8.72
tblVehicleEF	MCY	190.93	225.05
tblVehicleEF	MCY	43.78	59.29
tblVehicleEF	MCY	1.11	1.11
tblVehicleEF	MCY	0.31	0.27
tblVehicleEF	MCY	2.5350e-003	2.5430e-003
tblVehicleEF	MCY	3.5080e-003	3.0380e-003
tblVehicleEF	MCY	2.3660e-003	2.3740e-003
tblVehicleEF	MCY	3.2930e-003	2.8510e-003
tblVehicleEF	MCY	1.15	1.16
tblVehicleEF	MCY	0.78	0.80
tblVehicleEF	MCY	0.61	0.62
tblVehicleEF	MCY	2.61	2.63
tblVehicleEF	MCY	0.65	2.08
tblVehicleEF	MCY	2.07	1.84
tblVehicleEF	MCY	2.2950e-003	2.2270e-003
tblVehicleEF	MCY	6.5900e-004	5.8700e-004
tblVehicleEF	MCY	1.15	1.16
tblVehicleEF	MCY	0.78	0.80
tblVehicleEF	MCY	0.61	0.62
tblVehicleEF	MCY	3.26	3.28
tblVehicleEF	MCY	0.65	2.08

tblVehicleEF	MCY	2.25	2.00
tblVehicleEF	MDV	0.01	4.9820e-003
tblVehicleEF	MDV	0.01	0.07
tblVehicleEF	MDV	1.10	0.98
tblVehicleEF	MDV	1.99	2.75
tblVehicleEF	MDV	481.40	398.81
tblVehicleEF	MDV	96.60	78.26
tblVehicleEF	MDV	0.12	0.08
tblVehicleEF	MDV	0.17	0.28
tblVehicleEF	MDV	2.2730e-003	1.8650e-003
tblVehicleEF	MDV	2.4250e-003	1.8220e-003
tblVehicleEF	MDV	2.0940e-003	1.7190e-003
tblVehicleEF	MDV	2.2300e-003	1.6760e-003
tblVehicleEF	MDV	0.06	0.08
tblVehicleEF	MDV	0.14	0.13
tblVehicleEF	MDV	0.07	0.08
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.08	0.39
tblVehicleEF	MDV	0.15	0.32
tblVehicleEF	MDV	4.8190e-003	3.8640e-003
tblVehicleEF	MDV	1.0000e-003	7.5900e-004
tblVehicleEF	MDV	0.06	0.08
tblVehicleEF	MDV	0.14	0.13
tblVehicleEF	MDV	0.07	0.08
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.08	0.39
tblVehicleEF	MDV	0.16	0.35

tblVehicleEF	MDV	0.01	5.2990e-003
tblVehicleEF	MDV	9.6010e-003	0.06
tblVehicleEF	MDV	1.21	1.07
tblVehicleEF	MDV	1.70	2.34
tblVehicleEF	MDV	502.45	410.36
tblVehicleEF	MDV	96.60	77.49
tblVehicleEF	MDV	0.10	0.07
tblVehicleEF	MDV	0.16	0.26
tblVehicleEF	MDV	2.2730e-003	1.8650e-003
tblVehicleEF	MDV	2.4250e-003	1.8220e-003
tblVehicleEF	MDV	2.0940e-003	1.7190e-003
tblVehicleEF	MDV	2.2300e-003	1.6760e-003
tblVehicleEF	MDV	0.10	0.12
tblVehicleEF	MDV	0.14	0.13
tblVehicleEF	MDV	0.09	0.11
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.08	0.37
tblVehicleEF	MDV	0.13	0.29
tblVehicleEF	MDV	5.0310e-003	3.9760e-003
tblVehicleEF	MDV	9.9500e-004	7.5100e-004
tblVehicleEF	MDV	0.10	0.12
tblVehicleEF	MDV	0.14	0.13
tblVehicleEF	MDV	0.09	0.11
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.08	0.37
tblVehicleEF	MDV	0.14	0.31
tblVehicleEF	MDV	0.01	4.8810e-003

tblVehicleEF	MDV	0.01	0.07
tblVehicleEF	MDV	1.06	0.95
tblVehicleEF	MDV	2.05	2.85
tblVehicleEF	MDV	473.66	394.54
tblVehicleEF	MDV	96.60	78.44
tblVehicleEF	MDV	0.11	0.08
tblVehicleEF	MDV	0.17	0.28
tblVehicleEF	MDV	2.2730e-003	1.8650e-003
tblVehicleEF	MDV	2.4250e-003	1.8220e-003
tblVehicleEF	MDV	2.0940e-003	1.7190e-003
tblVehicleEF	MDV	2.2300e-003	1.6760e-003
tblVehicleEF	MDV	0.06	0.07
tblVehicleEF	MDV	0.15	0.13
tblVehicleEF	MDV	0.06	0.08
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.10	0.46
tblVehicleEF	MDV	0.15	0.33
tblVehicleEF	MDV	4.7420e-003	3.8230e-003
tblVehicleEF	MDV	1.0010e-003	7.6000e-004
tblVehicleEF	MDV	0.06	0.07
tblVehicleEF	MDV	0.15	0.13
tblVehicleEF	MDV	0.06	0.08
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.10	0.46
tblVehicleEF	MDV	0.16	0.36
tblVehicleEF	MH	0.02	7.6690e-003
tblVehicleEF	MH	0.02	0.02

tblVehicleEF	MH	1.43	0.81
tblVehicleEF	MH	4.82	1.94
tblVehicleEF	MH	1,126.11	1,447.94
tblVehicleEF	MH	59.42	18.29
tblVehicleEF	MH	0.93	1.00
tblVehicleEF	MH	0.71	0.25
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	9.8700e-004	2.5500e-004
tblVehicleEF	MH	3.2070e-003	3.2580e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	9.0800e-004	2.3400e-004
tblVehicleEF	MH	0.76	0.65
tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	0.33	0.29
tblVehicleEF	MH	0.06	0.04
tblVehicleEF	MH	0.02	1.14
tblVehicleEF	MH	0.28	0.09
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.7800e-004	1.8100e-004
tblVehicleEF	MH	0.76	0.65
tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	0.33	0.29
tblVehicleEF	MH	0.08	0.06
tblVehicleEF	MH	0.02	1.14
tblVehicleEF	MH	0.30	0.10
tblVehicleEF	MH	0.02	7.8380e-003

tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.47	0.83
tblVehicleEF	MH	4.54	1.84
tblVehicleEF	MH	1,126.11	1,447.98
tblVehicleEF	MH	59.42	18.11
tblVehicleEF	MH	0.86	0.94
tblVehicleEF	MH	0.68	0.24
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	9.8700e-004	2.5500e-004
tblVehicleEF	MH	3.2070e-003	3.2580e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	9.0800e-004	2.3400e-004
tblVehicleEF	MH	1.12	0.93
tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	0.47	0.39
tblVehicleEF	MH	0.06	0.05
tblVehicleEF	MH	0.02	1.12
tblVehicleEF	MH	0.27	0.08
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.7300e-004	1.7900e-004
tblVehicleEF	MH	1.12	0.93
tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	0.47	0.39
tblVehicleEF	MH	0.09	0.06
tblVehicleEF	MH	0.02	1.12
tblVehicleEF	MH	0.29	0.09

tblVehicleEF	MH	0.02	7.6200e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.42	0.81
tblVehicleEF	MH	4.87	1.96
tblVehicleEF	MH	1,126.11	1,447.93
tblVehicleEF	MH	59.42	18.33
tblVehicleEF	MH	0.91	0.99
tblVehicleEF	MH	0.71	0.25
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	9.8700e-004	2.5500e-004
tblVehicleEF	MH	3.2070e-003	3.2580e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	9.0800e-004	2.3400e-004
tblVehicleEF	MH	0.85	0.72
tblVehicleEF	MH	0.07	0.06
tblVehicleEF	MH	0.34	0.29
tblVehicleEF	MH	0.06	0.04
tblVehicleEF	MH	0.02	1.21
tblVehicleEF	MH	0.28	0.09
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.7900e-004	1.8100e-004
tblVehicleEF	MH	0.85	0.72
tblVehicleEF	MH	0.07	0.06
tblVehicleEF	MH	0.34	0.29
tblVehicleEF	MH	0.08	0.06
tblVehicleEF	MH	0.02	1.21

tblVehicleEF	MH	0.31	0.10
tblVehicleEF	MHD	0.02	4.3420e-003
tblVehicleEF	MHD	3.4980e-003	1.7990e-003
tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.35	0.40
tblVehicleEF	MHD	0.29	0.24
tblVehicleEF	MHD	5.13	1.27
tblVehicleEF	MHD	132.56	63.61
tblVehicleEF	MHD	1,140.29	1,014.00
tblVehicleEF	MHD	61.49	11.48
tblVehicleEF	MHD	0.35	0.34
tblVehicleEF	MHD	0.76	1.09
tblVehicleEF	MHD	10.11	1.60
tblVehicleEF	MHD	9.0000e-005	2.8200e-004
tblVehicleEF	MHD	2.8650e-003	6.1500e-003
tblVehicleEF	MHD	7.8500e-004	1.2800e-004
tblVehicleEF	MHD	8.6000e-005	2.7000e-004
tblVehicleEF	MHD	2.7360e-003	5.8770e-003
tblVehicleEF	MHD	7.2200e-004	1.1700e-004
tblVehicleEF	MHD	9.8100e-004	5.6700e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	6.6900e-004	3.8100e-004
tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.02	0.13
tblVehicleEF	MHD	0.32	0.06
tblVehicleEF	MHD	1.2770e-003	6.0500e-004

tblVehicleEF	MHD	0.01	9.6930e-003
tblVehicleEF	MHD	7.0500e-004	1.1400e-004
tblVehicleEF	MHD	9.8100e-004	5.6700e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.03	0.03
tblVehicleEF	MHD	6.6900e-004	3.8100e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.02	0.13
tblVehicleEF	MHD	0.35	0.07
tblVehicleEF	MHD	0.01	4.1210e-003
tblVehicleEF	MHD	3.5450e-003	1.8350e-003
tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.26	0.33
tblVehicleEF	MHD	0.30	0.24
tblVehicleEF	MHD	4.87	1.21
tblVehicleEF	MHD	140.40	63.60
tblVehicleEF	MHD	1,140.29	1,014.01
tblVehicleEF	MHD	61.49	11.37
tblVehicleEF	MHD	0.36	0.33
tblVehicleEF	MHD	0.71	1.03
tblVehicleEF	MHD	10.08	1.59
tblVehicleEF	MHD	7.6000e-005	2.4000e-004
tblVehicleEF	MHD	2.8650e-003	6.1500e-003
tblVehicleEF	MHD	7.8500e-004	1.2800e-004
tblVehicleEF	MHD	7.2000e-005	2.3000e-004
tblVehicleEF	MHD	2.7360e-003	5.8770e-003
tblVehicleEF	MHD	7.2200e-004	1.1700e-004

tblVehicleEF	MHD	1.4660e-003	8.4100e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	9.3700e-004	5.3100e-004
tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.02	0.12
tblVehicleEF	MHD	0.30	0.06
tblVehicleEF	MHD	1.3510e-003	6.0500e-004
tblVehicleEF	MHD	0.01	9.6940e-003
tblVehicleEF	MHD	7.0000e-004	1.1200e-004
tblVehicleEF	MHD	1.4660e-003	8.4100e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.03	0.03
tblVehicleEF	MHD	9.3700e-004	5.3100e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.02	0.12
tblVehicleEF	MHD	0.33	0.06
tblVehicleEF	MHD	0.02	4.6590e-003
tblVehicleEF	MHD	3.4850e-003	1.7870e-003
tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.49	0.49
tblVehicleEF	MHD	0.29	0.24
tblVehicleEF	MHD	5.18	1.28
tblVehicleEF	MHD	121.72	63.61
tblVehicleEF	MHD	1,140.29	1,014.00
tblVehicleEF	MHD	61.49	11.50
tblVehicleEF	MHD	0.33	0.35

tblVehicleEF	MHD	0.74	1.07
tblVehicleEF	MHD	10.12	1.60
tblVehicleEF	MHD	1.0900e-004	3.3900e-004
tblVehicleEF	MHD	2.8650e-003	6.1500e-003
tblVehicleEF	MHD	7.8500e-004	1.2800e-004
tblVehicleEF	MHD	1.0500e-004	3.2500e-004
tblVehicleEF	MHD	2.7360e-003	5.8770e-003
tblVehicleEF	MHD	7.2200e-004	1.1700e-004
tblVehicleEF	MHD	9.9000e-004	5.7600e-004
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	6.4900e-004	3.7000e-004
tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.02	0.14
tblVehicleEF	MHD	0.32	0.06
tblVehicleEF	MHD	1.1750e-003	6.0400e-004
tblVehicleEF	MHD	0.01	9.6930e-003
tblVehicleEF	MHD	7.0600e-004	1.1400e-004
tblVehicleEF	MHD	9.9000e-004	5.7600e-004
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	6.4900e-004	3.7000e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.02	0.14
tblVehicleEF	MHD	0.35	0.07
tblVehicleEF	OBUS	0.01	8.2740e-003
tblVehicleEF	OBUS	5.4840e-003	4.4180e-003

tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.25	0.62
tblVehicleEF	OBUS	0.41	0.55
tblVehicleEF	OBUS	4.93	2.26
tblVehicleEF	OBUS	102.93	91.17
tblVehicleEF	OBUS	1,248.17	1,333.80
tblVehicleEF	OBUS	67.50	18.57
tblVehicleEF	OBUS	0.22	0.36
tblVehicleEF	OBUS	0.71	1.19
tblVehicleEF	OBUS	2.50	0.85
tblVehicleEF	OBUS	2.0000e-005	1.2100e-004
tblVehicleEF	OBUS	2.7480e-003	7.3390e-003
tblVehicleEF	OBUS	8.4800e-004	2.0100e-004
tblVehicleEF	OBUS	1.9000e-005	1.1600e-004
tblVehicleEF	OBUS	2.6130e-003	7.0070e-003
tblVehicleEF	OBUS	7.8000e-004	1.8500e-004
tblVehicleEF	OBUS	1.3910e-003	1.8280e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	7.6200e-004	9.5200e-004
tblVehicleEF	OBUS	0.04	0.03
tblVehicleEF	OBUS	0.04	0.27
tblVehicleEF	OBUS	0.31	0.11
tblVehicleEF	OBUS	9.9400e-004	8.6700e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.6100e-004	1.8400e-004
tblVehicleEF	OBUS	1.3910e-003	1.8280e-003

tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	7.6200e-004	9.5200e-004
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	0.04	0.27
tblVehicleEF	OBUS	0.34	0.12
tblVehicleEF	OBUS	0.01	8.3630e-003
tblVehicleEF	OBUS	5.5780e-003	4.5130e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.24	0.61
tblVehicleEF	OBUS	0.42	0.56
tblVehicleEF	OBUS	4.66	2.14
tblVehicleEF	OBUS	108.07	90.13
tblVehicleEF	OBUS	1,248.17	1,333.81
tblVehicleEF	OBUS	67.50	18.36
tblVehicleEF	OBUS	0.23	0.34
tblVehicleEF	OBUS	0.67	1.11
tblVehicleEF	OBUS	2.46	0.84
tblVehicleEF	OBUS	1.7000e-005	1.0700e-004
tblVehicleEF	OBUS	2.7480e-003	7.3390e-003
tblVehicleEF	OBUS	8.4800e-004	2.0100e-004
tblVehicleEF	OBUS	1.6000e-005	1.0300e-004
tblVehicleEF	OBUS	2.6130e-003	7.0070e-003
tblVehicleEF	OBUS	7.8000e-004	1.8500e-004
tblVehicleEF	OBUS	2.0340e-003	2.6320e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.03	0.05

tblVehicleEF	OBUS	1.0660e-003	1.3140e-003
tblVehicleEF	OBUS	0.04	0.03
tblVehicleEF	OBUS	0.04	0.26
tblVehicleEF	OBUS	0.30	0.10
tblVehicleEF	OBUS	1.0430e-003	8.5700e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.5700e-004	1.8200e-004
tblVehicleEF	OBUS	2.0340e-003	2.6320e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	1.0660e-003	1.3140e-003
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	0.04	0.26
tblVehicleEF	OBUS	0.32	0.11
tblVehicleEF	OBUS	0.01	8.1710e-003
tblVehicleEF	OBUS	5.4590e-003	4.3900e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.26	0.63
tblVehicleEF	OBUS	0.41	0.55
tblVehicleEF	OBUS	4.98	2.29
tblVehicleEF	OBUS	95.85	92.62
tblVehicleEF	OBUS	1,248.17	1,333.79
tblVehicleEF	OBUS	67.50	18.62
tblVehicleEF	OBUS	0.21	0.38
tblVehicleEF	OBUS	0.70	1.16
tblVehicleEF	OBUS	2.50	0.85
tblVehicleEF	OBUS	2.4000e-005	1.3900e-004

tblVehicleEF	OBUS	2.7480e-003	7.3390e-003
tblVehicleEF	OBUS	8.4800e-004	2.0100e-004
tblVehicleEF	OBUS	2.3000e-005	1.3300e-004
tblVehicleEF	OBUS	2.6130e-003	7.0070e-003
tblVehicleEF	OBUS	7.8000e-004	1.8500e-004
tblVehicleEF	OBUS	1.4050e-003	1.8910e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	7.3700e-004	9.3100e-004
tblVehicleEF	OBUS	0.04	0.03
tblVehicleEF	OBUS	0.04	0.29
tblVehicleEF	OBUS	0.31	0.11
tblVehicleEF	OBUS	9.2600e-004	8.8100e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.6200e-004	1.8400e-004
tblVehicleEF	OBUS	1.4050e-003	1.8910e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	7.3700e-004	9.3100e-004
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	0.04	0.29
tblVehicleEF	OBUS	0.34	0.12
tblVehicleEF	SBUS	0.83	0.08
tblVehicleEF	SBUS	0.01	6.3240e-003
tblVehicleEF	SBUS	0.06	7.3230e-003
tblVehicleEF	SBUS	8.41	3.29
tblVehicleEF	SBUS	0.61	0.54

tblVehicleEF	SBUS	7.01	0.99
tblVehicleEF	SBUS	1,089.91	353.50
tblVehicleEF	SBUS	1,062.27	1,068.92
tblVehicleEF	SBUS	57.76	6.19
tblVehicleEF	SBUS	7.82	2.91
tblVehicleEF	SBUS	3.46	4.10
tblVehicleEF	SBUS	11.58	1.01
tblVehicleEF	SBUS	7.0050e-003	3.2480e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	8.9100e-004	6.6000e-005
tblVehicleEF	SBUS	6.7020e-003	3.1080e-003
tblVehicleEF	SBUS	2.6490e-003	2.6420e-003
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	8.1900e-004	6.0000e-005
tblVehicleEF	SBUS	3.4080e-003	1.0860e-003
tblVehicleEF	SBUS	0.03	9.4900e-003
tblVehicleEF	SBUS	1.00	0.38
tblVehicleEF	SBUS	1.8930e-003	5.9900e-004
tblVehicleEF	SBUS	0.09	0.08
tblVehicleEF	SBUS	0.01	0.06
tblVehicleEF	SBUS	0.37	0.04
tblVehicleEF	SBUS	0.01	3.3780e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.9900e-004	6.1000e-005
tblVehicleEF	SBUS	3.4080e-003	1.0860e-003
tblVehicleEF	SBUS	0.03	9.4900e-003

tblVehicleEF	SBUS	1.45	0.55
tblVehicleEF	SBUS	1.8930e-003	5.9900e-004
tblVehicleEF	SBUS	0.11	0.10
tblVehicleEF	SBUS	0.01	0.06
tblVehicleEF	SBUS	0.41	0.05
tblVehicleEF	SBUS	0.83	0.08
tblVehicleEF	SBUS	0.01	6.3970e-003
tblVehicleEF	SBUS	0.05	6.5350e-003
tblVehicleEF	SBUS	8.31	3.26
tblVehicleEF	SBUS	0.62	0.55
tblVehicleEF	SBUS	5.69	0.81
tblVehicleEF	SBUS	1,137.73	359.94
tblVehicleEF	SBUS	1,062.27	1,068.93
tblVehicleEF	SBUS	57.76	5.88
tblVehicleEF	SBUS	8.07	2.97
tblVehicleEF	SBUS	3.26	3.87
tblVehicleEF	SBUS	11.55	1.00
tblVehicleEF	SBUS	5.9050e-003	2.7460e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	8.9100e-004	6.6000e-005
tblVehicleEF	SBUS	5.6500e-003	2.6280e-003
tblVehicleEF	SBUS	2.6490e-003	2.6420e-003
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	8.1900e-004	6.0000e-005
tblVehicleEF	SBUS	5.0090e-003	1.5690e-003
tblVehicleEF	SBUS	0.03	9.6320e-003

tblVehicleEF	SBUS	1.00	0.38
tblVehicleEF	SBUS	2.6560e-003	8.2600e-004
tblVehicleEF	SBUS	0.09	0.08
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.33	0.04
tblVehicleEF	SBUS	0.01	3.4390e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.7700e-004	5.8000e-005
tblVehicleEF	SBUS	5.0090e-003	1.5690e-003
tblVehicleEF	SBUS	0.03	9.6320e-003
tblVehicleEF	SBUS	1.44	0.55
tblVehicleEF	SBUS	2.6560e-003	8.2600e-004
tblVehicleEF	SBUS	0.11	0.10
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.36	0.04
tblVehicleEF	SBUS	0.83	0.08
tblVehicleEF	SBUS	0.01	6.3020e-003
tblVehicleEF	SBUS	0.06	7.5040e-003
tblVehicleEF	SBUS	8.54	3.34
tblVehicleEF	SBUS	0.61	0.54
tblVehicleEF	SBUS	7.24	1.03
tblVehicleEF	SBUS	1,023.86	344.60
tblVehicleEF	SBUS	1,062.27	1,068.92
tblVehicleEF	SBUS	57.76	6.25
tblVehicleEF	SBUS	7.48	2.84
tblVehicleEF	SBUS	3.40	4.03
tblVehicleEF	SBUS	11.58	1.01

tblVehicleEF	SBUS	8.5240e-003	3.9410e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	8.9100e-004	6.6000e-005
tblVehicleEF	SBUS	8.1550e-003	3.7710e-003
tblVehicleEF	SBUS	2.6490e-003	2.6420e-003
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	8.1900e-004	6.0000e-005
tblVehicleEF	SBUS	3.3910e-003	1.0830e-003
tblVehicleEF	SBUS	0.03	9.8620e-003
tblVehicleEF	SBUS	1.00	0.38
tblVehicleEF	SBUS	1.8130e-003	5.7300e-004
tblVehicleEF	SBUS	0.09	0.08
tblVehicleEF	SBUS	0.02	0.07
tblVehicleEF	SBUS	0.38	0.04
tblVehicleEF	SBUS	0.01	3.2940e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	7.0300e-004	6.2000e-005
tblVehicleEF	SBUS	3.3910e-003	1.0830e-003
tblVehicleEF	SBUS	0.03	9.8620e-003
tblVehicleEF	SBUS	1.45	0.55
tblVehicleEF	SBUS	1.8130e-003	5.7300e-004
tblVehicleEF	SBUS	0.11	0.10
tblVehicleEF	SBUS	0.02	0.07
tblVehicleEF	SBUS	0.42	0.05
tblVehicleEF	UBUS	2.28	5.85
tblVehicleEF	UBUS	0.05	9.7390e-003

tblVehicleEF	UBUS	10.20	45.43
tblVehicleEF	UBUS	8.89	0.71
tblVehicleEF	UBUS	1,934.49	1,980.90
tblVehicleEF	UBUS	104.15	8.05
tblVehicleEF	UBUS	8.69	0.46
tblVehicleEF	UBUS	14.82	0.07
tblVehicleEF	UBUS	0.59	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.12	3.2450e-003
tblVehicleEF	UBUS	1.1960e-003	7.1000e-005
tblVehicleEF	UBUS	0.25	0.03
tblVehicleEF	UBUS	3.0000e-003	7.9690e-003
tblVehicleEF	UBUS	0.11	3.0990e-003
tblVehicleEF	UBUS	1.1000e-003	6.6000e-005
tblVehicleEF	UBUS	4.1520e-003	4.2600e-004
tblVehicleEF	UBUS	0.07	4.8760e-003
tblVehicleEF	UBUS	2.4690e-003	2.9900e-004
tblVehicleEF	UBUS	0.74	0.09
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	0.69	0.04
tblVehicleEF	UBUS	9.7410e-003	1.3280e-003
tblVehicleEF	UBUS	1.2020e-003	8.0000e-005
tblVehicleEF	UBUS	4.1520e-003	4.2600e-004
tblVehicleEF	UBUS	0.07	4.8760e-003
tblVehicleEF	UBUS	2.4690e-003	2.9900e-004
tblVehicleEF	UBUS	3.11	5.97
tblVehicleEF	UBUS	0.02	0.03

tblVehicleEF	UBUS	0.76	0.05
tblVehicleEF	UBUS	2.29	5.85
tblVehicleEF	UBUS	0.05	9.0510e-003
tblVehicleEF	UBUS	10.25	45.43
tblVehicleEF	UBUS	7.71	0.63
tblVehicleEF	UBUS	1,934.49	1,980.91
tblVehicleEF	UBUS	104.15	7.90
tblVehicleEF	UBUS	8.19	0.46
tblVehicleEF	UBUS	14.77	0.07
tblVehicleEF	UBUS	0.59	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.12	3.2450e-003
tblVehicleEF	UBUS	1.1960e-003	7.1000e-005
tblVehicleEF	UBUS	0.25	0.03
tblVehicleEF	UBUS	3.0000e-003	7.9690e-003
tblVehicleEF	UBUS	0.11	3.0990e-003
tblVehicleEF	UBUS	1.1000e-003	6.6000e-005
tblVehicleEF	UBUS	5.9260e-003	6.2300e-004
tblVehicleEF	UBUS	0.07	5.0780e-003
tblVehicleEF	UBUS	3.3920e-003	4.2100e-004
tblVehicleEF	UBUS	0.75	0.09
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	0.64	0.04
tblVehicleEF	UBUS	9.7420e-003	1.3280e-003
tblVehicleEF	UBUS	1.1820e-003	7.8000e-005
tblVehicleEF	UBUS	5.9260e-003	6.2300e-004
tblVehicleEF	UBUS	0.07	5.0780e-003

tblVehicleEF	UBUS	3.3920e-003	4.2100e-004
tblVehicleEF	UBUS	3.12	5.97
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	0.70	0.04
tblVehicleEF	UBUS	2.28	5.85
tblVehicleEF	UBUS	0.05	9.8940e-003
tblVehicleEF	UBUS	10.19	45.43
tblVehicleEF	UBUS	9.10	0.73
tblVehicleEF	UBUS	1,934.49	1,980.90
tblVehicleEF	UBUS	104.15	8.08
tblVehicleEF	UBUS	8.53	0.46
tblVehicleEF	UBUS	14.83	0.07
tblVehicleEF	UBUS	0.59	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.12	3.2450e-003
tblVehicleEF	UBUS	1.1960e-003	7.1000e-005
tblVehicleEF	UBUS	0.25	0.03
tblVehicleEF	UBUS	3.0000e-003	7.9690e-003
tblVehicleEF	UBUS	0.11	3.0990e-003
tblVehicleEF	UBUS	1.1000e-003	6.6000e-005
tblVehicleEF	UBUS	4.6510e-003	4.3000e-004
tblVehicleEF	UBUS	0.08	5.3040e-003
tblVehicleEF	UBUS	2.5600e-003	2.8700e-004
tblVehicleEF	UBUS	0.74	0.09
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	0.71	0.04
tblVehicleEF	UBUS	9.7410e-003	1.3280e-003

tblVehicleEF	UBUS	1.2060e-003	8.0000e-005
tblVehicleEF	UBUS	4.6510e-003	4.3000e-004
tblVehicleEF	UBUS	0.08	5.3040e-003
tblVehicleEF	UBUS	2.5600e-003	2.8700e-004
tblVehicleEF	UBUS	3.10	5.97
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	0.77	0.05
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	15.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	61.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	24.00	100.00
tblVehicleTrips	ST_TR	6.39	4.17
tblVehicleTrips	ST_TR	863.10	35.28
tblVehicleTrips	SU_TR	5.86	3.48
tblVehicleTrips	SU_TR	758.45	16.14
tblVehicleTrips	WD_TR	6.65	4.62
tblVehicleTrips	WD_TR	737.99	28.88
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	10,424,644.10	3,364,570.00
tblWater	IndoorWaterUseRate	296,290.09	0.00
tblWater	OutdoorWaterUseRate	6,572,058.24	57,305.00
tblWater	OutdoorWaterUseRate	181,597.15	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	8.00	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	5.3819	0.4720	35.7214	0.0647		3.2079	3.2079		3.2079	3.2079	472.1311	23.7851	495.9162	2.5818	0.0000	560.4618
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	2.0279	1.9586	21.8686	0.0603	6.8375	0.0414	6.8790	1.8152	0.0383	1.8535		6,243.9165	6,243.9165	0.2414		6,249.9506
Total	**7.4098**	**2.4306**	**57.5901**	**0.1250**	**6.8375**	**3.2493**	**10.0869**	**1.8152**	**3.2462**	**5.0614**	**472.1311**	**6,267.7016**	**6,739.8327**	**2.8232**	**0.0000**	**6,810.4125**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	5.3819	0.4720	35.7214	0.0647		3.2079	3.2079		3.2079	3.2079	472.1311	23.7851	495.9162	2.5818	0.0000	560.4618
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	2.0279	1.9586	21.8686	0.0603	6.8375	0.0414	6.8790	1.8152	0.0383	1.8535		6,243.9165	6,243.9165	0.2414		6,249.9506
Total	**7.4098**	**2.4306**	**57.5901**	**0.1250**	**6.8375**	**3.2493**	**10.0869**	**1.8152**	**3.2462**	**5.0614**	**472.1311**	**6,267.7016**	**6,739.8327**	**2.8232**	**0.0000**	**6,810.4125**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.0279	1.9586	21.8686	0.0603	6.8375	0.0414	6.8790	1.8152	0.0383	1.8535		6,243.9165	6,243.9165	0.2414		6,249.9506
Unmitigated	2.0279	1.9586	21.8686	0.0603	6.8375	0.0414	6.8790	1.8152	0.0383	1.8535		6,243.9165	6,243.9165	0.2414		6,249.9506

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	739.20	667.20	556.80	2,705,354	2,705,354
Convenience Market (24 Hour)	115.52	141.12	64.56	333,534	333,534
Enclosed Parking with Elevator	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	854.72	808.32	621.36	3,038,889	3,038,889

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	100	0	0
Convenience Market (24 Hour)	16.60	8.40	6.90	0.90	80.10	19.00	100	0	0
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.659436	0.053955	0.249772	0.020000	0.002038	0.000849	0.002800	0.004313	0.000000	0.000000	0.006838	0.000000	0.000000
Convenience Market (24 Hour)	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
Enclosed Parking with Elevator	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
Other Asphalt Surfaces	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
Other Non-Asphalt Surfaces	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Kilowatt Hours of Renewable Electricity Generated

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	5.3819	0.4720	35.7214	0.0647		3.2079	3.2079		3.2079	3.2079	472.1311	23.7851	495.9162	2.5818	0.0000	560.4618
Unmitigated	5.3819	0.4720	35.7214	0.0647		3.2079	3.2079		3.2079	3.2079	472.1311	23.7851	495.9162	2.5818	0.0000	560.4618

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1246					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.9406					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.9192	0.3199	22.5190	0.0640		3.1348	3.1348		3.1348	3.1348	472.1311	0.0000	472.1311	2.5590	0.0000	536.1055
Landscaping	0.3975	0.1521	13.2025	7.0000e-004		0.0732	0.0732		0.0732	0.0732		23.7851	23.7851	0.0229		24.3563
Total	**5.3819**	**0.4720**	**35.7214**	**0.0647**		**3.2079**	**3.2079**		**3.2079**	**3.2079**	**472.1311**	**23.7851**	**495.9162**	**2.5818**	**0.0000**	**560.4618**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1246					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.9406					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.9192	0.3199	22.5190	0.0640		3.1348	3.1348		3.1348	3.1348	472.1311	0.0000	472.1311	2.5590	0.0000	536.1055
Landscaping	0.3975	0.1521	13.2025	7.0000e-004		0.0732	0.0732		0.0732	0.0732		23.7851	23.7851	0.0229		24.3563
Total	**5.3819**	**0.4720**	**35.7214**	**0.0647**		**3.2079**	**3.2079**		**3.2079**	**3.2079**	**472.1311**	**23.7851**	**495.9162**	**2.5818**	**0.0000**	**560.4618**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Operation - Los Angeles-South Coast County, Winter

Operation

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	35.37	1000sqft	0.00	35,365.00	0
Other Asphalt Surfaces	9.50	1000sqft	0.22	9,500.00	0
Other Non-Asphalt Surfaces	27.63	1000sqft	0.63	0.00	0
Apartments Mid Rise	160.00	Dwelling Unit	0.69	143,710.00	458
Convenience Market (24 Hour)	4.00	1000sqft	0.00	4,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	531.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Based on SCE 2019 Sustainability Report.

Land Use - See assumptions file.

Construction Phase -

Vehicle Trips - See assumptions file.

Vehicle Emission Factors - Updated with emissions data derived from EMFAC2017 and CalEEMod methodology.

Vehicle Emission Factors - Updated with emissions data derived from EMFAC2017 and CalEEMod methodology.

Vehicle Emission Factors - Updated with emissions data derived from EMFAC2017 and CalEEMod methodology.

Woodstoves - Assumes no woodburning stoves or fireplaces.

Area Coating - See assumptions file.

Energy Use - Assumes all-electric buildings. All energy demand accounted in Apartments Mid Rise land use.

Water And Wastewater - See assumptions file. All water use accounted in Apartments Mid Rise land use.

Energy Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Exterior	2000	3552
tblAreaCoating	Area_Nonresidential_Interior	6000	10657
tblAreaCoating	Area_Parking	2692	2122
tblAreaCoating	Area_Residential_Exterior	97004	40909
tblAreaCoating	Area_Residential_Interior	291013	122726
tblEnergyUse	LightingElect	741.44	558.92
tblEnergyUse	LightingElect	6.26	0.00
tblEnergyUse	LightingElect	1.75	0.00
tblEnergyUse	NT24E	3,054.10	2,302.29
tblEnergyUse	NT24E	3.23	0.00
tblEnergyUse	NT24E	0.19	0.00
tblEnergyUse	NT24NG	6,384.00	0.00
tblEnergyUse	NT24NG	0.49	0.00
tblEnergyUse	T24E	252.63	190.44
tblEnergyUse	T24E	4.01	0.00
tblEnergyUse	T24E	3.92	0.00

tblEnergyUse	T24NG	7,012.17	0.00
tblEnergyUse	T24NG	1.15	0.00
tblFireplaces	NumberGas	136.00	0.00
tblFireplaces	NumberNoFireplace	16.00	160.00
tblFireplaces	NumberWood	8.00	0.00
tblFleetMix	HHD	0.03	4.3130e-003
tblFleetMix	LDA	0.55	0.66
tblFleetMix	LDT1	0.04	0.05
tblFleetMix	LDT2	0.21	0.25
tblFleetMix	LHD1	0.02	2.0380e-003
tblFleetMix	LHD2	6.2530e-003	8.4900e-004
tblFleetMix	MCY	5.2170e-003	6.8380e-003
tblFleetMix	MDV	0.12	0.02
tblFleetMix	MH	8.5000e-004	0.00
tblFleetMix	MHD	0.02	2.8000e-003
tblFleetMix	OBUS	2.5600e-003	0.00
tblFleetMix	SBUS	6.9600e-004	0.00
tblFleetMix	UBUS	2.0710e-003	0.00
tblLandUse	LandUseSquareFeet	35,370.00	35,365.00
tblLandUse	LandUseSquareFeet	27,630.00	0.00
tblLandUse	LandUseSquareFeet	160,000.00	143,710.00
tblLandUse	LotAcreage	0.81	0.00
tblLandUse	LotAcreage	4.21	0.69
tblLandUse	LotAcreage	0.09	0.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	531.44
tblVehicleEF	HHD	0.47	0.03
tblVehicleEF	HHD	0.09	0.08

tblVehicleEF	HHD	0.07	0.00
tblVehicleEF	HHD	1.60	6.71
tblVehicleEF	HHD	1.08	0.47
tblVehicleEF	HHD	3.29	8.7670e-003
tblVehicleEF	HHD	4,415.48	1,109.72
tblVehicleEF	HHD	1,567.39	1,379.15
tblVehicleEF	HHD	10.70	0.08
tblVehicleEF	HHD	13.98	5.71
tblVehicleEF	HHD	2.11	2.72
tblVehicleEF	HHD	19.48	2.35
tblVehicleEF	HHD	8.9530e-003	3.0560e-003
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	6.2770e-003	0.02
tblVehicleEF	HHD	9.2000e-005	1.0000e-006
tblVehicleEF	HHD	8.5660e-003	2.9240e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8420e-003	8.8990e-003
tblVehicleEF	HHD	6.0050e-003	0.02
tblVehicleEF	HHD	8.5000e-005	1.0000e-006
tblVehicleEF	HHD	9.9000e-005	5.0000e-006
tblVehicleEF	HHD	4.3090e-003	1.9700e-004
tblVehicleEF	HHD	0.41	0.45
tblVehicleEF	HHD	7.6000e-005	4.0000e-006
tblVehicleEF	HHD	0.09	0.02
tblVehicleEF	HHD	3.5500e-004	1.0060e-003
tblVehicleEF	HHD	0.07	3.0000e-006

tblVehicleEF	HHD	0.04	0.01
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	1.6100e-004	1.0000e-006
tblVehicleEF	HHD	9.9000e-005	5.0000e-006
tblVehicleEF	HHD	4.3090e-003	1.9700e-004
tblVehicleEF	HHD	0.48	0.52
tblVehicleEF	HHD	7.6000e-005	4.0000e-006
tblVehicleEF	HHD	0.20	0.11
tblVehicleEF	HHD	3.5500e-004	1.0060e-003
tblVehicleEF	HHD	0.08	3.0000e-006
tblVehicleEF	HHD	0.44	0.03
tblVehicleEF	HHD	0.09	0.08
tblVehicleEF	HHD	0.06	0.00
tblVehicleEF	HHD	1.17	6.61
tblVehicleEF	HHD	1.08	0.47
tblVehicleEF	HHD	3.12	8.3270e-003
tblVehicleEF	HHD	4,677.81	1,097.04
tblVehicleEF	HHD	1,567.39	1,379.15
tblVehicleEF	HHD	10.70	0.08
tblVehicleEF	HHD	14.43	5.45
tblVehicleEF	HHD	2.00	2.58
tblVehicleEF	HHD	19.47	2.35
tblVehicleEF	HHD	7.5480e-003	2.6640e-003
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	6.2770e-003	0.02
tblVehicleEF	HHD	9.2000e-005	1.0000e-006

tblVehicleEF	HHD	7.2220e-003	2.5490e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8420e-003	8.8990e-003
tblVehicleEF	HHD	6.0050e-003	0.02
tblVehicleEF	HHD	8.5000e-005	1.0000e-006
tblVehicleEF	HHD	1.5000e-004	8.0000e-006
tblVehicleEF	HHD	4.4160e-003	2.0100e-004
tblVehicleEF	HHD	0.38	0.48
tblVehicleEF	HHD	1.0700e-004	5.0000e-006
tblVehicleEF	HHD	0.09	0.02
tblVehicleEF	HHD	3.4300e-004	9.8800e-004
tblVehicleEF	HHD	0.07	2.0000e-006
tblVehicleEF	HHD	0.04	0.01
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	1.5800e-004	1.0000e-006
tblVehicleEF	HHD	1.5000e-004	8.0000e-006
tblVehicleEF	HHD	4.4160e-003	2.0100e-004
tblVehicleEF	HHD	0.45	0.55
tblVehicleEF	HHD	1.0700e-004	5.0000e-006
tblVehicleEF	HHD	0.20	0.11
tblVehicleEF	HHD	3.4300e-004	9.8800e-004
tblVehicleEF	HHD	0.07	3.0000e-006
tblVehicleEF	HHD	0.50	0.02
tblVehicleEF	HHD	0.09	9.8700e-004
tblVehicleEF	HHD	0.07	0.00
tblVehicleEF	HHD	2.21	6.73
tblVehicleEF	HHD	1.08	0.24

tblVehicleEF	HHD	3.32	8.8540e-003
tblVehicleEF	HHD	4,053.22	1,107.93
tblVehicleEF	HHD	1,567.39	1,323.93
tblVehicleEF	HHD	10.70	0.08
tblVehicleEF	HHD	13.36	5.94
tblVehicleEF	HHD	2.08	2.64
tblVehicleEF	HHD	19.48	2.35
tblVehicleEF	HHD	0.01	3.3890e-003
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.03
tblVehicleEF	HHD	6.2770e-003	0.02
tblVehicleEF	HHD	9.2000e-005	1.0000e-006
tblVehicleEF	HHD	0.01	3.2420e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8420e-003	8.7490e-003
tblVehicleEF	HHD	6.0050e-003	0.02
tblVehicleEF	HHD	8.5000e-005	1.0000e-006
tblVehicleEF	HHD	9.6000e-005	5.0000e-006
tblVehicleEF	HHD	4.5590e-003	2.2200e-004
tblVehicleEF	HHD	0.44	0.42
tblVehicleEF	HHD	7.3000e-005	4.0000e-006
tblVehicleEF	HHD	0.09	0.02
tblVehicleEF	HHD	3.8700e-004	1.0720e-003
tblVehicleEF	HHD	0.07	3.0000e-006
tblVehicleEF	HHD	0.04	0.01
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	1.6100e-004	1.0000e-006

tblVehicleEF	HHD	9.6000e-005	5.0000e-006
tblVehicleEF	HHD	4.5590e-003	2.2200e-004
tblVehicleEF	HHD	0.52	0.47
tblVehicleEF	HHD	7.3000e-005	4.0000e-006
tblVehicleEF	HHD	0.20	0.02
tblVehicleEF	HHD	3.8700e-004	1.0720e-003
tblVehicleEF	HHD	0.08	3.0000e-006
tblVehicleEF	LDA	4.4230e-003	2.3640e-003
tblVehicleEF	LDA	4.1600e-003	0.04
tblVehicleEF	LDA	0.57	0.63
tblVehicleEF	LDA	0.95	1.96
tblVehicleEF	LDA	253.91	260.15
tblVehicleEF	LDA	52.79	51.03
tblVehicleEF	LDA	0.04	0.03
tblVehicleEF	LDA	0.05	0.16
tblVehicleEF	LDA	2.0900e-003	1.6550e-003
tblVehicleEF	LDA	2.2190e-003	1.6910e-003
tblVehicleEF	LDA	1.9260e-003	1.5240e-003
tblVehicleEF	LDA	2.0400e-003	1.5550e-003
tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.01	8.9880e-003
tblVehicleEF	LDA	0.04	0.20
tblVehicleEF	LDA	0.06	0.19
tblVehicleEF	LDA	2.5430e-003	2.5220e-003
tblVehicleEF	LDA	5.4400e-004	4.9500e-004

tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.02	0.01
tblVehicleEF	LDA	0.04	0.20
tblVehicleEF	LDA	0.06	0.20
tblVehicleEF	LDA	4.7040e-003	2.5270e-003
tblVehicleEF	LDA	3.7040e-003	0.04
tblVehicleEF	LDA	0.63	0.69
tblVehicleEF	LDA	0.81	1.68
tblVehicleEF	LDA	265.72	271.51
tblVehicleEF	LDA	52.79	50.50
tblVehicleEF	LDA	0.04	0.03
tblVehicleEF	LDA	0.05	0.15
tblVehicleEF	LDA	2.0900e-003	1.6550e-003
tblVehicleEF	LDA	2.2190e-003	1.6910e-003
tblVehicleEF	LDA	1.9260e-003	1.5240e-003
tblVehicleEF	LDA	2.0400e-003	1.5550e-003
tblVehicleEF	LDA	0.05	0.07
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.04	0.06
tblVehicleEF	LDA	0.01	9.5250e-003
tblVehicleEF	LDA	0.03	0.18
tblVehicleEF	LDA	0.05	0.17
tblVehicleEF	LDA	2.6610e-003	2.6320e-003
tblVehicleEF	LDA	5.4100e-004	4.9000e-004
tblVehicleEF	LDA	0.05	0.07

tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.04	0.06
tblVehicleEF	LDA	0.02	0.01
tblVehicleEF	LDA	0.03	0.18
tblVehicleEF	LDA	0.05	0.18
tblVehicleEF	LDA	4.3320e-003	2.3130e-003
tblVehicleEF	LDA	4.2560e-003	0.04
tblVehicleEF	LDA	0.55	0.60
tblVehicleEF	LDA	0.98	2.03
tblVehicleEF	LDA	249.59	255.95
tblVehicleEF	LDA	52.79	51.15
tblVehicleEF	LDA	0.04	0.03
tblVehicleEF	LDA	0.06	0.16
tblVehicleEF	LDA	2.0900e-003	1.6550e-003
tblVehicleEF	LDA	2.2190e-003	1.6910e-003
tblVehicleEF	LDA	1.9260e-003	1.5240e-003
tblVehicleEF	LDA	2.0400e-003	1.5550e-003
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.01	8.8100e-003
tblVehicleEF	LDA	0.04	0.22
tblVehicleEF	LDA	0.06	0.19
tblVehicleEF	LDA	2.4990e-003	2.4810e-003
tblVehicleEF	LDA	5.4400e-004	4.9600e-004
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.10	0.10

tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.02	0.01
tblVehicleEF	LDA	0.04	0.22
tblVehicleEF	LDA	0.06	0.21
tblVehicleEF	LDT1	0.01	5.9380e-003
tblVehicleEF	LDT1	0.01	0.06
tblVehicleEF	LDT1	1.40	1.18
tblVehicleEF	LDT1	2.25	2.11
tblVehicleEF	LDT1	322.00	308.10
tblVehicleEF	LDT1	65.45	60.85
tblVehicleEF	LDT1	0.13	0.09
tblVehicleEF	LDT1	0.13	0.22
tblVehicleEF	LDT1	3.2340e-003	2.3500e-003
tblVehicleEF	LDT1	3.1500e-003	2.2900e-003
tblVehicleEF	LDT1	2.9770e-003	2.1620e-003
tblVehicleEF	LDT1	2.8970e-003	2.1050e-003
tblVehicleEF	LDT1	0.11	0.11
tblVehicleEF	LDT1	0.23	0.17
tblVehicleEF	LDT1	0.09	0.09
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.16	0.60
tblVehicleEF	LDT1	0.15	0.29
tblVehicleEF	LDT1	3.2370e-003	2.9870e-003
tblVehicleEF	LDT1	6.9400e-004	5.9000e-004
tblVehicleEF	LDT1	0.11	0.11
tblVehicleEF	LDT1	0.23	0.17
tblVehicleEF	LDT1	0.09	0.09

tblVehicleEF	LDT1	0.05	0.04
tblVehicleEF	LDT1	0.16	0.60
tblVehicleEF	LDT1	0.16	0.31
tblVehicleEF	LDT1	0.01	6.2920e-003
tblVehicleEF	LDT1	9.8770e-003	0.05
tblVehicleEF	LDT1	1.52	1.28
tblVehicleEF	LDT1	1.91	1.80
tblVehicleEF	LDT1	336.08	319.70
tblVehicleEF	LDT1	65.45	60.24
tblVehicleEF	LDT1	0.11	0.08
tblVehicleEF	LDT1	0.12	0.20
tblVehicleEF	LDT1	3.2340e-003	2.3500e-003
tblVehicleEF	LDT1	3.1500e-003	2.2900e-003
tblVehicleEF	LDT1	2.9770e-003	2.1620e-003
tblVehicleEF	LDT1	2.8970e-003	2.1050e-003
tblVehicleEF	LDT1	0.17	0.16
tblVehicleEF	LDT1	0.24	0.18
tblVehicleEF	LDT1	0.13	0.13
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.14	0.55
tblVehicleEF	LDT1	0.13	0.25
tblVehicleEF	LDT1	3.3800e-003	3.1000e-003
tblVehicleEF	LDT1	6.8800e-004	5.8400e-004
tblVehicleEF	LDT1	0.17	0.16
tblVehicleEF	LDT1	0.24	0.18
tblVehicleEF	LDT1	0.13	0.13
tblVehicleEF	LDT1	0.05	0.04

tblVehicleEF	LDT1	0.14	0.55
tblVehicleEF	LDT1	0.15	0.28
tblVehicleEF	LDT1	0.01	5.8250e-003
tblVehicleEF	LDT1	0.01	0.06
tblVehicleEF	LDT1	1.36	1.14
tblVehicleEF	LDT1	2.32	2.18
tblVehicleEF	LDT1	316.82	303.81
tblVehicleEF	LDT1	65.45	60.99
tblVehicleEF	LDT1	0.13	0.09
tblVehicleEF	LDT1	0.13	0.22
tblVehicleEF	LDT1	3.2340e-003	2.3500e-003
tblVehicleEF	LDT1	3.1500e-003	2.2900e-003
tblVehicleEF	LDT1	2.9770e-003	2.1620e-003
tblVehicleEF	LDT1	2.8970e-003	2.1050e-003
tblVehicleEF	LDT1	0.11	0.11
tblVehicleEF	LDT1	0.26	0.19
tblVehicleEF	LDT1	0.09	0.09
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.18	0.71
tblVehicleEF	LDT1	0.15	0.29
tblVehicleEF	LDT1	3.1850e-003	2.9450e-003
tblVehicleEF	LDT1	6.9500e-004	5.9100e-004
tblVehicleEF	LDT1	0.11	0.11
tblVehicleEF	LDT1	0.26	0.19
tblVehicleEF	LDT1	0.09	0.09
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.18	0.71

tblVehicleEF	LDT1	0.17	0.32
tblVehicleEF	LDT2	6.1600e-003	4.0130e-003
tblVehicleEF	LDT2	5.0900e-003	0.06
tblVehicleEF	LDT2	0.76	0.88
tblVehicleEF	LDT2	1.14	2.47
tblVehicleEF	LDT2	357.41	324.47
tblVehicleEF	LDT2	72.80	64.52
tblVehicleEF	LDT2	0.07	0.07
tblVehicleEF	LDT2	0.08	0.23
tblVehicleEF	LDT2	2.1810e-003	1.7730e-003
tblVehicleEF	LDT2	2.3970e-003	1.7550e-003
tblVehicleEF	LDT2	2.0060e-003	1.6320e-003
tblVehicleEF	LDT2	2.2040e-003	1.6130e-003
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.09	0.11
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.38
tblVehicleEF	LDT2	0.07	0.26
tblVehicleEF	LDT2	3.5800e-003	3.1450e-003
tblVehicleEF	LDT2	7.4700e-004	6.2600e-004
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.09	0.11
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.38
tblVehicleEF	LDT2	0.08	0.29

tblVehicleEF	LDT2	6.5370e-003	4.2740e-003
tblVehicleEF	LDT2	4.5360e-003	0.05
tblVehicleEF	LDT2	0.83	0.96
tblVehicleEF	LDT2	0.98	2.10
tblVehicleEF	LDT2	373.41	335.60
tblVehicleEF	LDT2	72.80	63.85
tblVehicleEF	LDT2	0.06	0.06
tblVehicleEF	LDT2	0.08	0.21
tblVehicleEF	LDT2	2.1810e-003	1.7730e-003
tblVehicleEF	LDT2	2.3970e-003	1.7550e-003
tblVehicleEF	LDT2	2.0060e-003	1.6320e-003
tblVehicleEF	LDT2	2.2040e-003	1.6130e-003
tblVehicleEF	LDT2	0.06	0.10
tblVehicleEF	LDT2	0.09	0.11
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.05	0.35
tblVehicleEF	LDT2	0.06	0.23
tblVehicleEF	LDT2	3.7410e-003	3.2530e-003
tblVehicleEF	LDT2	7.4400e-004	6.1900e-004
tblVehicleEF	LDT2	0.06	0.10
tblVehicleEF	LDT2	0.09	0.11
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.05	0.35
tblVehicleEF	LDT2	0.07	0.26
tblVehicleEF	LDT2	6.0370e-003	3.9310e-003

tblVehicleEF	LDT2	5.2090e-003	0.06
tblVehicleEF	LDT2	0.73	0.85
tblVehicleEF	LDT2	1.18	2.55
tblVehicleEF	LDT2	351.53	320.35
tblVehicleEF	LDT2	72.80	64.68
tblVehicleEF	LDT2	0.07	0.06
tblVehicleEF	LDT2	0.08	0.24
tblVehicleEF	LDT2	2.1810e-003	1.7730e-003
tblVehicleEF	LDT2	2.3970e-003	1.7550e-003
tblVehicleEF	LDT2	2.0060e-003	1.6320e-003
tblVehicleEF	LDT2	2.2040e-003	1.6130e-003
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.10	0.12
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.01	0.02
tblVehicleEF	LDT2	0.07	0.44
tblVehicleEF	LDT2	0.07	0.27
tblVehicleEF	LDT2	3.5210e-003	3.1050e-003
tblVehicleEF	LDT2	7.4800e-004	6.2700e-004
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.10	0.12
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.44
tblVehicleEF	LDT2	0.08	0.29
tblVehicleEF	LHD1	4.9880e-003	5.1330e-003
tblVehicleEF	LHD1	9.2560e-003	4.4580e-003

tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	0.19
tblVehicleEF	LHD1	0.66	0.50
tblVehicleEF	LHD1	2.37	1.03
tblVehicleEF	LHD1	8.95	8.74
tblVehicleEF	LHD1	588.36	641.01
tblVehicleEF	LHD1	31.02	11.65
tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.78	0.48
tblVehicleEF	LHD1	0.89	0.30
tblVehicleEF	LHD1	8.3700e-004	8.1500e-004
tblVehicleEF	LHD1	0.01	9.7830e-003
tblVehicleEF	LHD1	8.5610e-003	5.7480e-003
tblVehicleEF	LHD1	8.8500e-004	2.5400e-004
tblVehicleEF	LHD1	8.0100e-004	7.8000e-004
tblVehicleEF	LHD1	2.5540e-003	2.4460e-003
tblVehicleEF	LHD1	8.1660e-003	5.4720e-003
tblVehicleEF	LHD1	8.1400e-004	2.3300e-004
tblVehicleEF	LHD1	2.7900e-003	2.1700e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.7340e-003	1.3580e-003
tblVehicleEF	LHD1	0.06	0.04
tblVehicleEF	LHD1	0.29	0.48
tblVehicleEF	LHD1	0.22	0.07
tblVehicleEF	LHD1	8.9000e-005	8.5000e-005
tblVehicleEF	LHD1	5.7670e-003	6.2540e-003

tblVehicleEF	LHD1	3.5400e-004	1.1500e-004
tblVehicleEF	LHD1	2.7900e-003	2.1700e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.7340e-003	1.3580e-003
tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.29	0.48
tblVehicleEF	LHD1	0.24	0.07
tblVehicleEF	LHD1	4.9880e-003	5.1440e-003
tblVehicleEF	LHD1	9.4510e-003	4.5390e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	0.19
tblVehicleEF	LHD1	0.67	0.51
tblVehicleEF	LHD1	2.26	0.99
tblVehicleEF	LHD1	8.95	8.74
tblVehicleEF	LHD1	588.36	641.02
tblVehicleEF	LHD1	31.02	11.57
tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.73	0.45
tblVehicleEF	LHD1	0.85	0.28
tblVehicleEF	LHD1	8.3700e-004	8.1500e-004
tblVehicleEF	LHD1	0.01	9.7830e-003
tblVehicleEF	LHD1	8.5610e-003	5.7480e-003
tblVehicleEF	LHD1	8.8500e-004	2.5400e-004
tblVehicleEF	LHD1	8.0100e-004	7.8000e-004
tblVehicleEF	LHD1	2.5540e-003	2.4460e-003
tblVehicleEF	LHD1	8.1660e-003	5.4720e-003

tblVehicleEF	LHD1	8.1400e-004	2.3300e-004
tblVehicleEF	LHD1	4.1640e-003	3.1860e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	2.4160e-003	1.8620e-003
tblVehicleEF	LHD1	0.06	0.04
tblVehicleEF	LHD1	0.28	0.47
tblVehicleEF	LHD1	0.21	0.06
tblVehicleEF	LHD1	8.9000e-005	8.5000e-005
tblVehicleEF	LHD1	5.7670e-003	6.2550e-003
tblVehicleEF	LHD1	3.5200e-004	1.1500e-004
tblVehicleEF	LHD1	4.1640e-003	3.1860e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	2.4160e-003	1.8620e-003
tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.28	0.47
tblVehicleEF	LHD1	0.23	0.07
tblVehicleEF	LHD1	4.9880e-003	5.1310e-003
tblVehicleEF	LHD1	9.2060e-003	4.4360e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	0.19
tblVehicleEF	LHD1	0.66	0.50
tblVehicleEF	LHD1	2.39	1.04
tblVehicleEF	LHD1	8.95	8.74
tblVehicleEF	LHD1	588.36	641.00
tblVehicleEF	LHD1	31.02	11.67

tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.76	0.47
tblVehicleEF	LHD1	0.89	0.30
tblVehicleEF	LHD1	8.3700e-004	8.1500e-004
tblVehicleEF	LHD1	0.01	9.7830e-003
tblVehicleEF	LHD1	8.5610e-003	5.7480e-003
tblVehicleEF	LHD1	8.8500e-004	2.5400e-004
tblVehicleEF	LHD1	8.0100e-004	7.8000e-004
tblVehicleEF	LHD1	2.5540e-003	2.4460e-003
tblVehicleEF	LHD1	8.1660e-003	5.4720e-003
tblVehicleEF	LHD1	8.1400e-004	2.3300e-004
tblVehicleEF	LHD1	2.9050e-003	2.2620e-003
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.7020e-003	1.3350e-003
tblVehicleEF	LHD1	0.06	0.04
tblVehicleEF	LHD1	0.31	0.52
tblVehicleEF	LHD1	0.22	0.07
tblVehicleEF	LHD1	8.9000e-005	8.5000e-005
tblVehicleEF	LHD1	5.7670e-003	6.2540e-003
tblVehicleEF	LHD1	3.5400e-004	1.1500e-004
tblVehicleEF	LHD1	2.9050e-003	2.2620e-003
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.7020e-003	1.3350e-003
tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.31	0.52

tblVehicleEF	LHD1	0.24	0.07
tblVehicleEF	LHD2	3.5180e-003	3.5560e-003
tblVehicleEF	LHD2	3.4110e-003	3.2460e-003
tblVehicleEF	LHD2	6.5620e-003	9.1980e-003
tblVehicleEF	LHD2	0.13	0.15
tblVehicleEF	LHD2	0.28	0.35
tblVehicleEF	LHD2	1.17	0.68
tblVehicleEF	LHD2	13.57	13.29
tblVehicleEF	LHD2	605.98	642.03
tblVehicleEF	LHD2	26.15	8.82
tblVehicleEF	LHD2	0.09	0.08
tblVehicleEF	LHD2	0.46	0.62
tblVehicleEF	LHD2	0.46	0.20
tblVehicleEF	LHD2	1.1260e-003	1.3050e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	8.0770e-003	9.4980e-003
tblVehicleEF	LHD2	4.2100e-004	1.4300e-004
tblVehicleEF	LHD2	1.0770e-003	1.2490e-003
tblVehicleEF	LHD2	2.6710e-003	2.6530e-003
tblVehicleEF	LHD2	7.7140e-003	9.0710e-003
tblVehicleEF	LHD2	3.8700e-004	1.3200e-004
tblVehicleEF	LHD2	9.3900e-004	1.3070e-003
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	6.4000e-004	8.4500e-004
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.07	0.28

tblVehicleEF	LHD2	0.09	0.04
tblVehicleEF	LHD2	1.3300e-004	1.2700e-004
tblVehicleEF	LHD2	5.9000e-003	6.2090e-003
tblVehicleEF	LHD2	2.8200e-004	8.7000e-005
tblVehicleEF	LHD2	9.3900e-004	1.3070e-003
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	6.4000e-004	8.4500e-004
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.07	0.28
tblVehicleEF	LHD2	0.10	0.05
tblVehicleEF	LHD2	3.5180e-003	3.5630e-003
tblVehicleEF	LHD2	3.4510e-003	3.2790e-003
tblVehicleEF	LHD2	6.3490e-003	8.8870e-003
tblVehicleEF	LHD2	0.13	0.15
tblVehicleEF	LHD2	0.28	0.35
tblVehicleEF	LHD2	1.12	0.65
tblVehicleEF	LHD2	13.57	13.29
tblVehicleEF	LHD2	605.98	642.03
tblVehicleEF	LHD2	26.15	8.77
tblVehicleEF	LHD2	0.09	0.08
tblVehicleEF	LHD2	0.44	0.58
tblVehicleEF	LHD2	0.44	0.19
tblVehicleEF	LHD2	1.1260e-003	1.3050e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	8.0770e-003	9.4980e-003
tblVehicleEF	LHD2	4.2100e-004	1.4300e-004

tblVehicleEF	LHD2	1.0770e-003	1.2490e-003
tblVehicleEF	LHD2	2.6710e-003	2.6530e-003
tblVehicleEF	LHD2	7.7140e-003	9.0710e-003
tblVehicleEF	LHD2	3.8700e-004	1.3200e-004
tblVehicleEF	LHD2	1.3970e-003	1.9230e-003
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	8.8800e-004	1.1640e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.06	0.27
tblVehicleEF	LHD2	0.09	0.04
tblVehicleEF	LHD2	1.3300e-004	1.2700e-004
tblVehicleEF	LHD2	5.9000e-003	6.2090e-003
tblVehicleEF	LHD2	2.8100e-004	8.7000e-005
tblVehicleEF	LHD2	1.3970e-003	1.9230e-003
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	8.8800e-004	1.1640e-003
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.06	0.27
tblVehicleEF	LHD2	0.09	0.05
tblVehicleEF	LHD2	3.5180e-003	3.5540e-003
tblVehicleEF	LHD2	3.4000e-003	3.2380e-003
tblVehicleEF	LHD2	6.6050e-003	9.2660e-003
tblVehicleEF	LHD2	0.13	0.15
tblVehicleEF	LHD2	0.28	0.35
tblVehicleEF	LHD2	1.18	0.68

tblVehicleEF	LHD2	13.57	13.29
tblVehicleEF	LHD2	605.98	642.02
tblVehicleEF	LHD2	26.15	8.83
tblVehicleEF	LHD2	0.09	0.08
tblVehicleEF	LHD2	0.46	0.61
tblVehicleEF	LHD2	0.46	0.21
tblVehicleEF	LHD2	1.1260e-003	1.3050e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	8.0770e-003	9.4980e-003
tblVehicleEF	LHD2	4.2100e-004	1.4300e-004
tblVehicleEF	LHD2	1.0770e-003	1.2490e-003
tblVehicleEF	LHD2	2.6710e-003	2.6530e-003
tblVehicleEF	LHD2	7.7140e-003	9.0710e-003
tblVehicleEF	LHD2	3.8700e-004	1.3200e-004
tblVehicleEF	LHD2	9.4200e-004	1.3330e-003
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	6.1900e-004	8.1700e-004
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.07	0.31
tblVehicleEF	LHD2	0.09	0.05
tblVehicleEF	LHD2	1.3300e-004	1.2700e-004
tblVehicleEF	LHD2	5.9000e-003	6.2090e-003
tblVehicleEF	LHD2	2.8200e-004	8.7000e-005
tblVehicleEF	LHD2	9.4200e-004	1.3330e-003
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	LHD2	0.02	0.02

tblVehicleEF	LHD2	6.1900e-004	8.1700e-004
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.07	0.31
tblVehicleEF	LHD2	0.10	0.05
tblVehicleEF	MCY	0.55	0.38
tblVehicleEF	MCY	0.15	0.23
tblVehicleEF	MCY	18.62	18.74
tblVehicleEF	MCY	9.70	8.57
tblVehicleEF	MCY	190.93	224.78
tblVehicleEF	MCY	43.78	58.90
tblVehicleEF	MCY	1.13	1.13
tblVehicleEF	MCY	0.31	0.26
tblVehicleEF	MCY	2.5350e-003	2.5430e-003
tblVehicleEF	MCY	3.5080e-003	3.0380e-003
tblVehicleEF	MCY	2.3660e-003	2.3740e-003
tblVehicleEF	MCY	3.2930e-003	2.8510e-003
tblVehicleEF	MCY	1.05	1.07
tblVehicleEF	MCY	0.61	0.62
tblVehicleEF	MCY	0.64	0.65
tblVehicleEF	MCY	2.60	2.61
tblVehicleEF	MCY	0.56	1.80
tblVehicleEF	MCY	2.03	1.79
tblVehicleEF	MCY	2.2930e-003	2.2240e-003
tblVehicleEF	MCY	6.5600e-004	5.8300e-004
tblVehicleEF	MCY	1.05	1.07
tblVehicleEF	MCY	0.61	0.62
tblVehicleEF	MCY	0.64	0.65

tblVehicleEF	MCY	3.25	3.26
tblVehicleEF	MCY	0.56	1.80
tblVehicleEF	MCY	2.21	1.95
tblVehicleEF	MCY	0.54	0.38
tblVehicleEF	MCY	0.13	0.21
tblVehicleEF	MCY	17.96	18.05
tblVehicleEF	MCY	8.84	7.79
tblVehicleEF	MCY	190.93	223.47
tblVehicleEF	MCY	43.78	57.01
tblVehicleEF	MCY	0.99	0.99
tblVehicleEF	MCY	0.29	0.25
tblVehicleEF	MCY	2.5350e-003	2.5430e-003
tblVehicleEF	MCY	3.5080e-003	3.0380e-003
tblVehicleEF	MCY	2.3660e-003	2.3740e-003
tblVehicleEF	MCY	3.2930e-003	2.8510e-003
tblVehicleEF	MCY	1.71	1.70
tblVehicleEF	MCY	0.67	0.68
tblVehicleEF	MCY	1.05	1.04
tblVehicleEF	MCY	2.54	2.56
tblVehicleEF	MCY	0.53	1.68
tblVehicleEF	MCY	1.81	1.60
tblVehicleEF	MCY	2.2810e-003	2.2110e-003
tblVehicleEF	MCY	6.3500e-004	5.6400e-004
tblVehicleEF	MCY	1.71	1.70
tblVehicleEF	MCY	0.67	0.68
tblVehicleEF	MCY	1.05	1.04
tblVehicleEF	MCY	3.18	3.19

tblVehicleEF	MCY	0.53	1.68
tblVehicleEF	MCY	1.97	1.74
tblVehicleEF	MCY	0.55	0.38
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	18.72	18.88
tblVehicleEF	MCY	9.85	8.72
tblVehicleEF	MCY	190.93	225.05
tblVehicleEF	MCY	43.78	59.29
tblVehicleEF	MCY	1.11	1.11
tblVehicleEF	MCY	0.31	0.27
tblVehicleEF	MCY	2.5350e-003	2.5430e-003
tblVehicleEF	MCY	3.5080e-003	3.0380e-003
tblVehicleEF	MCY	2.3660e-003	2.3740e-003
tblVehicleEF	MCY	3.2930e-003	2.8510e-003
tblVehicleEF	MCY	1.15	1.16
tblVehicleEF	MCY	0.78	0.80
tblVehicleEF	MCY	0.61	0.62
tblVehicleEF	MCY	2.61	2.63
tblVehicleEF	MCY	0.65	2.08
tblVehicleEF	MCY	2.07	1.84
tblVehicleEF	MCY	2.2950e-003	2.2270e-003
tblVehicleEF	MCY	6.5900e-004	5.8700e-004
tblVehicleEF	MCY	1.15	1.16
tblVehicleEF	MCY	0.78	0.80
tblVehicleEF	MCY	0.61	0.62
tblVehicleEF	MCY	3.26	3.28
tblVehicleEF	MCY	0.65	2.08

tblVehicleEF	MCY	2.25	2.00
tblVehicleEF	MDV	0.01	4.9820e-003
tblVehicleEF	MDV	0.01	0.07
tblVehicleEF	MDV	1.10	0.98
tblVehicleEF	MDV	1.99	2.75
tblVehicleEF	MDV	481.40	398.81
tblVehicleEF	MDV	96.60	78.26
tblVehicleEF	MDV	0.12	0.08
tblVehicleEF	MDV	0.17	0.28
tblVehicleEF	MDV	2.2730e-003	1.8650e-003
tblVehicleEF	MDV	2.4250e-003	1.8220e-003
tblVehicleEF	MDV	2.0940e-003	1.7190e-003
tblVehicleEF	MDV	2.2300e-003	1.6760e-003
tblVehicleEF	MDV	0.06	0.08
tblVehicleEF	MDV	0.14	0.13
tblVehicleEF	MDV	0.07	0.08
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.08	0.39
tblVehicleEF	MDV	0.15	0.32
tblVehicleEF	MDV	4.8190e-003	3.8640e-003
tblVehicleEF	MDV	1.0000e-003	7.5900e-004
tblVehicleEF	MDV	0.06	0.08
tblVehicleEF	MDV	0.14	0.13
tblVehicleEF	MDV	0.07	0.08
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.08	0.39
tblVehicleEF	MDV	0.16	0.35

tblVehicleEF	MDV	0.01	5.2990e-003
tblVehicleEF	MDV	9.6010e-003	0.06
tblVehicleEF	MDV	1.21	1.07
tblVehicleEF	MDV	1.70	2.34
tblVehicleEF	MDV	502.45	410.36
tblVehicleEF	MDV	96.60	77.49
tblVehicleEF	MDV	0.10	0.07
tblVehicleEF	MDV	0.16	0.26
tblVehicleEF	MDV	2.2730e-003	1.8650e-003
tblVehicleEF	MDV	2.4250e-003	1.8220e-003
tblVehicleEF	MDV	2.0940e-003	1.7190e-003
tblVehicleEF	MDV	2.2300e-003	1.6760e-003
tblVehicleEF	MDV	0.10	0.12
tblVehicleEF	MDV	0.14	0.13
tblVehicleEF	MDV	0.09	0.11
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.08	0.37
tblVehicleEF	MDV	0.13	0.29
tblVehicleEF	MDV	5.0310e-003	3.9760e-003
tblVehicleEF	MDV	9.9500e-004	7.5100e-004
tblVehicleEF	MDV	0.10	0.12
tblVehicleEF	MDV	0.14	0.13
tblVehicleEF	MDV	0.09	0.11
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.08	0.37
tblVehicleEF	MDV	0.14	0.31
tblVehicleEF	MDV	0.01	4.8810e-003

tblVehicleEF	MDV	0.01	0.07
tblVehicleEF	MDV	1.06	0.95
tblVehicleEF	MDV	2.05	2.85
tblVehicleEF	MDV	473.66	394.54
tblVehicleEF	MDV	96.60	78.44
tblVehicleEF	MDV	0.11	0.08
tblVehicleEF	MDV	0.17	0.28
tblVehicleEF	MDV	2.2730e-003	1.8650e-003
tblVehicleEF	MDV	2.4250e-003	1.8220e-003
tblVehicleEF	MDV	2.0940e-003	1.7190e-003
tblVehicleEF	MDV	2.2300e-003	1.6760e-003
tblVehicleEF	MDV	0.06	0.07
tblVehicleEF	MDV	0.15	0.13
tblVehicleEF	MDV	0.06	0.08
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.10	0.46
tblVehicleEF	MDV	0.15	0.33
tblVehicleEF	MDV	4.7420e-003	3.8230e-003
tblVehicleEF	MDV	1.0010e-003	7.6000e-004
tblVehicleEF	MDV	0.06	0.07
tblVehicleEF	MDV	0.15	0.13
tblVehicleEF	MDV	0.06	0.08
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.10	0.46
tblVehicleEF	MDV	0.16	0.36
tblVehicleEF	MH	0.02	7.6690e-003
tblVehicleEF	MH	0.02	0.02

tblVehicleEF	MH	1.43	0.81
tblVehicleEF	MH	4.82	1.94
tblVehicleEF	MH	1,126.11	1,447.94
tblVehicleEF	MH	59.42	18.29
tblVehicleEF	MH	0.93	1.00
tblVehicleEF	MH	0.71	0.25
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	9.8700e-004	2.5500e-004
tblVehicleEF	MH	3.2070e-003	3.2580e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	9.0800e-004	2.3400e-004
tblVehicleEF	MH	0.76	0.65
tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	0.33	0.29
tblVehicleEF	MH	0.06	0.04
tblVehicleEF	MH	0.02	1.14
tblVehicleEF	MH	0.28	0.09
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.7800e-004	1.8100e-004
tblVehicleEF	MH	0.76	0.65
tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	0.33	0.29
tblVehicleEF	MH	0.08	0.06
tblVehicleEF	MH	0.02	1.14
tblVehicleEF	MH	0.30	0.10
tblVehicleEF	MH	0.02	7.8380e-003

tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.47	0.83
tblVehicleEF	MH	4.54	1.84
tblVehicleEF	MH	1,126.11	1,447.98
tblVehicleEF	MH	59.42	18.11
tblVehicleEF	MH	0.86	0.94
tblVehicleEF	MH	0.68	0.24
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	9.8700e-004	2.5500e-004
tblVehicleEF	MH	3.2070e-003	3.2580e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	9.0800e-004	2.3400e-004
tblVehicleEF	MH	1.12	0.93
tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	0.47	0.39
tblVehicleEF	MH	0.06	0.05
tblVehicleEF	MH	0.02	1.12
tblVehicleEF	MH	0.27	0.08
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.7300e-004	1.7900e-004
tblVehicleEF	MH	1.12	0.93
tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	0.47	0.39
tblVehicleEF	MH	0.09	0.06
tblVehicleEF	MH	0.02	1.12
tblVehicleEF	MH	0.29	0.09

tblVehicleEF	MH	0.02	7.6200e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.42	0.81
tblVehicleEF	MH	4.87	1.96
tblVehicleEF	MH	1,126.11	1,447.93
tblVehicleEF	MH	59.42	18.33
tblVehicleEF	MH	0.91	0.99
tblVehicleEF	MH	0.71	0.25
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	9.8700e-004	2.5500e-004
tblVehicleEF	MH	3.2070e-003	3.2580e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	9.0800e-004	2.3400e-004
tblVehicleEF	MH	0.85	0.72
tblVehicleEF	MH	0.07	0.06
tblVehicleEF	MH	0.34	0.29
tblVehicleEF	MH	0.06	0.04
tblVehicleEF	MH	0.02	1.21
tblVehicleEF	MH	0.28	0.09
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.7900e-004	1.8100e-004
tblVehicleEF	MH	0.85	0.72
tblVehicleEF	MH	0.07	0.06
tblVehicleEF	MH	0.34	0.29
tblVehicleEF	MH	0.08	0.06
tblVehicleEF	MH	0.02	1.21

tblVehicleEF	MH	0.31	0.10
tblVehicleEF	MHD	0.02	4.3420e-003
tblVehicleEF	MHD	3.4980e-003	1.7990e-003
tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.35	0.40
tblVehicleEF	MHD	0.29	0.24
tblVehicleEF	MHD	5.13	1.27
tblVehicleEF	MHD	132.56	63.61
tblVehicleEF	MHD	1,140.29	1,014.00
tblVehicleEF	MHD	61.49	11.48
tblVehicleEF	MHD	0.35	0.34
tblVehicleEF	MHD	0.76	1.09
tblVehicleEF	MHD	10.11	1.60
tblVehicleEF	MHD	9.0000e-005	2.8200e-004
tblVehicleEF	MHD	2.8650e-003	6.1500e-003
tblVehicleEF	MHD	7.8500e-004	1.2800e-004
tblVehicleEF	MHD	8.6000e-005	2.7000e-004
tblVehicleEF	MHD	2.7360e-003	5.8770e-003
tblVehicleEF	MHD	7.2200e-004	1.1700e-004
tblVehicleEF	MHD	9.8100e-004	5.6700e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	6.6900e-004	3.8100e-004
tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.02	0.13
tblVehicleEF	MHD	0.32	0.06
tblVehicleEF	MHD	1.2770e-003	6.0500e-004

tblVehicleEF	MHD	0.01	9.6930e-003
tblVehicleEF	MHD	7.0500e-004	1.1400e-004
tblVehicleEF	MHD	9.8100e-004	5.6700e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.03	0.03
tblVehicleEF	MHD	6.6900e-004	3.8100e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.02	0.13
tblVehicleEF	MHD	0.35	0.07
tblVehicleEF	MHD	0.01	4.1210e-003
tblVehicleEF	MHD	3.5450e-003	1.8350e-003
tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.26	0.33
tblVehicleEF	MHD	0.30	0.24
tblVehicleEF	MHD	4.87	1.21
tblVehicleEF	MHD	140.40	63.60
tblVehicleEF	MHD	1,140.29	1,014.01
tblVehicleEF	MHD	61.49	11.37
tblVehicleEF	MHD	0.36	0.33
tblVehicleEF	MHD	0.71	1.03
tblVehicleEF	MHD	10.08	1.59
tblVehicleEF	MHD	7.6000e-005	2.4000e-004
tblVehicleEF	MHD	2.8650e-003	6.1500e-003
tblVehicleEF	MHD	7.8500e-004	1.2800e-004
tblVehicleEF	MHD	7.2000e-005	2.3000e-004
tblVehicleEF	MHD	2.7360e-003	5.8770e-003
tblVehicleEF	MHD	7.2200e-004	1.1700e-004

tblVehicleEF	MHD	1.4660e-003	8.4100e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	9.3700e-004	5.3100e-004
tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.02	0.12
tblVehicleEF	MHD	0.30	0.06
tblVehicleEF	MHD	1.3510e-003	6.0500e-004
tblVehicleEF	MHD	0.01	9.6940e-003
tblVehicleEF	MHD	7.0000e-004	1.1200e-004
tblVehicleEF	MHD	1.4660e-003	8.4100e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.03	0.03
tblVehicleEF	MHD	9.3700e-004	5.3100e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.02	0.12
tblVehicleEF	MHD	0.33	0.06
tblVehicleEF	MHD	0.02	4.6590e-003
tblVehicleEF	MHD	3.4850e-003	1.7870e-003
tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.49	0.49
tblVehicleEF	MHD	0.29	0.24
tblVehicleEF	MHD	5.18	1.28
tblVehicleEF	MHD	121.72	63.61
tblVehicleEF	MHD	1,140.29	1,014.00
tblVehicleEF	MHD	61.49	11.50
tblVehicleEF	MHD	0.33	0.35

tblVehicleEF	MHD	0.74	1.07
tblVehicleEF	MHD	10.12	1.60
tblVehicleEF	MHD	1.0900e-004	3.3900e-004
tblVehicleEF	MHD	2.8650e-003	6.1500e-003
tblVehicleEF	MHD	7.8500e-004	1.2800e-004
tblVehicleEF	MHD	1.0500e-004	3.2500e-004
tblVehicleEF	MHD	2.7360e-003	5.8770e-003
tblVehicleEF	MHD	7.2200e-004	1.1700e-004
tblVehicleEF	MHD	9.9000e-004	5.7600e-004
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	6.4900e-004	3.7000e-004
tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.02	0.14
tblVehicleEF	MHD	0.32	0.06
tblVehicleEF	MHD	1.1750e-003	6.0400e-004
tblVehicleEF	MHD	0.01	9.6930e-003
tblVehicleEF	MHD	7.0600e-004	1.1400e-004
tblVehicleEF	MHD	9.9000e-004	5.7600e-004
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	6.4900e-004	3.7000e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.02	0.14
tblVehicleEF	MHD	0.35	0.07
tblVehicleEF	OBUS	0.01	8.2740e-003
tblVehicleEF	OBUS	5.4840e-003	4.4180e-003

tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.25	0.62
tblVehicleEF	OBUS	0.41	0.55
tblVehicleEF	OBUS	4.93	2.26
tblVehicleEF	OBUS	102.93	91.17
tblVehicleEF	OBUS	1,248.17	1,333.80
tblVehicleEF	OBUS	67.50	18.57
tblVehicleEF	OBUS	0.22	0.36
tblVehicleEF	OBUS	0.71	1.19
tblVehicleEF	OBUS	2.50	0.85
tblVehicleEF	OBUS	2.0000e-005	1.2100e-004
tblVehicleEF	OBUS	2.7480e-003	7.3390e-003
tblVehicleEF	OBUS	8.4800e-004	2.0100e-004
tblVehicleEF	OBUS	1.9000e-005	1.1600e-004
tblVehicleEF	OBUS	2.6130e-003	7.0070e-003
tblVehicleEF	OBUS	7.8000e-004	1.8500e-004
tblVehicleEF	OBUS	1.3910e-003	1.8280e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	7.6200e-004	9.5200e-004
tblVehicleEF	OBUS	0.04	0.03
tblVehicleEF	OBUS	0.04	0.27
tblVehicleEF	OBUS	0.31	0.11
tblVehicleEF	OBUS	9.9400e-004	8.6700e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.6100e-004	1.8400e-004
tblVehicleEF	OBUS	1.3910e-003	1.8280e-003

tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	7.6200e-004	9.5200e-004
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	0.04	0.27
tblVehicleEF	OBUS	0.34	0.12
tblVehicleEF	OBUS	0.01	8.3630e-003
tblVehicleEF	OBUS	5.5780e-003	4.5130e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.24	0.61
tblVehicleEF	OBUS	0.42	0.56
tblVehicleEF	OBUS	4.66	2.14
tblVehicleEF	OBUS	108.07	90.13
tblVehicleEF	OBUS	1,248.17	1,333.81
tblVehicleEF	OBUS	67.50	18.36
tblVehicleEF	OBUS	0.23	0.34
tblVehicleEF	OBUS	0.67	1.11
tblVehicleEF	OBUS	2.46	0.84
tblVehicleEF	OBUS	1.7000e-005	1.0700e-004
tblVehicleEF	OBUS	2.7480e-003	7.3390e-003
tblVehicleEF	OBUS	8.4800e-004	2.0100e-004
tblVehicleEF	OBUS	1.6000e-005	1.0300e-004
tblVehicleEF	OBUS	2.6130e-003	7.0070e-003
tblVehicleEF	OBUS	7.8000e-004	1.8500e-004
tblVehicleEF	OBUS	2.0340e-003	2.6320e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.03	0.05

tblVehicleEF	OBUS	1.0660e-003	1.3140e-003
tblVehicleEF	OBUS	0.04	0.03
tblVehicleEF	OBUS	0.04	0.26
tblVehicleEF	OBUS	0.30	0.10
tblVehicleEF	OBUS	1.0430e-003	8.5700e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.5700e-004	1.8200e-004
tblVehicleEF	OBUS	2.0340e-003	2.6320e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	1.0660e-003	1.3140e-003
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	0.04	0.26
tblVehicleEF	OBUS	0.32	0.11
tblVehicleEF	OBUS	0.01	8.1710e-003
tblVehicleEF	OBUS	5.4590e-003	4.3900e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.26	0.63
tblVehicleEF	OBUS	0.41	0.55
tblVehicleEF	OBUS	4.98	2.29
tblVehicleEF	OBUS	95.85	92.62
tblVehicleEF	OBUS	1,248.17	1,333.79
tblVehicleEF	OBUS	67.50	18.62
tblVehicleEF	OBUS	0.21	0.38
tblVehicleEF	OBUS	0.70	1.16
tblVehicleEF	OBUS	2.50	0.85
tblVehicleEF	OBUS	2.4000e-005	1.3900e-004

tblVehicleEF	OBUS	2.7480e-003	7.3390e-003
tblVehicleEF	OBUS	8.4800e-004	2.0100e-004
tblVehicleEF	OBUS	2.3000e-005	1.3300e-004
tblVehicleEF	OBUS	2.6130e-003	7.0070e-003
tblVehicleEF	OBUS	7.8000e-004	1.8500e-004
tblVehicleEF	OBUS	1.4050e-003	1.8910e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	7.3700e-004	9.3100e-004
tblVehicleEF	OBUS	0.04	0.03
tblVehicleEF	OBUS	0.04	0.29
tblVehicleEF	OBUS	0.31	0.11
tblVehicleEF	OBUS	9.2600e-004	8.8100e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.6200e-004	1.8400e-004
tblVehicleEF	OBUS	1.4050e-003	1.8910e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	7.3700e-004	9.3100e-004
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	0.04	0.29
tblVehicleEF	OBUS	0.34	0.12
tblVehicleEF	SBUS	0.83	0.08
tblVehicleEF	SBUS	0.01	6.3240e-003
tblVehicleEF	SBUS	0.06	7.3230e-003
tblVehicleEF	SBUS	8.41	3.29
tblVehicleEF	SBUS	0.61	0.54

tblVehicleEF	SBUS	7.01	0.99
tblVehicleEF	SBUS	1,089.91	353.50
tblVehicleEF	SBUS	1,062.27	1,068.92
tblVehicleEF	SBUS	57.76	6.19
tblVehicleEF	SBUS	7.82	2.91
tblVehicleEF	SBUS	3.46	4.10
tblVehicleEF	SBUS	11.58	1.01
tblVehicleEF	SBUS	7.0050e-003	3.2480e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	8.9100e-004	6.6000e-005
tblVehicleEF	SBUS	6.7020e-003	3.1080e-003
tblVehicleEF	SBUS	2.6490e-003	2.6420e-003
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	8.1900e-004	6.0000e-005
tblVehicleEF	SBUS	3.4080e-003	1.0860e-003
tblVehicleEF	SBUS	0.03	9.4900e-003
tblVehicleEF	SBUS	1.00	0.38
tblVehicleEF	SBUS	1.8930e-003	5.9900e-004
tblVehicleEF	SBUS	0.09	0.08
tblVehicleEF	SBUS	0.01	0.06
tblVehicleEF	SBUS	0.37	0.04
tblVehicleEF	SBUS	0.01	3.3780e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.9900e-004	6.1000e-005
tblVehicleEF	SBUS	3.4080e-003	1.0860e-003
tblVehicleEF	SBUS	0.03	9.4900e-003

tblVehicleEF	SBUS	1.45	0.55
tblVehicleEF	SBUS	1.8930e-003	5.9900e-004
tblVehicleEF	SBUS	0.11	0.10
tblVehicleEF	SBUS	0.01	0.06
tblVehicleEF	SBUS	0.41	0.05
tblVehicleEF	SBUS	0.83	0.08
tblVehicleEF	SBUS	0.01	6.3970e-003
tblVehicleEF	SBUS	0.05	6.5350e-003
tblVehicleEF	SBUS	8.31	3.26
tblVehicleEF	SBUS	0.62	0.55
tblVehicleEF	SBUS	5.69	0.81
tblVehicleEF	SBUS	1,137.73	359.94
tblVehicleEF	SBUS	1,062.27	1,068.93
tblVehicleEF	SBUS	57.76	5.88
tblVehicleEF	SBUS	8.07	2.97
tblVehicleEF	SBUS	3.26	3.87
tblVehicleEF	SBUS	11.55	1.00
tblVehicleEF	SBUS	5.9050e-003	2.7460e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	8.9100e-004	6.6000e-005
tblVehicleEF	SBUS	5.6500e-003	2.6280e-003
tblVehicleEF	SBUS	2.6490e-003	2.6420e-003
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	8.1900e-004	6.0000e-005
tblVehicleEF	SBUS	5.0090e-003	1.5690e-003
tblVehicleEF	SBUS	0.03	9.6320e-003

tblVehicleEF	SBUS	1.00	0.38
tblVehicleEF	SBUS	2.6560e-003	8.2600e-004
tblVehicleEF	SBUS	0.09	0.08
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.33	0.04
tblVehicleEF	SBUS	0.01	3.4390e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.7700e-004	5.8000e-005
tblVehicleEF	SBUS	5.0090e-003	1.5690e-003
tblVehicleEF	SBUS	0.03	9.6320e-003
tblVehicleEF	SBUS	1.44	0.55
tblVehicleEF	SBUS	2.6560e-003	8.2600e-004
tblVehicleEF	SBUS	0.11	0.10
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.36	0.04
tblVehicleEF	SBUS	0.83	0.08
tblVehicleEF	SBUS	0.01	6.3020e-003
tblVehicleEF	SBUS	0.06	7.5040e-003
tblVehicleEF	SBUS	8.54	3.34
tblVehicleEF	SBUS	0.61	0.54
tblVehicleEF	SBUS	7.24	1.03
tblVehicleEF	SBUS	1,023.86	344.60
tblVehicleEF	SBUS	1,062.27	1,068.92
tblVehicleEF	SBUS	57.76	6.25
tblVehicleEF	SBUS	7.48	2.84
tblVehicleEF	SBUS	3.40	4.03
tblVehicleEF	SBUS	11.58	1.01

tblVehicleEF	SBUS	8.5240e-003	3.9410e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	8.9100e-004	6.6000e-005
tblVehicleEF	SBUS	8.1550e-003	3.7710e-003
tblVehicleEF	SBUS	2.6490e-003	2.6420e-003
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	8.1900e-004	6.0000e-005
tblVehicleEF	SBUS	3.3910e-003	1.0830e-003
tblVehicleEF	SBUS	0.03	9.8620e-003
tblVehicleEF	SBUS	1.00	0.38
tblVehicleEF	SBUS	1.8130e-003	5.7300e-004
tblVehicleEF	SBUS	0.09	0.08
tblVehicleEF	SBUS	0.02	0.07
tblVehicleEF	SBUS	0.38	0.04
tblVehicleEF	SBUS	0.01	3.2940e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	7.0300e-004	6.2000e-005
tblVehicleEF	SBUS	3.3910e-003	1.0830e-003
tblVehicleEF	SBUS	0.03	9.8620e-003
tblVehicleEF	SBUS	1.45	0.55
tblVehicleEF	SBUS	1.8130e-003	5.7300e-004
tblVehicleEF	SBUS	0.11	0.10
tblVehicleEF	SBUS	0.02	0.07
tblVehicleEF	SBUS	0.42	0.05
tblVehicleEF	UBUS	2.28	5.85
tblVehicleEF	UBUS	0.05	9.7390e-003

tblVehicleEF	UBUS	10.20	45.43
tblVehicleEF	UBUS	8.89	0.71
tblVehicleEF	UBUS	1,934.49	1,980.90
tblVehicleEF	UBUS	104.15	8.05
tblVehicleEF	UBUS	8.69	0.46
tblVehicleEF	UBUS	14.82	0.07
tblVehicleEF	UBUS	0.59	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.12	3.2450e-003
tblVehicleEF	UBUS	1.1960e-003	7.1000e-005
tblVehicleEF	UBUS	0.25	0.03
tblVehicleEF	UBUS	3.0000e-003	7.9690e-003
tblVehicleEF	UBUS	0.11	3.0990e-003
tblVehicleEF	UBUS	1.1000e-003	6.6000e-005
tblVehicleEF	UBUS	4.1520e-003	4.2600e-004
tblVehicleEF	UBUS	0.07	4.8760e-003
tblVehicleEF	UBUS	2.4690e-003	2.9900e-004
tblVehicleEF	UBUS	0.74	0.09
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	0.69	0.04
tblVehicleEF	UBUS	9.7410e-003	1.3280e-003
tblVehicleEF	UBUS	1.2020e-003	8.0000e-005
tblVehicleEF	UBUS	4.1520e-003	4.2600e-004
tblVehicleEF	UBUS	0.07	4.8760e-003
tblVehicleEF	UBUS	2.4690e-003	2.9900e-004
tblVehicleEF	UBUS	3.11	5.97
tblVehicleEF	UBUS	0.02	0.03

tblVehicleEF	UBUS	0.76	0.05
tblVehicleEF	UBUS	2.29	5.85
tblVehicleEF	UBUS	0.05	9.0510e-003
tblVehicleEF	UBUS	10.25	45.43
tblVehicleEF	UBUS	7.71	0.63
tblVehicleEF	UBUS	1,934.49	1,980.91
tblVehicleEF	UBUS	104.15	7.90
tblVehicleEF	UBUS	8.19	0.46
tblVehicleEF	UBUS	14.77	0.07
tblVehicleEF	UBUS	0.59	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.12	3.2450e-003
tblVehicleEF	UBUS	1.1960e-003	7.1000e-005
tblVehicleEF	UBUS	0.25	0.03
tblVehicleEF	UBUS	3.0000e-003	7.9690e-003
tblVehicleEF	UBUS	0.11	3.0990e-003
tblVehicleEF	UBUS	1.1000e-003	6.6000e-005
tblVehicleEF	UBUS	5.9260e-003	6.2300e-004
tblVehicleEF	UBUS	0.07	5.0780e-003
tblVehicleEF	UBUS	3.3920e-003	4.2100e-004
tblVehicleEF	UBUS	0.75	0.09
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	0.64	0.04
tblVehicleEF	UBUS	9.7420e-003	1.3280e-003
tblVehicleEF	UBUS	1.1820e-003	7.8000e-005
tblVehicleEF	UBUS	5.9260e-003	6.2300e-004
tblVehicleEF	UBUS	0.07	5.0780e-003

tblVehicleEF	UBUS	3.3920e-003	4.2100e-004
tblVehicleEF	UBUS	3.12	5.97
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	0.70	0.04
tblVehicleEF	UBUS	2.28	5.85
tblVehicleEF	UBUS	0.05	9.8940e-003
tblVehicleEF	UBUS	10.19	45.43
tblVehicleEF	UBUS	9.10	0.73
tblVehicleEF	UBUS	1,934.49	1,980.90
tblVehicleEF	UBUS	104.15	8.08
tblVehicleEF	UBUS	8.53	0.46
tblVehicleEF	UBUS	14.83	0.07
tblVehicleEF	UBUS	0.59	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.12	3.2450e-003
tblVehicleEF	UBUS	1.1960e-003	7.1000e-005
tblVehicleEF	UBUS	0.25	0.03
tblVehicleEF	UBUS	3.0000e-003	7.9690e-003
tblVehicleEF	UBUS	0.11	3.0990e-003
tblVehicleEF	UBUS	1.1000e-003	6.6000e-005
tblVehicleEF	UBUS	4.6510e-003	4.3000e-004
tblVehicleEF	UBUS	0.08	5.3040e-003
tblVehicleEF	UBUS	2.5600e-003	2.8700e-004
tblVehicleEF	UBUS	0.74	0.09
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	0.71	0.04
tblVehicleEF	UBUS	9.7410e-003	1.3280e-003

tblVehicleEF	UBUS	1.2060e-003	8.0000e-005
tblVehicleEF	UBUS	4.6510e-003	4.3000e-004
tblVehicleEF	UBUS	0.08	5.3040e-003
tblVehicleEF	UBUS	2.5600e-003	2.8700e-004
tblVehicleEF	UBUS	3.10	5.97
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	0.77	0.05
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	15.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	61.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	24.00	100.00
tblVehicleTrips	ST_TR	6.39	4.17
tblVehicleTrips	ST_TR	863.10	35.28
tblVehicleTrips	SU_TR	5.86	3.48
tblVehicleTrips	SU_TR	758.45	16.14
tblVehicleTrips	WD_TR	6.65	4.62
tblVehicleTrips	WD_TR	737.99	28.88
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	10,424,644.10	3,364,570.00
tblWater	IndoorWaterUseRate	296,290.09	0.00
tblWater	OutdoorWaterUseRate	6,572,058.24	57,305.00
tblWater	OutdoorWaterUseRate	181,597.15	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	8.00	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	5.3819	0.4720	35.7214	0.0647		3.2079	3.2079		3.2079	3.2079	472.1311	23.7851	495.9162	2.5818	0.0000	560.4618
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	2.0906	2.1123	20.8600	0.0574	6.8373	0.0414	6.8787	1.8151	0.0383	1.8534		5,938.1842	5,938.1842	0.2360		5,944.0849
Total	**7.4724**	**2.5842**	**56.5815**	**0.1221**	**6.8373**	**3.2493**	**10.0866**	**1.8151**	**3.2462**	**5.0613**	**472.1311**	**5,961.9693**	**6,434.1004**	**2.8179**	**0.0000**	**6,504.5467**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	5.3819	0.4720	35.7214	0.0647		3.2079	3.2079		3.2079	3.2079	472.1311	23.7851	495.9162	2.5818	0.0000	560.4618
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	2.0906	2.1123	20.8600	0.0574	6.8373	0.0414	6.8787	1.8151	0.0383	1.8534		5,938.1842	5,938.1842	0.2360		5,944.0849
Total	**7.4724**	**2.5842**	**56.5815**	**0.1221**	**6.8373**	**3.2493**	**10.0866**	**1.8151**	**3.2462**	**5.0613**	**472.1311**	**5,961.9693**	**6,434.1004**	**2.8179**	**0.0000**	**6,504.5467**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.0906	2.1123	20.8600	0.0574	6.8373	0.0414	6.8787	1.8151	0.0383	1.8534		5,938.1842	5,938.1842	0.2360		5,944.0849
Unmitigated	2.0906	2.1123	20.8600	0.0574	6.8373	0.0414	6.8787	1.8151	0.0383	1.8534		5,938.1842	5,938.1842	0.2360		5,944.0849

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	739.20	667.20	556.80	2,705,354	2,705,354
Convenience Market (24 Hour)	115.52	141.12	64.56	333,534	333,534
Enclosed Parking with Elevator	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	854.72	808.32	621.36	3,038,889	3,038,889

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	100	0	0
Convenience Market (24 Hour)	16.60	8.40	6.90	0.90	80.10	19.00	100	0	0
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.659436	0.053955	0.249772	0.020000	0.002038	0.000849	0.002800	0.004313	0.000000	0.000000	0.006838	0.000000	0.000000
Convenience Market (24 Hour)	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
Enclosed Parking with Elevator	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
Other Asphalt Surfaces	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
Other Non-Asphalt Surfaces	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Kilowatt Hours of Renewable Electricity Generated

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

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	5.3819	0.4720	35.7214	0.0647		3.2079	3.2079		3.2079	3.2079	472.1311	23.7851	495.9162	2.5818	0.0000	560.4618
Unmitigated	5.3819	0.4720	35.7214	0.0647		3.2079	3.2079		3.2079	3.2079	472.1311	23.7851	495.9162	2.5818	0.0000	560.4618

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1246					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.9406					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.9192	0.3199	22.5190	0.0640		3.1348	3.1348		3.1348	3.1348	472.1311	0.0000	472.1311	2.5590	0.0000	536.1055
Landscaping	0.3975	0.1521	13.2025	7.0000e-004		0.0732	0.0732		0.0732	0.0732		23.7851	23.7851	0.0229		24.3563
Total	**5.3819**	**0.4720**	**35.7214**	**0.0647**		**3.2079**	**3.2079**		**3.2079**	**3.2079**	**472.1311**	**23.7851**	**495.9162**	**2.5818**	**0.0000**	**560.4618**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.1246					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.9406					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.9192	0.3199	22.5190	0.0640		3.1348	3.1348		3.1348	3.1348	472.1311	0.0000	472.1311	2.5590	0.0000	536.1055
Landscaping	0.3975	0.1521	13.2025	7.0000e-004		0.0732	0.0732		0.0732	0.0732		23.7851	23.7851	0.0229		24.3563
Total	**5.3819**	**0.4720**	**35.7214**	**0.0647**		**3.2079**	**3.2079**		**3.2079**	**3.2079**	**472.1311**	**23.7851**	**495.9162**	**2.5818**	**0.0000**	**560.4618**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Operation - Los Angeles-South Coast County, Annual

Operation

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Enclosed Parking with Elevator	35.37	1000sqft	0.00	35,365.00	0
Other Asphalt Surfaces	9.50	1000sqft	0.22	9,500.00	0
Other Non-Asphalt Surfaces	27.63	1000sqft	0.63	0.00	0
Apartments Mid Rise	160.00	Dwelling Unit	0.69	143,710.00	458
Convenience Market (24 Hour)	4.00	1000sqft	0.00	4,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2024
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	531.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Based on SCE 2019 Sustainability Report.

Land Use - See assumptions file.

Construction Phase -

Vehicle Trips - See assumptions file.

Vehicle Emission Factors - Updated with emissions data derived from EMFAC2017 and CalEEMod methodology.

Vehicle Emission Factors - Updated with emissions data derived from EMFAC2017 and CalEEMod methodology.

Vehicle Emission Factors - Updated with emissions data derived from EMFAC2017 and CalEEMod methodology.

Woodstoves - Assumes no woodburning stoves or fireplaces.

Area Coating - See assumptions file.

Energy Use - Assumes all-electric buildings. All energy demand accounted in Apartments Mid Rise land use.

Water And Wastewater - See assumptions file. All water use accounted in Apartments Mid Rise land use.

Energy Mitigation -

Table Name	Column Name	Default Value	New Value
tblAreaCoating	Area_Nonresidential_Exterior	2000	3552
tblAreaCoating	Area_Nonresidential_Interior	6000	10657
tblAreaCoating	Area_Parking	2692	2122
tblAreaCoating	Area_Residential_Exterior	97004	40909
tblAreaCoating	Area_Residential_Interior	291013	122726
tblEnergyUse	LightingElect	741.44	558.92
tblEnergyUse	LightingElect	6.26	0.00
tblEnergyUse	LightingElect	1.75	0.00
tblEnergyUse	NT24E	3,054.10	2,302.29
tblEnergyUse	NT24E	3.23	0.00
tblEnergyUse	NT24E	0.19	0.00
tblEnergyUse	NT24NG	6,384.00	0.00
tblEnergyUse	NT24NG	0.49	0.00
tblEnergyUse	T24E	252.63	190.44
tblEnergyUse	T24E	4.01	0.00

tblEnergyUse	T24E	3.92	0.00
tblEnergyUse	T24NG	7,012.17	0.00
tblEnergyUse	T24NG	1.15	0.00
tblFireplaces	NumberGas	136.00	0.00
tblFireplaces	NumberNoFireplace	16.00	160.00
tblFireplaces	NumberWood	8.00	0.00
tblFleetMix	HHD	0.03	4.3130e-003
tblFleetMix	LDA	0.55	0.66
tblFleetMix	LDT1	0.04	0.05
tblFleetMix	LDT2	0.21	0.25
tblFleetMix	LHD1	0.02	2.0380e-003
tblFleetMix	LHD2	6.2530e-003	8.4900e-004
tblFleetMix	MCY	5.2170e-003	6.8380e-003
tblFleetMix	MDV	0.12	0.02
tblFleetMix	MH	8.5000e-004	0.00
tblFleetMix	MHD	0.02	2.8000e-003
tblFleetMix	OBUS	2.5600e-003	0.00
tblFleetMix	SBUS	6.9600e-004	0.00
tblFleetMix	UBUS	2.0710e-003	0.00
tblLandUse	LandUseSquareFeet	35,370.00	35,365.00
tblLandUse	LandUseSquareFeet	27,630.00	0.00
tblLandUse	LandUseSquareFeet	160,000.00	143,710.00
tblLandUse	LotAcreage	0.81	0.00
tblLandUse	LotAcreage	4.21	0.69
tblLandUse	LotAcreage	0.09	0.00
tblProjectCharacteristics	CO2IntensityFactor	702.44	531.44
tblVehicleEF	HHD	0.47	0.03

tblVehicleEF	HHD	0.09	0.08
tblVehicleEF	HHD	0.07	0.00
tblVehicleEF	HHD	1.60	6.71
tblVehicleEF	HHD	1.08	0.47
tblVehicleEF	HHD	3.29	8.7670e-003
tblVehicleEF	HHD	4,415.48	1,109.72
tblVehicleEF	HHD	1,567.39	1,379.15
tblVehicleEF	HHD	10.70	0.08
tblVehicleEF	HHD	13.98	5.71
tblVehicleEF	HHD	2.11	2.72
tblVehicleEF	HHD	19.48	2.35
tblVehicleEF	HHD	8.9530e-003	3.0560e-003
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	6.2770e-003	0.02
tblVehicleEF	HHD	9.2000e-005	1.0000e-006
tblVehicleEF	HHD	8.5660e-003	2.9240e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8420e-003	8.8990e-003
tblVehicleEF	HHD	6.0050e-003	0.02
tblVehicleEF	HHD	8.5000e-005	1.0000e-006
tblVehicleEF	HHD	9.9000e-005	5.0000e-006
tblVehicleEF	HHD	4.3090e-003	1.9700e-004
tblVehicleEF	HHD	0.41	0.45
tblVehicleEF	HHD	7.6000e-005	4.0000e-006
tblVehicleEF	HHD	0.09	0.02
tblVehicleEF	HHD	3.5500e-004	1.0060e-003

tblVehicleEF	HHD	0.07	3.0000e-006
tblVehicleEF	HHD	0.04	0.01
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	1.6100e-004	1.0000e-006
tblVehicleEF	HHD	9.9000e-005	5.0000e-006
tblVehicleEF	HHD	4.3090e-003	1.9700e-004
tblVehicleEF	HHD	0.48	0.52
tblVehicleEF	HHD	7.6000e-005	4.0000e-006
tblVehicleEF	HHD	0.20	0.11
tblVehicleEF	HHD	3.5500e-004	1.0060e-003
tblVehicleEF	HHD	0.08	3.0000e-006
tblVehicleEF	HHD	0.44	0.03
tblVehicleEF	HHD	0.09	0.08
tblVehicleEF	HHD	0.06	0.00
tblVehicleEF	HHD	1.17	6.61
tblVehicleEF	HHD	1.08	0.47
tblVehicleEF	HHD	3.12	8.3270e-003
tblVehicleEF	HHD	4,677.81	1,097.04
tblVehicleEF	HHD	1,567.39	1,379.15
tblVehicleEF	HHD	10.70	0.08
tblVehicleEF	HHD	14.43	5.45
tblVehicleEF	HHD	2.00	2.58
tblVehicleEF	HHD	19.47	2.35
tblVehicleEF	HHD	7.5480e-003	2.6640e-003
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	6.2770e-003	0.02

tblVehicleEF	HHD	9.2000e-005	1.0000e-006
tblVehicleEF	HHD	7.2220e-003	2.5490e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8420e-003	8.8990e-003
tblVehicleEF	HHD	6.0050e-003	0.02
tblVehicleEF	HHD	8.5000e-005	1.0000e-006
tblVehicleEF	HHD	1.5000e-004	8.0000e-006
tblVehicleEF	HHD	4.4160e-003	2.0100e-004
tblVehicleEF	HHD	0.38	0.48
tblVehicleEF	HHD	1.0700e-004	5.0000e-006
tblVehicleEF	HHD	0.09	0.02
tblVehicleEF	HHD	3.4300e-004	9.8800e-004
tblVehicleEF	HHD	0.07	2.0000e-006
tblVehicleEF	HHD	0.04	0.01
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	1.5800e-004	1.0000e-006
tblVehicleEF	HHD	1.5000e-004	8.0000e-006
tblVehicleEF	HHD	4.4160e-003	2.0100e-004
tblVehicleEF	HHD	0.45	0.55
tblVehicleEF	HHD	1.0700e-004	5.0000e-006
tblVehicleEF	HHD	0.20	0.11
tblVehicleEF	HHD	3.4300e-004	9.8800e-004
tblVehicleEF	HHD	0.07	3.0000e-006
tblVehicleEF	HHD	0.50	0.02
tblVehicleEF	HHD	0.09	9.8700e-004
tblVehicleEF	HHD	0.07	0.00
tblVehicleEF	HHD	2.21	6.73

tblVehicleEF	HHD	1.08	0.24
tblVehicleEF	HHD	3.32	8.8540e-003
tblVehicleEF	HHD	4,053.22	1,107.93
tblVehicleEF	HHD	1,567.39	1,323.93
tblVehicleEF	HHD	10.70	0.08
tblVehicleEF	HHD	13.36	5.94
tblVehicleEF	HHD	2.08	2.64
tblVehicleEF	HHD	19.48	2.35
tblVehicleEF	HHD	0.01	3.3890e-003
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.03
tblVehicleEF	HHD	6.2770e-003	0.02
tblVehicleEF	HHD	9.2000e-005	1.0000e-006
tblVehicleEF	HHD	0.01	3.2420e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8420e-003	8.7490e-003
tblVehicleEF	HHD	6.0050e-003	0.02
tblVehicleEF	HHD	8.5000e-005	1.0000e-006
tblVehicleEF	HHD	9.6000e-005	5.0000e-006
tblVehicleEF	HHD	4.5590e-003	2.2200e-004
tblVehicleEF	HHD	0.44	0.42
tblVehicleEF	HHD	7.3000e-005	4.0000e-006
tblVehicleEF	HHD	0.09	0.02
tblVehicleEF	HHD	3.8700e-004	1.0720e-003
tblVehicleEF	HHD	0.07	3.0000e-006
tblVehicleEF	HHD	0.04	0.01
tblVehicleEF	HHD	0.01	0.01

tblVehicleEF	HHD	1.6100e-004	1.0000e-006
tblVehicleEF	HHD	9.6000e-005	5.0000e-006
tblVehicleEF	HHD	4.5590e-003	2.2200e-004
tblVehicleEF	HHD	0.52	0.47
tblVehicleEF	HHD	7.3000e-005	4.0000e-006
tblVehicleEF	HHD	0.20	0.02
tblVehicleEF	HHD	3.8700e-004	1.0720e-003
tblVehicleEF	HHD	0.08	3.0000e-006
tblVehicleEF	LDA	4.4230e-003	2.3640e-003
tblVehicleEF	LDA	4.1600e-003	0.04
tblVehicleEF	LDA	0.57	0.63
tblVehicleEF	LDA	0.95	1.96
tblVehicleEF	LDA	253.91	260.15
tblVehicleEF	LDA	52.79	51.03
tblVehicleEF	LDA	0.04	0.03
tblVehicleEF	LDA	0.05	0.16
tblVehicleEF	LDA	2.0900e-003	1.6550e-003
tblVehicleEF	LDA	2.2190e-003	1.6910e-003
tblVehicleEF	LDA	1.9260e-003	1.5240e-003
tblVehicleEF	LDA	2.0400e-003	1.5550e-003
tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.01	8.9880e-003
tblVehicleEF	LDA	0.04	0.20
tblVehicleEF	LDA	0.06	0.19
tblVehicleEF	LDA	2.5430e-003	2.5220e-003

tblVehicleEF	LDA	5.4400e-004	4.9500e-004
tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.02	0.01
tblVehicleEF	LDA	0.04	0.20
tblVehicleEF	LDA	0.06	0.20
tblVehicleEF	LDA	4.7040e-003	2.5270e-003
tblVehicleEF	LDA	3.7040e-003	0.04
tblVehicleEF	LDA	0.63	0.69
tblVehicleEF	LDA	0.81	1.68
tblVehicleEF	LDA	265.72	271.51
tblVehicleEF	LDA	52.79	50.50
tblVehicleEF	LDA	0.04	0.03
tblVehicleEF	LDA	0.05	0.15
tblVehicleEF	LDA	2.0900e-003	1.6550e-003
tblVehicleEF	LDA	2.2190e-003	1.6910e-003
tblVehicleEF	LDA	1.9260e-003	1.5240e-003
tblVehicleEF	LDA	2.0400e-003	1.5550e-003
tblVehicleEF	LDA	0.05	0.07
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.04	0.06
tblVehicleEF	LDA	0.01	9.5250e-003
tblVehicleEF	LDA	0.03	0.18
tblVehicleEF	LDA	0.05	0.17
tblVehicleEF	LDA	2.6610e-003	2.6320e-003
tblVehicleEF	LDA	5.4100e-004	4.9000e-004

tblVehicleEF	LDA	0.05	0.07
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.04	0.06
tblVehicleEF	LDA	0.02	0.01
tblVehicleEF	LDA	0.03	0.18
tblVehicleEF	LDA	0.05	0.18
tblVehicleEF	LDA	4.3320e-003	2.3130e-003
tblVehicleEF	LDA	4.2560e-003	0.04
tblVehicleEF	LDA	0.55	0.60
tblVehicleEF	LDA	0.98	2.03
tblVehicleEF	LDA	249.59	255.95
tblVehicleEF	LDA	52.79	51.15
tblVehicleEF	LDA	0.04	0.03
tblVehicleEF	LDA	0.06	0.16
tblVehicleEF	LDA	2.0900e-003	1.6550e-003
tblVehicleEF	LDA	2.2190e-003	1.6910e-003
tblVehicleEF	LDA	1.9260e-003	1.5240e-003
tblVehicleEF	LDA	2.0400e-003	1.5550e-003
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.01	8.8100e-003
tblVehicleEF	LDA	0.04	0.22
tblVehicleEF	LDA	0.06	0.19
tblVehicleEF	LDA	2.4990e-003	2.4810e-003
tblVehicleEF	LDA	5.4400e-004	4.9600e-004
tblVehicleEF	LDA	0.03	0.04

tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.02	0.01
tblVehicleEF	LDA	0.04	0.22
tblVehicleEF	LDA	0.06	0.21
tblVehicleEF	LDT1	0.01	5.9380e-003
tblVehicleEF	LDT1	0.01	0.06
tblVehicleEF	LDT1	1.40	1.18
tblVehicleEF	LDT1	2.25	2.11
tblVehicleEF	LDT1	322.00	308.10
tblVehicleEF	LDT1	65.45	60.85
tblVehicleEF	LDT1	0.13	0.09
tblVehicleEF	LDT1	0.13	0.22
tblVehicleEF	LDT1	3.2340e-003	2.3500e-003
tblVehicleEF	LDT1	3.1500e-003	2.2900e-003
tblVehicleEF	LDT1	2.9770e-003	2.1620e-003
tblVehicleEF	LDT1	2.8970e-003	2.1050e-003
tblVehicleEF	LDT1	0.11	0.11
tblVehicleEF	LDT1	0.23	0.17
tblVehicleEF	LDT1	0.09	0.09
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.16	0.60
tblVehicleEF	LDT1	0.15	0.29
tblVehicleEF	LDT1	3.2370e-003	2.9870e-003
tblVehicleEF	LDT1	6.9400e-004	5.9000e-004
tblVehicleEF	LDT1	0.11	0.11
tblVehicleEF	LDT1	0.23	0.17

tblVehicleEF	LDT1	0.09	0.09
tblVehicleEF	LDT1	0.05	0.04
tblVehicleEF	LDT1	0.16	0.60
tblVehicleEF	LDT1	0.16	0.31
tblVehicleEF	LDT1	0.01	6.2920e-003
tblVehicleEF	LDT1	9.8770e-003	0.05
tblVehicleEF	LDT1	1.52	1.28
tblVehicleEF	LDT1	1.91	1.80
tblVehicleEF	LDT1	336.08	319.70
tblVehicleEF	LDT1	65.45	60.24
tblVehicleEF	LDT1	0.11	0.08
tblVehicleEF	LDT1	0.12	0.20
tblVehicleEF	LDT1	3.2340e-003	2.3500e-003
tblVehicleEF	LDT1	3.1500e-003	2.2900e-003
tblVehicleEF	LDT1	2.9770e-003	2.1620e-003
tblVehicleEF	LDT1	2.8970e-003	2.1050e-003
tblVehicleEF	LDT1	0.17	0.16
tblVehicleEF	LDT1	0.24	0.18
tblVehicleEF	LDT1	0.13	0.13
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.14	0.55
tblVehicleEF	LDT1	0.13	0.25
tblVehicleEF	LDT1	3.3800e-003	3.1000e-003
tblVehicleEF	LDT1	6.8800e-004	5.8400e-004
tblVehicleEF	LDT1	0.17	0.16
tblVehicleEF	LDT1	0.24	0.18
tblVehicleEF	LDT1	0.13	0.13

tblVehicleEF	LDT1	0.05	0.04
tblVehicleEF	LDT1	0.14	0.55
tblVehicleEF	LDT1	0.15	0.28
tblVehicleEF	LDT1	0.01	5.8250e-003
tblVehicleEF	LDT1	0.01	0.06
tblVehicleEF	LDT1	1.36	1.14
tblVehicleEF	LDT1	2.32	2.18
tblVehicleEF	LDT1	316.82	303.81
tblVehicleEF	LDT1	65.45	60.99
tblVehicleEF	LDT1	0.13	0.09
tblVehicleEF	LDT1	0.13	0.22
tblVehicleEF	LDT1	3.2340e-003	2.3500e-003
tblVehicleEF	LDT1	3.1500e-003	2.2900e-003
tblVehicleEF	LDT1	2.9770e-003	2.1620e-003
tblVehicleEF	LDT1	2.8970e-003	2.1050e-003
tblVehicleEF	LDT1	0.11	0.11
tblVehicleEF	LDT1	0.26	0.19
tblVehicleEF	LDT1	0.09	0.09
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.18	0.71
tblVehicleEF	LDT1	0.15	0.29
tblVehicleEF	LDT1	3.1850e-003	2.9450e-003
tblVehicleEF	LDT1	6.9500e-004	5.9100e-004
tblVehicleEF	LDT1	0.11	0.11
tblVehicleEF	LDT1	0.26	0.19
tblVehicleEF	LDT1	0.09	0.09
tblVehicleEF	LDT1	0.04	0.04

tblVehicleEF	LDT1	0.18	0.71
tblVehicleEF	LDT1	0.17	0.32
tblVehicleEF	LDT2	6.1600e-003	4.0130e-003
tblVehicleEF	LDT2	5.0900e-003	0.06
tblVehicleEF	LDT2	0.76	0.88
tblVehicleEF	LDT2	1.14	2.47
tblVehicleEF	LDT2	357.41	324.47
tblVehicleEF	LDT2	72.80	64.52
tblVehicleEF	LDT2	0.07	0.07
tblVehicleEF	LDT2	0.08	0.23
tblVehicleEF	LDT2	2.1810e-003	1.7730e-003
tblVehicleEF	LDT2	2.3970e-003	1.7550e-003
tblVehicleEF	LDT2	2.0060e-003	1.6320e-003
tblVehicleEF	LDT2	2.2040e-003	1.6130e-003
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.09	0.11
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.38
tblVehicleEF	LDT2	0.07	0.26
tblVehicleEF	LDT2	3.5800e-003	3.1450e-003
tblVehicleEF	LDT2	7.4700e-004	6.2600e-004
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.09	0.11
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.38

tblVehicleEF	LDT2	0.08	0.29
tblVehicleEF	LDT2	6.5370e-003	4.2740e-003
tblVehicleEF	LDT2	4.5360e-003	0.05
tblVehicleEF	LDT2	0.83	0.96
tblVehicleEF	LDT2	0.98	2.10
tblVehicleEF	LDT2	373.41	335.60
tblVehicleEF	LDT2	72.80	63.85
tblVehicleEF	LDT2	0.06	0.06
tblVehicleEF	LDT2	0.08	0.21
tblVehicleEF	LDT2	2.1810e-003	1.7730e-003
tblVehicleEF	LDT2	2.3970e-003	1.7550e-003
tblVehicleEF	LDT2	2.0060e-003	1.6320e-003
tblVehicleEF	LDT2	2.2040e-003	1.6130e-003
tblVehicleEF	LDT2	0.06	0.10
tblVehicleEF	LDT2	0.09	0.11
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.05	0.35
tblVehicleEF	LDT2	0.06	0.23
tblVehicleEF	LDT2	3.7410e-003	3.2530e-003
tblVehicleEF	LDT2	7.4400e-004	6.1900e-004
tblVehicleEF	LDT2	0.06	0.10
tblVehicleEF	LDT2	0.09	0.11
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.05	0.35
tblVehicleEF	LDT2	0.07	0.26

tblVehicleEF	LDT2	6.0370e-003	3.9310e-003
tblVehicleEF	LDT2	5.2090e-003	0.06
tblVehicleEF	LDT2	0.73	0.85
tblVehicleEF	LDT2	1.18	2.55
tblVehicleEF	LDT2	351.53	320.35
tblVehicleEF	LDT2	72.80	64.68
tblVehicleEF	LDT2	0.07	0.06
tblVehicleEF	LDT2	0.08	0.24
tblVehicleEF	LDT2	2.1810e-003	1.7730e-003
tblVehicleEF	LDT2	2.3970e-003	1.7550e-003
tblVehicleEF	LDT2	2.0060e-003	1.6320e-003
tblVehicleEF	LDT2	2.2040e-003	1.6130e-003
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.10	0.12
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.01	0.02
tblVehicleEF	LDT2	0.07	0.44
tblVehicleEF	LDT2	0.07	0.27
tblVehicleEF	LDT2	3.5210e-003	3.1050e-003
tblVehicleEF	LDT2	7.4800e-004	6.2700e-004
tblVehicleEF	LDT2	0.04	0.06
tblVehicleEF	LDT2	0.10	0.12
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.44
tblVehicleEF	LDT2	0.08	0.29
tblVehicleEF	LHD1	4.9880e-003	5.1330e-003

tblVehicleEF	LHD1	9.2560e-003	4.4580e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	0.19
tblVehicleEF	LHD1	0.66	0.50
tblVehicleEF	LHD1	2.37	1.03
tblVehicleEF	LHD1	8.95	8.74
tblVehicleEF	LHD1	588.36	641.01
tblVehicleEF	LHD1	31.02	11.65
tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.78	0.48
tblVehicleEF	LHD1	0.89	0.30
tblVehicleEF	LHD1	8.3700e-004	8.1500e-004
tblVehicleEF	LHD1	0.01	9.7830e-003
tblVehicleEF	LHD1	8.5610e-003	5.7480e-003
tblVehicleEF	LHD1	8.8500e-004	2.5400e-004
tblVehicleEF	LHD1	8.0100e-004	7.8000e-004
tblVehicleEF	LHD1	2.5540e-003	2.4460e-003
tblVehicleEF	LHD1	8.1660e-003	5.4720e-003
tblVehicleEF	LHD1	8.1400e-004	2.3300e-004
tblVehicleEF	LHD1	2.7900e-003	2.1700e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.7340e-003	1.3580e-003
tblVehicleEF	LHD1	0.06	0.04
tblVehicleEF	LHD1	0.29	0.48
tblVehicleEF	LHD1	0.22	0.07
tblVehicleEF	LHD1	8.9000e-005	8.5000e-005

tblVehicleEF	LHD1	5.7670e-003	6.2540e-003
tblVehicleEF	LHD1	3.5400e-004	1.1500e-004
tblVehicleEF	LHD1	2.7900e-003	2.1700e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.7340e-003	1.3580e-003
tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.29	0.48
tblVehicleEF	LHD1	0.24	0.07
tblVehicleEF	LHD1	4.9880e-003	5.1440e-003
tblVehicleEF	LHD1	9.4510e-003	4.5390e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	0.19
tblVehicleEF	LHD1	0.67	0.51
tblVehicleEF	LHD1	2.26	0.99
tblVehicleEF	LHD1	8.95	8.74
tblVehicleEF	LHD1	588.36	641.02
tblVehicleEF	LHD1	31.02	11.57
tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.73	0.45
tblVehicleEF	LHD1	0.85	0.28
tblVehicleEF	LHD1	8.3700e-004	8.1500e-004
tblVehicleEF	LHD1	0.01	9.7830e-003
tblVehicleEF	LHD1	8.5610e-003	5.7480e-003
tblVehicleEF	LHD1	8.8500e-004	2.5400e-004
tblVehicleEF	LHD1	8.0100e-004	7.8000e-004
tblVehicleEF	LHD1	2.5540e-003	2.4460e-003

tblVehicleEF	LHD1	8.1660e-003	5.4720e-003
tblVehicleEF	LHD1	8.1400e-004	2.3300e-004
tblVehicleEF	LHD1	4.1640e-003	3.1860e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	2.4160e-003	1.8620e-003
tblVehicleEF	LHD1	0.06	0.04
tblVehicleEF	LHD1	0.28	0.47
tblVehicleEF	LHD1	0.21	0.06
tblVehicleEF	LHD1	8.9000e-005	8.5000e-005
tblVehicleEF	LHD1	5.7670e-003	6.2550e-003
tblVehicleEF	LHD1	3.5200e-004	1.1500e-004
tblVehicleEF	LHD1	4.1640e-003	3.1860e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	2.4160e-003	1.8620e-003
tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.28	0.47
tblVehicleEF	LHD1	0.23	0.07
tblVehicleEF	LHD1	4.9880e-003	5.1310e-003
tblVehicleEF	LHD1	9.2060e-003	4.4360e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	0.19
tblVehicleEF	LHD1	0.66	0.50
tblVehicleEF	LHD1	2.39	1.04
tblVehicleEF	LHD1	8.95	8.74
tblVehicleEF	LHD1	588.36	641.00

tblVehicleEF	LHD1	31.02	11.67
tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.76	0.47
tblVehicleEF	LHD1	0.89	0.30
tblVehicleEF	LHD1	8.3700e-004	8.1500e-004
tblVehicleEF	LHD1	0.01	9.7830e-003
tblVehicleEF	LHD1	8.5610e-003	5.7480e-003
tblVehicleEF	LHD1	8.8500e-004	2.5400e-004
tblVehicleEF	LHD1	8.0100e-004	7.8000e-004
tblVehicleEF	LHD1	2.5540e-003	2.4460e-003
tblVehicleEF	LHD1	8.1660e-003	5.4720e-003
tblVehicleEF	LHD1	8.1400e-004	2.3300e-004
tblVehicleEF	LHD1	2.9050e-003	2.2620e-003
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.7020e-003	1.3350e-003
tblVehicleEF	LHD1	0.06	0.04
tblVehicleEF	LHD1	0.31	0.52
tblVehicleEF	LHD1	0.22	0.07
tblVehicleEF	LHD1	8.9000e-005	8.5000e-005
tblVehicleEF	LHD1	5.7670e-003	6.2540e-003
tblVehicleEF	LHD1	3.5400e-004	1.1500e-004
tblVehicleEF	LHD1	2.9050e-003	2.2620e-003
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.7020e-003	1.3350e-003
tblVehicleEF	LHD1	0.07	0.05

tblVehicleEF	LHD1	0.31	0.52
tblVehicleEF	LHD1	0.24	0.07
tblVehicleEF	LHD2	3.5180e-003	3.5560e-003
tblVehicleEF	LHD2	3.4110e-003	3.2460e-003
tblVehicleEF	LHD2	6.5620e-003	9.1980e-003
tblVehicleEF	LHD2	0.13	0.15
tblVehicleEF	LHD2	0.28	0.35
tblVehicleEF	LHD2	1.17	0.68
tblVehicleEF	LHD2	13.57	13.29
tblVehicleEF	LHD2	605.98	642.03
tblVehicleEF	LHD2	26.15	8.82
tblVehicleEF	LHD2	0.09	0.08
tblVehicleEF	LHD2	0.46	0.62
tblVehicleEF	LHD2	0.46	0.20
tblVehicleEF	LHD2	1.1260e-003	1.3050e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	8.0770e-003	9.4980e-003
tblVehicleEF	LHD2	4.2100e-004	1.4300e-004
tblVehicleEF	LHD2	1.0770e-003	1.2490e-003
tblVehicleEF	LHD2	2.6710e-003	2.6530e-003
tblVehicleEF	LHD2	7.7140e-003	9.0710e-003
tblVehicleEF	LHD2	3.8700e-004	1.3200e-004
tblVehicleEF	LHD2	9.3900e-004	1.3070e-003
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	6.4000e-004	8.4500e-004
tblVehicleEF	LHD2	0.04	0.04

tblVehicleEF	LHD2	0.07	0.28
tblVehicleEF	LHD2	0.09	0.04
tblVehicleEF	LHD2	1.3300e-004	1.2700e-004
tblVehicleEF	LHD2	5.9000e-003	6.2090e-003
tblVehicleEF	LHD2	2.8200e-004	8.7000e-005
tblVehicleEF	LHD2	9.3900e-004	1.3070e-003
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	6.4000e-004	8.4500e-004
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.07	0.28
tblVehicleEF	LHD2	0.10	0.05
tblVehicleEF	LHD2	3.5180e-003	3.5630e-003
tblVehicleEF	LHD2	3.4510e-003	3.2790e-003
tblVehicleEF	LHD2	6.3490e-003	8.8870e-003
tblVehicleEF	LHD2	0.13	0.15
tblVehicleEF	LHD2	0.28	0.35
tblVehicleEF	LHD2	1.12	0.65
tblVehicleEF	LHD2	13.57	13.29
tblVehicleEF	LHD2	605.98	642.03
tblVehicleEF	LHD2	26.15	8.77
tblVehicleEF	LHD2	0.09	0.08
tblVehicleEF	LHD2	0.44	0.58
tblVehicleEF	LHD2	0.44	0.19
tblVehicleEF	LHD2	1.1260e-003	1.3050e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	8.0770e-003	9.4980e-003

tblVehicleEF	LHD2	4.2100e-004	1.4300e-004
tblVehicleEF	LHD2	1.0770e-003	1.2490e-003
tblVehicleEF	LHD2	2.6710e-003	2.6530e-003
tblVehicleEF	LHD2	7.7140e-003	9.0710e-003
tblVehicleEF	LHD2	3.8700e-004	1.3200e-004
tblVehicleEF	LHD2	1.3970e-003	1.9230e-003
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	8.8800e-004	1.1640e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.06	0.27
tblVehicleEF	LHD2	0.09	0.04
tblVehicleEF	LHD2	1.3300e-004	1.2700e-004
tblVehicleEF	LHD2	5.9000e-003	6.2090e-003
tblVehicleEF	LHD2	2.8100e-004	8.7000e-005
tblVehicleEF	LHD2	1.3970e-003	1.9230e-003
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	8.8800e-004	1.1640e-003
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.06	0.27
tblVehicleEF	LHD2	0.09	0.05
tblVehicleEF	LHD2	3.5180e-003	3.5540e-003
tblVehicleEF	LHD2	3.4000e-003	3.2380e-003
tblVehicleEF	LHD2	6.6050e-003	9.2660e-003
tblVehicleEF	LHD2	0.13	0.15
tblVehicleEF	LHD2	0.28	0.35

tblVehicleEF	LHD2	1.18	0.68
tblVehicleEF	LHD2	13.57	13.29
tblVehicleEF	LHD2	605.98	642.02
tblVehicleEF	LHD2	26.15	8.83
tblVehicleEF	LHD2	0.09	0.08
tblVehicleEF	LHD2	0.46	0.61
tblVehicleEF	LHD2	0.46	0.21
tblVehicleEF	LHD2	1.1260e-003	1.3050e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	8.0770e-003	9.4980e-003
tblVehicleEF	LHD2	4.2100e-004	1.4300e-004
tblVehicleEF	LHD2	1.0770e-003	1.2490e-003
tblVehicleEF	LHD2	2.6710e-003	2.6530e-003
tblVehicleEF	LHD2	7.7140e-003	9.0710e-003
tblVehicleEF	LHD2	3.8700e-004	1.3200e-004
tblVehicleEF	LHD2	9.4200e-004	1.3330e-003
tblVehicleEF	LHD2	0.03	0.05
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	6.1900e-004	8.1700e-004
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.07	0.31
tblVehicleEF	LHD2	0.09	0.05
tblVehicleEF	LHD2	1.3300e-004	1.2700e-004
tblVehicleEF	LHD2	5.9000e-003	6.2090e-003
tblVehicleEF	LHD2	2.8200e-004	8.7000e-005
tblVehicleEF	LHD2	9.4200e-004	1.3330e-003
tblVehicleEF	LHD2	0.03	0.05

tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	6.1900e-004	8.1700e-004
tblVehicleEF	LHD2	0.05	0.05
tblVehicleEF	LHD2	0.07	0.31
tblVehicleEF	LHD2	0.10	0.05
tblVehicleEF	MCY	0.55	0.38
tblVehicleEF	MCY	0.15	0.23
tblVehicleEF	MCY	18.62	18.74
tblVehicleEF	MCY	9.70	8.57
tblVehicleEF	MCY	190.93	224.78
tblVehicleEF	MCY	43.78	58.90
tblVehicleEF	MCY	1.13	1.13
tblVehicleEF	MCY	0.31	0.26
tblVehicleEF	MCY	2.5350e-003	2.5430e-003
tblVehicleEF	MCY	3.5080e-003	3.0380e-003
tblVehicleEF	MCY	2.3660e-003	2.3740e-003
tblVehicleEF	MCY	3.2930e-003	2.8510e-003
tblVehicleEF	MCY	1.05	1.07
tblVehicleEF	MCY	0.61	0.62
tblVehicleEF	MCY	0.64	0.65
tblVehicleEF	MCY	2.60	2.61
tblVehicleEF	MCY	0.56	1.80
tblVehicleEF	MCY	2.03	1.79
tblVehicleEF	MCY	2.2930e-003	2.2240e-003
tblVehicleEF	MCY	6.5600e-004	5.8300e-004
tblVehicleEF	MCY	1.05	1.07
tblVehicleEF	MCY	0.61	0.62

tblVehicleEF	MCY	0.64	0.65
tblVehicleEF	MCY	3.25	3.26
tblVehicleEF	MCY	0.56	1.80
tblVehicleEF	MCY	2.21	1.95
tblVehicleEF	MCY	0.54	0.38
tblVehicleEF	MCY	0.13	0.21
tblVehicleEF	MCY	17.96	18.05
tblVehicleEF	MCY	8.84	7.79
tblVehicleEF	MCY	190.93	223.47
tblVehicleEF	MCY	43.78	57.01
tblVehicleEF	MCY	0.99	0.99
tblVehicleEF	MCY	0.29	0.25
tblVehicleEF	MCY	2.5350e-003	2.5430e-003
tblVehicleEF	MCY	3.5080e-003	3.0380e-003
tblVehicleEF	MCY	2.3660e-003	2.3740e-003
tblVehicleEF	MCY	3.2930e-003	2.8510e-003
tblVehicleEF	MCY	1.71	1.70
tblVehicleEF	MCY	0.67	0.68
tblVehicleEF	MCY	1.05	1.04
tblVehicleEF	MCY	2.54	2.56
tblVehicleEF	MCY	0.53	1.68
tblVehicleEF	MCY	1.81	1.60
tblVehicleEF	MCY	2.2810e-003	2.2110e-003
tblVehicleEF	MCY	6.3500e-004	5.6400e-004
tblVehicleEF	MCY	1.71	1.70
tblVehicleEF	MCY	0.67	0.68
tblVehicleEF	MCY	1.05	1.04

tblVehicleEF	MCY	3.18	3.19
tblVehicleEF	MCY	0.53	1.68
tblVehicleEF	MCY	1.97	1.74
tblVehicleEF	MCY	0.55	0.38
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	18.72	18.88
tblVehicleEF	MCY	9.85	8.72
tblVehicleEF	MCY	190.93	225.05
tblVehicleEF	MCY	43.78	59.29
tblVehicleEF	MCY	1.11	1.11
tblVehicleEF	MCY	0.31	0.27
tblVehicleEF	MCY	2.5350e-003	2.5430e-003
tblVehicleEF	MCY	3.5080e-003	3.0380e-003
tblVehicleEF	MCY	2.3660e-003	2.3740e-003
tblVehicleEF	MCY	3.2930e-003	2.8510e-003
tblVehicleEF	MCY	1.15	1.16
tblVehicleEF	MCY	0.78	0.80
tblVehicleEF	MCY	0.61	0.62
tblVehicleEF	MCY	2.61	2.63
tblVehicleEF	MCY	0.65	2.08
tblVehicleEF	MCY	2.07	1.84
tblVehicleEF	MCY	2.2950e-003	2.2270e-003
tblVehicleEF	MCY	6.5900e-004	5.8700e-004
tblVehicleEF	MCY	1.15	1.16
tblVehicleEF	MCY	0.78	0.80
tblVehicleEF	MCY	0.61	0.62
tblVehicleEF	MCY	3.26	3.28

tblVehicleEF	MCY	0.65	2.08
tblVehicleEF	MCY	2.25	2.00
tblVehicleEF	MDV	0.01	4.9820e-003
tblVehicleEF	MDV	0.01	0.07
tblVehicleEF	MDV	1.10	0.98
tblVehicleEF	MDV	1.99	2.75
tblVehicleEF	MDV	481.40	398.81
tblVehicleEF	MDV	96.60	78.26
tblVehicleEF	MDV	0.12	0.08
tblVehicleEF	MDV	0.17	0.28
tblVehicleEF	MDV	2.2730e-003	1.8650e-003
tblVehicleEF	MDV	2.4250e-003	1.8220e-003
tblVehicleEF	MDV	2.0940e-003	1.7190e-003
tblVehicleEF	MDV	2.2300e-003	1.6760e-003
tblVehicleEF	MDV	0.06	0.08
tblVehicleEF	MDV	0.14	0.13
tblVehicleEF	MDV	0.07	0.08
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.08	0.39
tblVehicleEF	MDV	0.15	0.32
tblVehicleEF	MDV	4.8190e-003	3.8640e-003
tblVehicleEF	MDV	1.0000e-003	7.5900e-004
tblVehicleEF	MDV	0.06	0.08
tblVehicleEF	MDV	0.14	0.13
tblVehicleEF	MDV	0.07	0.08
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.08	0.39

tblVehicleEF	MDV	0.16	0.35
tblVehicleEF	MDV	0.01	5.2990e-003
tblVehicleEF	MDV	9.6010e-003	0.06
tblVehicleEF	MDV	1.21	1.07
tblVehicleEF	MDV	1.70	2.34
tblVehicleEF	MDV	502.45	410.36
tblVehicleEF	MDV	96.60	77.49
tblVehicleEF	MDV	0.10	0.07
tblVehicleEF	MDV	0.16	0.26
tblVehicleEF	MDV	2.2730e-003	1.8650e-003
tblVehicleEF	MDV	2.4250e-003	1.8220e-003
tblVehicleEF	MDV	2.0940e-003	1.7190e-003
tblVehicleEF	MDV	2.2300e-003	1.6760e-003
tblVehicleEF	MDV	0.10	0.12
tblVehicleEF	MDV	0.14	0.13
tblVehicleEF	MDV	0.09	0.11
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.08	0.37
tblVehicleEF	MDV	0.13	0.29
tblVehicleEF	MDV	5.0310e-003	3.9760e-003
tblVehicleEF	MDV	9.9500e-004	7.5100e-004
tblVehicleEF	MDV	0.10	0.12
tblVehicleEF	MDV	0.14	0.13
tblVehicleEF	MDV	0.09	0.11
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.08	0.37
tblVehicleEF	MDV	0.14	0.31

tblVehicleEF	MDV	0.01	4.8810e-003
tblVehicleEF	MDV	0.01	0.07
tblVehicleEF	MDV	1.06	0.95
tblVehicleEF	MDV	2.05	2.85
tblVehicleEF	MDV	473.66	394.54
tblVehicleEF	MDV	96.60	78.44
tblVehicleEF	MDV	0.11	0.08
tblVehicleEF	MDV	0.17	0.28
tblVehicleEF	MDV	2.2730e-003	1.8650e-003
tblVehicleEF	MDV	2.4250e-003	1.8220e-003
tblVehicleEF	MDV	2.0940e-003	1.7190e-003
tblVehicleEF	MDV	2.2300e-003	1.6760e-003
tblVehicleEF	MDV	0.06	0.07
tblVehicleEF	MDV	0.15	0.13
tblVehicleEF	MDV	0.06	0.08
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.10	0.46
tblVehicleEF	MDV	0.15	0.33
tblVehicleEF	MDV	4.7420e-003	3.8230e-003
tblVehicleEF	MDV	1.0010e-003	7.6000e-004
tblVehicleEF	MDV	0.06	0.07
tblVehicleEF	MDV	0.15	0.13
tblVehicleEF	MDV	0.06	0.08
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.10	0.46
tblVehicleEF	MDV	0.16	0.36
tblVehicleEF	MH	0.02	7.6690e-003

tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.43	0.81
tblVehicleEF	MH	4.82	1.94
tblVehicleEF	MH	1,126.11	1,447.94
tblVehicleEF	MH	59.42	18.29
tblVehicleEF	MH	0.93	1.00
tblVehicleEF	MH	0.71	0.25
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	9.8700e-004	2.5500e-004
tblVehicleEF	MH	3.2070e-003	3.2580e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	9.0800e-004	2.3400e-004
tblVehicleEF	MH	0.76	0.65
tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	0.33	0.29
tblVehicleEF	MH	0.06	0.04
tblVehicleEF	MH	0.02	1.14
tblVehicleEF	MH	0.28	0.09
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.7800e-004	1.8100e-004
tblVehicleEF	MH	0.76	0.65
tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	0.33	0.29
tblVehicleEF	MH	0.08	0.06
tblVehicleEF	MH	0.02	1.14
tblVehicleEF	MH	0.30	0.10

tblVehicleEF	MH	0.02	7.8380e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.47	0.83
tblVehicleEF	MH	4.54	1.84
tblVehicleEF	MH	1,126.11	1,447.98
tblVehicleEF	MH	59.42	18.11
tblVehicleEF	MH	0.86	0.94
tblVehicleEF	MH	0.68	0.24
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	9.8700e-004	2.5500e-004
tblVehicleEF	MH	3.2070e-003	3.2580e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	9.0800e-004	2.3400e-004
tblVehicleEF	MH	1.12	0.93
tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	0.47	0.39
tblVehicleEF	MH	0.06	0.05
tblVehicleEF	MH	0.02	1.12
tblVehicleEF	MH	0.27	0.08
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.7300e-004	1.7900e-004
tblVehicleEF	MH	1.12	0.93
tblVehicleEF	MH	0.05	0.05
tblVehicleEF	MH	0.47	0.39
tblVehicleEF	MH	0.09	0.06
tblVehicleEF	MH	0.02	1.12

tblVehicleEF	MH	0.29	0.09
tblVehicleEF	MH	0.02	7.6200e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	1.42	0.81
tblVehicleEF	MH	4.87	1.96
tblVehicleEF	MH	1,126.11	1,447.93
tblVehicleEF	MH	59.42	18.33
tblVehicleEF	MH	0.91	0.99
tblVehicleEF	MH	0.71	0.25
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	9.8700e-004	2.5500e-004
tblVehicleEF	MH	3.2070e-003	3.2580e-003
tblVehicleEF	MH	0.02	0.02
tblVehicleEF	MH	9.0800e-004	2.3400e-004
tblVehicleEF	MH	0.85	0.72
tblVehicleEF	MH	0.07	0.06
tblVehicleEF	MH	0.34	0.29
tblVehicleEF	MH	0.06	0.04
tblVehicleEF	MH	0.02	1.21
tblVehicleEF	MH	0.28	0.09
tblVehicleEF	MH	0.01	0.01
tblVehicleEF	MH	6.7900e-004	1.8100e-004
tblVehicleEF	MH	0.85	0.72
tblVehicleEF	MH	0.07	0.06
tblVehicleEF	MH	0.34	0.29
tblVehicleEF	MH	0.08	0.06

tblVehicleEF	MH	0.02	1.21
tblVehicleEF	MH	0.31	0.10
tblVehicleEF	MHD	0.02	4.3420e-003
tblVehicleEF	MHD	3.4980e-003	1.7990e-003
tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.35	0.40
tblVehicleEF	MHD	0.29	0.24
tblVehicleEF	MHD	5.13	1.27
tblVehicleEF	MHD	132.56	63.61
tblVehicleEF	MHD	1,140.29	1,014.00
tblVehicleEF	MHD	61.49	11.48
tblVehicleEF	MHD	0.35	0.34
tblVehicleEF	MHD	0.76	1.09
tblVehicleEF	MHD	10.11	1.60
tblVehicleEF	MHD	9.0000e-005	2.8200e-004
tblVehicleEF	MHD	2.8650e-003	6.1500e-003
tblVehicleEF	MHD	7.8500e-004	1.2800e-004
tblVehicleEF	MHD	8.6000e-005	2.7000e-004
tblVehicleEF	MHD	2.7360e-003	5.8770e-003
tblVehicleEF	MHD	7.2200e-004	1.1700e-004
tblVehicleEF	MHD	9.8100e-004	5.6700e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	6.6900e-004	3.8100e-004
tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.02	0.13
tblVehicleEF	MHD	0.32	0.06

tblVehicleEF	MHD	1.2770e-003	6.0500e-004
tblVehicleEF	MHD	0.01	9.6930e-003
tblVehicleEF	MHD	7.0500e-004	1.1400e-004
tblVehicleEF	MHD	9.8100e-004	5.6700e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.03	0.03
tblVehicleEF	MHD	6.6900e-004	3.8100e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.02	0.13
tblVehicleEF	MHD	0.35	0.07
tblVehicleEF	MHD	0.01	4.1210e-003
tblVehicleEF	MHD	3.5450e-003	1.8350e-003
tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.26	0.33
tblVehicleEF	MHD	0.30	0.24
tblVehicleEF	MHD	4.87	1.21
tblVehicleEF	MHD	140.40	63.60
tblVehicleEF	MHD	1,140.29	1,014.01
tblVehicleEF	MHD	61.49	11.37
tblVehicleEF	MHD	0.36	0.33
tblVehicleEF	MHD	0.71	1.03
tblVehicleEF	MHD	10.08	1.59
tblVehicleEF	MHD	7.6000e-005	2.4000e-004
tblVehicleEF	MHD	2.8650e-003	6.1500e-003
tblVehicleEF	MHD	7.8500e-004	1.2800e-004
tblVehicleEF	MHD	7.2000e-005	2.3000e-004
tblVehicleEF	MHD	2.7360e-003	5.8770e-003

tblVehicleEF	MHD	7.2200e-004	1.1700e-004
tblVehicleEF	MHD	1.4660e-003	8.4100e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.02	0.02
tblVehicleEF	MHD	9.3700e-004	5.3100e-004
tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.02	0.12
tblVehicleEF	MHD	0.30	0.06
tblVehicleEF	MHD	1.3510e-003	6.0500e-004
tblVehicleEF	MHD	0.01	9.6940e-003
tblVehicleEF	MHD	7.0000e-004	1.1200e-004
tblVehicleEF	MHD	1.4660e-003	8.4100e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.03	0.03
tblVehicleEF	MHD	9.3700e-004	5.3100e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.02	0.12
tblVehicleEF	MHD	0.33	0.06
tblVehicleEF	MHD	0.02	4.6590e-003
tblVehicleEF	MHD	3.4850e-003	1.7870e-003
tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.49	0.49
tblVehicleEF	MHD	0.29	0.24
tblVehicleEF	MHD	5.18	1.28
tblVehicleEF	MHD	121.72	63.61
tblVehicleEF	MHD	1,140.29	1,014.00
tblVehicleEF	MHD	61.49	11.50

tblVehicleEF	MHD	0.33	0.35
tblVehicleEF	MHD	0.74	1.07
tblVehicleEF	MHD	10.12	1.60
tblVehicleEF	MHD	1.0900e-004	3.3900e-004
tblVehicleEF	MHD	2.8650e-003	6.1500e-003
tblVehicleEF	MHD	7.8500e-004	1.2800e-004
tblVehicleEF	MHD	1.0500e-004	3.2500e-004
tblVehicleEF	MHD	2.7360e-003	5.8770e-003
tblVehicleEF	MHD	7.2200e-004	1.1700e-004
tblVehicleEF	MHD	9.9000e-004	5.7600e-004
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	6.4900e-004	3.7000e-004
tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.02	0.14
tblVehicleEF	MHD	0.32	0.06
tblVehicleEF	MHD	1.1750e-003	6.0400e-004
tblVehicleEF	MHD	0.01	9.6930e-003
tblVehicleEF	MHD	7.0600e-004	1.1400e-004
tblVehicleEF	MHD	9.9000e-004	5.7600e-004
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	6.4900e-004	3.7000e-004
tblVehicleEF	MHD	0.04	0.02
tblVehicleEF	MHD	0.02	0.14
tblVehicleEF	MHD	0.35	0.07
tblVehicleEF	OBUS	0.01	8.2740e-003

tblVehicleEF	OBUS	5.4840e-003	4.4180e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.25	0.62
tblVehicleEF	OBUS	0.41	0.55
tblVehicleEF	OBUS	4.93	2.26
tblVehicleEF	OBUS	102.93	91.17
tblVehicleEF	OBUS	1,248.17	1,333.80
tblVehicleEF	OBUS	67.50	18.57
tblVehicleEF	OBUS	0.22	0.36
tblVehicleEF	OBUS	0.71	1.19
tblVehicleEF	OBUS	2.50	0.85
tblVehicleEF	OBUS	2.0000e-005	1.2100e-004
tblVehicleEF	OBUS	2.7480e-003	7.3390e-003
tblVehicleEF	OBUS	8.4800e-004	2.0100e-004
tblVehicleEF	OBUS	1.9000e-005	1.1600e-004
tblVehicleEF	OBUS	2.6130e-003	7.0070e-003
tblVehicleEF	OBUS	7.8000e-004	1.8500e-004
tblVehicleEF	OBUS	1.3910e-003	1.8280e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	7.6200e-004	9.5200e-004
tblVehicleEF	OBUS	0.04	0.03
tblVehicleEF	OBUS	0.04	0.27
tblVehicleEF	OBUS	0.31	0.11
tblVehicleEF	OBUS	9.9400e-004	8.6700e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.6100e-004	1.8400e-004

tblVehicleEF	OBUS	1.3910e-003	1.8280e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	7.6200e-004	9.5200e-004
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	0.04	0.27
tblVehicleEF	OBUS	0.34	0.12
tblVehicleEF	OBUS	0.01	8.3630e-003
tblVehicleEF	OBUS	5.5780e-003	4.5130e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.24	0.61
tblVehicleEF	OBUS	0.42	0.56
tblVehicleEF	OBUS	4.66	2.14
tblVehicleEF	OBUS	108.07	90.13
tblVehicleEF	OBUS	1,248.17	1,333.81
tblVehicleEF	OBUS	67.50	18.36
tblVehicleEF	OBUS	0.23	0.34
tblVehicleEF	OBUS	0.67	1.11
tblVehicleEF	OBUS	2.46	0.84
tblVehicleEF	OBUS	1.7000e-005	1.0700e-004
tblVehicleEF	OBUS	2.7480e-003	7.3390e-003
tblVehicleEF	OBUS	8.4800e-004	2.0100e-004
tblVehicleEF	OBUS	1.6000e-005	1.0300e-004
tblVehicleEF	OBUS	2.6130e-003	7.0070e-003
tblVehicleEF	OBUS	7.8000e-004	1.8500e-004
tblVehicleEF	OBUS	2.0340e-003	2.6320e-003
tblVehicleEF	OBUS	0.02	0.02

tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	1.0660e-003	1.3140e-003
tblVehicleEF	OBUS	0.04	0.03
tblVehicleEF	OBUS	0.04	0.26
tblVehicleEF	OBUS	0.30	0.10
tblVehicleEF	OBUS	1.0430e-003	8.5700e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.5700e-004	1.8200e-004
tblVehicleEF	OBUS	2.0340e-003	2.6320e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	1.0660e-003	1.3140e-003
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	0.04	0.26
tblVehicleEF	OBUS	0.32	0.11
tblVehicleEF	OBUS	0.01	8.1710e-003
tblVehicleEF	OBUS	5.4590e-003	4.3900e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.26	0.63
tblVehicleEF	OBUS	0.41	0.55
tblVehicleEF	OBUS	4.98	2.29
tblVehicleEF	OBUS	95.85	92.62
tblVehicleEF	OBUS	1,248.17	1,333.79
tblVehicleEF	OBUS	67.50	18.62
tblVehicleEF	OBUS	0.21	0.38
tblVehicleEF	OBUS	0.70	1.16
tblVehicleEF	OBUS	2.50	0.85

tblVehicleEF	OBUS	2.4000e-005	1.3900e-004
tblVehicleEF	OBUS	2.7480e-003	7.3390e-003
tblVehicleEF	OBUS	8.4800e-004	2.0100e-004
tblVehicleEF	OBUS	2.3000e-005	1.3300e-004
tblVehicleEF	OBUS	2.6130e-003	7.0070e-003
tblVehicleEF	OBUS	7.8000e-004	1.8500e-004
tblVehicleEF	OBUS	1.4050e-003	1.8910e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	7.3700e-004	9.3100e-004
tblVehicleEF	OBUS	0.04	0.03
tblVehicleEF	OBUS	0.04	0.29
tblVehicleEF	OBUS	0.31	0.11
tblVehicleEF	OBUS	9.2600e-004	8.8100e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.6200e-004	1.8400e-004
tblVehicleEF	OBUS	1.4050e-003	1.8910e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	7.3700e-004	9.3100e-004
tblVehicleEF	OBUS	0.05	0.04
tblVehicleEF	OBUS	0.04	0.29
tblVehicleEF	OBUS	0.34	0.12
tblVehicleEF	SBUS	0.83	0.08
tblVehicleEF	SBUS	0.01	6.3240e-003
tblVehicleEF	SBUS	0.06	7.3230e-003
tblVehicleEF	SBUS	8.41	3.29

tblVehicleEF	SBUS	0.61	0.54
tblVehicleEF	SBUS	7.01	0.99
tblVehicleEF	SBUS	1,089.91	353.50
tblVehicleEF	SBUS	1,062.27	1,068.92
tblVehicleEF	SBUS	57.76	6.19
tblVehicleEF	SBUS	7.82	2.91
tblVehicleEF	SBUS	3.46	4.10
tblVehicleEF	SBUS	11.58	1.01
tblVehicleEF	SBUS	7.0050e-003	3.2480e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	8.9100e-004	6.6000e-005
tblVehicleEF	SBUS	6.7020e-003	3.1080e-003
tblVehicleEF	SBUS	2.6490e-003	2.6420e-003
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	8.1900e-004	6.0000e-005
tblVehicleEF	SBUS	3.4080e-003	1.0860e-003
tblVehicleEF	SBUS	0.03	9.4900e-003
tblVehicleEF	SBUS	1.00	0.38
tblVehicleEF	SBUS	1.8930e-003	5.9900e-004
tblVehicleEF	SBUS	0.09	0.08
tblVehicleEF	SBUS	0.01	0.06
tblVehicleEF	SBUS	0.37	0.04
tblVehicleEF	SBUS	0.01	3.3780e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.9900e-004	6.1000e-005
tblVehicleEF	SBUS	3.4080e-003	1.0860e-003

tblVehicleEF	SBUS	0.03	9.4900e-003
tblVehicleEF	SBUS	1.45	0.55
tblVehicleEF	SBUS	1.8930e-003	5.9900e-004
tblVehicleEF	SBUS	0.11	0.10
tblVehicleEF	SBUS	0.01	0.06
tblVehicleEF	SBUS	0.41	0.05
tblVehicleEF	SBUS	0.83	0.08
tblVehicleEF	SBUS	0.01	6.3970e-003
tblVehicleEF	SBUS	0.05	6.5350e-003
tblVehicleEF	SBUS	8.31	3.26
tblVehicleEF	SBUS	0.62	0.55
tblVehicleEF	SBUS	5.69	0.81
tblVehicleEF	SBUS	1,137.73	359.94
tblVehicleEF	SBUS	1,062.27	1,068.93
tblVehicleEF	SBUS	57.76	5.88
tblVehicleEF	SBUS	8.07	2.97
tblVehicleEF	SBUS	3.26	3.87
tblVehicleEF	SBUS	11.55	1.00
tblVehicleEF	SBUS	5.9050e-003	2.7460e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	8.9100e-004	6.6000e-005
tblVehicleEF	SBUS	5.6500e-003	2.6280e-003
tblVehicleEF	SBUS	2.6490e-003	2.6420e-003
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	8.1900e-004	6.0000e-005
tblVehicleEF	SBUS	5.0090e-003	1.5690e-003

tblVehicleEF	SBUS	0.03	9.6320e-003
tblVehicleEF	SBUS	1.00	0.38
tblVehicleEF	SBUS	2.6560e-003	8.2600e-004
tblVehicleEF	SBUS	0.09	0.08
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.33	0.04
tblVehicleEF	SBUS	0.01	3.4390e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.7700e-004	5.8000e-005
tblVehicleEF	SBUS	5.0090e-003	1.5690e-003
tblVehicleEF	SBUS	0.03	9.6320e-003
tblVehicleEF	SBUS	1.44	0.55
tblVehicleEF	SBUS	2.6560e-003	8.2600e-004
tblVehicleEF	SBUS	0.11	0.10
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.36	0.04
tblVehicleEF	SBUS	0.83	0.08
tblVehicleEF	SBUS	0.01	6.3020e-003
tblVehicleEF	SBUS	0.06	7.5040e-003
tblVehicleEF	SBUS	8.54	3.34
tblVehicleEF	SBUS	0.61	0.54
tblVehicleEF	SBUS	7.24	1.03
tblVehicleEF	SBUS	1,023.86	344.60
tblVehicleEF	SBUS	1,062.27	1,068.92
tblVehicleEF	SBUS	57.76	6.25
tblVehicleEF	SBUS	7.48	2.84
tblVehicleEF	SBUS	3.40	4.03

tblVehicleEF	SBUS	11.58	1.01
tblVehicleEF	SBUS	8.5240e-003	3.9410e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	8.9100e-004	6.6000e-005
tblVehicleEF	SBUS	8.1550e-003	3.7710e-003
tblVehicleEF	SBUS	2.6490e-003	2.6420e-003
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	8.1900e-004	6.0000e-005
tblVehicleEF	SBUS	3.3910e-003	1.0830e-003
tblVehicleEF	SBUS	0.03	9.8620e-003
tblVehicleEF	SBUS	1.00	0.38
tblVehicleEF	SBUS	1.8130e-003	5.7300e-004
tblVehicleEF	SBUS	0.09	0.08
tblVehicleEF	SBUS	0.02	0.07
tblVehicleEF	SBUS	0.38	0.04
tblVehicleEF	SBUS	0.01	3.2940e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	7.0300e-004	6.2000e-005
tblVehicleEF	SBUS	3.3910e-003	1.0830e-003
tblVehicleEF	SBUS	0.03	9.8620e-003
tblVehicleEF	SBUS	1.45	0.55
tblVehicleEF	SBUS	1.8130e-003	5.7300e-004
tblVehicleEF	SBUS	0.11	0.10
tblVehicleEF	SBUS	0.02	0.07
tblVehicleEF	SBUS	0.42	0.05
tblVehicleEF	UBUS	2.28	5.85

tblVehicleEF	UBUS	0.05	9.7390e-003
tblVehicleEF	UBUS	10.20	45.43
tblVehicleEF	UBUS	8.89	0.71
tblVehicleEF	UBUS	1,934.49	1,980.90
tblVehicleEF	UBUS	104.15	8.05
tblVehicleEF	UBUS	8.69	0.46
tblVehicleEF	UBUS	14.82	0.07
tblVehicleEF	UBUS	0.59	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.12	3.2450e-003
tblVehicleEF	UBUS	1.1960e-003	7.1000e-005
tblVehicleEF	UBUS	0.25	0.03
tblVehicleEF	UBUS	3.0000e-003	7.9690e-003
tblVehicleEF	UBUS	0.11	3.0990e-003
tblVehicleEF	UBUS	1.1000e-003	6.6000e-005
tblVehicleEF	UBUS	4.1520e-003	4.2600e-004
tblVehicleEF	UBUS	0.07	4.8760e-003
tblVehicleEF	UBUS	2.4690e-003	2.9900e-004
tblVehicleEF	UBUS	0.74	0.09
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	0.69	0.04
tblVehicleEF	UBUS	9.7410e-003	1.3280e-003
tblVehicleEF	UBUS	1.2020e-003	8.0000e-005
tblVehicleEF	UBUS	4.1520e-003	4.2600e-004
tblVehicleEF	UBUS	0.07	4.8760e-003
tblVehicleEF	UBUS	2.4690e-003	2.9900e-004
tblVehicleEF	UBUS	3.11	5.97

tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	0.76	0.05
tblVehicleEF	UBUS	2.29	5.85
tblVehicleEF	UBUS	0.05	9.0510e-003
tblVehicleEF	UBUS	10.25	45.43
tblVehicleEF	UBUS	7.71	0.63
tblVehicleEF	UBUS	1,934.49	1,980.91
tblVehicleEF	UBUS	104.15	7.90
tblVehicleEF	UBUS	8.19	0.46
tblVehicleEF	UBUS	14.77	0.07
tblVehicleEF	UBUS	0.59	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.12	3.2450e-003
tblVehicleEF	UBUS	1.1960e-003	7.1000e-005
tblVehicleEF	UBUS	0.25	0.03
tblVehicleEF	UBUS	3.0000e-003	7.9690e-003
tblVehicleEF	UBUS	0.11	3.0990e-003
tblVehicleEF	UBUS	1.1000e-003	6.6000e-005
tblVehicleEF	UBUS	5.9260e-003	6.2300e-004
tblVehicleEF	UBUS	0.07	5.0780e-003
tblVehicleEF	UBUS	3.3920e-003	4.2100e-004
tblVehicleEF	UBUS	0.75	0.09
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	0.64	0.04
tblVehicleEF	UBUS	9.7420e-003	1.3280e-003
tblVehicleEF	UBUS	1.1820e-003	7.8000e-005
tblVehicleEF	UBUS	5.9260e-003	6.2300e-004

tblVehicleEF	UBUS	0.07	5.0780e-003
tblVehicleEF	UBUS	3.3920e-003	4.2100e-004
tblVehicleEF	UBUS	3.12	5.97
tblVehicleEF	UBUS	0.02	0.03
tblVehicleEF	UBUS	0.70	0.04
tblVehicleEF	UBUS	2.28	5.85
tblVehicleEF	UBUS	0.05	9.8940e-003
tblVehicleEF	UBUS	10.19	45.43
tblVehicleEF	UBUS	9.10	0.73
tblVehicleEF	UBUS	1,934.49	1,980.90
tblVehicleEF	UBUS	104.15	8.08
tblVehicleEF	UBUS	8.53	0.46
tblVehicleEF	UBUS	14.83	0.07
tblVehicleEF	UBUS	0.59	0.07
tblVehicleEF	UBUS	0.01	0.03
tblVehicleEF	UBUS	0.12	3.2450e-003
tblVehicleEF	UBUS	1.1960e-003	7.1000e-005
tblVehicleEF	UBUS	0.25	0.03
tblVehicleEF	UBUS	3.0000e-003	7.9690e-003
tblVehicleEF	UBUS	0.11	3.0990e-003
tblVehicleEF	UBUS	1.1000e-003	6.6000e-005
tblVehicleEF	UBUS	4.6510e-003	4.3000e-004
tblVehicleEF	UBUS	0.08	5.3040e-003
tblVehicleEF	UBUS	2.5600e-003	2.8700e-004
tblVehicleEF	UBUS	0.74	0.09
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	0.71	0.04

tblVehicleEF	UBUS	9.7410e-003	1.3280e-003
tblVehicleEF	UBUS	1.2060e-003	8.0000e-005
tblVehicleEF	UBUS	4.6510e-003	4.3000e-004
tblVehicleEF	UBUS	0.08	5.3040e-003
tblVehicleEF	UBUS	2.5600e-003	2.8700e-004
tblVehicleEF	UBUS	3.10	5.97
tblVehicleEF	UBUS	0.03	0.04
tblVehicleEF	UBUS	0.77	0.05
tblVehicleTrips	DV_TP	11.00	0.00
tblVehicleTrips	DV_TP	15.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PB_TP	61.00	0.00
tblVehicleTrips	PR_TP	86.00	100.00
tblVehicleTrips	PR_TP	24.00	100.00
tblVehicleTrips	ST_TR	6.39	4.17
tblVehicleTrips	ST_TR	863.10	35.28
tblVehicleTrips	SU_TR	5.86	3.48
tblVehicleTrips	SU_TR	758.45	16.14
tblVehicleTrips	WD_TR	6.65	4.62
tblVehicleTrips	WD_TR	737.99	28.88
tblWater	AerobicPercent	87.46	100.00
tblWater	AnaerobicandFacultativeLagoonsPercent	2.21	0.00
tblWater	IndoorWaterUseRate	10,424,644.10	3,364,570.00
tblWater	IndoorWaterUseRate	296,290.09	0.00
tblWater	OutdoorWaterUseRate	6,572,058.24	57,305.00
tblWater	OutdoorWaterUseRate	181,597.15	0.00
tblWater	SepticTankPercent	10.33	0.00
tblWoodstoves	NumberCatalytic	8.00	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6331	0.0230	1.9318	8.9000e-004		0.0483	0.0483		0.0483	0.0483	5.3539	2.6972	8.0511	0.0316	0.0000	8.8413
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	117.6995	117.6995	6.4200e-003	1.3300e-003	118.2561
Mobile	0.3361	0.3540	3.5811	9.8000e-003	1.1349	6.9600e-003	1.1419	0.3017	6.4300e-003	0.3081	0.0000	920.5334	920.5334	0.0371	0.0000	921.4613
Waste						0.0000	0.0000		0.0000	0.0000	17.3801	0.0000	17.3801	1.0271	0.0000	43.0584
Water						0.0000	0.0000		0.0000	0.0000	1.1904	10.7142	11.9046	4.6800e-003	2.7100e-003	12.8291
Total	**0.9692**	**0.3770**	**5.5129**	**0.0107**	**1.1349**	**0.0553**	**1.1902**	**0.3017**	**0.0548**	**0.3565**	**23.9244**	**1,051.6443**	**1,075.5686**	**1.1070**	**4.0400e-003**	**1,104.4462**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.6331	0.0230	1.9318	8.9000e-004		0.0483	0.0483		0.0483	0.0483	5.3539	2.6972	8.0511	0.0316	0.0000	8.8413
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	68.0528	68.0528	3.7100e-003	7.7000e-004	68.3746
Mobile	0.3361	0.3540	3.5811	9.8000e-003	1.1349	6.9600e-003	1.1419	0.3017	6.4300e-003	0.3081	0.0000	920.5334	920.5334	0.0371	0.0000	921.4613
Waste						0.0000	0.0000		0.0000	0.0000	17.3801	0.0000	17.3801	1.0271	0.0000	43.0584
Water						0.0000	0.0000		0.0000	0.0000	1.1904	10.7142	11.9046	4.6800e-003	2.7100e-003	12.8291
Total	**0.9692**	**0.3770**	**5.5129**	**0.0107**	**1.1349**	**0.0553**	**1.1902**	**0.3017**	**0.0548**	**0.3565**	**23.9244**	**1,001.9976**	**1,025.9219**	**1.1043**	**3.4800e-003**	**1,054.5648**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**4.72**	**4.62**	**0.24**	**13.86**	**4.52**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3361	0.3540	3.5811	9.8000e-003	1.1349	6.9600e-003	1.1419	0.3017	6.4300e-003	0.3081	0.0000	920.5334	920.5334	0.0371	0.0000	921.4613
Unmitigated	0.3361	0.3540	3.5811	9.8000e-003	1.1349	6.9600e-003	1.1419	0.3017	6.4300e-003	0.3081	0.0000	920.5334	920.5334	0.0371	0.0000	921.4613

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	739.20	667.20	556.80	2,705,354	2,705,354
Convenience Market (24 Hour)	115.52	141.12	64.56	333,534	333,534
Enclosed Parking with Elevator	0.00	0.00	0.00		
Other Asphalt Surfaces	0.00	0.00	0.00		
Other Non-Asphalt Surfaces	0.00	0.00	0.00		
Total	854.72	808.32	621.36	3,038,889	3,038,889

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-...	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	100	0	0
Convenience Market (24 Hour)	16.60	8.40	6.90	0.90	80.10	19.00	100	0	0
Enclosed Parking with Elevator	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Other Non-Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Mid Rise	0.659436	0.053955	0.249772	0.020000	0.002038	0.000849	0.002800	0.004313	0.000000	0.000000	0.006838	0.000000	0.000000
Convenience Market (24 Hour)	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
Enclosed Parking with Elevator	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
Other Asphalt Surfaces	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850
Other Non-Asphalt Surfaces	0.545348	0.044620	0.206559	0.118451	0.015002	0.006253	0.020617	0.031756	0.002560	0.002071	0.005217	0.000696	0.000850

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Kilowatt Hours of Renewable Electricity Generated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	68.0528	68.0528	3.7100e-003	7.7000e-004	68.3746
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	117.6995	117.6995	6.4200e-003	1.3300e-003	118.2561
NaturalGas Mitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
NaturalGas Unmitigated	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Convenience Market (24 Hour)	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	488264	117.6995	6.4200e-003	1.3300e-003	118.2561
Convenience Market (24 Hour)	0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**117.6995**	**6.4200e-003**	**1.3300e-003**	**118.2561**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	447073	107.7702	5.8800e-003	1.2200e-003	108.2798
Convenience Market (24 Hour)	-41190.8	-9.9293	-0.0005	-0.0001	-9.9763
Enclosed Parking with Elevator	-41190.8	-9.9293	-0.0005	-0.0001	-9.9763
Other Asphalt Surfaces	-41190.8	-9.9293	-0.0005	-0.0001	-9.9763
Other Non-Asphalt Surfaces	-41190.8	-9.9293	-0.0005	-0.0001	-9.9763
Total		**68.0528**	**3.7200e-003**	**7.8000e-004**	**68.3746**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.6331	0.0230	1.9318	8.9000e-004		0.0483	0.0483		0.0483	0.0483	5.3539	2.6972	8.0511	0.0316	0.0000	8.8413
Unmitigated	0.6331	0.0230	1.9318	8.9000e-004		0.0483	0.0483		0.0483	0.0483	5.3539	2.6972	8.0511	0.0316	0.0000	8.8413

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0228					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5367					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0240	4.0000e-003	0.2815	8.0000e-004		0.0392	0.0392		0.0392	0.0392	5.3539	0.0000	5.3539	0.0290	0.0000	6.0793
Landscaping	0.0497	0.0190	1.6503	9.0000e-005		9.1400e-003	9.1400e-003		9.1400e-003	9.1400e-003	0.0000	2.6972	2.6972	2.5900e-003	0.0000	2.7620
Total	**0.6331**	**0.0230**	**1.9318**	**8.9000e-004**		**0.0483**	**0.0483**		**0.0483**	**0.0483**	**5.3539**	**2.6972**	**8.0511**	**0.0316**	**0.0000**	**8.8413**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0228					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.5367					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0240	4.0000e-003	0.2815	8.0000e-004		0.0392	0.0392		0.0392	0.0392	5.3539	0.0000	5.3539	0.0290	0.0000	6.0793
Landscaping	0.0497	0.0190	1.6503	9.0000e-005		9.1400e-003	9.1400e-003		9.1400e-003	9.1400e-003	0.0000	2.6972	2.6972	2.5900e-003	0.0000	2.7620
Total	**0.6331**	**0.0230**	**1.9318**	**8.9000e-004**		**0.0483**	**0.0483**		**0.0483**	**0.0483**	**5.3539**	**2.6972**	**8.0511**	**0.0316**	**0.0000**	**8.8413**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	11.9046	4.6800e-003	2.7100e-003	12.8291
Unmitigated	11.9046	4.6800e-003	2.7100e-003	12.8291

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	3.36457 / 0.057305	11.9046	4.6800e-003	2.7100e-003	12.8291
Convenience Market (24 Hour)	0 / 0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**11.9046**	**4.6800e-003**	**2.7100e-003**	**12.8291**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	3.36457 / 0.057305	11.9046	4.6800e-003	2.7100e-003	12.8291
Convenience Market (24 Hour)	0 / 0	0.0000	0.0000	0.0000	0.0000
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**11.9046**	**4.6800e-003**	**2.7100e-003**	**12.8291**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	17.3801	1.0271	0.0000	43.0584
Unmitigated	17.3801	1.0271	0.0000	43.0584

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	73.6	14.9401	0.8829	0.0000	37.0136
Convenience Market (24 Hour)	12.02	2.4400	0.1442	0.0000	6.0449
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**17.3801**	**1.0271**	**0.0000**	**43.0584**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	73.6	14.9401	0.8829	0.0000	37.0136
Convenience Market (24 Hour)	12.02	2.4400	0.1442	0.0000	6.0449
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Other Non-Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Total		**17.3801**	**1.0271**	**0.0000**	**43.0584**

9.0 Operational Offroad

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

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

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

Boilers

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

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Operation

Los Angeles-South Coast County, Mitigation Report

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	42.18	42.18	42.21	42.11	42.18
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting:

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value 3
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	0.07	0.27		
No	Land Use	Improve Walkability Design	0.00			
No	Land Use	Improve Destination Accessibility	0.00			
No	Land Use	Increase Transit Accessibility	0.25			

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

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	50.00
No	Use Low VOC Paint (Residential Exterior)	50.00
No	Use Low VOC Paint (Non-residential Interior)	100.00
No	Use Low VOC Paint (Non-residential Exterior)	100.00
No	Use Low VOC Paint (Parking)	100.00
No	% Electric Lawnmower	
No	% Electric Leafblower	
No	% Electric Chainsaw	

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Exceed Title 24		
No	Install High Efficiency Lighting		
Yes	On-site Renewable	205,954.00	

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00
DishWasher		15.00
Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

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

Solid Waste Mitigation

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

Appendix C. Screening-Level LST Worksheets

Appendix

This page intentionally left blank.

Construction Localized Significance Thresholds: Asphalt Demolition, Debris Haul, and Onsite Reprocessing

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Project site Acreage Disturbed
4	1.54	25	82	1.54

Source Receptor Distance (meters)	South Coastal LA County	Equipment	Acres/8-hr Day		Daily hours	Equipment Used	Acres
	25	Tractors	0.5	0.0625	8	3	1.5
NOx	**71**	Graders	0.5	0.0625			0
CO	**724**	Dozers	0.5	0.0625	8	1	0.5
PM10	**5.62**	Scrapers	1	0.125			0
PM2.5	**4.08**					**Acres**	2.00

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	57	58	68	90	142
	2	82	80	87	106	151
		71	70	78	99	147
CO	1	585	789	1180	2296	7558
	2	842	1158	1611	2869	8253
		724	988	1413	2605	7933
PM10	1	4	13	29	61	158
	2	7	21	37	70	167
		6	17	33	66	163
PM2.5	1	3	5	10	26	93
	2	5	7	13	30	101
		4	6	12	28	97

South Coastal LA County

1.54 Acres

	25	**50**	**100**	**200**	**500**
NOx	71	70	78	99	147
CO	724	988	1413	2605	7933
PM10	6	17	33	66	163
PM2.5	4	6	12	28	97

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
4	1	4	2
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds: Site Preparation and Soil Hauling

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Project site Acreage Disturbed
4	1.44	25	82	1.54

Source Receptor	South Coastal LA County	Equipment	Acres/8-hr Day		Daily hours	Equipment Used	Acres
Distance (meters)	25	Tractors	0.5	0.0625	8	1	0.5
NOx	**68**	Graders	0.5	0.0625	8	1	0.5
CO	**697**	Dozers	0.5	0.0625	7	1	0.4375
PM10	**5.31**	Scrapers	1	0.125			0
PM2.5	**3.87**					**Acres**	1.44

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	57	58	68	90	142
	2	82	80	87	106	151
		68	68	76	97	146
CO	1	585	789	1180	2296	7558
	2	842	1158	1611	2869	8253
		697	950	1369	2547	7862
PM10	1	4	13	29	61	158
	2	7	21	37	70	167
		5	17	33	65	162
PM2.5	1	3	5	10	26	93
	2	5	7	13	30	101
		4	6	11	28	97

South Coastal LA County

1.44 Acres

	25	**50**	**100**	**200**	**500**
NOx	68	68	76	97	146
CO	697	950	1369	2547	7862
PM10	5	17	33	65	162
PM2.5	4	6	11	28	97

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
4	1	4	2
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds: Site Preparation and Soil Hauling

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Project site Acreage Disturbed
4	1.19	25	82	1.54

Source Receptor	South Coastal LA County	Equipment	Acres/8-hr Day		Daily hours	Equipment Used	Acres
Distance (meters)	25	Tractors	0.5	0.0625	7	1	0.4375
NOx	**62**	Graders	0.5	0.0625	6	1	0.375
CO	**633**	Dozers	0.5	0.0625	6	1	0.375
PM10	**4.56**	Scrapers	1	0.125			0
PM2.5	**3.37**					**Acres**	1.19

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	57	58	68	90	142
	2	82	80	87	106	151
		62	62	72	93	144
CO	1	585	789	1180	2296	7558
	2	842	1158	1611	2869	8253
		633	858	1261	2403	7688
PM10	1	4	13	29	61	158
	2	7	21	37	70	167
		5	15	31	63	160
PM2.5	1	3	5	10	26	93
	2	5	7	13	30	101
		3	5	11	27	95

South Coastal LA County

1.19 Acres

	25	**50**	**100**	**200**	**500**
NOx	62	62	72	93	144
CO	633	858	1261	2403	7688
PM10	5	15	31	63	160
PM2.5	3	5	11	27	95

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
4	1	4	2
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds: Utility Trenching and Parking Structure Construction

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Project site Acreage Disturbed
4	0.38	25	82	1.54

Source Receptor	South Coastal LA County	Equipment	Acres/8-hr Day		Daily hours	Equipment Used	Acres
Distance (meters)	25	Tractors	0.5	0.0625	6	1	0.375
NOx	**57**	Graders	0.5	0.0625			0
CO	**585**	Dozers	0.5	0.0625			0
PM10	**4.00**	Scrapers	1	0.125			0
PM2.5	**3.00**					**Acres**	0.38

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	57	58	68	90	142
	1	57	58	68	90	142
		57	58	68	90	142
CO	1	585	789	1180	2296	7558
	1	585	789	1180	2296	7558
		585	789	1180	2296	7558
PM10	1	4	13	29	61	158
	1	4	13	29	61	158
		4	13	29	61	158
PM2.5	1	3	5	10	26	93
	1	3	5	10	26	93
		3	5	10	26	93

South Coastal LA County

0.38 Acres

	25	**50**	**100**	**200**	**500**
NOx	57	58	68	90	142
CO	585	789	1180	2296	7558
PM10	4	13	29	61	158
PM2.5	3	5	10	26	93

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
4	1	4	1
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds: Parking Structure Construction

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Project site Acreage Disturbed
4	0.38	25	82	1.54

Source Receptor	South Coastal LA County	Equipment	Acres/8-hr Day		Daily hours	Equipment Used	Acres
Distance (meters)	25	Tractors	0.5	0.0625	6	1	0.375
NOx	**57**	Graders	0.5	0.0625			0
CO	**585**	Dozers	0.5	0.0625			0
PM10	**4.00**	Scrapers	1	0.125			0
PM2.5	**3.00**					**Acres**	0.38

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	57	58	68	90	142
	1	57	58	68	90	142
		57	58	68	90	142
CO	1	585	789	1180	2296	7558
	1	585	789	1180	2296	7558
		585	789	1180	2296	7558
PM10	1	4	13	29	61	158
	1	4	13	29	61	158
		4	13	29	61	158
PM2.5	1	3	5	10	26	93
	1	3	5	10	26	93
		3	5	10	26	93

South Coastal LA County

0.38 Acres

	25	**50**	**100**	**200**	**500**
NOx	57	58	68	90	142
CO	585	789	1180	2296	7558
PM10	4	13	29	61	158
PM2.5	3	5	10	26	93

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
4	1	4	1
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds: Building Construction

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Project site Acreage Disturbed
4	0.38	25	82	1.54

Source Receptor	South Coastal LA County	Equipment	Acres/8-hr Day		Daily hours	Equipment Used	Acres
Distance (meters)	25	Tractors	0.5	0.0625	6	1	0.375
NOx	**57**	Graders	0.5	0.0625			0
CO	**585**	Dozers	0.5	0.0625			0
PM10	**4.00**	Scrapers	1	0.125			0
PM2.5	**3.00**					**Acres**	0.38

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	57	58	68	90	142
	1	57	58	68	90	142
		57	58	68	90	142
CO	1	585	789	1180	2296	7558
	1	585	789	1180	2296	7558
		585	789	1180	2296	7558
PM10	1	4	13	29	61	158
	1	4	13	29	61	158
		4	13	29	61	158
PM2.5	1	3	5	10	26	93
	1	3	5	10	26	93
		3	5	10	26	93

South Coastal LA County

0.38 Acres

	25	**50**	**100**	**200**	**500**
NOx	57	58	68	90	142
CO	585	789	1180	2296	7558
PM10	4	13	29	61	158
PM2.5	3	5	10	26	93

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
4	1	4	1
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds: Building Construction and Architectural Coating

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Project site Acreage Disturbed
4	0.38	25	82	1.54

Source Receptor	South Coastal LA County	Equipment	Acres/8-hr Day		Daily hours	Equipment Used	Acres
Distance (meters)	25	Tractors	0.5	0.0625	6	1	0.375
NOx	**57**	Graders	0.5	0.0625			0
CO	**585**	Dozers	0.5	0.0625			0
PM10	**4.00**	Scrapers	1	0.125			0
PM2.5	**3.00**					**Acres**	0.38

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	57	58	68	90	142
	1	57	58	68	90	142
		57	58	68	90	142
CO	1	585	789	1180	2296	7558
	1	585	789	1180	2296	7558
		585	789	1180	2296	7558
PM10	1	4	13	29	61	158
	1	4	13	29	61	158
		4	13	29	61	158
PM2.5	1	3	5	10	26	93
	1	3	5	10	26	93
		3	5	10	26	93

South Coastal LA County

0.38 Acres

	25	**50**	**100**	**200**	**500**
NOx	57	58	68	90	142
CO	585	789	1180	2296	7558
PM10	4	13	29	61	158
PM2.5	3	5	10	26	93

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
4	1	4	1
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds: Building Construction, Architectural Coating, and Fine Grading

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Project site Acreage Disturbed
4	1.54	25	82	1.54

Source Receptor	South Coastal LA County	Equipment	Acres/8-hr Day		Daily hours	Equipment Used	Acres
Distance (meters)	25	Tractors	0.5	0.0625	6	1	0.375
NOx	**71**	Tractors	0.5	0.0625	7	1	0.4375
CO	**724**	Graders	0.5	0.0625	6	1	0.375
PM10	**5.62**	Dozers	0.5	0.0625	6	1	0.375
PM2.5	**4.08**	Scrapers	1	0.125			0
						Acres	1.56

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	57	58	68	90	142
	2	82	80	87	106	151
		71	70	78	99	147
CO	1	585	789	1180	2296	7558
	2	842	1158	1611	2869	8253
		724	988	1413	2605	7933
PM10	1	4	13	29	61	158
	2	7	21	37	70	167
		6	17	33	66	163
PM2.5	1	3	5	10	26	93
	2	5	7	13	30	101
		4	6	12	28	97

South Coastal LA County

1.54 Acres

	25	**50**	**100**	**200**	**500**
NOx	71	70	78	99	147
CO	724	988	1413	2605	7933
PM10	6	17	33	66	163
PM2.5	4	6	12	28	97

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
4	1	4	2
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds: Building Construction, Architectural Coating, Fine Grading, and Finishing and Landscaping

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Project site Acreage Disturbed
4	1.54	25	82	1.54

Source Receptor Distance (meters)	South Coastal LA County	Equipment	Acres/8-hr Day		Daily hours	Equipment Used	Acres
	25	Tractors	0.5	0.0625	6	1	0.375
NOx	**71**	Tractors	0.5	0.0625	7	1	0.4375
CO	**724**	Graders	0.5	0.0625	6	1	0.375
PM10	**5.62**	Dozers	0.5	0.0625	6	1	0.375
PM2.5	**4.08**	Scrapers	1	0.125			0
						Acres	1.56

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	57	58	68	90	142
	2	82	80	87	106	151
		71	70	78	99	147
CO	1	585	789	1180	2296	7558
	2	842	1158	1611	2869	8253
		724	988	1413	2605	7933
PM10	1	4	13	29	61	158
	2	7	21	37	70	167
		6	17	33	66	163
PM2.5	1	3	5	10	26	93
	2	5	7	13	30	101
		4	6	12	28	97

South Coastal LA County

1.54 Acres

	25	**50**	**100**	**200**	**500**
NOx	71	70	78	99	147
CO	724	988	1413	2605	7933
PM10	6	17	33	66	163
PM2.5	4	6	12	28	97

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
4	1	4	2
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Construction Localized Significance Thresholds: Paving

SRA No.	Acres	Source Receptor Distance (meters)	Source Receptor Distance (Feet)	Project site Acreage Disturbed
4	0.50	25	82	1.54

Source Receptor	South Coastal LA County	Equipment	Acres/8-hr Day		Daily hours	Equipment Used	Acres
Distance (meters)	25	Tractors	0.5	0.0625	8	1	0.5
NOx	**57**	Graders	0.5	0.0625			0
CO	**585**	Dozers	0.5	0.0625			0
PM10	**4.00**	Scrapers	1	0.125			0
PM2.5	**3.00**					**Acres**	0.50

	Acres	**25**	**50**	**100**	**200**	**500**
NOx	1	57	58	68	90	142
	1	57	58	68	90	142
		57	58	68	90	142
CO	1	585	789	1180	2296	7558
	1	585	789	1180	2296	7558
		585	789	1180	2296	7558
PM10	1	4	13	29	61	158
	1	4	13	29	61	158
		4	13	29	61	158
PM2.5	1	3	5	10	26	93
	1	3	5	10	26	93
		3	5	10	26	93

South Coastal LA County

0.50 Acres

	25	**50**	**100**	**200**	**500**
NOx	57	58	68	90	142
CO	585	789	1180	2296	7558
PM10	4	13	29	61	158
PM2.5	3	5	10	26	93

Acre Below		**Acre Above**	
SRA No.	Acres	SRA No.	Acres
4	1	4	1
Distance Increment Below			
25			
Distance Increment Above			
25			

Updated: 10/21/2009 - Table C-1. 2006 – 2008

Attachment 3b. 2024 CalEEMod Calcultations

CalEEMod Input

Project Name:	14th & Long Beach Blvd Affordable Housing Project
Project Location:	SouthCoast AQMD
CEC Climate Zone:	7
Land Use Setting:	Urban
Operational Year:	2028
Utility Company	Southern California Edison

Land Use

Land Use Type	Land Use Subtype	Unit Amount	Size Metric	Lot Acreage	Source
Residential*	Apartments Mid Rise	158,620	SF	1.09	Site plan
Parking**	Other Non-Asphalt Surf	2,790	SF	0.00	Site plan
Parking	Enclosed Parking with I	31,834	SF	0.00	Site plan

193,244.00 Total Gross Building Floor Area (SF)

Construction Schedule

Construction Phase Name	Phase Type	Start Date	End Date	# Days/Week	# one-way worker trips/day	# one-way vendor trips/day	# Total haul trips	Worker Trip Length	Vendor Trip Length	Haul Trip Length
Asphalt Demolition	Demolition	6/1/2026	7/3/2026	5	30	11	10	18.5	10.2	20
Site Preparation	Site Preparation	7/6/2026	7/17/2026	5	10	4	10	18.5	10.2	20
Rough Grading	Grading	7/20/2026	8/14/2026	5	20	3	0	18.5	10.2	0
Utility Trenching	Trenching	8/17/2026	10/16/2026	5	10	5	0	18.5	10.2	0
Parking Structure Construction	Building Construction	8/17/2026	3/16/2027	5	25	5	0	18.5	10.2	0
Building Construction	Building Construction	3/17/2027	6/16/2028	5	50	20	5	18.5	10.2	20
Architectural Coating	Architectural Coating	9/13/2027	3/16/2028	5	20	5	0	18.5	10.2	0
Fine Grading	Grading	10/18/2027	3/16/2028	5	5	3	0	18.5	10.2	0
Finish/Landscaping	Trenching	1/18/2027	3/16/2027	5	20	10	0	18.5	10.2	0
Asphalt Paving	Paving	3/17/2028	4/22/2028	5	15	5	0	18.5	10.2	0

Notes:

Work would occur during the weekdays (5 days per week)

Schedule provided by applicant

Trip lengths for worker, vendor, and hauling trips are CaleeMod defaults

*Includes residential units, community room, decks, and circulation.

**This includes the Podium Level Open Space

List of Construction Equipment

Equipment Name	CalEEMod Equipment Name	Count	Hours/Day	HP	Load Factor
Asphalt Demolition					
Concrete/Industrial Saws	Concrete/Industrial Saws	1	8	33	0.73
Rubber Tired Dozers	Rubber Tired Dozers	1	8	367	0.4
Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	3	8	84	0.38
Crushing/Processing Equipment	Crushing/Processing Equipment	1	8	85	0.78
Site Preparation					
Graders	Graders	1	8	148	0.41
Rubber Tired Dozers	Rubber Tired Dozers	1	7	367	0.4
Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	1	8	84	0.37
Rough Grading					
Graders	Graders	1	6	148	0.41
Rubber Tired Dozers	Rubber Tired Dozers	1	6	367	0.4
Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	1	7	84	0.37
Utilities Trenching					
Excavators	Excavators	1	8	36	0.38
Parking Structure Construction					
Cranes	Cranes	1	6	367	0.29
Forklifts	Forklifts	1	6	82	0.2
Generator Sets	Generator Sets	1	8	14	0.74
Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	1	6	84	0.37
Welders	Welders	3	8	46	0.45
Building Construction					
Cranes	Cranes	1	6	367	0.29
Forklifts	Forklifts	1	6	82	0.2
Generator Sets	Generator Sets	1	8	14	0.74
Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	1	6	84	0.37
Welders	Welders	3	8	46	0.45
Architectural Coating					
Air Compressor	Air Compressor	1	6	37	0.48
Fine Grading					
Graders	Graders	1	6	148	0.41
Rubber Tired Dozers	Rubber Tired Dozers	1	6	367	0.4
Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	1	7	84	0.37
Finishing and Landscaping					
Excavators	Excavators	1	8	36	0.38
Paving					
Cement and Mortar Mixers	Cement and Mortar Mixers	1	6	10	0.56
Pavers	Pavers	1	6	81	0.42
Paving Equipment	Paving Equipment	1	8	89	0.36
Rollers	Rollers	1	7	36	0.38
Tractors/Loaders/Backhoes	Tractors/Loaders/Backhoes	1	8	84	0.37

Construction equipment, count, and hours/day provided by applicant. HP and load factors are CalEEMod defaults

Construction Trips Worksheet

Phase Name	Worker Trip Ends Per Day	Vendor Trip Ends Per Day	Haul Truck Trip Ends Per Day
Asphalt Demolition	10	7	0
Asphalt Demolition Debris Haul	10	2	10
Asphalt Demolition Debris Onsite Reprocessing	10	2	0
Site Preparation	5	3	0
Site Preparation Soil Haul	5	1	10
Rough Grading	20	3	0
Utility Trenching	10	5	0
Parking Structure Construction	25	5	0
Building Construction	50	20	0
Architectural Coating	20	5	0
Fine Grading	5	3	0
Finishing/Landscaping	20	10	0
Asphalt Paving	15	5	0

Facility would be all electric, no natural gas assumed. 1 BTU = 0.000293083 kWh

	Total Annual Consumption			Annual Consumption by Title 24 Category					
				Subject to Title 24 Standards			Not Subject to Title 24		
Land Use	Default NG (kBTU/yr)	Default Electricity (kWh/yr)	Updated Electricity (kWh/yr)	Default NG (kBTU/yr)	Electricity (kWh/yr)	Updated Electricity (kWh/yr)	Default NG (kBTU/yr)	Electricity (kWh/yr)	Updated Electricity (kWh/yr)
Apartment Mid Rise	1,699,346.96	560,872.62	1,058,922.72	1,480,570.80	158,971.28	592,901.75	218,776.17	401,901.34	466,020.97
Enclosed Parking with Elevator	0.00	117,498.27	117,498.27	0	111,450.57	111,450.57	0.00	6,047.70	6,047.70

Maximum Project Daily Regional Construction Emissions

Construction Year	Pounds/Day					
2026	**ROG**	**NOx**	**CO**	**SO_2**	**PM10**	**PM2.5**
Asphalt Demolition (2026)	0.5	9.4	14.0	<1	1.9	0.5
Site Preparation (2026)	0.3	7.4	12.9	<1	2.8	1.3
Rough Grading (2026)	0.3	5.4	11.1	<1	2.4	1.1
Utility Trenching (2026)	0.1	1.0	1.1	<1	0.1	<1
Parking Structure Construction (2026)	0.8	8.1	13.1	<1	0.5	0.2
2027						
Parking Structure Construction (2027)	0.8	8.0	12.7	<1	0.5	0.2
Building Construction (2027)	0.9	8.6	14.7	0.0	1.0	0.3
Architectural Coating (2027)	7.6	1.1	2.4	0.0	0.3	0.1
Fine Grading (2027)	0.2	5.4	10.1	0.0	2.2	1.1
Finish/Landscaping (2027)	0.2	1.2	2.2	<1	0.4	0.1
2028						
Building Construction (2028)	0.9	8.4	14.5	<1	1.0	0.3
Architectural Coating (2028)	7.6	1.0	2.2	<1	0.3	0.1
Fine Grading (2028)	0.2	5.4	10.1	<1	2.2	1.1
Asphalt Paving (2028)	0.3	4.6	7.8	<1	0.3	0.1
Overlapping Phases						
Utility Trenching (2026) + Parking Structure Construction (2026)	0.9	9.1	14.2	<1	0.6	<1
Building Construction (2027) + Architectural Coating (2027)	8.5	9.6	17.1	<1	1.3	0.4
Architectural Coating (2027) + Fine Grading (2027)	7.8	6.5	12.5	<1	2.5	1.1
Parking Structure Construction (2027) + Finish/Landscaping (2027)	1.0	9.3	14.9	<1	0.9	0.3
Building Construction (2027) + Architectural Coating (2027) + Fine Grading (2027)	8.7	15.0	27.2	<1	3.5	1.5
Building Construction (2028) + Architectural Coating (2028)	8.5	9.5	16.6	<1	1.3	0.4
Building Construction (2028) + Architectural Coating (2028) + Fine Grading (2028)	8.7	14.9	26.7	<1	3.5	1.5
Architectural Coating (2028) + Fine Grading (2028)	7.8	6.4	12.2	<1	2.5	1.1
Asphalt Paving (2028) + Building Construction (2028)	1.2	13.1	22.3	<1	1.2	0.4
Maximum Daily Emissions	**8.7**	**15.0**	**27.2**	**<1**	**3.5**	**1.5**
SCAQMD Thresholds	75	100	550	150	150	55
Significant?	No	No	No	No	No	No
2016 Certified EIR for the Approved Project	150	240	256	<1	39	21

Note: Includes implementation of Mitigation Measures AQ-1, which requires use of Tier 4 off-road equipment for equipment rated at 50 horsepower or higher.

Maximum Project Daily Regional Operational Emissions

Construction Year	Pounds/Day					
	ROG	NOx	CO	SO_2	PM10	PM2.5
Mobile	1.8	0.5	3.7	<1	<1	<1
Area	4.7	<1	10.1	<1	<1	<1
Energy	0.0	<1	<1	<1	<1	<1
Maximum Daily Emissions	**4.7**	**0.5**	**10.1**	**<1**	**<1**	**<1**
SCAQMD Thresholds	55	55	550	150	150	55
Significant?	No	No	No	No	No	No
2016 Certified EIR for the Approved Project	131	81	870	870	151	95

Maximum Project Daily LST Construction Emissions

Construction Year	Pounds/Day			
2026	**NOx**	**CO**	**PM10**	**PM2.5**
Asphalt Demolition (2026)	8.1	11.5	1.3	0.3
Site Preparation (2026)	6.4	11.9	2.5	1.2
Rough Grading (2026)	5.3	9.8	2.1	1.0
Utility Trenching (2026)	0.8	1.0	0.0	0.0
Parking Structure Construction (2026)	7.9	11.4	0.2	0.1
2027				
Parking Structure Construction (2027)	7.7	11.4	0.1	0.1
Building Construction (2027)	7.7	11.4	0.1	0.1
Architectural Coating (2027)	0.8	1.1	0.0	0.0
Fine Grading (2027)	5.3	9.8	2.1	1.0
Finish/Landscaping (2027)	0.8	1.0	0.0	0.0
2028				
Building Construction (2028)	7.6	11.4	0.1	0.1
Architectural Coating (2028)	0.8	1.1	0.0	0.0
Fine Grading (2028)	5.3	9.8	2.1	1.0
Asphalt Paving (2028)	4.4	6.9	0.1	0.1
Overlapping Phases				
Utility Trenching (2026) + Parking Structure Construction (2026)	8.7	12.4	0.2	<1
Building Construction (2027) + Architectural Coating (2027)	8.6	12.5	0.2	0.1
Architectural Coating (2027) + Fine Grading (2027)	6.1	10.9	2.1	1.1
Parking Structure Construction (2027) + Finish/Landscaping (2027)	8.6	12.4	0.2	0.1
Building Construction (2028) + Architectural Coating (2028)	8.5	12.5	0.1	0.1
Architectural Coating (2028) + Fine Grading (2028)	6.1	10.9	2.1	1.0
Maximum Daily Emissions	**8.7**	**12.5**	**2.5**	**1.2**
SCAQMD Thresholds (1-acre)	57	585	4	3
Exceeds LST?	No	No	No	No

Note: Based on a 1-acre site in SRA 4 with sensitive receptors located 25 meters from the project site.

Maximum Project Daily LST Operations Emissions

Construction Year	Pounds/Day			
	NOx	**CO**	**PM10**	**PM2.5**
Area	0.1	10.1	0.0	0.0
Energy	0.0	0.0	0.0	0.0
Maximum Daily Emissions	**0.1**	**10.1**	**0.0**	**0.0**
SCAQMD Thresholds (1-acre)	57	585	1	1
Exceeds LST?	No	No	No	No

Note: Based on a 1-acre site in SRA 4 with sensitive receptors located 25 meters from the project site.

Total Project Construction Greenhouse Gas Emissions

Year	CO2e (Metric Tons per Year)
2026	184
2027	426
2028	242
Total	853
Amortized Construction Total	**28**

Total Project Operational Greenhouse Gas Emissions

Year	CO2e (Metric Tons per Year)
Mobile	23
Area	3
Energy	285
Water	10
Waste	35
Total	357
Project Total	**385**

14th & Long Beach Custom Report

Table of Contents

1. Basic Project Information

1.1. Basic Project Information

1.2. Land Use Types

1.3. User-Selected Emission Reduction Measures by Emissions Sector

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

2.2. Construction Emissions by Year, Unmitigated

2.3. Construction Emissions by Year, Mitigated

2.4. Operations Emissions Compared Against Thresholds

2.5. Operations Emissions by Sector, Unmitigated

2.6. Operations Emissions by Sector, Mitigated

3. Construction Emissions Details

3.1. Asphalt Demolition (2026) - Unmitigated

3.2. Asphalt Demolition (2026) - Mitigated

3.3. Site Preparation (2026) - Unmitigated

3.4. Site Preparation (2026) - Mitigated

3.5. Rough Grading (2026) - Unmitigated

3.6. Rough Grading (2026) - Mitigated

3.7. Fine Grading (2027) - Unmitigated

3.8. Fine Grading (2027) - Mitigated

3.9. Fine Grading (2028) - Unmitigated

3.10. Fine Grading (2028) - Mitigated

3.11. Building Construction (2027) - Unmitigated

3.12. Building Construction (2027) - Mitigated

3.13. Building Construction (2028) - Unmitigated

3.14. Building Construction (2028) - Mitigated

3.15. Parking Structure Construction (2026) - Unmitigated

3.16. Parking Structure Construction (2026) - Mitigated

3.17. Parking Structure Construction (2027) - Unmitigated

3.18. Parking Structure Construction (2027) - Mitigated

3.19. Asphalt Paving (2028) - Unmitigated

3.20. Asphalt Paving (2028) - Mitigated

3.21. Architectural Coating (2027) - Unmitigated

3.22. Architectural Coating (2027) - Mitigated

3.23. Architectural Coating (2028) - Unmitigated

3.24. Architectural Coating (2028) - Mitigated

3.25. Utility Trenching (2026) - Unmitigated

3.26. Utility Trenching (2026) - Mitigated

3.27. Finish/Landscaping (2027) - Unmitigated

3.28. Finish/Landscaping (2027) - Mitigated

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

4.1.2. Mitigated

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

4.2.2. Electricity Emissions By Land Use - Mitigated

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

4.2.4. Natural Gas Emissions By Land Use - Mitigated

4.3. Area Emissions by Source

4.3.1. Unmitigated

4.3.2. Mitigated

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

4.4.2. Mitigated

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

4.5.2. Mitigated

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

4.6.2. Mitigated

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

4.7.2. Mitigated

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

4.8.2. Mitigated

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

4.9.2. Mitigated

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.2.2. Mitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.3.2. Mitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.9. Operational Mobile Sources

5.9.1. Unmitigated

5.9.2. Mitigated

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

5.10.2. Architectural Coatings

5.10.3. Landscape Equipment

5.10.4. Landscape Equipment - Mitigated

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.11.2. Mitigated

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.12.2. Mitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.13.2. Mitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.14.2. Mitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.15.2. Mitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.1.2. Mitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

5.18.2.2. Mitigated

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	14th & Long Beach
Construction Start Date	6/1/2026
Operational Year	2028
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.30
Precipitation (days)	18.4
Location	33.78420171002411, -118.18990893739527
County	Los Angeles-South Coast
City	Long Beach
Air District	South Coast AQMD
Air Basin	South Coast
TAZ	4751
EDFZ	7
Electric Utility	Southern California Edison
Gas Utility	Long Beach Gas & Oil
App Version	2022.1.1.26

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	153	Dwelling Unit	1.09	158,620	0.00	—	453	—

Other Non-Asphalt Surfaces	2.79	1000sqft	0.00	0.00	0.00	—	—	—
Enclosed Parking with Elevator	31.8	1000sqft	0.00	31,830	0.00	—	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

Sector	#	Measure Title
Construction	C-5	Use Advanced Engine Tiers

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.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	9.05	8.77	21.4	23.8	0.04	0.94	5.16	6.09	0.86	2.33	3.20	—	5,084	5,084	0.22	0.19	4.89	5,148
Mit.	8.71	8.50	13.1	24.0	0.04	0.19	5.16	5.24	0.17	2.33	2.41	—	5,084	5,084	0.22	0.19	4.89	5,148
% Reduced	4%	3%	39%	-1%	—	80%	—	14%	80%	—	24%	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	10.2	9.77	19.1	24.9	0.04	0.68	3.29	3.97	0.62	1.30	1.92	—	5,450	5,450	0.20	0.18	0.14	5,510
Mit.	8.95	8.74	15.1	26.6	0.04	0.20	3.29	3.49	0.18	1.30	1.48	—	5,450	5,450	0.20	0.18	0.14	5,510
% Reduced	13%	11%	21%	-7%	—	71%	—	12%	70%	—	23%	—	—	—	—	—	—	—
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unmit.	2.83	2.62	8.13	11.2	0.02	0.25	0.94	1.19	0.23	0.30	0.54	—	2,543	2,543	0.09	0.09	1.22	2,575
Mit.	2.45	2.32	7.27	12.3	0.02	0.11	0.94	1.05	0.11	0.30	0.41	—	2,543	2,543	0.09	0.09	1.22	2,575
% Reduced	13%	11%	11%	-10%	—	55%	—	12%	55%	—	24%	—	—	—	—	—	—	—
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	0.52	0.48	1.48	2.04	< 0.005	0.05	0.17	0.22	0.04	0.06	0.10	—	421	421	0.01	0.02	0.20	426
Mit.	0.45	0.42	1.33	2.24	< 0.005	0.02	0.17	0.19	0.02	0.06	0.07	—	421	421	0.01	0.02	0.20	426
% Reduced	13%	11%	11%	-10%	—	55%	—	12%	55%	—	24%	—	—	—	—	—	—	—
Exceeds (Daily Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	75.0	100	550	150	—	—	150	—	—	55.0	—	—	—	—	—	—	—
Unmit.	Yes	No	No	No	No	Yes	—	No	Yes	—	No	—	—	—	—	—	—	—
Mit.	Yes	No	No	No	No	Yes	—	No	Yes	—	No	—	—	—	—	—	—	—
Exceeds (Average Daily)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Threshold	—	75.0	100	550	150	—	—	150	—	—	55.0	—	—	—	—	—	—	—
Unmit.	Yes	No	No	No	No	Yes	—	No	Yes	—	No	—	—	—	—	—	—	—
Mit.	Yes	No	No	No	No	Yes	—	No	Yes	—	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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	2.88	2.39	21.4	23.8	0.04	0.94	5.16	6.09	0.86	2.33	3.20	—	5,084	5,084	0.22	0.19	3.83	5,148

2027	9.05	8.77	10.1	15.6	0.03	0.29	1.13	1.41	0.26	0.27	0.54	—	3,629	3,629	0.15	0.15	4.89	3,684
2028	1.93	1.60	13.0	20.4	0.03	0.38	1.06	1.45	0.35	0.26	0.61	—	4,388	4,388	0.15	0.16	4.31	4,443
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.50	1.25	9.90	13.1	0.02	0.32	0.54	0.86	0.29	0.13	0.42	—	2,704	2,704	0.11	0.08	0.06	2,730
2027	10.2	9.77	19.1	24.9	0.04	0.68	3.29	3.97	0.62	1.30	1.92	—	5,450	5,450	0.20	0.18	0.14	5,510
2028	10.2	9.69	18.3	24.6	0.04	0.63	3.29	3.92	0.58	1.30	1.88	—	5,415	5,415	0.19	0.18	0.13	5,474
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.63	0.52	4.32	5.24	0.01	0.16	0.45	0.61	0.14	0.15	0.29	—	1,099	1,099	0.05	0.04	0.39	1,111
2027	2.83	2.62	8.13	11.2	0.02	0.25	0.94	1.19	0.23	0.30	0.54	—	2,543	2,543	0.09	0.09	1.22	2,575
2028	1.79	1.68	4.61	6.49	0.01	0.15	0.65	0.80	0.13	0.23	0.37	—	1,447	1,447	0.05	0.05	0.61	1,464
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.11	0.10	0.79	0.96	< 0.005	0.03	0.08	0.11	0.03	0.03	0.05	—	182	182	0.01	0.01	0.07	184
2027	0.52	0.48	1.48	2.04	< 0.005	0.05	0.17	0.22	0.04	0.06	0.10	—	421	421	0.01	0.02	0.20	426
2028	0.33	0.31	0.84	1.18	< 0.005	0.03	0.12	0.15	0.02	0.04	0.07	—	240	240	0.01	0.01	0.10	242

2.3. Construction Emissions by Year, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.15	0.98	12.8	24.0	0.04	0.19	5.16	5.24	0.17	2.33	2.41	—	5,084	5,084	0.22	0.19	3.83	5,148
2027	8.71	8.50	9.64	17.1	0.03	0.16	1.13	1.29	0.15	0.27	0.43	—	3,629	3,629	0.15	0.15	4.89	3,684
2028	1.40	1.19	13.1	22.3	0.03	0.18	1.06	1.25	0.17	0.26	0.43	—	4,388	4,388	0.15	0.16	4.31	4,443
Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	1.15	0.97	9.20	14.5	0.02	0.19	0.54	0.73	0.17	0.13	0.30	—	2,704	2,704	0.11	0.08	0.06	2,730

2027	8.95	8.74	15.1	26.6	0.04	0.20	3.29	3.49	0.18	1.30	1.48	—	5,450	5,450	0.20	0.18	0.14	5,510
2028	8.90	8.69	14.9	26.3	0.04	0.18	3.29	3.47	0.17	1.30	1.46	—	5,415	5,415	0.19	0.18	0.13	5,474
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.35	0.30	3.48	5.59	0.01	0.06	0.45	0.51	0.06	0.15	0.20	—	1,099	1,099	0.05	0.04	0.39	1,111
2027	2.45	2.32	7.27	12.3	0.02	0.11	0.94	1.05	0.11	0.30	0.41	—	2,543	2,543	0.09	0.09	1.22	2,575
2028	1.53	1.47	4.08	7.03	0.01	0.05	0.65	0.70	0.05	0.23	0.28	—	1,447	1,447	0.05	0.05	0.61	1,464
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	0.06	0.06	0.64	1.02	< 0.005	0.01	0.08	0.09	0.01	0.03	0.04	—	182	182	0.01	0.01	0.07	184
2027	0.45	0.42	1.33	2.24	< 0.005	0.02	0.17	0.19	0.02	0.06	0.07	—	421	421	0.01	0.02	0.20	426
2028	0.28	0.27	0.74	1.28	< 0.005	0.01	0.12	0.13	0.01	0.04	0.05	—	240	240	0.01	0.01	0.10	242

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.	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	6.52	6.42	0.57	13.8	< 0.005	0.01	< 0.005	0.01	0.01	< 0.005	0.01	67.5	1,905	1,972	6.97	0.08	1.15	2,171
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.46	5.41	0.51	4.47	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	67.5	1,877	1,945	6.98	0.08	1.14	2,144
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	6.07	5.98	0.54	11.0	< 0.005	0.01	< 0.005	0.01	0.01	< 0.005	0.01	67.5	1,891	1,958	6.97	0.08	1.14	2,156
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.11	1.09	0.10	2.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	11.2	313	324	1.15	0.01	0.19	357

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	—	—	—	—	—	—	—

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.81	1.76	0.48	3.74	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	127	127	0.09	0.05	0.01	144
Area	4.71	4.65	0.09	10.1	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	28.9	28.9	< 0.005	< 0.005	—	29.0
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1,715	1,715	0.11	0.01	—	1,721
Water	—	—	—	—	—	—	—	—	—	—	—	6.56	34.0	40.5	0.67	0.02	—	62.2
Waste	—	—	—	—	—	—	—	—	—	—	—	61.0	0.00	61.0	6.10	0.00	—	213
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.14	1.14
Total	6.52	6.42	0.57	13.8	< 0.005	0.01	< 0.005	0.01	0.01	< 0.005	0.01	67.5	1,905	1,972	6.97	0.08	1.15	2,171
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.79	1.74	0.51	4.47	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	129	129	0.10	0.05	< 0.005	146
Area	3.67	3.67	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1,715	1,715	0.11	0.01	—	1,721

Water	—	—	—	—	—	—	—	—	—	—	—	6.56	34.0	40.5	0.67	0.02	—	62.2
Waste	—	—	—	—	—	—	—	—	—	—	—	61.0	0.00	61.0	6.10	0.00	—	213
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.14	1.14
Total	5.46	5.41	0.51	4.47	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	67.5	1,877	1,945	6.98	0.08	1.14	2,144
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.69	1.64	0.48	4.12	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	122	122	0.10	0.05	< 0.005	138
Area	4.38	4.34	0.06	6.90	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	19.8	19.8	< 0.005	< 0.005	—	19.9
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1,715	1,715	0.11	0.01	—	1,721
Water	—	—	—	—	—	—	—	—	—	—	—	6.56	34.0	40.5	0.67	0.02	—	62.2
Waste	—	—	—	—	—	—	—	—	—	—	—	61.0	0.00	61.0	6.10	0.00	—	213
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.14	1.14
Total	6.07	5.98	0.54	11.0	< 0.005	0.01	< 0.005	0.01	0.01	< 0.005	0.01	67.5	1,891	1,958	6.97	0.08	1.14	2,156
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.31	0.30	0.09	0.75	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	20.2	20.2	0.02	0.01	< 0.005	22.9
Area	0.80	0.79	0.01	1.26	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.28	3.28	< 0.005	< 0.005	—	3.29
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	284	284	0.02	< 0.005	—	285
Water	—	—	—	—	—	—	—	—	—	—	—	1.09	5.62	6.71	0.11	< 0.005	—	10.3
Waste	—	—	—	—	—	—	—	—	—	—	—	10.1	0.00	10.1	1.01	0.00	—	35.3
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.19	0.19
Total	1.11	1.09	0.10	2.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	11.2	313	324	1.15	0.01	0.19	357

2.6. Operations Emissions by Sector, Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.81	1.76	0.48	3.74	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	127	127	0.09	0.05	0.01	144

Area	4.71	4.65	0.09	10.1	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	28.9	28.9	< 0.005	< 0.005	—	29.0
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1,715	1,715	0.11	0.01	—	1,721
Water	—	—	—	—	—	—	—	—	—	—	—	6.56	34.0	40.5	0.67	0.02	—	62.2
Waste	—	—	—	—	—	—	—	—	—	—	—	61.0	0.00	61.0	6.10	0.00	—	213
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.14	1.14
Total	6.52	6.42	0.57	13.8	< 0.005	0.01	< 0.005	0.01	0.01	< 0.005	0.01	67.5	1,905	1,972	6.97	0.08	1.15	2,171
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.79	1.74	0.51	4.47	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	129	129	0.10	0.05	< 0.005	146
Area	3.67	3.67	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1,715	1,715	0.11	0.01	—	1,721
Water	—	—	—	—	—	—	—	—	—	—	—	6.56	34.0	40.5	0.67	0.02	—	62.2
Waste	—	—	—	—	—	—	—	—	—	—	—	61.0	0.00	61.0	6.10	0.00	—	213
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.14	1.14
Total	5.46	5.41	0.51	4.47	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	67.5	1,877	1,945	6.98	0.08	1.14	2,144
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	1.69	1.64	0.48	4.12	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	122	122	0.10	0.05	< 0.005	138
Area	4.38	4.34	0.06	6.90	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	19.8	19.8	< 0.005	< 0.005	—	19.9
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	1,715	1,715	0.11	0.01	—	1,721
Water	—	—	—	—	—	—	—	—	—	—	—	6.56	34.0	40.5	0.67	0.02	—	62.2
Waste	—	—	—	—	—	—	—	—	—	—	—	61.0	0.00	61.0	6.10	0.00	—	213
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.14	1.14
Total	6.07	5.98	0.54	11.0	< 0.005	0.01	< 0.005	0.01	0.01	< 0.005	0.01	67.5	1,891	1,958	6.97	0.08	1.14	2,156
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.31	0.30	0.09	0.75	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	20.2	20.2	0.02	0.01	< 0.005	22.9
Area	0.80	0.79	0.01	1.26	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.28	3.28	< 0.005	< 0.005	—	3.29
Energy	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	284	284	0.02	< 0.005	—	285

Water	—	—	—	—	—	—	—	—	—	—	—	1.09	5.62	6.71	0.11	< 0.005	—	10.3
Waste	—	—	—	—	—	—	—	—	—	—	—	10.1	0.00	10.1	1.01	0.00	—	35.3
Refrig.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.19	0.19
Total	1.11	1.09	0.10	2.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	11.2	313	324	1.15	0.01	0.19	357

3. Construction Emissions Details

3.1. Asphalt Demolition (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.77	1.48	12.5	12.2	0.02	0.50	—	0.50	0.46	—	0.46	—	2,042	2,042	0.08	0.02	—	2,049
Demolition	—	—	—	—	—	—	1.10	1.10	—	0.17	0.17	—	—	—	—	—	—	—
Onsite truck	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	0.85	0.84	< 0.005	0.03	—	0.03	0.03	—	0.03	—	140	140	0.01	< 0.005	—	140
Demolition	—	—	—	—	—	—	0.08	0.08	—	0.01	0.01	—	—	—	—	—	—	—

Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.16	0.15	< 0.005	0.01	—	0.01	0.01	—	0.01	—	23.2	23.2	< 0.005	< 0.005	—	23.2
Demolition	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.12	1.94	0.00	0.00	0.39	0.39	0.00	0.09	0.09	—	406	406	0.02	0.01	1.38	412
Vendor	0.02	0.01	0.38	0.18	< 0.005	< 0.005	0.09	0.10	< 0.005	0.03	0.03	—	343	343	0.01	0.05	0.93	359
Hauling	0.05	0.01	0.82	0.32	< 0.005	0.01	0.19	0.19	0.01	0.05	0.06	—	680	680	0.04	0.11	1.53	715
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	26.8	26.8	< 0.005	< 0.005	0.04	27.1
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	23.5	23.5	< 0.005	< 0.005	0.03	24.5
Hauling	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	46.6	46.6	< 0.005	0.01	0.04	48.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.43	4.43	< 0.005	< 0.005	0.01	4.49
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.89	3.89	< 0.005	< 0.005	< 0.005	4.06
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.71	7.71	< 0.005	< 0.005	0.01	8.10

3.2. Asphalt Demolition (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.43	0.40	8.13	11.5	0.02	0.16	—	0.16	0.15	—	0.15	—	2,042	2,042	0.08	0.02	—	2,049
Demolition	—	—	—	—	—	—	1.10	1.10	—	0.17	0.17	—	—	—	—	—	—	—
Onsite truck	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.56	0.79	< 0.005	0.01	—	0.01	0.01	—	0.01	—	140	140	0.01	< 0.005	—	140
Demolition	—	—	—	—	—	—	0.08	0.08	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.10	0.14	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	23.2	23.2	< 0.005	< 0.005	—	23.2
Demolition	—	—	—	—	—	—	0.01	0.01	—	< 0.005	< 0.005	—	—	—	—	—	—	—
Onsite truck	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

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.12	0.11	0.12	1.94	0.00	0.00	0.39	0.39	0.00	0.09	0.09	—	406	406	0.02	0.01	1.38	412
Vendor	0.02	0.01	0.38	0.18	< 0.005	< 0.005	0.09	0.10	< 0.005	0.03	0.03	—	343	343	0.01	0.05	0.93	359
Hauling	0.05	0.01	0.82	0.32	< 0.005	0.01	0.19	0.19	0.01	0.05	0.06	—	680	680	0.04	0.11	1.53	715
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.12	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	26.8	26.8	< 0.005	< 0.005	0.04	27.1
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	23.5	23.5	< 0.005	< 0.005	0.03	24.5
Hauling	< 0.005	< 0.005	0.06	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	46.6	46.6	< 0.005	0.01	0.04	48.9
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.43	4.43	< 0.005	< 0.005	0.01	4.49
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.89	3.89	< 0.005	< 0.005	< 0.005	4.06
Hauling	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	7.71	7.71	< 0.005	< 0.005	0.01	8.10

3.3. Site Preparation (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.47	1.24	11.0	11.7	0.02	0.51	—	0.51	0.47	—	0.47	—	2,065	2,065	0.08	0.02	—	2,072

Dust From Material Movement	—	—	—	—	—	—	2.45	2.45	—	1.17	1.17	—	—	—	—	—	—	—
Onsite truck	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.30	0.32	< 0.005	0.01	—	0.01	0.01	—	0.01	—	56.6	56.6	< 0.005	< 0.005	—	56.8
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.06	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.37	9.37	< 0.005	< 0.005	—	9.40
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.65	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	135	135	0.01	< 0.005	0.46	137

Vendor	0.01	< 0.005	0.14	0.07	< 0.005	< 0.005	0.03	0.04	< 0.005	0.01	0.01	—	125	125	0.01	0.02	0.34	130
Hauling	0.05	0.01	0.82	0.32	< 0.005	0.01	0.19	0.19	0.01	0.05	0.06	—	680	680	0.04	0.11	1.53	715
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.57	3.57	< 0.005	< 0.005	0.01	3.62
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.42	3.42	< 0.005	< 0.005	< 0.005	3.57
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	18.6	18.6	< 0.005	< 0.005	0.02	19.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.59	0.59	< 0.005	< 0.005	< 0.005	0.60
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.57	0.57	< 0.005	< 0.005	< 0.005	0.59
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.09	3.09	< 0.005	< 0.005	< 0.005	3.24

3.4. Site Preparation (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.27	0.27	6.40	11.9	0.02	0.04	—	0.04	0.04	—	0.04	—	2,065	2,065	0.08	0.02	—	2,072
Dust From Material Movement	—	—	—	—	—	—	2.45	2.45	—	1.17	1.17	—	—	—	—	—	—	—
Onsite truck	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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.18	0.33	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	56.6	56.6	< 0.005	< 0.005	—	56.8
Dust From Material Movement	—	—	—	—	—	—	0.07	0.07	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.03	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	9.37	9.37	< 0.005	< 0.005	—	9.40
Dust From Material Movement	—	—	—	—	—	—	0.01	0.01	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.65	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	135	135	0.01	< 0.005	0.46	137
Vendor	0.01	< 0.005	0.14	0.07	< 0.005	< 0.005	0.03	0.04	< 0.005	0.01	0.01	—	125	125	0.01	0.02	0.34	130
Hauling	0.05	0.01	0.82	0.32	< 0.005	0.01	0.19	0.19	0.01	0.05	0.06	—	680	680	0.04	0.11	1.53	715
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.57	3.57	< 0.005	< 0.005	0.01	3.62
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.42	3.42	< 0.005	< 0.005	< 0.005	3.57
Hauling	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	18.6	18.6	< 0.005	< 0.005	0.02	19.6
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.59	0.59	< 0.005	< 0.005	< 0.005	0.60
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.57	0.57	< 0.005	< 0.005	< 0.005	0.59
Hauling	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.09	3.09	< 0.005	< 0.005	< 0.005	3.24

3.5. Rough Grading (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.22	1.02	9.19	9.69	0.02	0.42	—	0.42	0.39	—	0.39	—	1,714	1,714	0.07	0.01	—	1,720
Dust From Material Movement	—	—	—	—	—	—	2.07	2.07	—	1.00	1.00	—	—	—	—	—	—	—
Onsite truck	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	0.07	0.06	0.53	0.56	< 0.005	0.02	—	0.02	0.02	—	0.02	—	98.6	98.6	< 0.005	< 0.005	—	99.0
Dust From Material Movement	—	—	—	—	—	—	0.12	0.12	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.10	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.3	16.3	< 0.005	< 0.005	—	16.4
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.08	1.29	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	271	271	0.01	0.01	0.92	275
Vendor	0.01	< 0.005	0.10	0.05	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	93.5	93.5	< 0.005	0.01	0.25	97.9
Hauling	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	15.0	15.0	< 0.005	< 0.005	0.02	15.2
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.38	5.38	< 0.005	< 0.005	0.01	5.62
Hauling	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.48	2.48	< 0.005	< 0.005	< 0.005	2.52
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.89	0.89	< 0.005	< 0.005	< 0.005	0.93
Hauling	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

3.6. Rough Grading (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	0.22	5.26	9.79	0.02	0.03	—	0.03	0.03	—	0.03	—	1,714	1,714	0.07	0.01	—	1,720
Dust From Material Movement	—	—	—	—	—	—	2.07	2.07	—	1.00	1.00	—	—	—	—	—	—	—
Onsite truck	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.30	0.56	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	98.6	98.6	< 0.005	< 0.005	—	99.0
Dust From Material Movement	—	—	—	—	—	—	0.12	0.12	—	0.06	0.06	—	—	—	—	—	—	—

Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.06	0.10	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.3	16.3	< 0.005	< 0.005	—	16.4
Dust From Material Movement	—	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.08	1.29	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	271	271	0.01	0.01	0.92	275
Vendor	0.01	< 0.005	0.10	0.05	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	93.5	93.5	< 0.005	0.01	0.25	97.9
Hauling	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	15.0	15.0	< 0.005	< 0.005	0.02	15.2
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.38	5.38	< 0.005	< 0.005	0.01	5.62
Hauling	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.48	2.48	< 0.005	< 0.005	< 0.005	2.52
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	0.89	0.89	< 0.005	< 0.005	< 0.005	0.93
Hauling	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

3.7. Fine Grading (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.18	0.99	8.70	9.56	0.02	0.39	—	0.39	0.36	—	0.36	—	1,715	1,715	0.07	0.01	—	1,720
Dust From Material Movement	—	—	—	—	—	—	2.07	2.07	—	1.00	1.00	—	—	—	—	—	—	—
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	1.28	1.40	< 0.005	0.06	—	0.06	0.05	—	0.05	—	252	252	0.01	< 0.005	—	253
Dust From Material Movement	—	—	—	—	—	—	0.30	0.30	—	0.15	0.15	—	—	—	—	—	—	—
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.03	0.03	0.23	0.26	< 0.005	0.01	—	0.01	0.01	—	0.01	—	41.7	41.7	< 0.005	< 0.005	—	41.8
Dust From Material Movement	—	—	—	—	—	—	0.06	0.06	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.25	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	63.0	63.0	< 0.005	< 0.005	0.01	63.7
Vendor	0.01	< 0.005	0.10	0.05	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	91.8	91.8	< 0.005	0.01	0.01	95.7
Hauling	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.38	9.38	< 0.005	< 0.005	0.01	9.50
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.5	13.5	< 0.005	< 0.005	0.02	14.0
Hauling	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.55	1.55	< 0.005	< 0.005	< 0.005	1.57
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.23	2.23	< 0.005	< 0.005	< 0.005	2.33
Hauling	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

3.8. Fine Grading (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.22	0.22	5.26	9.79	0.02	0.03	—	0.03	0.03	—	0.03	—	1,715	1,715	0.07	0.01	—	1,720
Dust From Material Movement	—	—	—	—	—	—	2.07	2.07	—	1.00	1.00	—	—	—	—	—	—	—
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.77	1.44	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	252	252	0.01	< 0.005	—	253
Dust From Material Movement	—	—	—	—	—	—	0.30	0.30	—	0.15	0.15	—	—	—	—	—	—	—
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.14	0.26	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	41.7	41.7	< 0.005	< 0.005	—	41.8

Dust From Material Movement	—	—	—	—	—	—	0.06	0.06	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.25	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	63.0	63.0	< 0.005	< 0.005	0.01	63.7
Vendor	0.01	< 0.005	0.10	0.05	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	91.8	91.8	< 0.005	0.01	0.01	95.7
Hauling	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.38	9.38	< 0.005	< 0.005	0.01	9.50
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.5	13.5	< 0.005	< 0.005	0.02	14.0
Hauling	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.55	1.55	< 0.005	< 0.005	< 0.005	1.57
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.23	2.23	< 0.005	< 0.005	< 0.005	2.33
Hauling	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

3.9. Fine Grading (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.16	0.97	8.42	9.59	0.02	0.38	—	0.38	0.35	—	0.35	—	1,715	1,715	0.07	0.01	—	1,721
Dust From Material Movement	—	—	—	—	—	—	2.07	2.07	—	1.00	1.00	—	—	—	—	—	—	—
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	1.25	1.43	< 0.005	0.06	—	0.06	0.05	—	0.05	—	255	255	0.01	< 0.005	—	256
Dust From Material Movement	—	—	—	—	—	—	0.31	0.31	—	0.15	0.15	—	—	—	—	—	—	—
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.03	0.23	0.26	< 0.005	0.01	—	0.01	0.01	—	0.01	—	42.2	42.2	< 0.005	< 0.005	—	42.4
Dust From Material Movement	—	—	—	—	—	—	0.06	0.06	—	0.03	0.03	—	—	—	—	—	—	—

Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.24	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	61.9	61.9	< 0.005	< 0.005	< 0.005	62.6
Vendor	0.01	< 0.005	0.10	0.05	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	89.6	89.6	< 0.005	0.01	0.01	93.5
Hauling	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.34	9.34	< 0.005	< 0.005	0.01	9.46
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.3	13.3	< 0.005	< 0.005	0.01	13.9
Hauling	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.55	1.55	< 0.005	< 0.005	< 0.005	1.57
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.21	2.21	< 0.005	< 0.005	< 0.005	2.30
Hauling	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

3.10. Fine Grading (2028) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Roa Equipment	0.22	0.22	5.26	9.79	0.02	0.03	—	0.03	0.03	—	0.03	—	1,715	1,715	0.07	0.01	—	1,721
Dust From Material Movement	—	—	—	—	—	—	2.07	2.07	—	1.00	1.00	—	—	—	—	—	—	—
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Roa d Equipm ent	0.03	0.03	0.78	1.46	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	255	255	0.01	< 0.005	—	256
Dust From Material Movement	—	—	—	—	—	—	0.31	0.31	—	0.15	0.15	—	—	—	—	—	—	—
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Roa d Equipm ent	0.01	0.01	0.14	0.27	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	42.2	42.2	< 0.005	< 0.005	—	42.4
Dust From Material Movement	—	—	—	—	—	—	0.06	0.06	—	0.03	0.03	—	—	—	—	—	—	—
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.24	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	61.9	61.9	< 0.005	< 0.005	< 0.005	62.6
Vendor	0.01	< 0.005	0.10	0.05	< 0.005	< 0.005	0.03	0.03	< 0.005	0.01	0.01	—	89.6	89.6	< 0.005	0.01	0.01	93.5
Hauling	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.34	9.34	< 0.005	< 0.005	0.01	9.46
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	13.3	13.3	< 0.005	< 0.005	0.01	13.9
Hauling	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.55	1.55	< 0.005	< 0.005	< 0.005	1.57
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.21	2.21	< 0.005	< 0.005	< 0.005	2.30
Hauling	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

3.11. Building Construction (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.17	0.97	8.25	9.91	0.02	0.26	—	0.26	0.24	—	0.24	—	1,801	1,801	0.07	0.01	—	1,807
Onsite truck	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Roa Equipment	1.17	0.97	8.25	9.91	0.02	0.26	—	0.26	0.24	—	0.24	—	1,801	1,801	0.07	0.01	—	1,807
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Roa d Equipm ent	0.66	0.55	4.68	5.62	0.01	0.15	—	0.15	0.14	—	0.14	—	1,022	1,022	0.04	0.01	—	1,026
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Roa d Equipm ent	0.12	0.10	0.85	1.03	< 0.005	0.03	—	0.03	0.02	—	0.02	—	169	169	0.01	< 0.005	—	170
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.18	0.17	3.00	0.00	0.00	0.65	0.65	0.00	0.15	0.15	—	664	664	0.03	0.02	2.07	674
Vendor	0.04	0.02	0.66	0.31	< 0.005	< 0.005	0.17	0.18	< 0.005	0.05	0.05	—	611	611	0.03	0.08	1.59	639
Hauling	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.17	0.22	2.54	0.00	0.00	0.65	0.65	0.00	0.15	0.15	—	630	630	0.01	0.02	0.05	637
Vendor	0.04	0.02	0.68	0.32	< 0.005	< 0.005	0.17	0.18	< 0.005	0.05	0.05	—	612	612	0.03	0.08	0.04	638
Hauling	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.11	0.10	0.12	1.52	0.00	0.00	0.37	0.37	0.00	0.09	0.09	—	363	363	0.01	0.01	0.51	367
Vendor	0.02	0.01	0.39	0.18	< 0.005	< 0.005	0.10	0.10	< 0.005	0.03	0.03	—	347	347	0.01	0.05	0.39	362
Hauling	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.28	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	60.1	60.1	< 0.005	< 0.005	0.08	60.8
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	57.5	57.5	< 0.005	0.01	0.06	60.0
Hauling	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

3.12. Building Construction (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.83	0.71	7.75	11.4	0.02	0.14	—	0.14	0.13	—	0.13	—	1,801	1,801	0.07	0.01	—	1,807
Onsite truck	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.83	0.71	7.75	11.4	0.02	0.14	—	0.14	0.13	—	0.13	—	1,801	1,801	0.07	0.01	—	1,807
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	0.47	0.40	4.40	6.46	0.01	0.08	—	0.08	0.07	—	0.07	—	1,022	1,022	0.04	0.01	—	1,026
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.09	0.07	0.80	1.18	< 0.005	0.01	—	0.01	0.01	—	0.01	—	169	169	0.01	< 0.005	—	170
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.18	0.17	3.00	0.00	0.00	0.65	0.65	0.00	0.15	0.15	—	664	664	0.03	0.02	2.07	674
Vendor	0.04	0.02	0.66	0.31	< 0.005	< 0.005	0.17	0.18	< 0.005	0.05	0.05	—	611	611	0.03	0.08	1.59	639
Hauling	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.20	0.17	0.22	2.54	0.00	0.00	0.65	0.65	0.00	0.15	0.15	—	630	630	0.01	0.02	0.05	637
Vendor	0.04	0.02	0.68	0.32	< 0.005	< 0.005	0.17	0.18	< 0.005	0.05	0.05	—	612	612	0.03	0.08	0.04	638
Hauling	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.11	0.10	0.12	1.52	0.00	0.00	0.37	0.37	0.00	0.09	0.09	—	363	363	0.01	0.01	0.51	367
Vendor	0.02	0.01	0.39	0.18	< 0.005	< 0.005	0.10	0.10	< 0.005	0.03	0.03	—	347	347	0.01	0.05	0.39	362
Hauling	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.02	0.02	0.28	0.00	0.00	0.07	0.07	0.00	0.02	0.02	—	60.1	60.1	< 0.005	< 0.005	0.08	60.8
Vendor	< 0.005	< 0.005	0.07	0.03	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	0.01	—	57.5	57.5	< 0.005	0.01	0.06	60.0

Hauling	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

3.13. Building Construction (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.12	0.93	7.89	9.88	0.02	0.23	—	0.23	0.21	—	0.21	—	1,801	1,801	0.07	0.01	—	1,807
Onsite truck	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.12	0.93	7.89	9.88	0.02	0.23	—	0.23	0.21	—	0.21	—	1,801	1,801	0.07	0.01	—	1,807
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.37	0.31	2.59	3.25	0.01	0.08	—	0.08	0.07	—	0.07	—	592	592	0.02	< 0.005	—	594
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	0.07	0.06	0.47	0.59	< 0.005	0.01	—	0.01	0.01	—	0.01	—	98.0	98.0	< 0.005	< 0.005	—	98.4
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.19	0.17	0.17	2.82	0.00	0.00	0.65	0.65	0.00	0.15	0.15	—	653	653	0.01	0.02	1.86	662
Vendor	0.04	0.01	0.63	0.30	< 0.005	< 0.005	0.17	0.18	< 0.005	0.05	0.05	—	597	597	0.02	0.08	1.51	624
Hauling	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.19	0.17	0.19	2.40	0.00	0.00	0.65	0.65	0.00	0.15	0.15	—	619	619	0.01	0.02	0.05	626
Vendor	0.04	0.01	0.66	0.31	< 0.005	< 0.005	0.17	0.18	< 0.005	0.05	0.05	—	598	598	0.02	0.08	0.04	623
Hauling	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.06	0.82	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	206	206	< 0.005	0.01	0.26	209
Vendor	0.01	< 0.005	0.22	0.10	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	196	196	0.01	0.03	0.21	205
Hauling	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.15	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	34.2	34.2	< 0.005	< 0.005	0.04	34.6
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	32.5	32.5	< 0.005	< 0.005	0.04	33.9
Hauling	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

3.14. Building Construction (2028) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e

Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	0.68	7.64	11.4	0.02	0.12	—	0.12	0.11	—	0.11	—	1,801	1,801	0.07	0.01	—	1,807
Onsite truck	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.80	0.68	7.64	11.4	0.02	0.12	—	0.12	0.11	—	0.11	—	1,801	1,801	0.07	0.01	—	1,807
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.26	0.22	2.51	3.73	0.01	0.04	—	0.04	0.04	—	0.04	—	592	592	0.02	< 0.005	—	594
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.04	0.46	0.68	< 0.005	0.01	—	0.01	0.01	—	0.01	—	98.0	98.0	< 0.005	< 0.005	—	98.4
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.19	0.17	0.17	2.82	0.00	0.00	0.65	0.65	0.00	0.15	0.15	—	653	653	0.01	0.02	1.86	662
Vendor	0.04	0.01	0.63	0.30	< 0.005	< 0.005	0.17	0.18	< 0.005	0.05	0.05	—	597	597	0.02	0.08	1.51	624
Hauling	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.19	0.17	0.19	2.40	0.00	0.00	0.65	0.65	0.00	0.15	0.15	—	619	619	0.01	0.02	0.05	626
Vendor	0.04	0.01	0.66	0.31	< 0.005	< 0.005	0.17	0.18	< 0.005	0.05	0.05	—	598	598	0.02	0.08	0.04	623
Hauling	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.06	0.82	0.00	0.00	0.21	0.21	0.00	0.05	0.05	—	206	206	< 0.005	0.01	0.26	209
Vendor	0.01	< 0.005	0.22	0.10	< 0.005	< 0.005	0.06	0.06	< 0.005	0.02	0.02	—	196	196	0.01	0.03	0.21	205
Hauling	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.15	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	34.2	34.2	< 0.005	< 0.005	0.04	34.6
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	32.5	32.5	< 0.005	< 0.005	0.04	33.9
Hauling	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

3.15. Parking Structure Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	1.22	1.01	8.57	9.96	0.02	0.29	—	0.29	0.27	—	0.27	—	1,801	1,801	0.07	0.01	—	1,807
Onsite truck	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.22	1.01	8.57	9.96	0.02	0.29	—	0.29	0.27	—	0.27	—	1,801	1,801	0.07	0.01	—	1,807
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.33	0.27	2.30	2.67	0.01	0.08	—	0.08	0.07	—	0.07	—	483	483	0.02	< 0.005	—	484
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.05	0.42	0.49	< 0.005	0.01	—	0.01	0.01	—	0.01	—	79.9	79.9	< 0.005	< 0.005	—	80.2
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.10	1.61	0.00	0.00	0.33	0.33	0.00	0.08	0.08	—	339	339	0.01	0.01	1.15	344
Vendor	0.01	< 0.005	0.17	0.08	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	156	156	0.01	0.02	0.42	163
Hauling	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

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.11	1.38	0.00	0.00	0.33	0.33	0.00	0.08	0.08	—	321	321	0.01	0.01	0.03	325
Vendor	0.01	< 0.005	0.18	0.09	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	156	156	0.01	0.02	0.01	163
Hauling	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.03	0.02	0.03	0.39	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	87.4	87.4	< 0.005	< 0.005	0.13	88.5
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	41.8	41.8	< 0.005	0.01	0.05	43.7
Hauling	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	14.5	14.5	< 0.005	< 0.005	0.02	14.7
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.92	6.92	< 0.005	< 0.005	0.01	7.23
Hauling	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

3.16. Parking Structure Construction (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.87	0.74	7.87	11.4	0.02	0.16	—	0.16	0.15	—	0.15	—	1,801	1,801	0.07	0.01	—	1,807
Onsite truck	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Roa Equipment	0.87	0.74	7.87	11.4	0.02	0.16	—	0.16	0.15	—	0.15	—	1,801	1,801	0.07	0.01	—	1,807
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Roa d Equipm ent	0.23	0.20	2.11	3.06	0.01	0.04	—	0.04	0.04	—	0.04	—	483	483	0.02	< 0.005	—	484
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Roa d Equipm ent	0.04	0.04	0.38	0.56	< 0.005	0.01	—	0.01	0.01	—	0.01	—	79.9	79.9	< 0.005	< 0.005	—	80.2
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.10	1.61	0.00	0.00	0.33	0.33	0.00	0.08	0.08	—	339	339	0.01	0.01	1.15	344
Vendor	0.01	< 0.005	0.17	0.08	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	156	156	0.01	0.02	0.42	163
Hauling	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.11	1.38	0.00	0.00	0.33	0.33	0.00	0.08	0.08	—	321	321	0.01	0.01	0.03	325
Vendor	0.01	< 0.005	0.18	0.09	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	156	156	0.01	0.02	0.01	163
Hauling	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.03	0.02	0.03	0.39	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	87.4	87.4	< 0.005	< 0.005	0.13	88.5
Vendor	< 0.005	< 0.005	0.05	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	41.8	41.8	< 0.005	0.01	0.05	43.7
Hauling	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	< 0.005	0.01	0.07	0.00	0.00	0.02	0.02	0.00	< 0.005	< 0.005	—	14.5	14.5	< 0.005	< 0.005	0.02	14.7
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.92	6.92	< 0.005	< 0.005	0.01	7.23
Hauling	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

3.17. Parking Structure Construction (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.17	0.97	8.25	9.91	0.02	0.26	—	0.26	0.24	—	0.24	—	1,801	1,801	0.07	0.01	—	1,807
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.17	0.14	1.21	1.45	< 0.005	0.04	—	0.04	0.04	—	0.04	—	264	264	0.01	< 0.005	—	265
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Roa Equipment	0.03	0.03	0.22	0.27	< 0.005	0.01	—	0.01	0.01	—	0.01	—	43.8	43.8	< 0.005	< 0.005	—	43.9
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.11	1.27	0.00	0.00	0.33	0.33	0.00	0.08	0.08	—	315	315	< 0.005	0.01	0.03	319
Vendor	0.01	< 0.005	0.17	0.08	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	153	153	0.01	0.02	0.01	159
Hauling	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.02	0.20	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	46.9	46.9	< 0.005	< 0.005	0.07	47.5
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	22.4	22.4	< 0.005	< 0.005	0.03	23.4
Hauling	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.77	7.77	< 0.005	< 0.005	0.01	7.87
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.72	3.72	< 0.005	< 0.005	< 0.005	3.88
Hauling	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

3.18. Parking Structure Construction (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.83	0.71	7.75	11.4	0.02	0.14	—	0.14	0.13	—	0.13	—	1,801	1,801	0.07	0.01	—	1,807
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.10	1.14	1.67	< 0.005	0.02	—	0.02	0.02	—	0.02	—	264	264	0.01	< 0.005	—	265
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.21	0.31	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	43.8	43.8	< 0.005	< 0.005	—	43.9
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.10	0.09	0.11	1.27	0.00	0.00	0.33	0.33	0.00	0.08	0.08	—	315	315	< 0.005	0.01	0.03	319
Vendor	0.01	< 0.005	0.17	0.08	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	153	153	0.01	0.02	0.01	159
Hauling	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.01	0.01	0.02	0.20	0.00	0.00	0.05	0.05	0.00	0.01	0.01	—	46.9	46.9	< 0.005	< 0.005	0.07	47.5
Vendor	< 0.005	< 0.005	0.03	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	22.4	22.4	< 0.005	< 0.005	0.03	23.4
Hauling	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	7.77	7.77	< 0.005	< 0.005	0.01	7.87
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.72	3.72	< 0.005	< 0.005	< 0.005	3.88
Hauling	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

3.19. Asphalt Paving (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.51	0.43	4.13	6.47	0.01	0.15	—	0.15	0.13	—	0.13	—	991	991	0.04	0.01	—	995
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.51	0.43	4.13	6.47	0.01	0.15	—	0.15	0.13	—	0.13	—	991	991	0.04	0.01	—	995
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.04	0.03	0.29	0.46	< 0.005	0.01	—	0.01	0.01	—	0.01	—	70.6	70.6	< 0.005	< 0.005	—	70.9
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.05	0.08	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.7	11.7	< 0.005	< 0.005	—	11.7
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.05	0.85	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	196	196	< 0.005	0.01	0.56	198
Vendor	0.01	< 0.005	0.16	0.08	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	149	149	0.01	0.02	0.38	156
Hauling	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.06	0.72	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	186	186	< 0.005	0.01	0.01	188
Vendor	0.01	< 0.005	0.16	0.08	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	149	149	0.01	0.02	0.01	156
Hauling	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.4	13.4	< 0.005	< 0.005	0.02	13.6
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.6	10.6	< 0.005	< 0.005	0.01	11.1

Hauling	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.22	2.22	< 0.005	< 0.005	< 0.005	2.25
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.76	1.76	< 0.005	< 0.005	< 0.005	1.84
Hauling	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

3.20. Asphalt Paving (2028) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	0.27	4.41	6.89	0.01	0.06	—	0.06	0.05	—	0.05	—	991	991	0.04	0.01	—	995
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.30	0.27	4.41	6.89	0.01	0.06	—	0.06	0.05	—	0.05	—	991	991	0.04	0.01	—	995
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road	0.02	0.02	0.31	0.49	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	70.6	70.6	< 0.005	< 0.005	—	70.9
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.06	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	11.7	11.7	< 0.005	< 0.005	—	11.7
Paving	0.00	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.05	0.85	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	196	196	< 0.005	0.01	0.56	198
Vendor	0.01	< 0.005	0.16	0.08	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	149	149	0.01	0.02	0.38	156
Hauling	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.05	0.06	0.72	0.00	0.00	0.20	0.20	0.00	0.05	0.05	—	186	186	< 0.005	0.01	0.01	188
Vendor	0.01	< 0.005	0.16	0.08	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	149	149	0.01	0.02	0.01	156
Hauling	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.05	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	13.4	13.4	< 0.005	< 0.005	0.02	13.6
Vendor	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	10.6	10.6	< 0.005	< 0.005	0.01	11.1
Hauling	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.22	2.22	< 0.005	< 0.005	< 0.005	2.25
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	1.76	1.76	< 0.005	< 0.005	< 0.005	1.84
Hauling	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

3.21. Architectural Coating (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	7.41	7.41	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	7.41	7.41	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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

Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.18	0.24	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	28.7	28.7	< 0.005	< 0.005	—	28.8
Architectural Coatings	1.59	1.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.76	4.76	< 0.005	< 0.005	—	4.77
Architectural Coatings	0.29	0.29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.07	1.20	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	266	266	0.01	0.01	0.83	270
Vendor	0.01	< 0.005	0.16	0.08	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	153	153	0.01	0.02	0.40	160
Hauling	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.09	1.02	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	252	252	< 0.005	0.01	0.02	255
Vendor	0.01	< 0.005	0.17	0.08	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	153	153	0.01	0.02	0.01	159

Hauling	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.02	0.23	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	55.0	55.0	< 0.005	< 0.005	0.08	55.7
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	32.9	32.9	< 0.005	< 0.005	0.04	34.3
Hauling	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.11	9.11	< 0.005	< 0.005	0.01	9.23
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.45	5.45	< 0.005	< 0.005	0.01	5.69
Hauling	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

3.22. Architectural Coating (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.14	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	7.41	7.41	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipm	0.14	0.11	0.83	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	7.41	7.41	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.02	0.18	0.24	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	28.7	28.7	< 0.005	< 0.005	—	28.8
Architectural Coatings	1.59	1.59	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.76	4.76	< 0.005	< 0.005	—	4.77
Architectural Coatings	0.29	0.29	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.07	1.20	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	266	266	0.01	0.01	0.83	270

Vendor	0.01	< 0.005	0.16	0.08	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	153	153	0.01	0.02	0.40	160
Hauling	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.09	1.02	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	252	252	< 0.005	0.01	0.02	255
Vendor	0.01	< 0.005	0.17	0.08	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	153	153	0.01	0.02	0.01	159
Hauling	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.02	0.23	0.00	0.00	0.06	0.06	0.00	0.01	0.01	—	55.0	55.0	< 0.005	< 0.005	0.08	55.7
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	32.9	32.9	< 0.005	< 0.005	0.04	34.3
Hauling	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.04	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.11	9.11	< 0.005	< 0.005	0.01	9.23
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	5.45	5.45	< 0.005	< 0.005	0.01	5.69
Hauling	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

3.23. Architectural Coating (2028) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.81	1.12	< 0.005	0.02	—	0.02	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134

Architect Coatings	7.41	7.41	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.02	0.02	0.12	0.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	19.9	19.9	< 0.005	< 0.005	—	19.9
Architectural Coatings	1.10	1.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.29	3.29	< 0.005	< 0.005	—	3.30
Architectural Coatings	0.20	0.20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.08	0.96	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	247	247	< 0.005	0.01	0.02	250
Vendor	0.01	< 0.005	0.16	0.08	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	149	149	0.01	0.02	0.01	156

Hauling	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.15	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	37.4	37.4	< 0.005	< 0.005	0.05	37.8
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	22.2	22.2	< 0.005	< 0.005	0.02	23.2
Hauling	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.18	6.18	< 0.005	< 0.005	0.01	6.26
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.68	3.68	< 0.005	< 0.005	< 0.005	3.84
Hauling	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

3.24. Architectural Coating (2028) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.13	0.11	0.81	1.12	< 0.005	0.02	—	0.02	0.01	—	0.01	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	7.41	7.41	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Roa Equipment	0.02	0.02	0.12	0.17	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	19.9	19.9	< 0.005	< 0.005	—	19.9
Architectural Coatings	1.10	1.10	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.03	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.29	3.29	< 0.005	< 0.005	—	3.30
Architectural Coatings	0.20	0.20	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.08	0.96	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	247	247	< 0.005	0.01	0.02	250
Vendor	0.01	< 0.005	0.16	0.08	< 0.005	< 0.005	0.04	0.04	< 0.005	0.01	0.01	—	149	149	0.01	0.02	0.01	156
Hauling	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.15	0.00	0.00	0.04	0.04	0.00	0.01	0.01	—	37.4	37.4	< 0.005	< 0.005	0.05	37.8
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	22.2	22.2	< 0.005	< 0.005	0.02	23.2
Hauling	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	< 0.005	< 0.005	< 0.005	0.03	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	6.18	6.18	< 0.005	< 0.005	0.01	6.26
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	3.68	3.68	< 0.005	< 0.005	< 0.005	3.84
Hauling	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

3.25. Utility Trenching (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.82	1.02	< 0.005	0.02	—	0.02	0.02	—	0.02	—	142	142	0.01	< 0.005	—	142
Onsite truck	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.82	1.02	< 0.005	0.02	—	0.02	0.02	—	0.02	—	142	142	0.01	< 0.005	—	142
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.09	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.3	16.3	< 0.005	< 0.005	—	16.4
Onsite truck	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

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.70	2.70	< 0.005	< 0.005	—	2.71
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.65	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	135	135	0.01	< 0.005	0.46	137
Vendor	0.01	< 0.005	0.17	0.08	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	156	156	0.01	0.02	0.42	163
Hauling	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.55	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	128	128	0.01	< 0.005	0.01	130
Vendor	0.01	< 0.005	0.18	0.09	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	156	156	0.01	0.02	0.01	163
Hauling	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	15.0	15.0	< 0.005	< 0.005	0.02	15.2
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	17.9	17.9	< 0.005	< 0.005	0.02	18.7
Hauling	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.48	2.48	< 0.005	< 0.005	< 0.005	2.52
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.97	2.97	< 0.005	< 0.005	< 0.005	3.10
Hauling	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

3.26. Utility Trenching (2026) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.82	1.02	< 0.005	0.02	—	0.02	0.02	—	0.02	—	142	142	0.01	< 0.005	—	142
Onsite truck	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.82	1.02	< 0.005	0.02	—	0.02	0.02	—	0.02	—	142	142	0.01	< 0.005	—	142
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.09	0.12	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.3	16.3	< 0.005	< 0.005	—	16.4
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.70	2.70	< 0.005	< 0.005	—	2.71
Onsite truck	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

Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.65	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	135	135	0.01	< 0.005	0.46	137
Vendor	0.01	< 0.005	0.17	0.08	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	156	156	0.01	0.02	0.42	163
Hauling	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.04	0.04	0.04	0.55	0.00	0.00	0.13	0.13	0.00	0.03	0.03	—	128	128	0.01	< 0.005	0.01	130
Vendor	0.01	< 0.005	0.18	0.09	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	156	156	0.01	0.02	0.01	163
Hauling	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.07	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	15.0	15.0	< 0.005	< 0.005	0.02	15.2
Vendor	< 0.005	< 0.005	0.02	0.01	< 0.005	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	—	17.9	17.9	< 0.005	< 0.005	0.02	18.7
Hauling	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	2.48	2.48	< 0.005	< 0.005	< 0.005	2.52
Vendor	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	2.97	2.97	< 0.005	< 0.005	< 0.005	3.10
Hauling	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

3.27. Finish/Landscaping (2027) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.81	1.02	< 0.005	0.02	—	0.02	0.02	—	0.02	—	142	142	0.01	< 0.005	—	142
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.10	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	17.5	17.5	< 0.005	< 0.005	—	17.5
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.89	2.89	< 0.005	< 0.005	—	2.90
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.09	1.02	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	252	252	< 0.005	0.01	0.02	255
Vendor	0.02	0.01	0.34	0.16	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	306	306	0.01	0.04	0.02	319
Hauling	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.01	0.01	0.01	0.13	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	31.5	31.5	< 0.005	< 0.005	0.04	31.9
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	37.7	37.7	< 0.005	0.01	0.04	39.3
Hauling	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.22	5.22	< 0.005	< 0.005	0.01	5.29
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.24	6.24	< 0.005	< 0.005	0.01	6.51
Hauling	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

3.28. Finish/Landscaping (2027) - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	0.09	0.81	1.02	< 0.005	0.02	—	0.02	0.02	—	0.02	—	142	142	0.01	< 0.005	—	142
Onsite truck	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.01	0.10	0.13	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	17.5	17.5	< 0.005	< 0.005	—	17.5
Onsite truck	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Roa Equipment	< 0.005	< 0.005	0.02	0.02	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	2.89	2.89	< 0.005	< 0.005	—	2.90
Onsite truck	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
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.08	0.07	0.09	1.02	0.00	0.00	0.26	0.26	0.00	0.06	0.06	—	252	252	< 0.005	0.01	0.02	255
Vendor	0.02	0.01	0.34	0.16	< 0.005	< 0.005	0.09	0.09	< 0.005	0.02	0.03	—	306	306	0.01	0.04	0.02	319
Hauling	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
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.01	0.13	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	31.5	31.5	< 0.005	< 0.005	0.04	31.9
Vendor	< 0.005	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	37.7	37.7	< 0.005	0.01	0.04	39.3
Hauling	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.02	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	5.22	5.22	< 0.005	< 0.005	0.01	5.29
Vendor	< 0.005	< 0.005	0.01	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005	—	6.24	6.24	< 0.005	< 0.005	0.01	6.51
Hauling	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

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Mobile source emissions results are presented in Sections 2.6. No further detailed breakdown of emissions is available.

4.1.2. Mitigated

Mobile source emissions results are presented in Sections 2.5. No further detailed breakdown of emissions is available.

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	1,543	1,543	0.10	0.01	—	1,549
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	171	171	0.01	< 0.005	—	172
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,715	1,715	0.11	0.01	—	1,721
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	1,543	1,543	0.10	0.01	—	1,549
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	171	171	0.01	< 0.005	—	172

Total	—	—	—	—	—	—	—	—	—	—	—	—	1,715	1,715	0.11	0.01	—	1,721
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	256	256	0.02	< 0.005	—	256
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	28.4	28.4	< 0.005	< 0.005	—	28.5
Total	—	—	—	—	—	—	—	—	—	—	—	—	284	284	0.02	< 0.005	—	285

4.2.2. Electricity Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	1,543	1,543	0.10	0.01	—	1,549
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	171	171	0.01	< 0.005	—	172
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,715	1,715	0.11	0.01	—	1,721

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	1,543	1,543	0.10	0.01	—	1,549
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	171	171	0.01	< 0.005	—	172
Total	—	—	—	—	—	—	—	—	—	—	—	—	1,715	1,715	0.11	0.01	—	1,721
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	256	256	0.02	< 0.005	—	256
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	—	0.00
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	—	28.4	28.4	< 0.005	< 0.005	—	28.5
Total	—	—	—	—	—	—	—	—	—	—	—	—	284	284	0.02	< 0.005	—	285

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartme Mid Rise	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
Other Non-Asphalt Surfaces	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
Enclose d Parking with Elevator	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
Total	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartme nts Mid Rise	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
Other Non-Asphalt Surfaces	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
Enclose d Parking with Elevator	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
Total	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
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartme nts Mid Rise	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
Other Non-Asphalt Surfaces	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
Enclose d Parking with Elevator	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

Total	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

4.2.4. Natural Gas Emissions By Land Use - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	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
Other Non-Asphalt Surfaces	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
Enclosed Parking with Elevator	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
Total	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
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	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
Other Non-Asphalt Surfaces	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
Enclosed Parking with Elevator	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
Total	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

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	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
Other Non-Asphalt Surfaces	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
Enclosed Parking with Elevator	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
Total	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

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	3.39	3.39	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.27	0.27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	1.05	0.98	0.09	10.1	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	28.9	28.9	< 0.005	< 0.005	—	29.0
Total	4.71	4.65	0.09	10.1	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	28.9	28.9	< 0.005	< 0.005	—	29.0

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	3.39	3.39	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.27	0.27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	3.67	3.67	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.62	0.62	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.05	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.13	0.12	0.01	1.26	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.28	3.28	< 0.005	< 0.005	—	3.29
Total	0.80	0.79	0.01	1.26	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.28	3.28	< 0.005	< 0.005	—	3.29

4.3.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Consumer Products	3.39	3.39	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.27	0.27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	1.05	0.98	0.09	10.1	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	28.9	28.9	< 0.005	< 0.005	—	29.0
Total	4.71	4.65	0.09	10.1	< 0.005	0.01	—	0.01	< 0.005	—	< 0.005	—	28.9	28.9	< 0.005	< 0.005	—	29.0
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	3.39	3.39	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.27	0.27	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	3.67	3.67	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	0.62	0.62	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.05	0.05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.13	0.12	0.01	1.26	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.28	3.28	< 0.005	< 0.005	—	3.29

Total	0.80	0.79	0.01	1.26	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	3.28	3.28	< 0.005	< 0.005	—	3.29

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	6.56	34.0	40.5	0.67	0.02	—	62.2
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	6.56	34.0	40.5	0.67	0.02	—	62.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	6.56	34.0	40.5	0.67	0.02	—	62.2
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	6.56	34.0	40.5	0.67	0.02	—	62.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1.09	5.62	6.71	0.11	< 0.005	—	10.3
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	1.09	5.62	6.71	0.11	< 0.005	—	10.3

4.4.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	6.56	34.0	40.5	0.67	0.02	—	62.2
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00

Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	6.56	34.0	40.5	0.67	0.02	—	62.2
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	6.56	34.0	40.5	0.67	0.02	—	62.2
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	6.56	34.0	40.5	0.67	0.02	—	62.2
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	1.09	5.62	6.71	0.11	< 0.005	—	10.3
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	1.09	5.62	6.71	0.11	< 0.005	—	10.3

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	61.0	0.00	61.0	6.10	0.00	—	213
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	61.0	0.00	61.0	6.10	0.00	—	213
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	61.0	0.00	61.0	6.10	0.00	—	213
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	61.0	0.00	61.0	6.10	0.00	—	213
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartments	—	—	—	—	—	—	—	—	—	—	—	10.1	0.00	10.1	1.01	0.00	—	35.3
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	10.1	0.00	10.1	1.01	0.00	—	35.3

4.5.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	61.0	0.00	61.0	6.10	0.00	—	213
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	61.0	0.00	61.0	6.10	0.00	—	213
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	61.0	0.00	61.0	6.10	0.00	—	213
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	61.0	0.00	61.0	6.10	0.00	—	213
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	10.1	0.00	10.1	1.01	0.00	—	35.3
Other Non-Asphalt Surfaces	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Enclosed Parking with Elevator	—	—	—	—	—	—	—	—	—	—	—	0.00	0.00	0.00	0.00	0.00	—	0.00
Total	—	—	—	—	—	—	—	—	—	—	—	10.1	0.00	10.1	1.01	0.00	—	35.3

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Apartme Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.14	1.14
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.14	1.14
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartme nts Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.14	1.14
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.14	1.14
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartme nts Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.19	0.19
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.19	0.19

4.6.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartme nts Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.14	1.14
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.14	1.14
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartme nts Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.14	1.14
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.14	1.14

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Apartments Mid Rise	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.19	0.19
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.19	0.19

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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.8.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9.2. Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	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	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	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	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.4. Soil Carbon Accumulation By Vegetation Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.5. Above and Belowground Carbon Accumulation by Land Use Type - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.6. Avoided and Sequestered Emissions by Species - Mitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	TOG	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	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
Asphalt Demolition	Demolition	6/1/2026	7/3/2026	5.00	25.0	—
Site Preparation	Site Preparation	7/6/2026	7/17/2026	5.00	10.0	—

Rough Grading	Grading	7/17/2026	8/14/2026	5.00	21.0	—
Fine Grading	Grading	10/18/2027	3/16/2028	5.00	109	—
Building Construction	Building Construction	3/17/2027	6/16/2028	5.00	328	—
Parking Structure Construction	Building Construction	8/17/2026	3/16/2027	5.00	152	—
Asphalt Paving	Paving	3/17/2028	4/22/2028	5.00	26.0	—
Architectural Coating	Architectural Coating	9/13/2027	3/16/2028	5.00	134	—
Utility Trenching	Trenching	8/17/2026	10/16/2026	5.00	42.0	—
Finish/Landscaping	Trenching	1/18/2027	3/16/2027	5.00	45.0	—

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
Asphalt Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Asphalt Demolition	Tractors/Loaders/Backhoes	Diesel	Average	3.00	8.00	36.0	0.38
Asphalt Demolition	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Asphalt Demolition	Crushing/Proc. Equipment	Diesel	Average	1.00	8.00	85.0	0.78
Site Preparation	Rubber Tired Dozers	Diesel	Average	1.00	7.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Site Preparation	Graders	Diesel	Average	1.00	8.00	148	0.41
Rough Grading	Graders	Diesel	Average	1.00	6.00	148	0.41
Rough Grading	Rubber Tired Dozers	Diesel	Average	1.00	6.00	367	0.40
Rough Grading	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Fine Grading	Graders	Diesel	Average	1.00	6.00	148	0.41

Fine Grading	Rubber Tired Dozers	Diesel	Average	1.00	6.00	367	0.40
Fine Grading	Tractors/Loaders/Backhoes	Diesel	Average	1.00	7.00	84.0	0.37
Building Construction	Cranes	Diesel	Average	1.00	6.00	367	0.29
Building Construction	Forklifts	Diesel	Average	1.00	6.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Average	1.00	6.00	84.0	0.37
Building Construction	Welders	Diesel	Average	3.00	8.00	46.0	0.45
Parking Structure Construction	Cranes	Diesel	Average	1.00	6.00	367	0.29
Parking Structure Construction	Forklifts	Diesel	Average	1.00	6.00	82.0	0.20
Parking Structure Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Parking Structure Construction	Tractors/Loaders/Backhoes	Diesel	Average	1.00	6.00	84.0	0.37
Parking Structure Construction	Welders	Diesel	Average	3.00	8.00	46.0	0.45
Asphalt Paving	Pavers	Diesel	Average	1.00	6.00	81.0	0.42
Asphalt Paving	Paving Equipment	Diesel	Average	1.00	8.00	89.0	0.36
Asphalt Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Asphalt Paving	Cement and Mortar Mixers	Diesel	Average	1.00	6.00	10.0	0.56
Asphalt Paving	Tractors/Loaders/Backhoes	Diesel	Average	1.00	8.00	84.0	0.37
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Utility Trenching	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Finish/Landscaping	Excavators	Diesel	Average	1.00	8.00	36.0	0.38

5.2.2. Mitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Asphalt Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Asphalt Demolition	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	3.00	8.00	36.0	0.38
Asphalt Demolition	Rubber Tired Dozers	Diesel	Tier 4 Interim	1.00	8.00	367	0.40
Asphalt Demolition	Crushing/Proc. Equipment	Diesel	Tier 4 Interim	1.00	8.00	85.0	0.78
Site Preparation	Rubber Tired Dozers	Diesel	Tier 4 Interim	1.00	7.00	367	0.40
Site Preparation	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	1.00	8.00	84.0	0.37
Site Preparation	Graders	Diesel	Tier 4 Interim	1.00	8.00	148	0.41
Rough Grading	Graders	Diesel	Tier 4 Interim	1.00	6.00	148	0.41
Rough Grading	Rubber Tired Dozers	Diesel	Tier 4 Interim	1.00	6.00	367	0.40
Rough Grading	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	1.00	7.00	84.0	0.37
Fine Grading	Graders	Diesel	Tier 4 Interim	1.00	6.00	148	0.41
Fine Grading	Rubber Tired Dozers	Diesel	Tier 4 Interim	1.00	6.00	367	0.40
Fine Grading	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	1.00	7.00	84.0	0.37
Building Construction	Cranes	Diesel	Tier 4 Interim	1.00	6.00	367	0.29
Building Construction	Forklifts	Diesel	Tier 4 Interim	1.00	6.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	1.00	6.00	84.0	0.37
Building Construction	Welders	Diesel	Average	3.00	8.00	46.0	0.45
Parking Structure Construction	Cranes	Diesel	Tier 4 Interim	1.00	6.00	367	0.29
Parking Structure Construction	Forklifts	Diesel	Tier 4 Interim	1.00	6.00	82.0	0.20
Parking Structure Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74

Parking Structure Construction	Tractors/Loaders/Back	Diesel	Tier 4 Interim	1.00	6.00	84.0	0.37
Parking Structure Construction	Welders	Diesel	Average	3.00	8.00	46.0	0.45
Asphalt Paving	Pavers	Diesel	Tier 4 Interim	1.00	6.00	81.0	0.42
Asphalt Paving	Paving Equipment	Diesel	Tier 4 Interim	1.00	8.00	89.0	0.36
Asphalt Paving	Rollers	Diesel	Average	1.00	7.00	36.0	0.38
Asphalt Paving	Cement and Mortar Mixers	Diesel	Average	1.00	6.00	10.0	0.56
Asphalt Paving	Tractors/Loaders/Backhoes	Diesel	Tier 4 Interim	1.00	8.00	84.0	0.37
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48
Utility Trenching	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Finish/Landscaping	Excavators	Diesel	Average	1.00	8.00	36.0	0.38

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Asphalt Demolition	—	—	—	—
Asphalt Demolition	Worker	30.0	18.5	LDA,LDT1,LDT2
Asphalt Demolition	Vendor	11.0	10.2	HHDT,MHDT
Asphalt Demolition	Hauling	10.0	20.0	HHDT
Asphalt Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	10.0	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	4.00	10.2	HHDT,MHDT
Site Preparation	Hauling	10.0	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Rough Grading	—	—	—	—

Rough Grading	Worker	20.0	18.5	LDA,LDT1,LDT2
Rough Grading	Vendor	3.00	10.2	HHDT,MHDT
Rough Grading	Hauling	0.00	20.0	HHDT
Rough Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	50.0	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	20.0	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Asphalt Paving	—	—	—	—
Asphalt Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Asphalt Paving	Vendor	5.00	10.2	HHDT,MHDT
Asphalt Paving	Hauling	0.00	20.0	HHDT
Asphalt Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	20.0	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	5.00	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Fine Grading	—	—	—	—
Fine Grading	Worker	5.00	18.5	LDA,LDT1,LDT2
Fine Grading	Vendor	3.00	10.2	HHDT,MHDT
Fine Grading	Hauling	0.00	20.0	HHDT
Fine Grading	Onsite truck	—	—	HHDT
Parking Structure Construction	—	—	—	—
Parking Structure Construction	Worker	25.0	18.5	LDA,LDT1,LDT2
Parking Structure Construction	Vendor	5.00	10.2	HHDT,MHDT
Parking Structure Construction	Hauling	0.00	20.0	HHDT

Parking Structure Construction	Onsite truck	—	—	HHDT
Utility Trenching	—	—	—	—
Utility Trenching	Worker	10.0	18.5	LDA,LDT1,LDT2
Utility Trenching	Vendor	5.00	10.2	HHDT,MHDT
Utility Trenching	Hauling	0.00	20.0	HHDT
Utility Trenching	Onsite truck	—	—	HHDT
Finish/Landscaping	—	—	—	—
Finish/Landscaping	Worker	20.0	18.5	LDA,LDT1,LDT2
Finish/Landscaping	Vendor	10.0	10.2	HHDT,MHDT
Finish/Landscaping	Hauling	0.00	20.0	HHDT
Finish/Landscaping	Onsite truck	—	—	HHDT

5.3.2. Mitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Asphalt Demolition	—	—	—	—
Asphalt Demolition	Worker	30.0	18.5	LDA,LDT1,LDT2
Asphalt Demolition	Vendor	11.0	10.2	HHDT,MHDT
Asphalt Demolition	Hauling	10.0	20.0	HHDT
Asphalt Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	10.0	18.5	LDA,LDT1,LDT2
Site Preparation	Vendor	4.00	10.2	HHDT,MHDT
Site Preparation	Hauling	10.0	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Rough Grading	—	—	—	—
Rough Grading	Worker	20.0	18.5	LDA,LDT1,LDT2
Rough Grading	Vendor	3.00	10.2	HHDT,MHDT
Rough Grading	Hauling	0.00	20.0	HHDT

Rough Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	50.0	18.5	LDA,LDT1,LDT2
Building Construction	Vendor	20.0	10.2	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Asphalt Paving	—	—	—	—
Asphalt Paving	Worker	15.0	18.5	LDA,LDT1,LDT2
Asphalt Paving	Vendor	5.00	10.2	HHDT,MHDT
Asphalt Paving	Hauling	0.00	20.0	HHDT
Asphalt Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	20.0	18.5	LDA,LDT1,LDT2
Architectural Coating	Vendor	5.00	10.2	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT
Fine Grading	—	—	—	—
Fine Grading	Worker	5.00	18.5	LDA,LDT1,LDT2
Fine Grading	Vendor	3.00	10.2	HHDT,MHDT
Fine Grading	Hauling	0.00	20.0	HHDT
Fine Grading	Onsite truck	—	—	HHDT
Parking Structure Construction	—	—	—	—
Parking Structure Construction	Worker	25.0	18.5	LDA,LDT1,LDT2
Parking Structure Construction	Vendor	5.00	10.2	HHDT,MHDT
Parking Structure Construction	Hauling	0.00	20.0	HHDT
Parking Structure Construction	Onsite truck	—	—	HHDT
Utility Trenching	—	—	—	—
Utility Trenching	Worker	10.0	18.5	LDA,LDT1,LDT2

Utility Trenching	Vendor	5.00	10.2	HHDT,MHDT
Utility Trenching	Hauling	0.00	20.0	HHDT
Utility Trenching	Onsite truck	—	—	HHDT
Finish/Landscaping	—	—	—	—
Finish/Landscaping	Worker	20.0	18.5	LDA,LDT1,LDT2
Finish/Landscaping	Vendor	10.0	10.2	HHDT,MHDT
Finish/Landscaping	Hauling	0.00	20.0	HHDT
Finish/Landscaping	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	321,206	107,069	0.00	0.00	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (Ton of Debris)	Material Exported (Ton of Debris)	Acres Graded (acres)	Material Demolished (Ton of Debris)	Acres Paved (acres)
Asphalt Demolition	0.00	0.00	0.00	1,286	—
Site Preparation	0.00	1,286	9.38	0.00	—
Rough Grading	0.00	400	15.0	0.00	—
Fine Grading	0.00	0.00	82.5	0.00	—
Asphalt Paving	0.00	0.00	0.00	0.00	0.00

5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Apartments Mid Rise	—	0%
Other Non-Asphalt Surfaces	0.00	0%
Enclosed Parking with Elevator	0.00	100%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2026	0.00	532	0.03	< 0.005
2027	0.00	532	0.03	< 0.005
2028	0.00	532	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
Total all Land Uses	740	668	556	256,751	5.44	4.91	4.09	1,888

5.9.2. Mitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMT/Weekday	VMT/Saturday	VMT/Sunday	VMT/Year
Total all Land Uses	740	668	556	256,751	5.44	4.91	4.09	1,888

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.1.2. Mitigated

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)
321205.5	107,069	0.00	0.00	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	250

5.10.4. Landscape Equipment - Mitigated

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	1,058,923	532	0.0330	0.0040	0.00

Other Non-Asphalt Surfaces	0.00	532	0.0330	0.0040	0.00
Enclosed Parking with Elevator	117,498	532	0.0330	0.0040	0.00

5.11.2. Mitigated

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	1,058,923	532	0.0330	0.0040	0.00
Other Non-Asphalt Surfaces	0.00	532	0.0330	0.0040	0.00
Enclosed Parking with Elevator	117,498	532	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	3,421,875	0.00
Other Non-Asphalt Surfaces	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00

5.12.2. Mitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Apartments Mid Rise	3,421,875	0.00
Other Non-Asphalt Surfaces	0.00	0.00
Enclosed Parking with Elevator	0.00	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	113	—
Other Non-Asphalt Surfaces	0.00	—
Enclosed Parking with Elevator	0.00	—

5.13.2. Mitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
Apartments Mid Rise	113	—
Other Non-Asphalt Surfaces	0.00	—
Enclosed Parking with Elevator	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

5.14.2. Mitigated

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

5.15.2. Mitigated

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

5.18.1.2. Mitigated

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

5.18.1.2. Mitigated

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)

5.18.2.2. Mitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)

8. User Changes to Default Data

Screen	Justification
Land Use	Used client provided site plans.
Construction: Construction Phases	Used project provided information.
Construction: Off-Road Equipment	Used client provided information for construction equipment, quantity, and hours. Defaults used for HP and load factor.

Construction: Trips and VMT	Information for Worker, Vendor, and Haul trips provided by applicant. Trips lengths and vehicle class are defaults.
Operations: Hearths	No fireplaces proposed.
Operations: Energy Use	Project does not use natural gas. Convert to electricity usage.
Operations: Water and Waste Water	Information taken from Partner Energy, 2021 report completed for the project.
Construction: Off-Road Equipment EF	Used emission factors for crushing equipment for year closest to construction period.
Construction: Dust From Material Movement	Updated to watering 2x a day

Attachment 3c. Record on Non-Applicability for Clean Air Act Conformity

Record of Non-Applicability (RONA) for Clean Air Act Conformity

Los Angeles County, California

This Proposed Action falls under the Record of Non-Applicability (RONA) category and is documented with this RONA.

The U.S. Environmental Protection Agency (USEPA) published Determining Conformity of General Federal Actions to State or Federal Implementation Plans; Final Rule, in the 30 November 1993, Federal Register (40 CFR Parts 6, 51, and 93). The U.S. Navy published Clean Air Act Conformity Guidance in Appendix F, OPNAVINST 5090.1d, dated 30 July 2013. These publications provide implementing guidance to document Clean Air Act Conformity Determination requirements. The General Conformity rule ensures that actions do not interfere with a State's plans to attain and maintain national standards for air quality (NAAQS), and plays an important role in helping those States and tribes improve air quality in their areas that do not meet the NAAQS

Federal regulations state that no department, agency, or instrumentality of the Federal Government shall engage in, support in any way or provide financial assistance for, license to permit, or approve any activity that does not conform to an applicable implementation plan. It is the responsibility of the Federal agency to determine whether a Federal action conforms to the applicable implementation plan, before the action is taken (40 CFR Part 51.850[a]). Federal actions may be exempt from conformity determinations if they do not exceed designated *de minimis* levels for criteria pollutants (40 CFR Part 51.853[b]). *De minimis* levels (in tons/year) for the air basin potentially affected by the Proposed Action are listed in Table 1.

Table 1 General Conformity *de minimis* levels for the South Coast Air Basin

Pollutant	Area Type	De minimis Level (Tons/year)
Oxides of Nitrogen (NO_X)	Extreme Nonattainment	10
Volatile Organic Compounds (VOC)	Extreme Nonattainment	10
Coarse Particulate Matter (PM_{10})	Attainment/Maintenance	100
Fine Particulate Matter ($PM_{2.5}$)	Serious Nonattainment	70
Carbon Monoxide (CO)	Attainment/Maintenance	100

Proposed Action

Action Proponent: City of Long Beach

Title of Proposed Action: 14th & Long Beach Boulevard Affordable Housing Project

Project Location: Northwest of the intersection of Long Beach Boulevard and 14th Street, Long Beach, California

Lead Agency for the EA: U.S. Department of Housing and Urban Development (HUD)

Proposed Action and Emission Summary: The project would develop a new affordable housing building with a cumulative area of 154,637 building square feet that would provide a total of 153 dwelling units

(DU), 123,646 square feet of residential space, 25,896 square feet of circulation, 5,095 square feet of private deck space, and up to 80 parking spaces over 1.09 acres of the project site.

Air Emission Summary:

Construction and operational emissions were calculated by using California Emissions Estimator Model (CalEEMod) version 2022.1.1. CalEEMod is a computer model developed for the California Air Pollution Officers Association (CAPCOA) in collaboration with several air quality management and pollution control districts to estimate anticipated emissions associated with land development projects in California. CalEEMod is the SCAQMD-recommended model for quantifying air quality impacts from land use projects throughout California. CalEEMod has separate databases for specific counties and air districts. The South Coast Air Basin database was used for the Proposed Action.

Construction

Construction of the project is anticipated to commence June 2026 and be completed in June 2028, a duration of approximately 24 months. Demolition and grading activities would result in the export of 1,286 tons of demolition debris and 400 cubic yards of soil. Emissions of VOC would primarily be from the application of paints, asphalt pavement, and operation of construction vehicles and off-road equipment. Emissions of NOX, and CO would primarily be generated from operation of off-road construction equipment in addition to construction worker and vendor vehicles. Coarse and fine particulate matter (PM10 and PM2.5) exhaust emissions would also be generated from operation of off-road construction equipment and construction and vendor vehicle trips. In addition, fugitive dust emissions of PM10 and PM2.5 would be generated from ground disturbance activities, asphalt demolition, and movement of earthen material.

The results of the modeling are shown in Tables 2 and 3 for the annual conditions for the construction and operation of the project site, respectively. The analysis assumes that construction would take approximately two years to complete.

Table 2 Annual Construction Emissions (tons/year)

Year	NO_x	VOC	CO	PM_{10}	$PM_{2.5}$
2026	0.64	0.06	1.02	0.09	0.04
2027	1.33	0.42	2.24	0.19	0.04
2028	0.74	0.27	1.28	0.13	0.05
de minimis Criteria	10	10	100	100	70

Operations

Project operations would generate an increase in criteria air pollutant emissions from transportation (i.e. vehicle trips), area sources (e.g. landscaping equipment), and architectural coating. Emissions from the use of consumer products and the reapplication of architectural coatings are based on data provided in CalEEMod.

Table 3 Annual Operational Emissions (tons/year)

Year	NO_x	VOC	CO	PM_{10}	$PM_{2.5}$
2028	0.01	1.09	2.01	0.00	0.00
de minimis Criteria	10	10	100	100	70

Tables 2 and 3 show that annual construction and operational emissions generated by the project are well below the South Coast Air Basin general conformity *de minimis* levels. As a result, the Proposed Action would not produce significant adverse air quality impacts.

Date RONA Prepared: July 22, 2024

Emissions Evaluation and Conclusion

The project would involve minor construction and operational emissions from the project site; all emissions are *de minimis*.

HUD concludes that *de minimis* thresholds for applicable criteria pollutants would not be exceeded as a result of implementation of the Proposed Action. Therefore, HUD concludes that further formal Conformity Determination procedures are not required, resulting in this Record of Non-Applicability.

Attachment 4. Coastal Zone Management Worksheet

Coastal Zone Management Act (CEST and EA)

General requirements	Legislation	Regulation
Federal assistance to applicant agencies for activities affecting any coastal use or resource is granted only when such activities are consistent with federally approved State Coastal Zone Management Act Plans.	Coastal Zone Management Act (16 USC 1451-1464), particularly section 307(c) and (d) (16 USC 1456(c) and (d))	15 CFR Part 930
References		
https://www.onecpd.info/environmental-review/coastal-zone-management		

Projects located in the following states must complete this form.

Alabama	Florida	Louisiana	Mississippi	Ohio	Texas
Alaska	Georgia	Maine	New Hampshire	Oregon	Virgin Islands
American Samona	Guam	Maryland	New Jersey	Pennsylvania	Virginia
California	Hawaii	Massachusetts	New York	Puerto Rico	Washington
Connecticut	Illinois	Michigan	North Carolina	Rhode Island	Wisconsin
Delaware	Indiana	Minnesota	Northern Mariana Islands	South Carolina	

1. **Is the project located in, or does it affect, a Coastal Zone as defined in your state Coastal Management Plan?**

   ☐Yes → *Continue to Question 2.*

   ☒No → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map showing that the site is not within a Coastal Zone.*

2. **Does this project include activities that are subject to state review**?

   ☐Yes → *Continue to Question 3.*

   ☐No → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide documentation used to make your determination.*

3. **Has this project been determined to be consistent with the State Coastal Management Program**?

   ☐Yes, with mitigation. → *Continue to Question 4.*

   ☐Yes, without mitigation. → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide documentation used to make your determination.*

☐No, project must be canceled.

Project cannot proceed at this location.

4. Explain in detail the proposed measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation.

→ *Continue to the Worksheet Summary below. Provide documentation of the consultation (including the State Coastal Management Program letter of consistency) and any other documentation used to make your determination.*

Worksheet Summary

Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

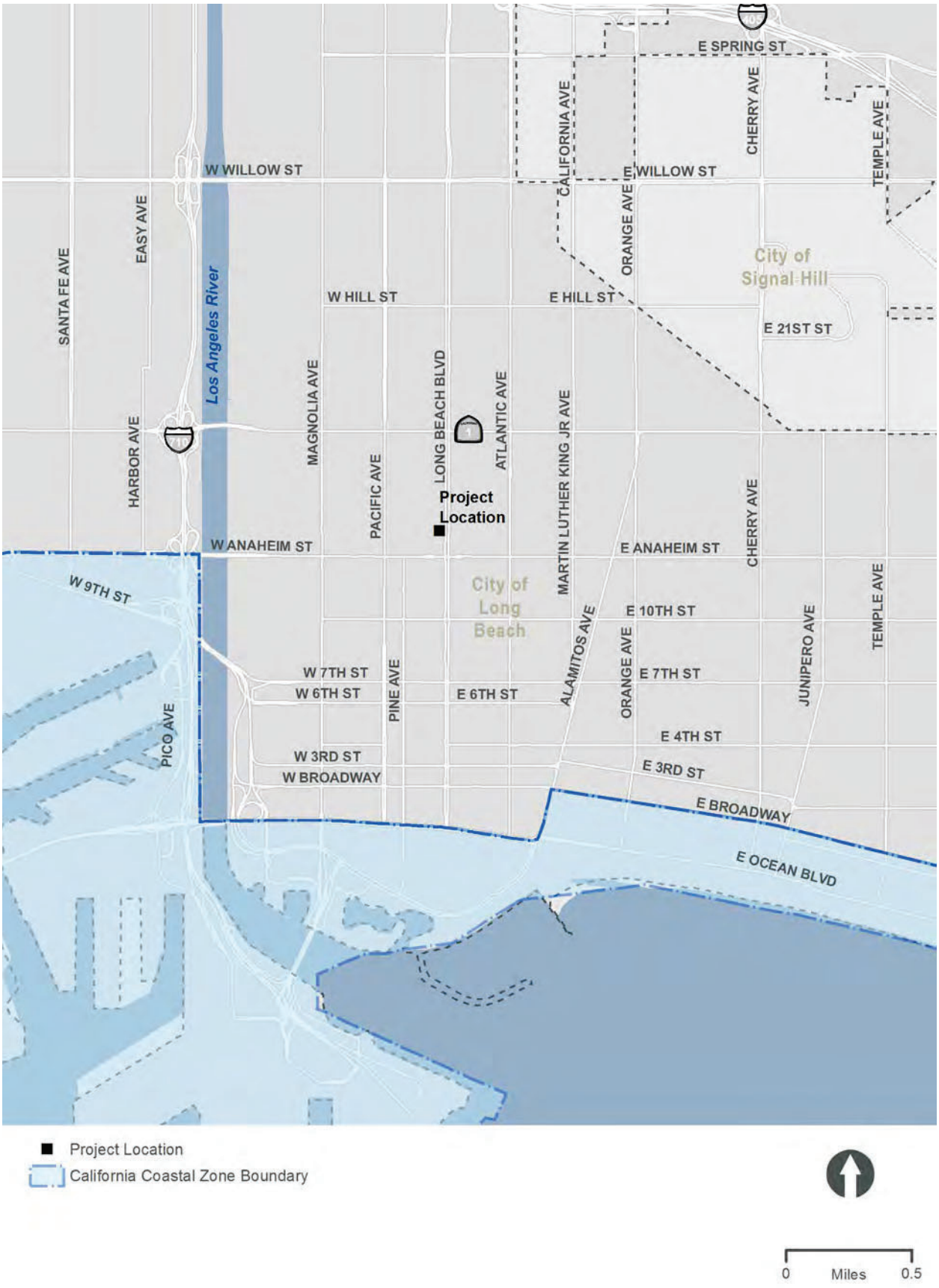
According to the National Oceanic and Atmospheric Administration's Coastal Zone Management Program, the project site is not located within the coastal zone or under the California Coastal Commission jurisdiction. See Figure 1 below.

Are formal compliance steps or mitigation required?

☐ Yes

☒ No

Figure 1 California Coastal Zone



Attachment 5. Site Contamination Multi Family Worksheet

Contamination and Toxic Substances (Multifamily and Non-Residential Properties)

General requirements	Legislation	Regulations
It is HUD policy that all properties that are being proposed for use in HUD programs be free of hazardous materials, contamination, toxic chemicals and gases, and radioactive substances, where a hazard could affect the health and safety of the occupants or conflict with the intended utilization of the property.	N/A	24 CFR 58.5(i)(2) 24 CFR 50.3(i)
Reference		
https://www.hudexchange.info/programs/environmental-review/site-contamination		

1. **How was site contamination evaluated?** [1] **Select all that apply.**

   ☒ ASTM Phase I ESA
   ☐ ASTM Phase II ESA
   ☐ Remediation or clean-up plan
   ☐ ASTM Vapor Encroachment Screening
   ☐ None of the above

   → *Provide documentation and reports and include an explanation of how site contamination was evaluated in the Worksheet Summary.*
   Continue to Question 2.

2. **Were any on-site or nearby toxic, hazardous, or radioactive substances found that could affect the health and safety of project occupants or conflict with the intended use of the property? (Were any recognized environmental conditions or RECs identified in a Phase I ESA and confirmed in a Phase II ESA?)**

   ☒ No

   Explain:

[1] HUD regulations at 24 CFR § 58.5(i)(2)(ii) require that the environmental review for multifamily housing with five or more dwelling units or non-residential property include the evaluation of previous uses of the site or other evidence of contamination on or near the site. For acquisition and new construction of multifamily and nonresidential properties HUD strongly advises the review include an ASTM Phase I Environmental Site Assessment (ESA) to meet real estate transaction standards of due diligence and to help ensure compliance with HUD's toxic policy at 24 CFR §58.5(i) and 24 CFR §50.3(i). Also note that some HUD programs require an ASTM Phase I ESA.

→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below.*

☐ Yes.

→ *Describe the findings, including any recognized environmental conditions (RECs), in Worksheet Summary below. Continue to Question 3.*

3. Mitigation

Document the mitigation needed according to the requirements of the appropriate federal, state, tribal, or local oversight agency. If the adverse environmental effects cannot be mitigated, then HUD assistance may not be used for the project at this site.

Can adverse environmental impacts be mitigated?

☐ Adverse environmental impacts cannot feasibly be mitigated

→ Project cannot proceed at this location.

☐ Yes, adverse environmental impacts can be eliminated through mitigation.

→ *Provide all mitigation requirements*[2] *and documents. Continue to Question 4.*

4. Describe how compliance was achieved. Include any of the following that apply: State Voluntary Clean-up Program, a No Further Action letter, use of engineering controls[3]**, or use of institutional controls**[4]**.**

[2] Mitigation requirements include all clean-up actions required by applicable federal, state, tribal, or local law. Additionally, provide, as applicable, the long-term operations and maintenance plan, Remedial Action Work Plan, and other equivalent documents.

[3] Engineering controls are any physical mechanism used to contain or stabilize contamination or ensure the effectiveness of a remedial action. Engineering controls may include, without limitation, caps, covers, dikes, trenches, leachate collection systems, signs, fences, physical access controls, ground water monitoring systems and ground water containment systems including, without limitation, slurry walls and ground water pumping systems.

[4] Institutional controls are mechanisms used to limit human activities at or near a contaminated site, or to ensure the effectiveness of the remedial action over time, when contaminants remain at a site at levels above the applicable remediation standard which would allow for unrestricted use of the property. Institutional controls may include structure, land, and natural resource use restrictions, well restriction areas, classification exception areas, deed notices, and declarations of environmental restrictions.

If a remediation plan or clean-up program was necessary, which standard does it follow?

☐ Complete removal

→ *Continue to the Worksheet Summary.*

☐ Risk-based corrective action (RBCA)

→ *Continue to the Worksheet Summary.*

Worksheet Summary

Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

Information contained in this worksheet is summarized from the Phase I ESA prepared for the 1401 Long Beach Boulevard Project by Partner Engineering and Science, Inc on July 24, 2023.
The Phase I ESA concluded that there was no evidence of RECs, CRECs, HRECs, or BERs in connection with the subject property.

Are formal compliance steps or mitigation required?

☐ Yes

☒ No

Attachment 5a. Phase I ESA
(Separate File)

Attachment 6. Endangered Species Worksheet

Endangered Species Act (CEST and EA)

General requirements	ESA Legislation	Regulations
Section 7 of the Endangered Species Act (ESA) mandates that federal agencies ensure that actions that they authorize, fund, or carry out shall not jeopardize the continued existence of federally listed plants and animals or result in the adverse modification or destruction of designated critical habitat. Where their actions may affect resources protected by the ESA, agencies must consult with the Fish and Wildlife Service and/or the National Marine Fisheries Service ("FWS" and "NMFS" or "the Services").	The Endangered Species Act of 1973 (16 U.S.C. 1531 *et seq*.); particularly section 7 (16 USC 1536).	50 CFR Part 402
References		
https://www.hudexchange.info/environmental-review/endangered-species		

1. **Does the project involve any activities that have the potential to affect species or habitats?**

☐No, the project will have No Effect due to the nature of the activities involved in the project.

→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination.*

☐No, the project will have No Effect based on a letter of understanding, memorandum of agreement, programmatic agreement, or checklist provided by local HUD office.

Explain your determination:

→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination.*

☒Yes, the activities involved in the project have the potential to affect species and/or habitats. → *Continue to Question 2.*

2. **Are federally listed species or designated critical habitats present in the action area?**

Obtain a list of protected species from the Services. This information is available on the FWS Website or you may contact your local FWS and/or NMFS offices directly.

☒No, the project will have No Effect due to the absence of federally listed species and designated critical habitat.

→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination. Documentation*

may include letters from the Services, species lists from the Services' websites, surveys or other documents and analysis showing that there are no species in the action area.

☐Yes, there are federally listed species or designated critical habitats present in the action area. → *Continue to Question 3.*

3. What effects, if any, will your project have on federally listed species or designated critical habitat?

☐No Effect: Based on the specifics of both the project and any federally listed species in the action area, you have determined that the project will have absolutely no effect on listed species or critical habitat.

→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination. Documentation should include a species list and explanation of your conclusion, and may require maps, photographs, and surveys as appropriate.*

☐May Affect, Not Likely to Adversely Affect: Any effects that the project may have on federally listed species or critical habitats would be beneficial, discountable, or insignificant.

→ *Continue to Question 4, Informal Consultation.*

☐Likely to Adversely Affect: The project may have negative effects on one or more listed species or critical habitat.

→ *Continue to Question 5, Formal Consultation.*

4. Informal Consultation is required

Section 7 of ESA (16 USC. 1536) mandates consultation to resolve potential impacts to endangered and threatened species and critical habitats. If a HUD-assisted project may affect any federally listed endangered or threatened species or critical habitat, then compliance is required with Section 7. See 50 CFR Part 402 Subpart B Consultation Procedures.

Did the Service(s) concur with the finding that the project is Not Likely to Adversely Affect?

☐Yes, the Service(s) concurred with the finding.

→ *Based on the response, the review is in compliance with this section. Continue to Question 6 and provide the following:*

(1) A biological evaluation or equivalent document
(2) Concurrence(s) from FWS and/or NMFS
(3) Any other documentation of informal consultation

Exception: If finding was made based on procedures provided by a letter of understanding, memorandum of agreement, programmatic agreement, or checklist provided by local HUD office, provide whatever documentation is mandated by that agreement.

☐No, the Service(s) did not concur with the finding. → *Continue to Question 5.*

5. Formal consultation is required

Section 7 of ESA (16 USC 1536) mandates consultation to resolve potential impacts to federally listed endangered and threatened species and critical habitats. If a HUD assisted project may affect any endangered or threatened species or critical habitat, then compliance is required with Section 7. See 50 CFR Part 402 Subpart B Consultation Procedures.

→ *Once consultation is complete, the review is in compliance with this section. Continue to Question 6 and provide the following:*

(1) A biological assessment, evaluation, or equivalent document
(2) Biological opinion(s) issued by FWS and/or NMFS
(3) Any other documentation of formal consultation

6. For the project to be brought into compliance with this section, all adverse impacts must be mitigated. Explain in detail the proposed measures that will be implemented to mitigate for the impact or effect, including the timeline for implementation.

☐Mitigation as follows will be implemented:

☐No mitigation is necessary.

Explain why mitigation will not be made here:

Worksheet Summary

Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

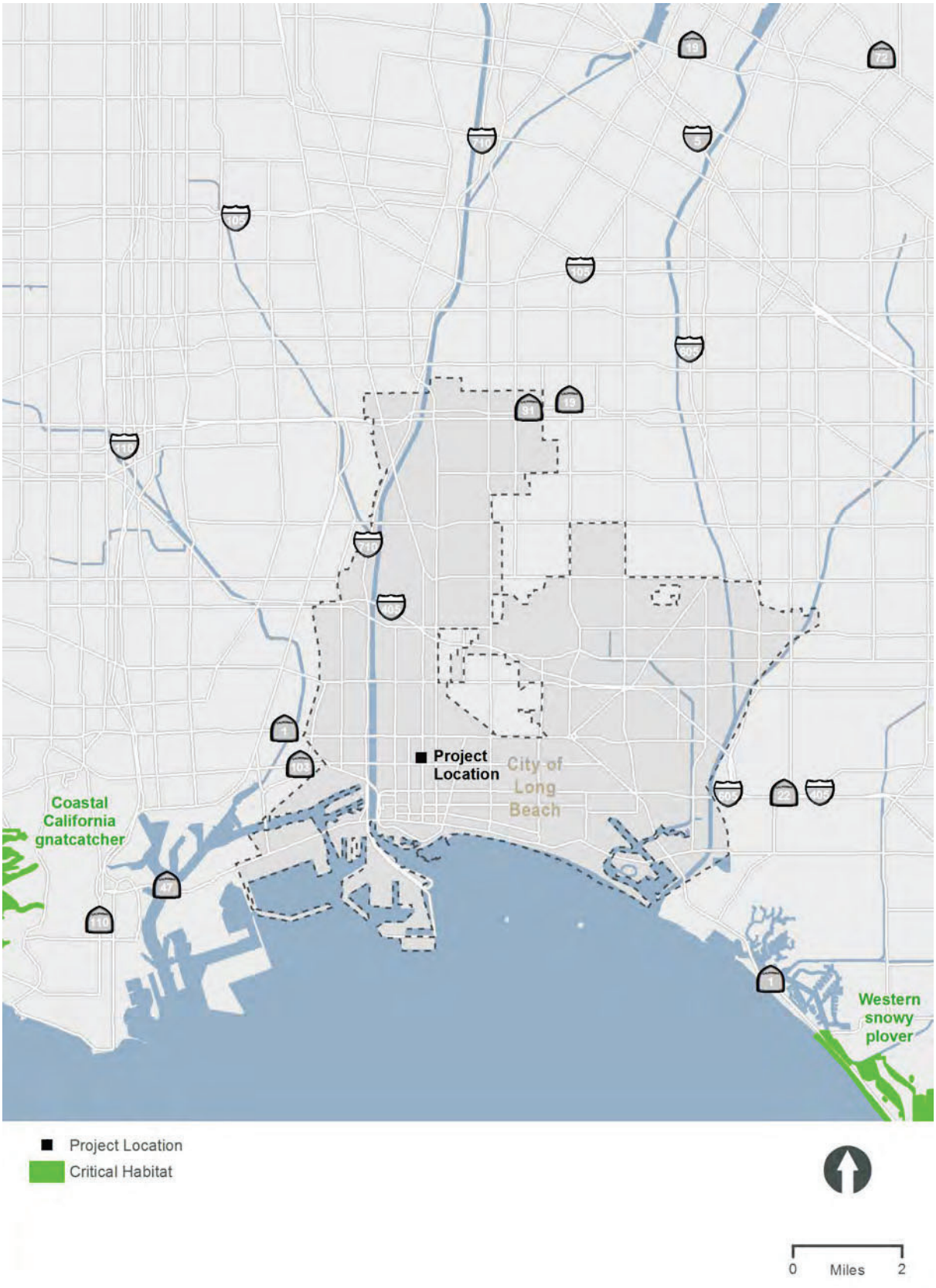
The project site is disturbed and surrounded by urban development with no ornamental trees. The site vacant, graded flat to street level, is partially paved, and contains no vegetation. Database searches of Information for Planning and Consultation, California Natural Diversity Database, and the Inventory of Rare and Endangered Plants of California indicate no species identified as candidate, sensitive, or special status have the potential to occur on the project site. Figure 1 shows there is no critical habitat in the project vicinity.

Are formal compliance steps or mitigation required?

☐ Yes

☒ No

Figure 1 ritic it t in Project Vicinity



Attachment 7. Explosive and Flammable Facilities Worksheet

Explosive and Flammable Hazards (CEST and EA)

General requirements	Legislation	Regulation
HUD-assisted projects must meet Acceptable Separation Distance (ASD) requirements to protect them from explosive and flammable hazards.	N/A	24 CFR Part 51 Subpart C
Reference		
https://www.hudexchange.info/environmental-review/explosive-and-flammable-facilities		

1. **Does the proposed HUD-assisted project include a hazardous facility (a facility that mainly stores, handles or processes flammable or combustible chemicals such as bulk fuel storage facilities and refineries)?**

   ☒ No

   → *Continue to Question 2.*

   ☐ Yes

   Explain:

   → *Continue to Question 5.*

2. **Does this project include any of the following activities: development, construction, rehabilitation that will increase residential densities, or conversion?**

   ☐ No

   → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below.*

   ☒ Yes

   → *Continue to Question 3.*

3. **Within 1 mile of the project site, are there any current *or planned* stationary aboveground storage containers:**
   - Of more than 100 gallon capacity, containing common liquid industrial fuels OR
   - Of any capacity, containing hazardous liquids or gases that are not common liquid industrial fuels?

   ☒ No

   → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide all documents used to make your determination.*

☐ Yes

→ *Continue to Question 4.*

4. **Is the Separation Distance from the project acceptable based on standards in the Regulation?**

   Please visit HUD's website for information on calculating Acceptable Separation Distance.

   ☐ Yes

   → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide map(s) showing the location of the project site relative to any tanks and your separation distance calculations. If the map identifies more than one tank, please identify the tank you have chosen as the "assessed tank."*

   ☐ No

   → *Provide map(s) showing the location of the project site relative to any tanks and your separation distance calculations. If the map identifies more than one tank, please identify the tank you have chosen as the "assessed tank."*
   Continue to Question 6.

5. **Is the hazardous facility located at an acceptable separation distance from residences and any other facility or area where people may congregate or be present?**

   Please visit HUD's website for information on calculating Acceptable Separation Distance.

   ☐ Yes

   → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide map(s) showing the location of the project site relative to residences and any other facility or area where people congregate or are present and your separation distance calculations.*

   ☐ No

   → *Provide map(s) showing the location of the project site relative to residences and any other facility or area where people congregate or are present and your separation distance calculations.*
   Continue to Question 6.

6. **For the project to be brought into compliance with this section, all adverse impacts must be mitigated. Explain in detail the exact measures that must be implemented to make the Separation Distance acceptable, including the timeline for implementation. If negative effects cannot be mitigated, cancel the project at this location.**

   Note that only licensed professional engineers should design and implement blast barriers. If a barrier will be used or the project will be modified to compensate for an

unacceptable separation distance, provide approval from a licensed professional engineer.

Worksheet Summary

Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

During the Phase I ESA site visit, there was no visual evidence during site reconnaissance of unobstructed or unshielded above ground storage tanks (fuel oil, gasoline, propane, etc.) at or immediately adjacent to the project site. The project would not involve explosive or flammable operations. Based on the record search as part of the Phase I ESA, there are no above ground storage tanks within one-quarter mile of the project site. Additionally, no known sites containing flammable, explosive, hazardous, or toxic materials were found to be of concern to future development of the site.

Are formal compliance steps or mitigation required?

☐ Yes

☒ No

Attachment 8. Farmlands Protection Worksheet

Farmlands Protection (CEST and EA)

General requirements	Legislation	Regulation
The Farmland Protection Policy Act (FPPA) discourages federal activities that would convert farmland to nonagricultural purposes.	Farmland Protection Policy Act of 1981 (7 U.S.C. 4201 et seq.)	7 CFR Part 658
Reference		
https://www.hudexchange.info/environmental-review/farmlands-protection		

1. **Does your project include any activities, including new construction, acquisition of undeveloped land or conversion, that could convert agricultural land to a non-agricultural use?**

   ☐Yes → *Continue to Question 2.*

   ☒No

   Explain how you determined that agricultural land would not be converted:

   1 1

   → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documentation supporting your determination.*

2. **Does "important farmland," including prime farmland, unique farmland, or farmland of statewide or local importance regulated under the Farmland Protection Policy Act, occur on the project site?**

   You may use the links below to determine important farmland occurs on the project site:

   - Utilize USDA Natural Resources Conservation Service's (NRCS) Web Soil Survey http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm
   - Check with your city or county's planning department and ask them to document if the project is on land regulated by the FPPA (zoning important farmland as non-agricultural does not exempt it from FPPA requirements)
   - Contact NRCS at the local USDA service center http://offices.sc.egov.usda.gov/locator/app?agency=nrcs or your NRCS state soil scientist http://soils.usda.gov/contact/state_offices/ for assistance

   ☒No → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide any documents used to make your determination.*

☐Yes → *Continue to Question 3.*

3. **Consider alternatives to completing the project on important farmland and means of avoiding impacts to important farmland.**
   - Complete form **AD-1006**, "Farmland Conversion Impact Rating" http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1045394.pdf and contact the state soil scientist before sending it to the local NRCS District Conservationist.
     (NOTE: for corridor type projects, use instead form **NRCS-CPA-106**, "Farmland Conversion Impact Rating for Corridor Type Projects: http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1045395.pdf.)
   - Work with NRCS to minimize the impact of the project on the protected farmland. When you have finished with your analysis, return a copy of form AD-1006 (or form NRCS-CPA-106 if applicable) to the USDA-NRCS State Soil Scientist or his/her designee informing them of your determination.

Document your conclusion:

☐Project will proceed with mitigation.

Explain in detail the proposed measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation.

→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide form AD-1006 and all other documents used to make your determination.*

☐Project will proceed without mitigation.

Explain why mitigation will not be made here:

→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide form AD-1006 and all other documents used to make your determination.*

Worksheet Summary

Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

Are formal compliance steps or mitigation required?

☐ Yes

☒ No

Attachment 9. Floodplain Management Worksheet

Floodplain Management (CEST and EA)

General Requirements	Legislation	Regulation
Executive Order 11988, Floodplain Management, requires Federal activities to avoid impacts to floodplains and to avoid direct and indirect support of floodplain development to the extent practicable.	Executive Order 11988	24 CFR 55
Reference		
https://www.hudexchange.info/environmental-review/floodplain-management		

1. **Does 24 CFR 55.12(c) exempt this project from compliance with HUD's floodplain management regulations in Part 55?**

   ☐ Yes

   Provide the applicable citation at 24 CFR 55.12(c) here. If project is exempt under 55.12(c)(7) or (8), provide supporting documentation.

   → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below.*

   ☒ No → *Continue to Question 2.*

2. **Provide a FEMA/FIRM or ABFE map showing the site.**

   The Federal Emergency Management Agency (FEMA) designates floodplains. The FEMA Map Service Center provides this information in the form of FEMA Flood Insurance Rate Maps (FIRMs) . For projects in areas not mapped by FEMA, use the best available information to determine floodplain information. Include documentation, including a discussion of why this is the best available information for the site.

   Does your project occur in a floodplain?

   ☒ No → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below.*

   ☐ Yes

   Select the applicable floodplain using the FEMA map or the best available information:

   ☐ Floodway → *Continue to Question 3, Floodways*

☐ Coastal High Hazard Area (V Zone) → *Continue to Question 4, Coastal High Hazard Areas*

☐ 500-year floodplain (B Zone or shaded X Zone) → *Continue to Question 5, 500-year Floodplains*

☐ 100-year floodplain (A Zone) → *The 8-Step Process is required. Continue to Question 6, 8-Step Process*

3. <u>Floodways</u>

Is this a functionally dependent use?

☐ Yes

<u>The 8-Step Process is required.</u> Work with your HUD FEO to determine a way to satisfactorily continue with this project. Provide a completed 8-Step Process, including the early public notice and the final notice.

→*Continue to Question 6, 8-Step Process*

☐ No

<u>Federal assistance may not be used at this location *unless a 55.12(c) exception applies*. You must either choose an alternate site or cancel the project at this location.</u>

4. <u>Coastal High Hazard Area</u>

Is this a critical action?

☐ Yes

<u>Critical actions are prohibited in coastal high hazard areas. Federal assistance may not be used at this location. Unless the action is excepted at 24 CFR 55.12(c), you must either choose an alternate site or cancel the project.</u>

☐ No

Does this action include construction that is not a functionally dependent use, existing construction (including improvements), or reconstruction following destruction caused by a disaster?

☐ Yes, there is new construction.

<u>New construction is prohibited in V Zones ((24 CFR 55.1(c)(3)).</u>

☐ No, this action concerns only a functionally dependent use, existing construction(including improvements), or reconstruction following destruction caused by a disaster.

This construction must have met FEMA elevation and construction standards for a coastal high hazard area or other standards applicable at the time of construction.

→ *Continue to Question 6, 8-Step Process*

5. **500-year Floodplain**

Is this a critical action?

☐ No → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below.*

☐Yes → *Continue to Question 6, 8-Step Process*

6. **8-Step Process**.

Does the 8-Step Process apply? Select one of the following options:

☐ 8-Step Process applies.

Provide a completed 8-Step Process, including the early public notice and the final notice.

→ *Continue to Question 7, Mitigation*

☐ 5-Step Process is applicable per 55.12(a)(1-3).

Provide documentation of 5-Step Process.

Select the applicable citation:

- ☐ *55.12(a)(1)* HUD actions involving the disposition of HUD-acquired multifamily housing projects or "bulk sales" of HUD-acquired one- to four-family properties in communities that are in the Regular Program of the National Flood Insurance Program (NFIP) and in good standing (i.e., not suspended from program eligibility or placed on probation under 44 CFR 59.24).
- ☐ *55.12(a)(2)* HUD's actions under the National Housing Act (12 U.S.C. 1701) for the purchase or refinancing of existing multifamily housing projects, hospitals, nursing homes, assisted living facilities, board and care facilities, and intermediate care facilities, in communities that are in good standing under the NFIP.
- ☐ *55.12(a)(3)* HUD's or the recipient's actions under any HUD program involving the repair, rehabilitation, modernization, weatherization, or improvement of existing multifamily housing projects, hospitals, nursing homes, assisted living facilities, board and care facilities, intermediate care facilities, and one- to four-family properties, in communities that are in the Regular Program of the National Flood Insurance Program (NFIP) and are in good standing, provided that the number of units is not increased more than 20 percent, the action does not involve a conversion from nonresidential to residential land use, the action does not meet the thresholds for "substantial improvement" under § 55.2(b)(10), and the footprint of the structure and paved areas is not significantly increased.
- ☐ *55.12(a)(4)* HUD's (or the recipient's) actions under any HUD program involving the repair, rehabilitation, modernization, weatherization, or improvement of existing nonresidential buildings and structures, in communities that are in the

Regular Program of the NFIP and are in good standing, provided that the action does not meet the thresholds for "substantial improvement" under § 55.2(b)(10) and that the footprint of the structure and paved areas is not significantly increased.

→ *Continue to Question 7, Mitigation*

☐ 8-Step Process is inapplicable per 55.12(b)(1-4).

Select the applicable citation:

☐ *55.12(b)(1)* HUD's mortgage insurance actions and other financial assistance for the purchasing, mortgaging or refinancing of existing one- to four-family properties in communities that are in the Regular Program of the National Flood Insurance Program (NFIP) and in good standing (i.e., not suspended from program eligibility or placed on probation under 44 CFR 59.24), where the action is not a critical action and the property is not located in a floodway or coastal high hazard area.

☐ *55.12(b)(2)* Financial assistance for minor repairs or improvements on one- to four-family properties that do not meet the thresholds for "substantial improvement" under § 55.2(b)(10)

☐ *55.12(b)(3)* HUD actions involving the disposition of individual HUD-acquired, one-to four-family properties.

☐ *55.12(b)(4)* HUD guarantees under the Loan Guarantee Recovery Fund Program (24 CFR part 573) of loans that refinance existing loans and mortgages, where any new construction or rehabilitation financed by the existing loan or mortgage has been completed prior to the filing of an application under the program, and the refinancing will not allow further construction or rehabilitation, nor result in any physical impacts or changes except for routine maintenance.

☐ *55.12(b)(5)* The approval of financial assistance to lease an existing structure located within the floodplain, but only if—

(i) The structure is located outside the floodway or Coastal High Hazard Area, and is in a community that is in the Regular Program of the NFIP and in good standing (i.e., not suspended from program eligibility or placed on probation under 44 CFR 59.24);

(ii) The project is not a critical action; and

(iii) The entire structure is or will be fully insured or insured to the maximum under the NFIP for at least the term of the lease.

→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below.*

7. <u>Mitigation</u>

For the project to be brought into compliance with this section, all adverse impacts must be mitigated. Explain in detail the exact measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation.

Which of the following mitigation/minimization measures have been identified for this project in the 8-Step or 5-Step Process? Select all that apply.

- ☐ Permeable surfaces
- ☐ Natural landscape enhancements that maintain or restore natural hydrology
- ☐ Planting or restoring native plant species
- ☐ Bioswales
- ☐ Evapotranspiration
- ☐ Stormwater capture and reuse
- ☐ Green or vegetative roofs with drainage provisions
- ☐ Natural Resources Conservation Service conservation easements or similar easements
- ☐ Floodproofing of structures
- ☐ Elevating structures including freeboarding above the required base flood elevations
- ☐ Other

→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below.*

Worksheet Summary

Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

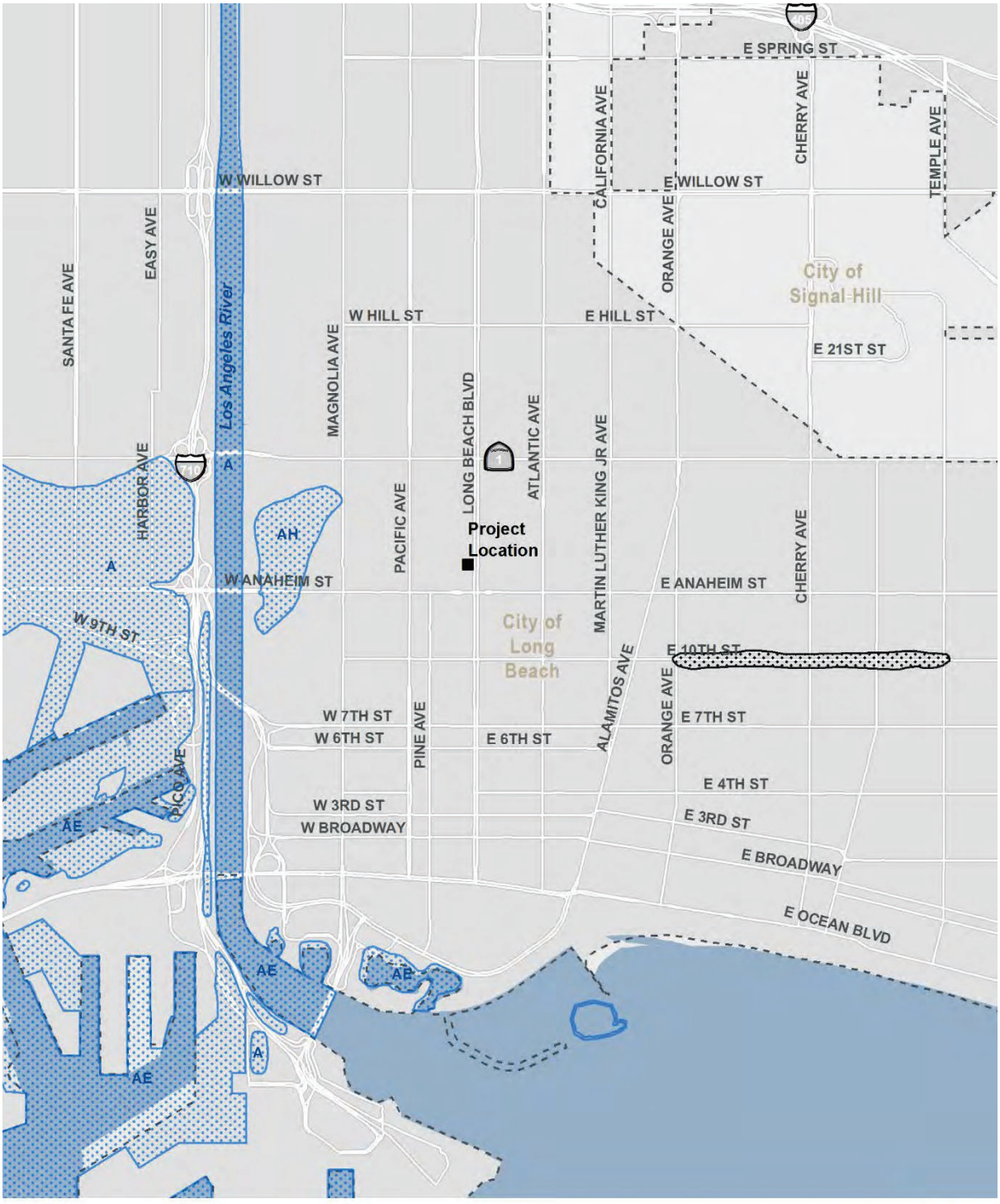
- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

Are formal compliance steps or mitigation required?

☐ Yes

☒ No

Figure 1. Federal Emergency Management Agency Flood Insurance Rate Map



Attachment 10. Historic Resources Worksheet

Historic Preservation (CEST and EA)

General requirements	Legislation	Regulation
Regulations under Section 106 of the National Historic Preservation Act (NHPA) require a consultative process to identify historic properties, assess project impacts on them, and avoid, minimize, or mitigate adverse effects	Section 106 of the National Historic Preservation Act (16 U.S.C. 470f)	36 CFR 800 "Protection of Historic Properties"
References		
https://www.hudexchange.info/environmental-review/historic-preservation		

Threshold

Is Section 106 review required for your project?

☐ No, because the project consists solely of activities listed as exempt in a Programmatic Agreement (PA). (See the PA Database to find applicable PAs.)
Either provide the PA itself or a link to it here. Mark the applicable exemptions or include the text here:

→ *Continue to the Worksheet Summary.*

☐ No, because the project consists solely of activities included in a No Potential to Cause Effects memo or other determination [36 CFR 800.3(a)(1)].
Either provide the memo itself or a link to it here. Explain and justify the other determination here:

→ *Continue to the Worksheet Summary.*

☒Yes, because the project includes activities with potential to cause effects (direct or indirect). → *Continue to Step 1.*

The Section 106 Process

After determining the need to do a Section 106 review, initiate consultation with regulatory and other interested parties, identify and evaluate historic properties, assess effects of the project on properties listed on or eligible for the National Register of Historic Places, and resolve any adverse effects through project design modifications or mitigation.

Note that consultation continues through all phases of the review.

Step 1: Initiate consultation

Step 2: Identify and evaluate historic properties

Step 3: Assess effects of the project on historic properties

Step 4: Resolve any adverse effects

Step 1 - Initiate Consultation

The following parties are entitled to participate in Section 106 reviews: Advisory Council on Historic Preservation; State Historic Preservation Officers (SHPOs); federally recognized Indian tribes/Tribal Historic Preservation Officers (THPOs); Native Hawaiian Organizations (NHOs); local governments; and project grantees. The general public and individuals and organizations with a demonstrated interest in a project may participate as consulting parties at the discretion of the RE or HUD official. Participation varies with the nature and scope of a project. Refer to HUD's website for guidance on consultation, including the required timeframes for response. Consultation should begin early to enable full consideration of preservation options.

Use the When To Consult With Tribes checklist within Notice CPD-12-006: Process for Tribal Consultation to determine if you should invite tribes to consult on a particular project. Use the Tribal Directory Assessment Tool (TDAT) to identify tribes that may have an interest in the area where the project is located. Note that consultants may not initiate consultation with Tribes.

Select all consulting parties below (check all that apply):

☒State Historic Preservation Officer (SHPO)

☐Advisory Council on Historic Preservation

☐Indian Tribes, including Tribal Historic Preservation Officers (THPOs) or Native

☐Hawaiian Organizations (NHOs)

List all tribes that were consulted here and their status of consultation:

☐Other Consulting Parties

List all consulting parties that were consulted here and their status of consultation:

Describe the process of selecting consulting parties and initiating consultation here:

Consultation with SHPO is complete. SHPO had no objections with the City's findings in a letter dated March 1, 2021.

Provide all correspondence, notices, and notes (including comments and objections received) and continue to Step 2.

Step 2 - Identify and Evaluate Historic Properties

Define the Area of Potential Effect (APE), either by entering the address(es) or providing a map depicting the APE. Attach an additional page if necessary.

Map is attached as Figure 1.

Gather information about known historic properties in the APE. Historic buildings, districts and archeological sites may have been identified in local, state, and national surveys and registers, local historic districts, municipal plans, town and county histories, and local history websites. If not already listed on the National Register of Historic Places, identified properties are then evaluated to see if they are eligible for the National Register.
Refer to HUD's website for guidance on identifying and evaluating historic properties.

In the space below, list historic properties identified and evaluated in the APE.
Every historic property that may be affected by the project should be listed. For each historic property or district, include the National Register status, whether the SHPO has concurred with the finding, and whether information on the site is sensitive. Attach an additional page if necessary.

There are no historic properties within the Direct APE (project site boundaries). Within the indirect APE (immediately adjacent parcels were included) one built environment resource was evaluated. The Packard Long Beach Company Building, constructed in 1946, is a two-story commercial building located at 1427 Long Beach Blvd. The building historically served as an automobile dealership and repair shop and was originally used as a Packard dealership. The property is currently occupied by Sam's Autobody and Horn's Collision Center.

The property, specifically the eastern portion of the property, located east of North Palmer Court and containing the original showroom, embodies the distinctive characteristics of the Googie style and postwar-era automobile-related architecture. In addition, the eastern portion of the property retains a high degree of integrity and most of its original features. Therefore, the Packard Long Beach Company Building dealership building is recommended eligible for listing in the National Register of Historic Places under *Criterion C* and the California Register of Historical Resources under *Criterion 3* for embodying the distinctive characteristics of the Googie style and postwar automobile-related architecture (Appendix C). Those characteristics include the roof form, cantilevered roof canopy, geometric building forms, multiple curved walls, large spans of glass window walls, and the attached building signage.

The character-defining features of the Packard Long Beach Company Building dealership building include: the building location and overall building form, the roof form and cantilevered canopy, the fenestration pattern, all of the windows and doors (except for one replacement vinyl window), the curved exterior and interior walls, and the projecting signboard attached to the façade. There are no character-defining setting features and the immediate setting has been altered on multiple occasions as adjacent buildings have been constructed and demolished.

The proposed project is expected to have no effect on this property. The project would not cause physical destruction or damage to the property and would not remove it from its current location; it would not change the character of the property's use or of physical features within the property's setting that contribute to its historic significance; it would not introduce visual, audible, or atmospheric elements that are out of character with the property or alter its setting; and the project would not lead to the neglect of the property, or its sale, transfer or lease. In addition, there are no character-defining features, or character-defining viewsheds or views that have the potential to be impacted by the project.

A State of California and the Resource Agency Department of Parks and Recreation primary record form (DPR 523 series) was completed for this property and is Attachment D of the Cultural Resource Memorandum (Attachment 10b of the EA).

Provide the documentation (survey forms, Register nominations, concurrence(s) and/or objection(s), notes, and photos) that justify your National Register Status determination.

Was a survey of historic buildings and/or archeological sites done as part of the project?
If the APE contains previously unsurveyed buildings or structures over 50 years old, or there is a likely presence of previously unsurveyed archeological sites, a survey may be necessary. For Archeological surveys, refer to HP Fact Sheet #6, Guidance on Archeological Investigations in HUD Projects.

☒ Yes → *Provide survey(s) and report(s) and continue to Step 3.*
Additional notes:

One previously recorded archaeological resource has been identified within the Direct APE. CA-LAN-694, recorded by Dixon in 1974 as a prehistoric site, measures approximately 380 meters east-west by 100 meters north-south according to the site boundary provided by the SCCIC.
See the attached Cultural Resource Memorandum for a summary of the results of the survey. A DPR form was completed for this site and is Attachment E of the Cultural Resource Memorandum (Attachment 10b of the EA); however, this form is confidential.

☐ No → *Continue to Step 3.*

Step 3 - Assess Effects of the Project on Historic Properties

Only properties that are listed on or eligible for the National Register of Historic Places receive further consideration under Section 106. Assess the effect(s) of the project by applying the Criteria of Adverse Effect. (36 CFR 800.5)] Consider direct and indirect effects as applicable as per HUD guidance.

Choose one of the findings below - No Historic Properties Affected, No Adverse Effect, or Adverse Effect; and seek concurrence from consulting parties.

☒ No Historic Properties Affected
Document reason for finding:

☐ No historic properties present. → *Provide concurrence(s) or objection(s) and continue to the Worksheet Summary.*

☒ Historic properties present, but project will have no effect upon them. → *Provide concurrence(s) or objection(s) and continue to the Worksheet Summary.*

If consulting parties concur or fail to respond to user's request for concurrence, project is in compliance with this section. No further review is required. If consulting parties object, refer to (36 CFR 800.4(d)(1)) and consult further to try to resolve objection(s).

☐ No Adverse Effect
Document reason for finding:

Does the No Adverse Effect finding contain conditions?

☐ Yes

Check all that apply: (check all that apply)

☐ Avoidance

☐ Modification of project

☐ Other

Describe conditions here:

→ *Monitor satisfactory implementation of conditions. Provide concurrence(s) or objection(s) and continue to the Worksheet Summary.*

☐ No → *Provide concurrence(s) or objection(s) and continue to the Worksheet Summary.*

If consulting parties concur or fail to respond to user's request for concurrence, project is in compliance with this section. No further review is required. If consulting parties object, refer to (36 CFR 800.5(c)(2)) and consult further to try to resolve objection(s).

☐ Adverse Effect

Document reason for finding:

Copy and paste applicable Criteria into text box with summary and justification.
Criteria of Adverse Effect: 36 CFR 800.5]

Notify the Advisory Council on Historic Preservation of the Adverse Effect and provide the documentation outlined in 36 CFR 800.11(e). The Council has 15 days to decide whether to enter the consultation (Not required for projects covered by a Programmatic Agreement).

→ *Continue to Step 4.*

Step 4 - Resolve Adverse Effects

Work with consulting parties to try to avoid, minimize or mitigate adverse effects. Refer to HUD guidance and 36 CFR 800.6 and 800.7.

Were the Adverse Effects resolved?

☐ Yes

Describe the resolution of Adverse Effects, including consultation efforts and participation by the Advisory Council on Historic Preservation:

For the project to be brought into compliance with this section, all adverse impacts must be mitigated. Explain in detail the exact measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation.

→ *Provide signed Memorandum of Agreement (MOA) or Standard Mitigation Measures Agreement (SMMA). Continue to the Worksheet Summary.*

☐ No

The project must be cancelled unless the "Head of Agency" approves it. Either provide approval from the "Head of Agency" or cancel the project at this location.

Describe the failure to resolve Adverse Effects, including consultation efforts and participation by the Advisory Council on Historic Preservation and "Head of the Agency":

Explain in detail the exact conditions or measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation.

→ *Provide correspondence, comments, documentation of decision, and "Head of Agency" approval. Continue to the Worksheet Summary.*

Worksheet Summary

Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

In December 2020, the South Central Coastal Information Center (SCCIC) was contacted to perform a record search of all previously recorded cultural resources (including archaeological sites) within one-quarter mile of the project site. One archaeological resource had been previously identified within the Direct APE and no build environment resources have been previously recorded within the Indirect APE. Outside the Indirect APE within one-quarter mile, 11 build environment resources have been previously recorded. The 11 historic-age buildings are all residences. No archaeological resources have been recorded within the one-quarter mile search area.

As described above, one newly identified built environment resource exists within the Indirect APE. The Packard Long Beach Company Building, constructed in 1946, is a two-story commercial building located at 1427 Long Beach Blvd. The Packard Long Beach Company Building dealership building is recommended eligible for listing in the National Register of Historic Places under *Criterion C* and the California Register of Historical Resources under *Criterion 3* for embodying the distinctive characteristics of the Googie style and postwar automobile-related architecture.

As detailed in the Cultural Resource Memorandum (Attachment 10b of the EA), one previously recorded archaeological resource has been identified within the Direct APE. CA-LAN-694, recorded by Dixon in 1974 as a prehistoric site, measures approximately 380 meters east-west by 100 meters north-south according to the site boundary provided by the SCCIC. On January 14, 2021, a pedestrian survey of the APE was conducted. No evidence of CA-LAN-694 was observed on the surface within the APE. No other cultural resources from either the prehistoric or historic periods were observed. On January 26, 2021 five shovel test pits (STPs) were excavated within and adjacent to the CA-LAN-694 site boundary. The site boundary is most likely inaccurately mapped and should not in fact overlap the APE.

One historic property, the Packard Long Beach Company Building, was identified in the Indirect APE as a result of survey. However, the proposed project is expected to have no effect on this property. The project would not cause physical destruction or damage to the property and would not remove it from its current location; it would not change the character of the property's use or of physical features within the property's setting that contribute to its historic significance; it would not introduce visual, audible, or atmospheric elements that are out of character with the property or alter its setting; and the project would not lead to the neglect of the property, or its sale, transfer or lease. In addition, there are no character-defining features, or character-defining viewsheds or views that have the potential to be impacted by the project. SHPO concurred on March 1, 2021 that the Packard Long Beach Company Building is eligible for the National Register of Historic Places under *Criterion C* and the California Register of Historical Resources under *Criterion 3* for embodying the distinctive characteristics of the Googie style and postwar automobile-related architecture.

One unevaluated resource – prehistoric archaeological site CA-LAN-694 – was previously identified within the Direct APE as a result of the records search. It appears that this resource has been inaccurately mapped and does not exist within the APE. The resource will not be impacted.

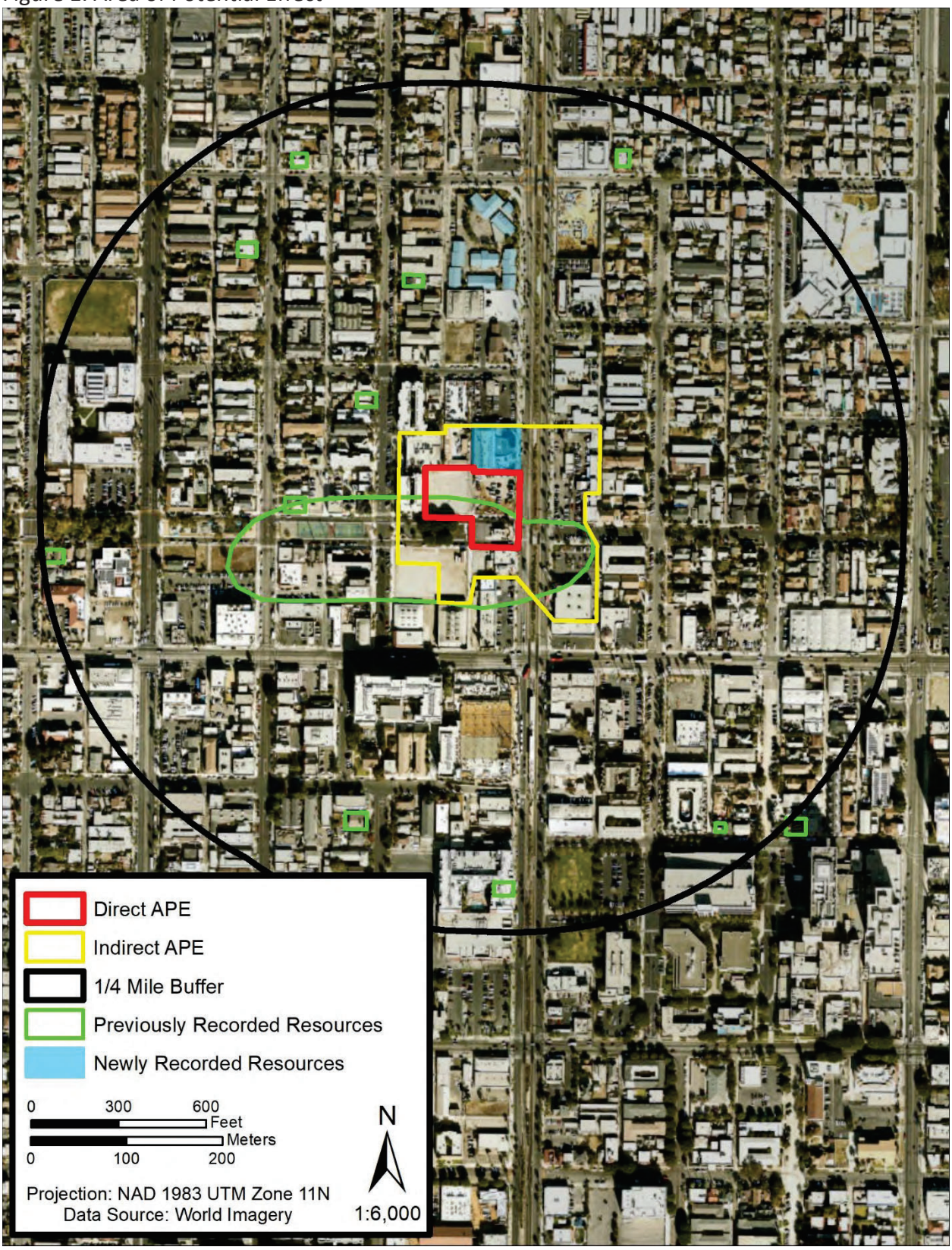
Therefore, as no historic properties, historic-era built environment, or archaeological resources have the potential to be impacted, the City has determined a finding of No Effect for the project. SHPO concurred with these findings on March 1, 2021 (see Attachment 10a of the EA).

Are formal compliance steps or mitigation required?

☐ Yes

☒ No

Figure 1. Area of Potential Effect



Attachment 10a. Office of Historic Preservation Concurrence Letter

State of California • Natural Resources Agency
Gavin Newsom, *Governor*

DEPARTMENT OF PARKS AND RECREATION
OFFICE OF HISTORIC PRESERVATION
Armando Quintero, *Director*

Julianne Polanco, State Historic Preservation Officer
1725 23rd Street, Suite 100, Sacramento, CA 95816-7100
Telephone: (916) 445-7000 FAX: (916) 445-7053
calshpo.ohp@parks.ca.gov www.ohp.parks.ca.gov

March 1, 2021
[VIA EMAIL]

Refer to HUD_2021_0128_004

Mr. Scott Kinsey
Planner V
Development Services, Planning Bureau
City of Long Beach
411 West Ocean Boulevard, 3rd Floor
Long Beach, CA 90802

Re: Mixed-Use Multifamily Affordable Housing Development Project at 1401 Long Beach Boulevard, Long Beach, CA

Dear Mr. Kinsey:

The California State Historic Preservation Officer (SHPO) received your submittal for the above referenced undertaking for review and comment pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations found at 36 CFR Part 800. The regulations and advisory materials are located at www.achp.gov.

Undertaking
Your letter informed the SHPO that the City of Long Beach is considering the use of funding from the U.S. Department of Housing and Urban Development (HUD) in the development of a mixed-use multifamily affordable housing project located at 1401 Long Beach Boulevard. The undertaking involves the construction of two multistory buildings containing 160-units of housing on a vacant 1.09-acre site.

Area of Potential Effects (APE)
The City has defined the APE as the subject site and adjacent and abutting parcels. The SHPO feels an adequate APE has been considered for the work associated with this undertaking.

Identification of Historic Properties
In an effort to identify potential historic properties within the APE the City and consultants obtained a records search for the project area from the South Central Coastal Information Center (SCCIC) of the CHRIS located at California State University, Fullerton. Finally, both a built environment and an archeological field survey of the APE were complete.

One previously recorded prehistoric archeological site (CA-LAN-694) was supposed to be within the APE. Neither the archeological pedestrian survey nor the subsequent shovel test pits located evidence of the stie.

One building within the APE, the Packard Long Beach Company Building, was determined eligible for listing in the National Register of Historic Places. The Googie style, post-war era, former automobile showroom, located at 1427 Long Beach Boulevard was determined eligible under Criterion C at the local level of significance. The SHPO agrees that the former Packard Long Beach Company Building, at 1427 Long Beach Boulevard, is eligible for the National Register under Criterion C at the local level and is, therefore, considered a historic property.

The SHPO believes that the City made reasonable and good faith identification efforts.

Finding of Effects

As the only historic property within the APE is not located on the subject site and the undertaking will not effect the building at 1427 Long Beach Boulevard, the City "has determined a finding of No Effect for the project." Pursuant to 36 CFR §800.4(d)(1), the CA SHPO has no objections to the finding of *No historic properties affected*.

The City may have additional Section 106 responsibilities under certain circumstances set forth at 36 CFR Part 800 in the event that historic properties are discovered during implementation of the undertaking your agency is required to consult further pursuant to §800.13(b).

We appreciate the City of Long Beach's consideration of historic properties in the project planning process. If you have questions please contact Shannon Lauchner Pries, Historian II, with the Local Government & Environmental Compliance Unit at (916)445-7013 or by email at shannon.pries@parks.ca.gov .

Note that we are only sending this letter in electronic format. Please confirm receipt of this letter. If you would like a hard copy mailed to you, respond to this email to request a hard copy be mailed.

Sincerely,



Julianne Polanco
State Historic Preservation Officer

Attachment 10b. Cultural Resource Analysis Memorandum

Memorandum

Date:	Friday, February 12, 2021
Project:	1401 Long Beach Boulevard
To:	City of Long Beach
From:	HDR Engineering, Inc.
Subject:	Cultural Resources Analysis

HDR prepared this cultural resource study in support of the City of Long Beach's proposed 1401 Long Beach Boulevard Project (project). This memorandum provides the results, findings, and recommendations of the cultural resource study.

Project Overview

The City of Long Beach is proposing the construction of a mixed-use, affordable housing development on the corner of East 14th Street and Long Beach Boulevard. The City of Long Beach is the responsible entity under Section 106 of the National Historic Preservation Act (NHPA) and the lead agency for the project under the California Environmental Quality Act (CEQA). Pursuant to both statues, it is necessary for the City of Long Beach to determine if the proposed project has the potential to affect historic properties or historical resources, respectively.

Project Location

The project is located at 1401 Long Beach Boulevard in the City of Long Beach, and falls within Township 4 South, Range 13 West, Section 36 (San Bernardino Baseline and Meridian) as shown on the *Long Beach* United States Geological Survey 7.5-minute topographic map (Attachment A). The project site is approximately 1.09 acres and consists of five parcels located between East 14th Street and East 15th Street, west of Long Beach Boulevard, and east of Locust Avenue in the central portion of the City of Long Beach. The Assessor Parcel Numbers are 7269016041, 042, 157, 158, and 159.

Project Description

The project consists of two new mixed-use affordable housing buildings. The east building is a mixed-use building with approximately 66,430 square feet, that is 55 feet above ground level (maximum 5 stories). The west building is a mixed-use building with approximately 116,645 square feet that is 85 feet above ground level (maximum 7 stories). The east building includes a 75-unit, 5-story apartment building, with 49,840 square feet of residential space on levels two through five, 10,215 square feet of circulation, and 6,375 square feet of amenity space. The west building includes an 85-unit, 7-story apartment building, with 60,990 square feet of residential space on levels two through seven, with 35,365 square feet of parking space, 10,670 square feet of circulation space, and 9,620 square feet of amenity space. Both buildings would include outdoor open space for residents with the east building having 6,745 square feet of outdoor common space and 1,125 square feet of private outdoor space. The west building would include 18,380 square feet of park space, 13,330 square feet of common outdoor space, and 3,790

square feet of private outdoor space. The project consists of 100-percent affordable housing units. Units would include 1-bedroom (115 units), 2-bedroom (41 units), and 3-bedroom (6 units) options.

The site is currently vacant, graded flat to street level, and contains minimal vegetation. The project site is surrounded by urban development, including residences and commercial businesses. The surrounding land uses include residential homes and apartments to the west and north west; an auto repair facility to the north; the LA Metro A line (formerly the Blue line) and used car dealership to the east; and a strip mall, saloon, and beauty salon to the south.

Historically, the site has been developed for commercial and residential uses dating back to at least 1914. A commercial building, most recently used as the Farmers and Merchants Bank, stood in the eastern half of the project site between 1950 and approximately 2005. From the early 1950s to 2018, a commercial building, most recently used as a fast-food Mexican restaurant, stood in the portion of the project site that overlaps the 14th Street median.

Regulatory Framework

The proposed project is receiving funds from a federal agency (Department of Housing and Urban Development [HUD]). Therefore, the project is considered an "undertaking" per 36 Code of Federal Regulations (CFR) § 800.2 (o) and is subject to compliance with Section 106 of the NHPA of 1966, as amended. Under these guidelines, federal agencies are required to identify cultural resources that may be affected by project actions, assess the significance of these resources and their eligibility for inclusion on the NRHP. A historic property is defined in the NHPA as "any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in the National Register, including artifacts, records, and material remains related to such a property or resource" (54 United States Code 300308). Per 24 CFR Part 58, HUD has designated the City of Long Beach as the responsible entity to perform the Section 106 environmental review for the project.

The proposed project is subject to compliance with the California Environmental Quality Act (CEQA), as amended. Therefore, cultural resources management work conducted as part of the proposed project shall comply with the *CEQA Statutes and Guidelines*, which directs lead agencies to first determine whether cultural resources are "historically significant" resources. A project with an effect that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment. Generally, a cultural resource shall be considered "historically significant" if the resource is 45 years old or older, possesses integrity of location, design, setting, materials, workmanship, feeling, and association, and meets the criteria for listing on the California Register of Historical Resource (CRHR).

Area of Potential Effect

The project's Area of Potential Effect (APE) includes all areas that could potentially be directly or indirectly affected by the project (Attachment B).

The Direct APE, used in the identification of archaeological resources, includes the project's construction limits and all proposed work areas. It has both a horizontal and vertical extent. The horizontal extent of the Direct APE is the boundary of the project site—a roughly rectangular area approximately 1.09 acres in size, bounded by an auto repair center at the north, Long Beach Boulevard at the east, East 14th Street at the south, and an apartment complex at the west, in the central part of the city of Long Beach. The Direct APE is a currently vacant partially paved lot surrounded by urban development on all sides. The vertical extent of the Direct APE corresponds to the depth of ground disturbance necessary for project construction, and is anticipated to be approximately 2 to 3 feet (61 to 91.44 centimeters) for most of the building footprint, and up to 9 feet (274.32 centimeters) for the northwest corner (15 percent of the building footprint).

The Indirect APE, used in the identification of historical built environment resources, is inclusive of the Direct APE, but also incorporates parcels adjacent (abutting or across the street) to the Direct APE in order to account for possible indirect effects that would have the potential to affect a historic property.

Identification of Properties/Resources

Record Search

On December 8, 2020, the South Central Coastal Information Center (SCCIC) was contacted to perform a record search of all previously recorded cultural resources (including archaeological sites) within ¼ mile of the Direct APE (Attachment C). One archaeological resource has been previously identified within the Direct APE, and no built environment resources have been previously recorded within the Indirect APE. Outside but within ¼ mile of the Indirect APE, 11 built environment resources have been previously recorded. The 11 historic-age buildings are all residences. No archaeological resources have been recorded in the ¼ mile search area.

Built Environment Resources

One newly identified built environment resource exists within the Indirect APE (see Attachment C). The Packard Long Beach Company Building, constructed in 1946, is a two-story commercial building located at 1427 Long Beach Blvd. The building historically served as an automobile dealership and repair shop and was originally used as a Packard dealership. The property is currently occupied by Sam's Autobody and Horn's Collision Center.

The property, specifically the eastern portion of the property, located east of North Palmer Court and containing the original showroom, embodies the distinctive characteristics of the Googie style and postwar-era automobile-related architecture. In addition, the eastern portion of the property retains a high degree of integrity and most of its original features. Therefore, the Packard Long Beach Company Building dealership building is recommended eligible for listing in the NRHP under *Criterion C* and the CRHR under *Criterion 3* for embodying the distinctive characteristics of the Googie style and postwar automobile-related architecture. Those characteristics include the roof form, cantilevered roof canopy, geometric building forms, multiple curved walls, large spans of glass window walls, and the attached building signage.

The character-defining features of the Packard Long Beach Company Building dealership building include: the building location and overall building form, the roof form and cantilevered canopy, the

fenestration pattern, all of the windows and doors (except for one replacement vinyl window), the curved exterior and interior walls, and the projecting signboard attached to the façade. There are no character-defining setting features and the immediate setting has been altered on multiple occasions as adjacent buildings have been constructed and demolished.

A new Department of Parks and Recreation (DPR) 523 series form was prepared for this resource and will be submitted to the SCCIC (Attachment D).

Archaeological Resources

One previously recorded archaeological resource has been identified within the Direct APE. CA-LAN-694, recorded by Dixon in 1974 as a prehistoric site, measures approximately 380 meters east-west by 100 meters north-south according to the site boundary provided by the SCCIC. In 1974, it appears the site was most evident as shell fragments and flakes in exposed midden soil located in the East 14th Street median between Chestnut Street and Long Beach Boulevard. However according to Dixon, prior utility excavations in the area of the site by the Long Beach Water Department, sometime prior to 1944, yielded “many artifacts.”

On January 14, 2021, a pedestrian survey of the APE was conducted. No evidence of CA-LAN-694 was observed on the surface within the APE. No other cultural resources from either the prehistoric or historic periods were observed.

As mentioned above, and based on historic maps and aerial imagery, the project site is situated in an area (central Long Beach) that has been heavily developed and built-up for both commercial and residential purposes for the last 100+ years. Additionally, various portions of the project site itself have been developed since the 1910s with commercial businesses and residences. It is likely this historic development has resulted in considerable past ground disturbance that would have destroyed any potential buried cultural resources associated with CA-LAN-694.

However, in order to confirm whether cultural materials associated with CA-LAN-694 were present below the surface, five shovel test pits (STPs) were excavated within and adjacent to the CA-LAN-694 site boundary on January 26, 2021. STPs were excavated to a depth of up to 3 feet (approximately 90 centimeters). All STPs were negative for the presence of shell, artifacts, midden soil, or any other cultural materials. Soils were similar in all STPs and consisted of dark brown to dark yellowish brown moderately compact loam from 0 to 5 inches (approximately 0 to 13 centimeters), followed by a highly compact sandy clay loam layer from 5 inches (approximately 13 centimeters) to the base of the STPs. Within this clay layer small fragments of historic debris – asphalt, brick, copper wire – were noted indicating the deposit is disturbed/construction fill with no potential to contain the site.

Additionally, based on historic aerial imagery, at the time CA-LAN-694 was recorded in 1974, the south portion of the APE (14th Street median) was covered with a restaurant and parking lot, the east portion of the APE was covered with a bank building and parking lot, and the west portion of the APE was covered with a parking lot. Although the CA-LAN-694 site boundary overlaps these areas, it is unlikely Dixon could have seen any cultural materials in these areas since they were covered with buildings and asphalt. Based on this information, the site boundary is most likely inaccurately mapped and should not in fact overlap the APE.

An updated DPR 523 series form was prepared for this resource and will be submitted to the SCCIC (Attachment E).

Finding of Effect

One historic property, the Packard Long Beach Company Building, was identified in the Indirect APE as a result of survey. However, the proposed project is expected to have no effect on this property. The project would not cause physical destruction or damage to the property and would not remove it from its current location; it would not change the character of the property's use or of physical features within the property's setting that contribute to its historic significance; it would not introduce visual, audible, or atmospheric elements that are out of character with the property or alter its setting; and the project would not lead to the neglect of the property, or its sale, transfer or lease. In addition, there are no character-defining features, or character-defining viewsheds or views that have the potential to be impacted by the project.

One unevaluated resource – prehistoric archaeological site CA-LAN-694 – was previously identified within the Direct APE as a result of the records search. Subsurface testing confirmed that the APE is disturbed to a depth of at least 3 feet (91.44 centimeters) (the maximum depth of planned disturbance for the portion of the proposed project that overlaps the site boundary) and it appears that this resource has been inaccurately mapped and does not exist within the APE. In either case, the resource will not be impacted.

Therefore, as no historic properties, historic-era built environment, or archaeological resources have the potential to be impacted, the City has determined a finding of No Effect for the project. State Historic Preservation Officer (SHPO) concurrence with this determination is pending.

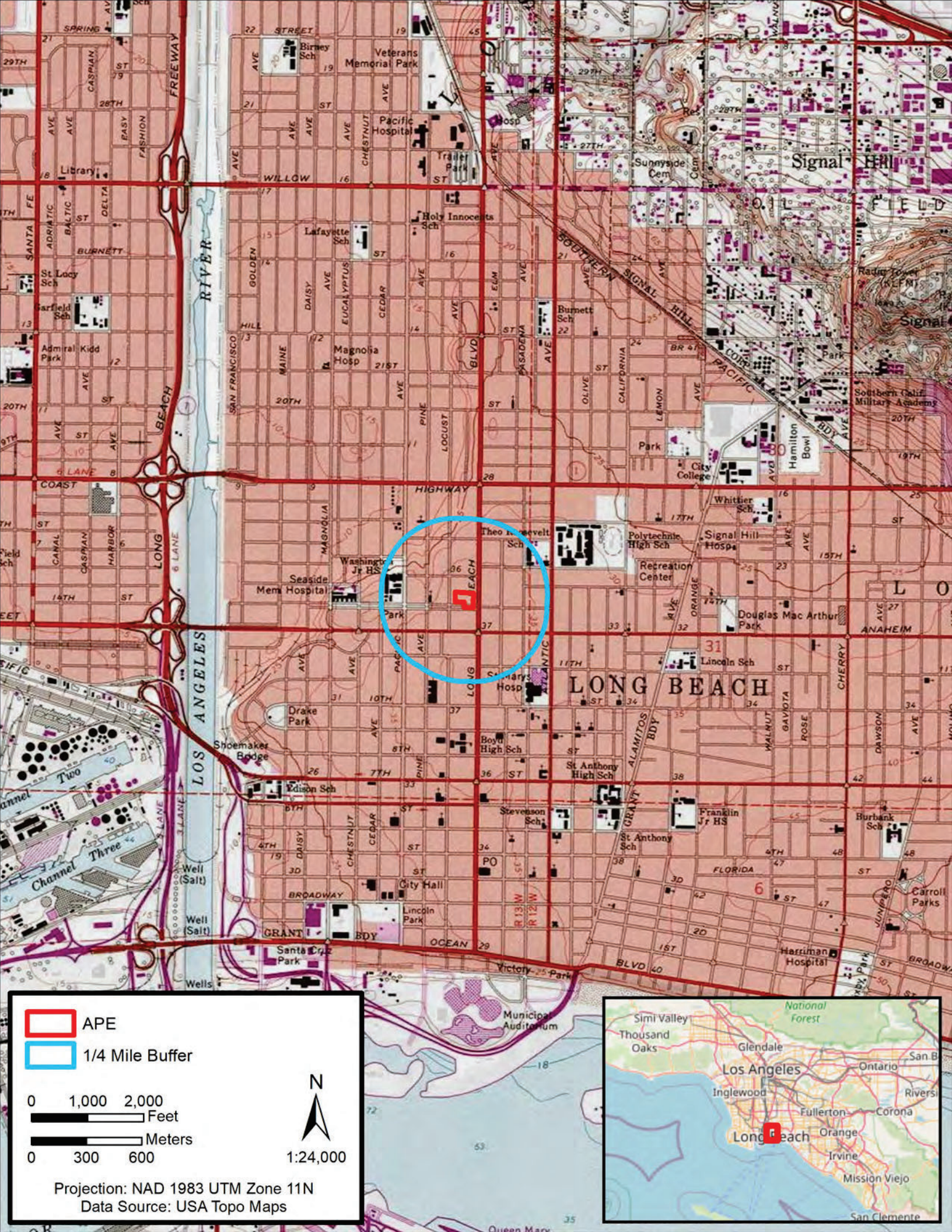
Recommendations

Given the level of disturbance within the project area, and the shallow depth proposed for construction project components, HDR recommends the contractor specifications require the stoppage of work in the event of an unanticipated discovery during construction until a professional archaeologist assesses the find to determine the nature of the resources discovered. In accordance with the post-review discovery process (CFR 800.13), if a potentially significant archaeological resource is identified during monitoring, the City will be notified of the find on the day of its discovery. The City will notify the SHPO and Advisory Council on Historic Preservation within 48 hours of the discovery. If the discovered resource contains Native American archaeological materials, Native American Tribes that may attach significance to the property will also be informed of the discovery. The City will report on the eligibility and treatment of the resource to the SHPO and Native American Tribes (if applicable) within five (5) working days of the discovery. The SHPO and Native American Tribes (if applicable) will have 48 hours to comment on the City's eligibility determination and proposed treatment of the unanticipated resource.

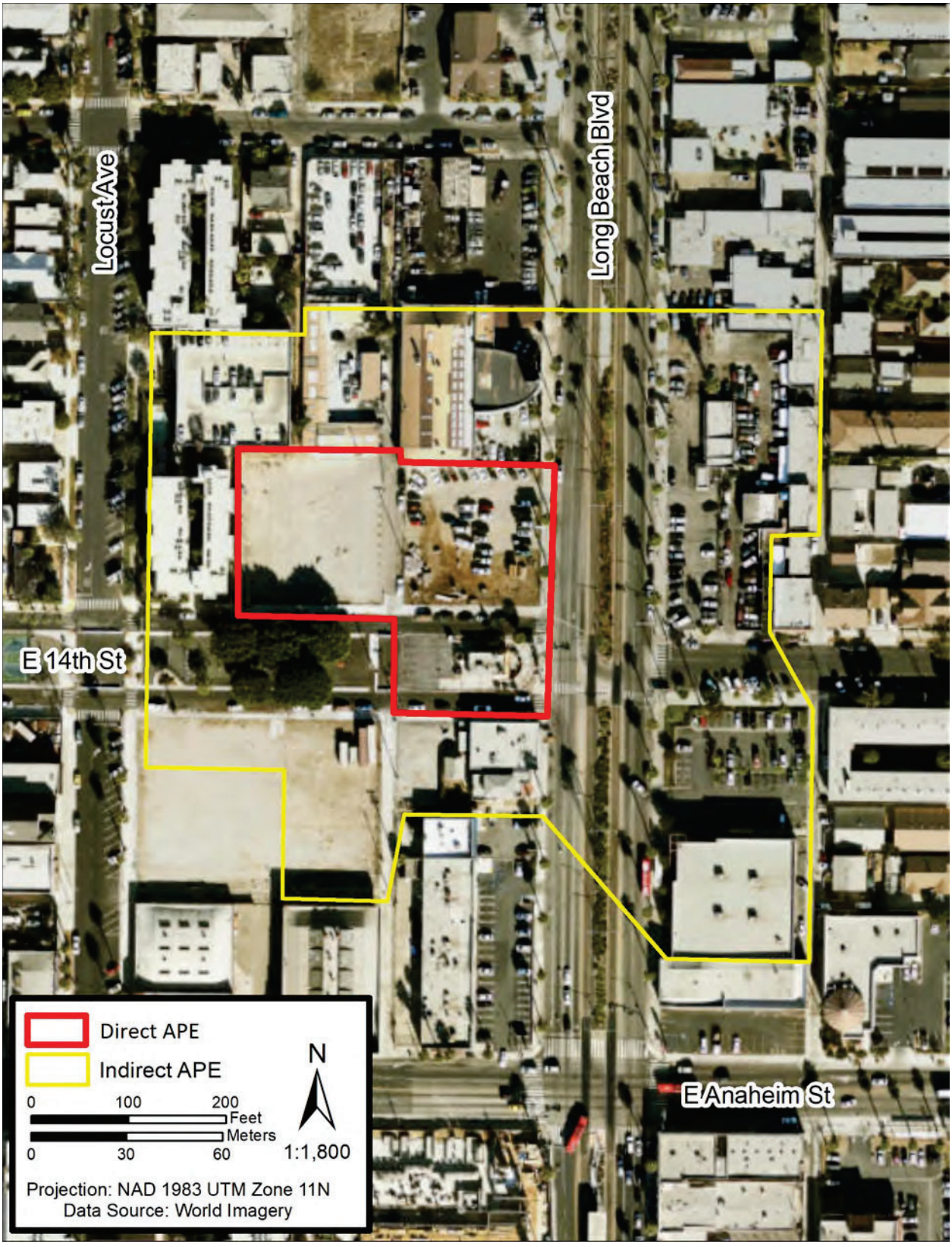
If any previously unrecorded human remains are inadvertently discovered during construction, all ground-disturbing activities in the vicinity of the discovery must cease immediately and a 50-foot-wide buffer will be established around it to secure it from further disturbance. California State law (Health and Safety Code Section 7050.5; Public Resources Code Sections 5097.94, 5097.98,

and 5097.99) will be followed on state, county, and private land. This law specifies that work will stop immediately in any areas where human remains or suspected human remains are encountered. The lead agency and the county coroner will be immediately notified of the discovery. The coroner has 2 working days to examine the remains after being notified by the lead agency. If the remains are determined to be Native American, the coroner has 24 hours to notify Native American Heritage Commission (NAHC), who will determine the most likely descendant. The NAHC will immediately notify the identified most likely descendant, and the most likely descendant has 48 hours to make recommendations to the landowner or representative for the respectful treatment or disposition of the remains and grave goods. If the most likely descendant does not make recommendations within 48 hours, the area of the property must be secured from further disturbance. If no recommendation is given, the lead agency or its authorized representative will re-inter the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance.

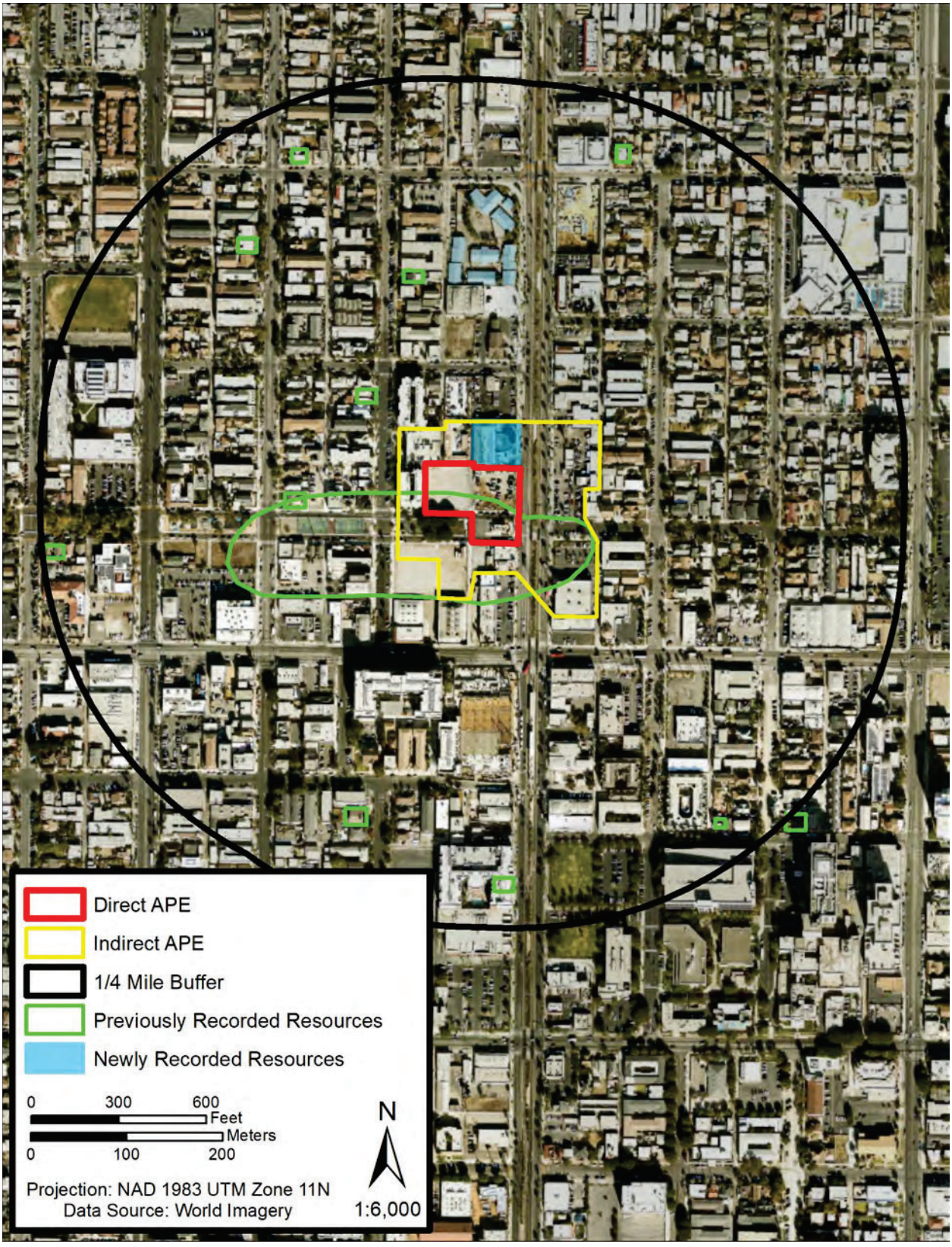
Attachment A: Project Location


APE
1/4 Mile Buffer
0 1,000 2,000
Feet
Meters
0 300 600
N
1:24,000
Projection: NAD 1983 UTM Zone 11N
Data Source: USA Topo Maps
LONG BEACH
Signal Hill
Los Angeles
Simi Valley
Thousand Oaks
Glendale
Ontario
Inglewood
Fullerton
Corona
Orange
Irvine
Mission Viejo
San Clemente
National Forest

Attachment B: Area of Potential Effects


Locust Ave
Long Beach Blvd
E 14th St
E Anaheim St
Direct APE
Indirect APE
N
0
100
200
Feet
Meters
0
30
60
1:1,800
Projection: NAD 1983 UTM Zone 11N
Data Source: World Imagery

Attachment C: Records Search Results (Confidential)


Direct APE
Indirect APE
1/4 Mile Buffer
Previously Recorded Resources
Newly Recorded Resources
0 300 600
Feet
Meters
0 100 200
N
Projection: NAD 1983 UTM Zone 11N
Data Source: World Imagery
1:6,000

Attachment D: DPR Form for 1427 Long Beach Boulevard

State of California ◆ The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

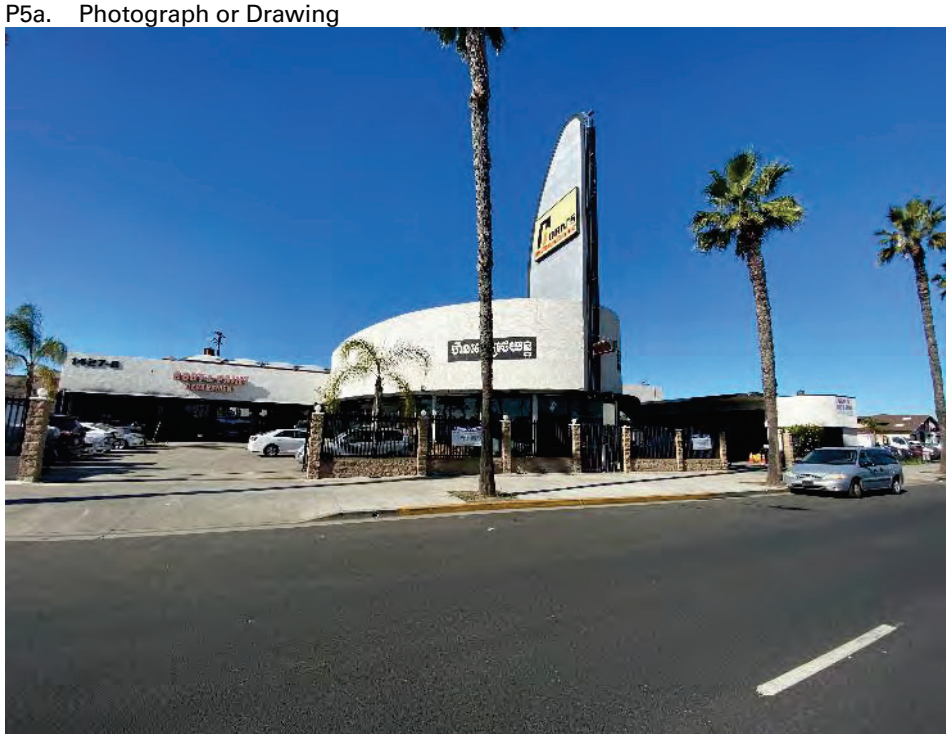
Primary #
HRI #
Trinomial
NRHP Status Code
Other Listings
Review Code | Reviewer | Date

Page 1 **of** 14 ***Resource Name or #:** (Assigned by recorder) Packard Long Beach Company Building
P1. Other Identifier: Berry De Soto-Plymouth, Severin Motors, and Holiday Rambler-Simca
*__P2.__ **Location:** ☐ **Not for Publication** ☒ **Unrestricted**
***a. County** Los Angeles **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)
***b. USGS 7.5' Quad** Long Beach **Date** 2018 **T** 4S; **R** 13W; Lot 39; S.B. **B.M.**
c. Address 1427 Long Beach Boulevard City Long Beach Zip 90813
d. UTM: (Give more than one for large and/or linear resources) Zone 11, 389828 mE/ 3738912 mN

***P3a. Description:** The Packard Long Beach Company Building, located at 1427 Long Beach Boulevard (APN 7269016147), is situated on the west side of Long Beach Boulevard, facing east towards the roadway and the Metro A Line tracks. The two-story building is irregularly shaped and features a rectangular mass with a bowed, projecting showroom space located on the façade (east), as well as an L-shaped projecting mass located at the north end of the façade. The roof section atop the rectangular portion is a low dome, and the roof sections atop the showroom and L-shaped projection are flat. The roof features a cantilevered concrete and steel canopy along the façade. A geometric, segmental-arch signboard projection is attached to the roof above the showroom and displays non-historic signage for the current tenant. It appears that the signboard may have once been illuminated with lights; however, the bulbs are missing. The building is composed of concrete block with exterior stucco and rests on a poured concrete foundation. An additional layer of stucco appears to have been added to the façade within the past 50 years as the stucco is thicker on the façade than on the other elevations. It does appear that the building has always been clad with a stucco coating. Windows are primarily fixed aluminum-framed display windows and multi-pane steel-framed fixed windows. (see Continuation Sheet page 3)

***P3b. Resource Attributes:** HP 6 (2-story commercial building)

P5a. Photograph or Drawing



***P4. Resources Present:**
☒ Building ☐ Structure ☐ Object
☐ Site ☐ District ☐ Element of District
☐ Other

P5b. Description of Photo: Façade. View northwest. Photo taken 01/14/2021. Digital image.

***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both 1946, County Records (Los Angeles County 2021)

***P7. Owner and Address:** Private

***P8. Recorded by:** Leesa Gratreak, HDR, Inc., 1050 SW 6th Avenue, Suite 1800, Portland, OR 97204-1134

***P9. Date Recorded:** 01/20/2021

***P10. Survey Type:** Cultural Resources Inventory and Evaluation

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.") HDR, Inc. 2021. Cultural Resources Memo for the 1401 Long Beach Blvd project. Prepared for the City of Long Beach.

***Attachments:** ☐NONE ☒Location Map ☒Continuation Sheet ☒Building, Structure, and Object Record ☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record ☐Artifact Record ☐Photograph Record ☐ Other (List): _____

BUILDING, STRUCTURE, AND OBJECT RECORD

***Resource Name or #** (Assigned by recorder) Packard Long Beach Company Building ***NRHP Status Code** 3S
Page 2 **of** 14
B1. Historic Name: Packard Long Beach Company; Berry De Soto-Plymouth, Severin Motors, and Holiday Rambler-Simca
B2. Common Name: 1427 Long Beach Boulevard
B3. Original Use: Auto Related B4. Present Use: Auto Related
***B5. Architectural Style:** Googie
***B6. Construction History:** (Construction date, alterations, and date of alterations)
The Packard Long Beach Company Building was primarily constructed in 1946; however, small portions of the rear (west) section of the property, located on the west side of North Palmer Court, were constructed later. The entire showroom and vehicle maintenance portion of the property, located east of North Palmer Court, appears to have been constructed in 1946 and there has been no change in building footprint or form since at least 1953. A portion of the auxiliary structure complex located west of North Palmer Court was also constructed by 1953. The auxiliary structure complex, which appears to serve as a storage area for vehicles and supplies, was augmented between 1963 and 1972, 1994 and 2002, 2009 and 2010, and 2010 and 2012 (see Construction History Map continuation sheet, page 13).

The only visible fenestration alteration is the addition of one 1/1 vinyl sash window within an existing aluminum frame along the facade. All doors visible from the public right-of-way (ROW) appear to be original. The exterior stucco is original, though an additional layer may have been added to the façade. Lastly, the signboard attached to the façade contains non-historic signage for the current tenant; however, the signboard form and location appear original. The only notable setting alteration is the concrete block and steel fence located immediately in front of the building, and the juvenile palm planter boxes. The fence is located within three feet of the showroom's main door, partially obscuring the view of the door from the sidewalk and roadway. The fence is not attached to the building and could be removed without damaging the building.

***B7. Moved?** ☒**No** ☐**Yes** ☐**Unknown** **Date:** _____ **Original Location:** _____
***B8. Related Features:**
Auxiliary open-air structure located on west side of North Palmer Court.

B9a. Architect: Unknown b. Builder: Unknown
***B10. Significance: Theme** Architecture: Googie Style **Area** Local
Period of Significance 1946 **Property Type** Building **Applicable Criteria** NRHP (C) and CRHR (3)

The Packard Long Beach Company Building is recommended eligible for listing in the California Register of Historic Resources (CRHR) and the National Register of Historic Places (NRHP) and is thus considered a historic property under Section 106 of the National Historic Preservation Act. In accordance with Section 15064.5(a)(2)-(3) of the California Environmental Quality Act (CEQA) Guidelines, using the criteria outlined in Section 5024.1 of the California Public Resources Code, the building is a historical resource for purposes of CEQA.
(See continuation sheet, page 3).

B11. Additional Resource Attributes: _____
***B12. References:**
(See continuation sheet, page 3)

B13. Remarks:

***B14. Evaluator:** Leesa Gratreak, HDR, Inc.
***Date of Evaluation:** 01/20/2021

(This space reserved for official comments.)



(Continued from page 2)
P3a. Description

The façade is divided into by three sections. The central section features the showroom and has a projecting bow-shape reminiscent of a boat bow or a boomerang. This section features 18 large aluminum-framed display windows, with a central double-leaf aluminum-framed entry door featuring an aluminum-framed transom. The south side of the showroom projection, at its west end, contains a roll-top steel vehicular door for cars entering the showroom, as well as two 6-pane fixed steel windows with operable awning panes, which illuminate an internal office space. The north side of the showroom, at its west end, contains an additional roll-top steel vehicular door for cars entering the showroom; a steel-framed double-door that appears to lead to a storage closet; and an aluminum-framed, sliding glass service window, likely for customers patronizing the repair shop. The service window is framed within a wall of yellow and red glazed tiles that appear original.

The southern and northern sections of the façade are set back from the showroom. Those sections are associated with vehicle maintenance, service, and repairs. Currently, the southern section houses the body and paint department and the northern section houses the mechanical department. When the building first opened in 1946, the commercial occupant provided services for paint, metal, trim, upholstery, and seat covers (see building history section), and it appears that these recessed building sections originally housed those services. The southern section of the façade contains three large vehicular bays with roll-top steel doors. The northern section of the façade contains one large roll-top steel vehicular door, a curved wall featuring a glass display case with four fixed glass panes (display space accessed from building interior), and one single-leaf pedestrian door that was open and not visible from the exterior during field survey. The L-shaped projection within the northern section of the façade is predominately open-air and contains three spaces for vehicles to be lifted for service. Fenestration in the service area includes a single-pane fixed aluminum-framed picture window; a single-leaf pedestrian door that was open and not visible from the exterior; and a curved wall containing two aluminum-framed display windows and one 1/1 vinyl sash window, which replaced one original display window within the curved wall. That window is the only notable fenestration alteration.

The north elevation is void of fenestration and the concrete blocks are more clearly defined as the stucco is thinner on the elevation. The west elevation contains six large 15-pane fixed steel windows and two roll-top steel vehicular doors. The south elevation is also void of fenestration and the concrete block construction is visible.

Located west of the primary showroom and repair shop building, on the west side of North Palmer Court, is an open-air complex of roofed vehicle parking spots with outdoor work areas and storage. A portion of this complex appears to have been completed in 1946 (visible in a 1953 aerial); however, most of this area was constructed in several phases between 1963 and 2012 (NETR 2021) (see Construction History Map continuation sheet, page 13). This section of the property is not connected to the main building; however, it does appear to currently function as a component of the overall commercial property. This complex is one-story, concrete block and wood-framed, and has flat and shed roofs covered with rolled asphalt. It displays no distinctive architectural features and is best described as utilitarian in form and materials. This portion of the property could not be safely accessed from the public ROW; however, it is partially visible from North Palmer Court.

The building interior is partially visible from the ROW when the roll-top vehicular doors are open, and the current owner allowed minimal access to photograph the interior from the vehicular doorways and parking area. The interior of the maintenance and service areas is a predominantly open volume with few interior wall divisions. From the roll-top doorway within the façade's northern section, a curved wall is visible. The wall contains a cork board and what appears to be a pass-through window to an office space. This area of the interior appears entirely original and intact. The dome roof's interior wood truss system, which appears to be fully intact, features bow trusses with a modified double fink truss shape and additional wood-beam cross bracing. Wood-framed skylights are fitted between the roof purlins and appear to be original. From the roll-top doorway at the façade's southern section, a single-leaf wood-framed door is visible and appears to be original.

(Continued on next page)

(Continued from page 3)

Inside of the central showroom space, interior walls have been updated with non-historic trim, non-historic interior single-leaf doors, and non-historic vinyl windows illuminating interior office spaces that were not visible at the time of survey. A staircase within the showroom indicates that there is a second floor within a portion of the building, though no second-story windows were observed from the exterior. Thus, interior alteration appears to have been focused in the interior office spaces, while the main rectangular mass of the maintenance and service area remains largely intact.

Setting features include: a concrete parking area adjacent to the façade's recessed sections; a low concrete block wall along the property's southern boundary, which apparently attaches to the building; a concrete block and steel fence that borders the property's eastern boundary; a flagpole in the parking area in front of the façade's south section, installed on an unknown date; a non-historic commercial sign at the property's southeast corner, adjacent to the concrete block perimeter wall; and five juvenile palms in non-historic planter boxes that match the concrete of the fence bordering the eastern edge and appear to have been installed when the fence was constructed. Four of the palms are located adjacent to the fence and one is located adjacent to the concrete wall at the property's southern boundary.

Alterations

The only visible fenestration alteration is the addition of one 1/1 vinyl sash window within an existing aluminum frame on the façade. All observed doors appear to be original. The exterior stucco is original, though an additional layer may have been added to the façade. Lastly, the façade's signboard contains non-historic signage for the current tenant; however, the signboard form and location appear original. The only notable setting alteration is the concrete block and steel fence installed immediately in front of the building, and the juvenile palm planter boxes. The fence is located within three feet of the showroom's main door, partially obscuring the view of the showroom from the sidewalk and roadway. The fence is not attached to the building and could be removed without damaging the building.

(Continued from page 2)
B10. Significance

Historic Context

Long Beach

The City of Long Beach (City) is in Los Angeles County, approximately 20 miles south of downtown Los Angeles. Settlement in the Long Beach area started as early as 1875, when Jotham Bixby began selling lots along the Los Angeles River on the west side of Long Beach. Settlement increased in 1881 with the establishment of the 4,000-acre American Colony, which included a 350-acre townsite known as Willmore City, established by William Erwin Willmore on land acquired from Bixby. The new settlement led to the development of a road connecting the area, which would become part of the greater city of Long Beach, to Los Angeles. That roadway would later become Long Beach Boulevard. Willmore was an early promoter of Southern California and its health-centric lifestyle, and Willmore City was touted as a "healthful seaside resort in newspapers throughout the country" (Sapphos Environmental, Inc., 2009: 34-35). Despite the hype surrounding the community, only 12 homes had been built in the colony by May 1884 and Willmore abandoned the remaining unsold lots (Sapphos Environmental, Inc., 2009: 35).

In June 1884, the townsite and greater American Colony was purchased by the San Francisco real estate firm Pomeroy and Mills, which reorganized as the Long Beach Land and Water Company and renamed the city 'Long Beach' to reflect the area's long and wide beaches. The town began to grow and, by 1885, contained approximately 51 residences, a church, and numerous businesses. The Atchison, Topeka, and Santa Fe Railroad completed its transcontinental line to Los Angeles in 1887, connecting the area to nationwide commercial markets and increased tourism opportunities. The railroad intensified land speculation and, between 1887 and 1889, more than 60 new towns were established in Southern California. In Long Beach, the population increase led to several new settlements (Sapphos Environmental, Inc., 2009:36).

In 1887, the San Francisco–based Long Beach Development Company purchased all remaining unsold lots in the American Colony, and Long Beach was formally incorporated in February 1888 with 800 residents. By the end of the decade, City development had spread as far north as Fifth Street and east to Linden Avenue. By 1900, substantial development along the City's waterfront supported a robust tourism industry and by 1902 Long Beach had approximately 4,000 residents (Sapphos Environmental, Inc., 2009:36-39)

Also, by 1902, the Pacific Electric Streetcar Company had been established by Henry Huntington and streetcar rail lines began operating across the City. The company's Interurban Red Cars connected Long Beach to towns throughout Southern California, the Yellow Cars carried residents to downtown Long Beach and local beaches, and the Big Red Cars traveled between Long Beach and Los Angeles (Sapphos Environmental, Inc., 2009:39).

Throughout the early 1900s, the City continued to grow as a tourism-centered urban center, with most tourism activity focused along the beach and wharf. A series of annexations in the 1900s increased the population and boundaries of the City. Between 1902 and 1905, Long Beach's population tripled from approximately 4,000 to 12,000. By 1910, the population was 17,809 and the City had expanded to approximately 10 square miles. This swift expansion led to some growing pains within the City, which soon fell behind in the construction of roads and distribution of other public services. As of 1912, approximately 15 percent of the City's roads had been paved (Sapphos Environmental, Inc., 2009:39-42).

Between 1910 and 1929, tenets of the City Beautiful Movement strongly impacted the City's architecture, including an emphasis on Beaux Arts classicism, the establishment of a civic core, construction of wide, tree-lined boulevards, and implementation of axial roadway plans. The movement led to the establishment of Victory Park and overall growth in the City's park system (Sapphos Environmental, Inc., 2009:44). (Continued on next page)

(Continued from page 5)

In 1921, the discovery of oil in Signal Hill by the Shell Oil Company brought dramatic changes to the City's economy, which soon became dominated by the production and sale of oil. Jobs related to the local oil boom caused the population of Long Beach to more than double between 1920 and 1925 (Sapphos Environmental, Inc., 2009:45).

Like most of California and the nation, the City's prosperity came to a halt in 1929 following the stock market crash and the beginning of the Great Depression. As an oil-driven economy, the City was substantially impacted by the nationwide drop in demand for petroleum products. The tourism industry also suffered, creating a dual burden on the City's economy. Many hotels and entertainment centers closed, and car and home sales dramatically declined as values dropped. An earthquake in 1933 struck a further blow, causing city-wide building and infrastructure damage. Federal grants and loans helped rebuild and revitalize the City, and the earthquake's devastation led to changes in municipal building codes. This massive rebuilding campaign prompted the City to shift away from the established Classicism of the 1910s and 1920s to 'modern' architectural styles such as Art Deco and Streamline Moderne. Funding and assistance from the Works Progress Administration improved parks, transportation facilities, and civic and recreational buildings. In addition to the rebuilding effort, the City experienced a boost in 1936 when oil was located at the Wilmington Oil Field near Long Beach Harbor (Sapphos Environmental, Inc., 2009: 47-48).

By the mid-1930s, Long Beach was witnessing the rise of the defense industry as the nation was preparing for involvement in World War II. In 1937, Reeves Field, located on Terminal Island, became the City's first permanent naval base. In 1941, Roosevelt Naval Base opened, and an 8.9-mile-long breakwater was constructed. In 1942, the Douglas Aircraft Company (a predecessor of McDonnell Douglas) built a 242-acre production plant adjacent to the Long Beach Airport. These developments brought jobs, construction, and economic development to Long Beach. In 1943, Douglas Aircraft had over 41,000 employees, 54 percent of which were women. By 1944, 87 percent of the company's employees were women and the company produced 11 airplanes a day. Plant production rapidly declined following the war, ending the company's run as a major Long beach employer. By 1945, the wartime defense industry had slowed, and development began to center around the massive influx of wartime soldiers returning home (Sapphos Environmental, Inc., 2009: 48-49).

Long Beach experienced a period of extraordinary growth from 1946 until 1965, with home sales steeply climbing thanks in large part to the G.I. Bill, which provided returning veterans low-interest loans and long-term mortgages. Goods such as cars and appliances also saw an increase in sales from the new home buyers anxious to get back to 'normal' life. Between 1950 and 1956, the City acquired 9.8 square miles of land through 69 annexations. Residential development grew on the east and north sides of Long Beach, converting vast spans of agricultural lands into residential communities. The nearby community of Los Altos, for example, quickly grew by 10,000 homes immediately following the war. New suburbs also arose in the Bixby Knolls area. New developments included single and multi-family housing, which began shifting the population to the City's edges and out of the urban core. This shift is suburban living, coupled with the loss of the streetcar system in the early 1940s, led to a reliance on the automobile and an increase in automobile sales. The impact of the automobile began to manifest in the built environment, particularly through an increase in shopping centers and strip malls along main thoroughfares, and the construction of automobile-related commercial buildings including car dealerships and service stations (Sapphos Environmental, Inc., 2009: 48-49).

Though the postwar boom brought major growth and expansion to Long Beach, by the 1950s and 1960s it had also led to a decline in the commercial and civic core, especially downtown and the shoreline. Attractions such as Disneyland and Knott's Berry Farm drew tourism from the shoreline, which had been heavily altered by the breakwater installed during the wartime effort and had lost much of its iconic sandy beaches.

(Continued on next page)

(Continued from page 6)

In addition, the residential boom in the suburbs and increase in suburban commercial development decreased commercial activity in the City center. By the 1960s, the City began seeking ways to revitalize the downtown area and increase economic activity. The City adopted its first redevelopment plan in 1962 and purchased the RMS Queen Mary in 1967 to increase shoreline tourism. Soon after, the original oceanfront attractions, many over 70 years old, were demolished and new oceanfront attractions were constructed, including a convention center, hotels, shops, restaurants, and a marina (Sapphos Environmental, Inc., 2009: 50).

By 1972, the downtown was severely blighted, and groups formed to address concerns about large-scale redevelopment and demolition of historic properties. In 1978, the City established the Cultural Heritage Committee, which was authorized to identify and protect historic resources, and in 1988 the Cultural Heritage Committee became a City commission. Despite the increased interest in historic preservation, many notable buildings continued to be demolished into the 1980s and 1990s, including many notable Art Deco civic buildings. The early 1990s brought major redevelopment to the downtown area, as well as renovation to the waterfront area, and some notable building were saved. By 2008, the City was home to over 461,000 people and the primary industries were aerospace manufacturing, shipping, and education. The Port of Long Beach was reputedly the busiest harbor on the West Coast (Sapphos Environmental, Inc., 2009: 50).

Long Beach Boulevard

The property is located on Long Beach Boulevard. The ROW for Long Beach Boulevard was first established in 1881 to connect Willmore City (later a portion of Long Beach) to the city of Los Angeles. In 1902, the ROW was further defined as the Pacific Electric Railway's Red Line streetcar route. By 1927, the City had established over 30 miles of streetcar tracks and was among the fastest growing cities in America. By the 1930s, automobile transit overtook streetcar use in popularity and many streetcar tracks were removed across the state to make way for new roads, avenues, and boulevards. Historic topographic maps indicate that the streetcar route along Long Beach Boulevard was in place in 1932 but had been removed by 1942. Between ca. 1940 and 1958, Long Beach Boulevard was known also known as American Boulevard; however, for consistency it is herein described as Long Beach Boulevard. Long Beach Boulevard has historically served as a grand entrance to the City of Long Beach's downtown core and continues to be a major north-south regional connector for Los Angeles County (GPA Consulting 2015:5; NETR 2020).

Following the streetcar's removal ca. 1940, the property's vicinity soon became automobile-centric and many automobile dealerships were built between ca. 1940 and 1978. In 1947, construction commenced on the Long Beach Freeway (Interstate 710), which parallels the west side of the Los Angeles River. The freeway likely impacted the commercial prosperity of Long Beach Boulevard as a direct north-south thoroughfare competitor. Advertisements in the Long Beach *Independent* from the 1950s to mid-1970s indicate that several car dealerships along Long Beach Boulevard were selling a variety of car brands. In 1978, California Proposition 13 passed, which enticed dealerships and other larger commercial entities to leave Long Beach for cities with more favorable property tax structures (County of San Luis Obispo 2021; GPA Consulting 2015:5; Sapphos Environmental, Inc., 2009: 28).

The loss of several large automobile dealerships and commercial tenants caused portions of Long Beach Boulevard, including the segment containing the subject property, to decline. The 1990 establishment of the Metro Blue Line light rail helped reverse that trend, and for over 20 years the City has sought to capitalize on the Blue Line as the centerpiece of a mixed-use, transit-oriented neighborhood along Long Beach Boulevard (GPA Consulting 2015:5).

(Continued on next page)

(Continued from page 7)

Building History

The Packard Long Beach Company Building was primarily constructed in 1946; however, small portions of the property's rear (west) section, located on the west side of North Palmer Court, were constructed later. The property's entire showroom and vehicle maintenance area, east of North Palmer Court, appears to have been constructed in 1946 and there has been no change in building footprint or form since at least 1953. A portion of the auxiliary structure complex located west of North Palmer Court was also constructed by 1953. The auxiliary structure complex, which appears to serve as a storage area for vehicles and supplies, was augmented between 1963 and 2012. The auxiliary structure complex is open-air and does not display any architectural detailing (see Construction History Map continuation sheet, page 13).

The building historically served as an automobile dealership and repair shop and was originally used as a Packard dealership. Various entities, identified below, occupied the property when it was used as a showroom. Today, the property is occupied by Sam's Autobody and Horn's Collision Center. Thus, the building continues to be used for automobile repair; however, automobile sales do not occur on the property.

From 1946 to 1954, the automobile dealership was known as the Packard Long Beach Company and sold primarily Packard cars, as well as some other used cars. A 1946 advertisement reads, "Now Open! The Following Departments are Ready Now to Serve You, Paint – Metal – Trim – Upholstery – Seat Covers, Post War Prices, Packard L. B. Co., 1427 American Avenue" (*Independent* 1946:70). In 1953, the dealership was managed by John Arkush and in 1954 it was managed by a Mr. Holland, who used the name "Holland Packard" in advertisements for a portion of 1954 (*Independent* 1948:30, 1949:49, 1953:35, 1954:20).

From 1955 to 1958, the automobile dealership was known as Berry De Soto-Plymouth (as well as Berry & Berry, Inc. in 1956 and 1957), was owned by John Berry, and appears to have only sold De Soto and Plymouth brand cars (*Independent* 1955:45, 1956:35, 1957:22, 1958:5).

From 1959 to 1962, the automobile dealership was known as Severin Motors and exclusively sold cars with the Valiant brand, part of the Chrysler Corporation (*Los Angeles Times* 1959:20, 1960:27; *Independent* 1961:55; *Independent Press-Telegram* 1962:21).

From 1963 to 1976, the automobile dealership was known as the Holiday Rambler-Simca and sold Rambler brand cars, as well as a selection of other used cars. In 1976, Bryan & Simkins, Inc. (dba Holiday AMC) sold the dealership, including parts, accessories and tools, to the American Motors Sales Corporation of El Segundo, California (*Independent* 1964:33, 1966:17, 1976:25; *Independent Press-Telegram* 1963:34; *Los Angeles Times* 1967:95).

No record was located of a car dealership occupying the property after 1976. Currently, the property is used for automobile repair and it appears that the property likely transitioned into that use shortly after 1976, possibly a result of the passage of California Proposition 13 in 1978 (see Long Beach Boulevard history section above).

Evaluation of Significance

The City of Long Beach Historic Context Statement provides guidance for evaluating the significance of resources located within the City and developed themes that demonstrate the distinctive periods of development within Long Beach (Sapphos Environmental, Inc., 2009). The Packard Long Beach Company Building does not fall within any of the defined, significant economic themes within Long Beach; however, it does fit within the theme of Architectural Character, specifically the Googie style from 1940-1960. (Continued on next page)

(Continued from page 8)

The property features many character-defining features of the style noted in the Long Beach Historic Context Statement, including curved walls and window walls, large panes of fixed glass, an exaggerated roof form with a cantilevered roof, geometric shapes, and exposed steel and aluminum window framing (Sapphos Environmental, Inc., 2009:233).

Criterion A/1

Though the property has historically been associated with the automobile industry, it does not appear to be associated with any significant historic themes and could generally be characterized as a postwar-era commercial property. Therefore, the property does not appear to be associated with events that have made a significant contribution to the broad patterns of human history and is recommended as not eligible for listing in the NRHP under *Criterion A*, and not eligible for listing in the California Register of Historical Resources (CRHR) under *Criterion 1*.

Criterion B/2

A review of prior ownership and occupancy did not indicate that the property is associated with the lives of persons significant in history. Therefore, the property is recommended not eligible for listing under NRHP *Criterion B* and CRHR *Criterion 2* due to a lack of significance.

Criterion C/3

The property, specifically the eastern portion of the property, located east of North Palmer Court and containing the original showroom, embodies the distinctive characteristics of the Googie style and postwar-era automobile-related architecture. In addition, the eastern portion of the property retains a high degree of integrity and most of its original features. Therefore, the Packard Long Beach Company Building dealership building is recommended eligible for listing in the NRHP under *Criterion C* and the CRHR under *Criterion 3* for embodying the distinctive characteristics of the Googie style and postwar automobile-related architecture. Those characteristics include the roof form, cantilevered roof canopy, geometric building forms, curved wall, large spans of glass window walls, and the building signage.

Criterion D/4

After an inspection of the property and its immediate setting, no archaeological resources were noted. In addition, this current recording of the resource as a built-environment resource encapsulates the likely information potential and it is unlikely that further survey would reveal additional potential for information important to history. Thus, the property is unlikely to yield information important in prehistory or history, and it does not appear to have significance under NRHP *Criterion D* or CRHR *Criterion 4*.

Integrity

The property retains excellent integrity of location, design, materials, and workmanship as it appears to retain all its historic character-defining features (listed in the following section) and has minimal exterior alterations. Wall finishes, overall building form, the roof, and the windows are all intact. The building retains integrity of feeling and association as the use of the building continues to support automobile-related commercial activity and retains a high-level of physical integrity. The building has diminished integrity of setting due to the extensive redevelopment along Long Beach Boulevard and the addition of a concrete block and steel fence immediately in front of the building, which partially obscures the showroom windows from the roadway and sidewalk.

(Continued on next page)

(Continued from page 9)

Though the building has diminished integrity of setting, the key aspects of integrity for a property that is significant under Criterion C – design, materials and workmanship – are retained.

Therefore, the property is recommended eligible for listing in the NRHP under *Criterion C* and the CRHR under *Criterion 3* for embodying the distinctive characteristics of the Googie type, and the characteristics of a postwar-era car dealership. The level of significance is local, and the period of significance is 1946, the building's original construction date.

Character-Defining Features

The character-defining features of the property include the eastern portion of the property, located east of North Palmer Court and containing the original showroom, and does not include the western portion of the property, the open-air automobile storage located on the west side of North Palmer Court. It is recommended that only the main automobile dealership building is eligible for listing in the NRHP and CRHR and the auxiliary structure complex located on the west side of Palmer Court would not be included in the property's eligible Section 106 and CEQA Boundary (see Supplemental Figures).

The character-defining features of the Packard Long Beach Company Building dealership building include: the building location and overall building form, the roof form and cantilevered canopy, the fenestration pattern, all of the windows and doors (except for one replacement vinyl window), the curved exterior and interior walls, and the projecting signboard attached to the façade.

B12. References

County of San Luis Obispo

2021 "History and Impact of Proposition 13." Accessed January 2021. https://www.slocounty.ca.gov/Departments/Assessor/Services/History-and-Impact-of-Proposition-13.aspx.

Google

2021 Google Maps. Accessed January 2021. https://www.google.com/maps?hl=en.

GPA Consulting

2015 Historical Resources Report Midtown Specific Plan Area, Long Beach, California. Prepared for the City of Long Beach.

Independent (Long Beach, CA)

1976 "Public Notice." Tuesday, July 13, pg. 25.

1966 Advertisement. Wednesday, April 20, pg. 17.

1964 Advertisement. Monday, April 27, pg. 33.

1958 Advertisement. Saturday, February 8, pg. 5

1957 Advertisement. Saturday, August 3, pg. 22.

1956 Advertisement. Friday, January 27, pg. 35.

1955 Advertisement. Thursday, October 20, pg. 45

1954 Advertisement. Saturday, June 26, pg. 20.

1953 Advertisement. Thursday, June 4, pg. 35.

1949 Advertisement. Thursday, June 30, pg. 49.

1948 Advertisement. Tuesday, March 16, pg. 30.

1946 Advertisement. Sunday, April 14, pg. 70.

Independent Press-Telegram

1963 Advertisement. Sunday, July 28, pg. 34.

1962 Advertisement. Sunday, December 30, pg. 21.

1961 Advertisement. Tuesday, August 8, pg. 55.

(Continued on next page)

(Continued from page 11)
B12. References (continued)

Los Angeles County

2021 Los Angeles County Assessor Portal Property Search. Accessed January 21, 2021. https://portal.assessor.lacounty.gov/parceldetail/7269016147.

Los Angeles Times

1967 Advertisement. Tuesday, September 26, pg. 95.

1960 Advertisement. Friday, March 25, pg. 27

1959 Advertisement. Friday, December 18, pg. 20.

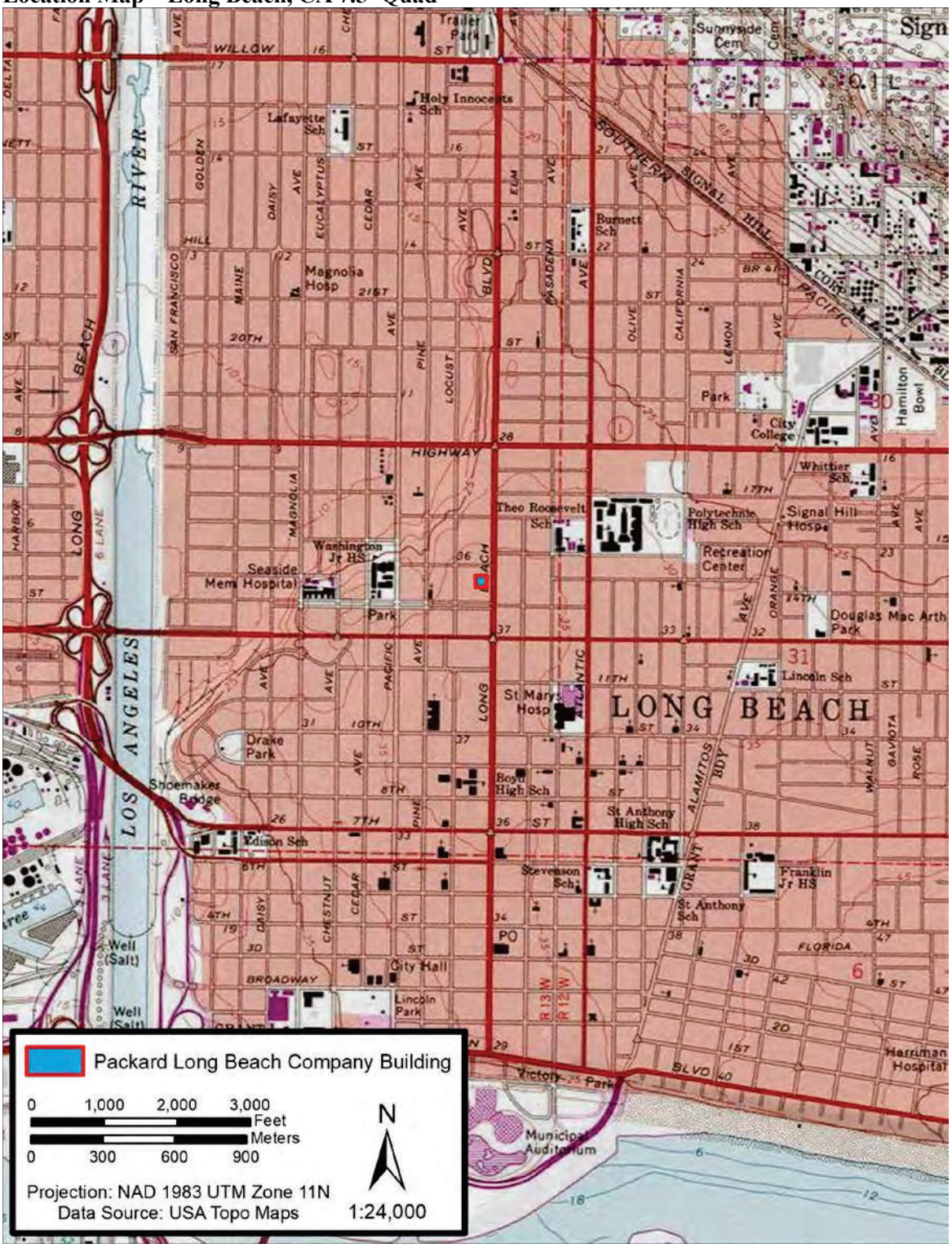
National Environmental Title Research (NETR)

2020 "Historic Aerials Viewer." Historic Aerials and Topo Maps of Los Angeles County, CA. Accessed January 2021. https://www.historicaerials.com/viewer.

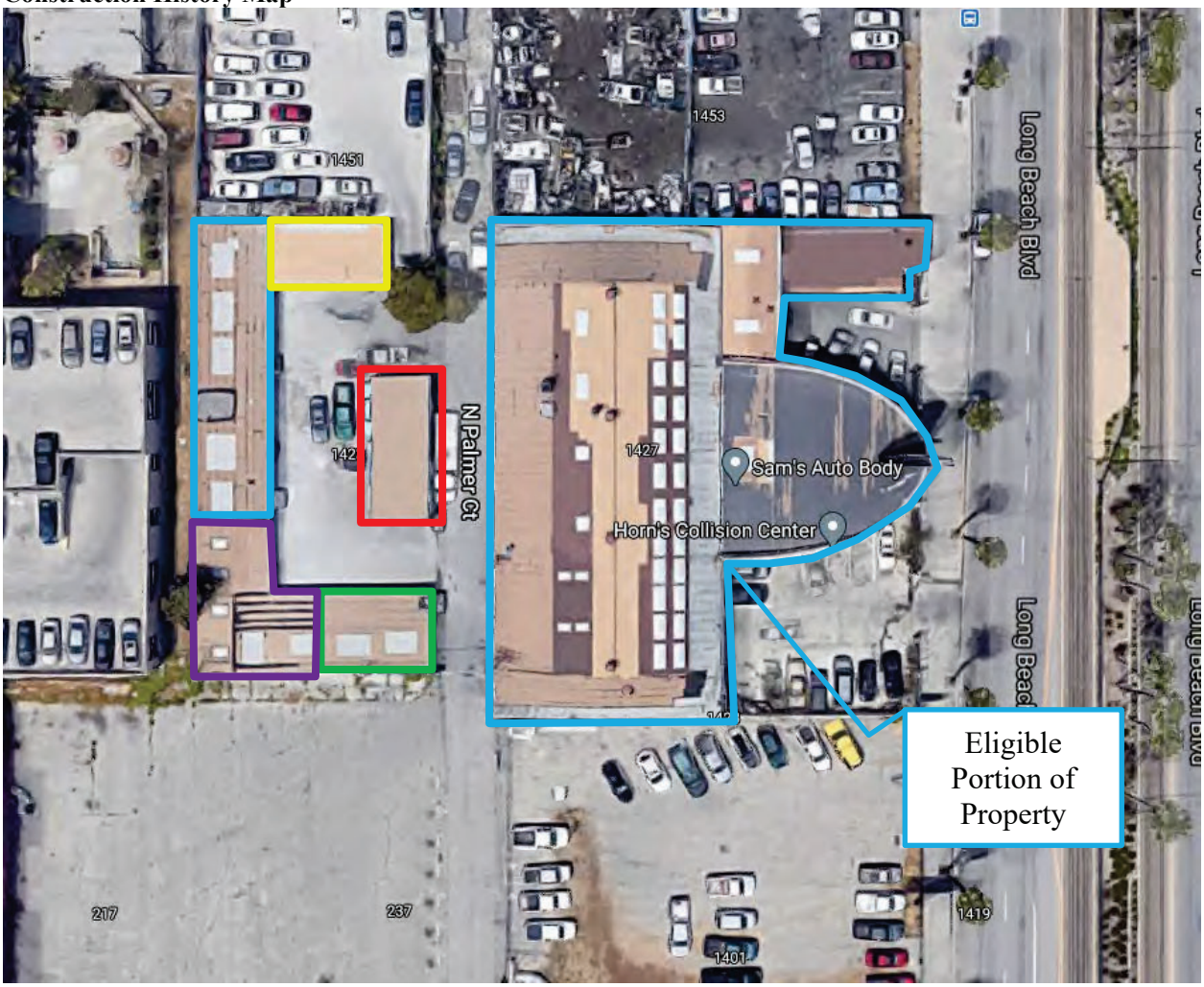
Sapphos Environmental, Inc.

2009 City of Long Beach Historic Context Statement. Prepared for the City of Long Beach. Available online at https://www.laconservancy.org/sites/default/files/files/issues/2009%20historic%20context%20for%20city.pdf.

Location Map – Long Beach, CA 7.5' Quad



Construction History Map



The blue polygons show the building components visible on a 1953 historic aerial. The green polygon shows the building section added between 1963 and 1972. The purple polygon shows the building section added between 1994 and 2002. The red polygon shows the building section added between 2009 and 2010. Lastly, the yellow polygon shows the building section added between 2010 and 2012 (Google 2021).

Attachment E: DPR Update for CA-LAN-694 (Confidential)

Attachment 11. Noise Abatement and Control Worksheet

Noise (EA Level Reviews)

General requirements	Legislation	Regulation
HUD's noise regulations protect residential properties from excessive noise exposure. HUD encourages mitigation as appropriate.	Noise Control Act of 1972 General Services Administration Federal Management Circular 75-2: "Compatible Land Uses at Federal Airfields"	Title 24 CFR 51 Subpart B
References		
https://www.hudexchange.info/programs/environmental-review/noise-abatement-and-control		

1. **What activities does your project involve? Check all that apply:**

☒ New construction for residential use
NOTE: HUD assistance to new construction projects is generally prohibited if they are located in an Unacceptable zone, and HUD discourages assistance for new construction projects in Normally Unacceptable zones. See 24 CFR 51.101(a)(3) for further details.
→ *Continue to Question 2.*

☐ Rehabilitation of an existing residential property
NOTE: For major or substantial rehabilitation in Normally Unacceptable zones, HUD encourages mitigation to reduce levels to acceptable compliance standards. For major rehabilitation in Unacceptable zones, HUD strongly encourages mitigation to reduce levels to acceptable compliance standards. See 24 CFR 51 Subpart B for further details.
→ *Continue to Question 2.*

☐ A research demonstration project which does not result in new construction or reconstruction, interstate, land sales registration, or any timely emergency assistance under disaster assistance provisions or appropriations which are provided to save lives, protect property, protect public health and safety, remove debris and wreckage, or assistance that has the effect of restoring facilities substantially as they existed prior to the disaster
→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below.*

☐ None of the above
→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below.*

2. **Complete the Preliminary Screening to identify potential noise generators in the vicinity (1000' from a major road, 3000' from a railroad, or 15 miles from an airport). Indicate the findings of the Preliminary Screening below:**

☐ There are no noise generators found within the threshold distances above.

→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map showing the location of the project relative to any noise generators.*

☒ Noise generators were found within the threshold distances.

→ *Continue to Question 3.*

3. **Complete the Noise Assessment Guidelines to quantify the noise exposure. Indicate the findings of the Noise Assessment below:**

☐ Acceptable: (65 decibels or less; the ceiling may be shifted to 70 decibels in circumstances described in §24 CFR 51.105(a))

Indicate noise level here: [ ]

→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide noise analysis, including noise level and data used to complete the analysis.*

☒ Normally Unacceptable: (Above 65 decibels but not exceeding 75 decibels; the floor may be shifted to 70 decibels in circumstances described in 24 CFR 51.105(a))

Indicate noise level here: [68]

<u>If project is rehabilitation:</u>

→ *Continue to Question 4. Provide noise analysis, including noise level and data used to complete the analysis.*

<u>If project is new construction:</u>

Is the project in a largely undeveloped area[1]?

☒ No

→ *Continue to Question 4. Provide noise analysis, including noise level and data used to complete the analysis, and any other relevant information.*

[1] A largely undeveloped area means the area within 2 miles of the project site is less than 50 percent developed with urban uses and does not have water and sewer capacity to serve the project.

☐ Yes

→Your project requires completion of an Environmental Impact Statement (EIS) pursuant to 51.104(b)(1)(i). Elevate this review to an EIS-level review.

☐ Unacceptable: (Above 75 decibels)

Indicate noise level here: [ ]

If project is rehabilitation:

HUD strongly encourages conversion of noise-exposed sites to land uses compatible with high noise levels. Consider converting this property to a non-residential use compatible with high noise levels.

→ Continue to Question 4. Provide noise analysis, including noise level and data used to complete the analysis, and any other relevant information.

If project is new construction:

Your project requires completion of an Environmental Impact Statement (EIS) pursuant to 51.104(b)(1)(i). You may either complete an EIS or provide a waiver signed by the appropriate authority. Indicate your choice:

☐ Convert to an EIS

→ Provide noise analysis, including noise level and data used to complete the analysis.

Continue to Question 4.

☐ Provide waiver

→ Provide an Environmental Impact Statement waiver from the Certifying Officer or the Assistant Secretary for Community Planning and Development per 24 CFR 51.104(b)(2) and noise analysis, including noise level and data used to complete the analysis.

Continue to Question 4.

4. **HUD strongly encourages mitigation be used to eliminate adverse noise impacts. Explain in detail the exact measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation. This information will be automatically included in the Mitigation summary for the environmental review.**

☒ Mitigation as follows will be implemented:

Mitigation Measure NOI-1: Prepare a Final Acoustical Report

The project applicant/developer shall submit a final acoustical report prepared to the satisfaction of the City of Long Beach Development Services Department. The report shall demonstrate that the residential development will be sound attenuated against present and projected noise levels, including roadway, railway, aircraft, helicopter, and stationary sources (e.g., industrial, commercial, etc.) to meet City interior standards. Specifically, the report shall demonstrate that the proposed residential design will result in compliance with the 45 dBA CNEL interior noise levels, as required by the California Building Code and California Noise Insulation Standards (Title 24 and 25 of the California Code of Regulations). The project applicant/developer shall submit the final acoustical report to the City of Long Beach Development Services Department for review and approval. Upon approval by the City, the project's acoustical design features shall be incorporated into construction of the proposed development project.

→ *Provide drawings, specifications, and other materials as needed to describe the project's noise mitigation measures. Continue to the Worksheet Summary.*

☐ No mitigation is necessary.

Explain why mitigation will not be made here:

→ *Continue to the Worksheet Summary.*

Worksheet Summary

Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

Based on the preliminary site plan, the proposed residential units will be constructed within 65 feet of the centerline of Long Beach Boulevard and 65 feet of the Metro A Line. At this distance the proposed residential units would potentially be exposed to noise levels above 67 dBA DNL for road noise and 61 dBA DNL for railroad noise, for a combined DNL of 68 dBA DNL. Standard building construction in warm climates provides 24 dBA of exterior to interior noise attenuation when windows are closed and 12 dBA of exterior to interior noise attenuation when windows are open (Protective Noise Levels, Environmental Protection Agency [EPA] 550/9 79 100, November 1978). All new construction residential units require some form of mechanical ventilation to ensure that proper indoor air quality is maintained even with all windows and doors closed. Therefore, with windows closed, the new residential units would be exposed to interior noise levels exceeding the 45 dBA DNL standard (68 – 24 = 44).
The following measure is recommended to reduce impacts: Mitigation Measure NOI-1 (see above).

Are formal compliance steps or mitigation required?

☒ Yes

☐ No

Attachment 11a. Noise and Vibration Technical Study

March 2021 | Noise and Vibration Technical Study

14th & Long Beach Boulevard Affordable Housing Project

for Pacific6 Enterprises

Prepared for:

Pacific6 Enterprises
Contact: John C. Molina
211 E. Ocean Blvd., Suite 550
Long Beach, California 90802
562.600.7226

Prepared by:

PlaceWorks
Contact: Izzy Garcia, Associate
3 MacArthur Place, Suite 1100
Santa Ana, California 92707
714.966.9220
info@placeworks.com
www.placeworks.com

PLACEWORKS

Table of Contents

Section **Page**

1. INTRODUCTION 1
1.1 PROJECT LOCATION 1
1.2 PROJECT DESCRIPTION 1
1.3 NOISE TERMINOLOGY AND DESCRIPTORS 5

2. REGULATORY SETTING 11
2.1 STATE 11
2.2 LOCAL 12

3. ENVIRONMENTAL SETTING 15
3.1 EXISTING NOISE ENVIRONMENT 15
3.2 SENSITIVE RECEPTORS 16

4. CEQA THRESHOLDS 17
4.1 NOISE THRESHOLDS 17
4.2 SIGNIFICANCE THRESHOLDS 17

5. ENVIRONMENTAL IMPACTS 19
5.1 SUMMARY OF IMPACTS IDENTIFIED WITH THE 2016 CERTIFIED EIR 19
5.2 METHODOLOGY 20
5.3 IMPACTS 20
5.4 ADOPTED MITIGATION MEASURES APPLICABLE TO THE PROPOSED PROJECT 26

6. REFERENCES 29

APPENDICES

Appendix A. Noise and Vibration

Table of Contents

List of Figures

Figure **Page**

Figure 1 Aerial Photograph 3

List of Tables

Table **Page**

Table 1 Noise Perceptibility 7
Table 2 Typical Noise Levels 9
Table 3 Human Reaction to Typical Vibration Levels 10
Table 4 Recommended Criteria for Maximum Acceptable Noise Levels[1] 13
Table 5 Long Beach Exterior Noise Standards 13
Table 6 Proposed Project Related Construction Noise, dBA L_{eq} 22
Table 7 Net Traffic Noise Increases 22
Table 8 Proposed Project's Vibration Levels (in in/sec PPV) 25
Table 9 Proposed Project's Construction Vibration Levels (in VdB) 25

1. Introduction

This Noise and Vibration Technical Study is prepared for Pacific6 Enterprises to evaluate the potential noise and vibration impacts pursuant to the California Environmental Quality Act (CEQA) from the development and operation of the proposed residential mixed-use buildings (Proposed Project) in the City of Long Beach. Specifically, the technical study is prepared to support an Addendum to the Midtown Specific Plan Environmental Impact Report certified in 2016 (2016 Certified EIR). For purposes of this technical study, buildout of the Midtown Specific Plan is the Approved Project and serves as the CEQA baseline for the Addendum. The Approved Project allows up to 401 units and 319,000 square feet of commercial uses in Transit Node District 7 (TND7).[1] Additionally, it also contemplates partial closure of 14th Street for parklets.

1.1 PROJECT LOCATION

The 1.54-acre project site is on 14th Street, west of Long Beach Boulevard, in the City of Long Beach (City), Los Angeles County, California, and is within TND7 of the Midtown Specific Plan. As shown in Figure 1, *Aerial Photograph*, the site is bounded by industrial uses to the north, multifamily residential to the west, industrial uses and Long Beach Boulevard to the east, and retail use and 14th Street to the south. The 1.09-acre portion of the project site north of East 14th Street is currently vacant, paved, and used as parking. The 0.45-acre portion of the project site south of East 14th Street, formerly occupied by a recently demolished fast-food building, is also currently vacant.

1.2 PROJECT DESCRIPTION

Pacific6 Enterprises is proposing to develop a mixed-use and mixed-income affordable housing community on the approximately 1.54-acre project site. The Proposed Project would develop two buildings (the East Building and West Building), with a cumulative area of 183,075 building square feet that would provide a total of 160 dwelling units (DU), 4,000 square feet of commercial space, and up to 104 parking spaces over 1.09 acres of the project site. The East Building would be constructed first. It would be eight levels and 116,645 square feet. This structure would traverse both the east and west portions of the 1.09-acre project site and would include parking for both the East and West Buildings. The East Building includes 35,365 square feet of parking on the ground floor and level two (L2). The East Building would provide 85 dwelling units on the second (L2) through seventh levels (L7). The West Building would be constructed on the eastern portion of the site, on top of the ground floor of the East Building (i.e., above the western-portion parking garage). It would include five levels (four levels on top of the parking garage) and be 66,430 square feet and encompass 4,000 square feet of commercial uses on the ground floor. The West Building would provide 75 dwelling units on the second (L2) through fifth levels (L5). Overall, both proposed buildings would be all-electric buildings, with no combustion

[1] Overall, the Transit Node District supports compact, transit-oriented mixed-use and residential development centered on the three Metro Blue Line stations. This district is characterized by intense building types, including mid- and low-rise podium, mixed-use flex blocks, liners, stacked flats, and live-work units.

1. Introduction

sources used for space heating, water heating, or cooking. In addition, a 133-kilowatt rooftop photovoltaic (PV) system would be installed, which would provide 205,954 kilowatt hours per year (kWh/yr) of renewal electricity for the Proposed Project.

The Proposed Project also includes development of the 14th Street Parklet on the remaining 0.45-acre site abutting the southeast corner of the project site. This portion of the project requires coordination with the City's Parks, Recreation and Marine; Development Services; and Public Works Departments. Creation of the park site would require vacating a portion of 14th Street along the project boundary to expand the site. The passive park would include a wood pavilion with stage, picnic tables, and a concrete plaza.

Transit improvements include a new enhanced bus island at the northwest corner of 14th Street and Long Beach Boulevard to be used by Long Beach Transit, Metro, and other regional transit providers. The bus island would include a transit shelter, furniture, landscaping, and real-time transit schedule information, located adjacent to the expanded 14th Street Park and ground floor retail space within the Project. Additionally, the proposed parklet would retain a 20-foot-wide paved pathway on the north side that would support bicycle movement and emergency vehicle access.

Figure 1 - Aerial Photograph



Project Boundary

0 100
Scale (Feet)

Source: Nearmap, 2020

1. Introduction

This page intentionally left blank.

1.3 NOISE TERMINOLOGY AND DESCRIPTORS

Noise is most often defined as unwanted sound. Although sound can be easily measured, the perception of noise and the physical response to sound complicate the analysis of its impact on people. People judge the relative magnitude of sound sensation in subjective terms such as "noisiness" or "loudness."

The following are brief definitions of terminology used in this document:

- **Sound.** A disturbance created by a vibrating object, which, when transmitted by pressure waves through a medium such as air, is capable of being detected by a receiving mechanism, such as the human ear or a microphone.

- **Noise.** Sound that is loud, unpleasant, unexpected, or otherwise undesirable.

- **Decibel (dB).** A unitless measure of sound, expressed on a logarithmic scale and with respect to a defined reference sound pressure. The standard reference pressure is 20 micropascals (20 μPa).

- **Vibration Decibel (VdB).** A unitless measure of vibration, expressed on a logarithmic scale and with respect to a defined reference vibration velocity. In the U.S., the standard reference velocity is 1 micro-inch per second ($1x10^{-6}$ in/sec).

- **A-Weighted Decibel (dBA).** An overall frequency-weighted sound level in decibels that approximates the frequency response of the human ear.

- **Equivalent Continuous Noise Level (L_{eq}); also called the Energy-Equivalent Noise Level.** The value of an equivalent, steady sound level which, in a stated time period (often over an hour) and at a stated location, has the same A-weighted sound energy as the time-varying sound. Thus, the L_{eq} metric is a single numerical value that represents the equivalent amount of variable sound energy received by a receptor over the specified duration.

- **Statistical Sound Level (L_n).** The sound level that is exceeded "n" percent of time during a given sample period. For example, the L_{50} level is the statistical indicator of the time-varying noise signal that is exceeded 50 percent of the time (during each sampling period); that is, half of the sampling time, the changing noise levels are above this value and half of the time they are below it. This is called the "median sound level." The L_{10} level, likewise, is the value that is exceeded 10 percent of the time (i.e., near the maximum) and this is often known as the "intrusive sound level." The L_{90} is the sound level exceeded 90 percent of the time and is often considered the "effective background level" or "residual noise level."

- **Maximum Sound Level (L_{max})**. The highest RMS sound level measured during the measurement period.
- **Root Mean Square Sound Level (RMS).** The square root of the average of the square of the sound pressure over the measurement period.

1. Introduction

- **Day-Night Sound Level (L_{dn} or DNL).** The energy-average of the A-weighted sound levels occurring during a 24-hour period, with 10 dB added to the sound levels occurring during the period from 10:00 PM to 7:00 AM.

- **Community Noise Equivalent Level (CNEL).** The energy average of the A-weighted sound levels occurring during a 24-hour period, with 5 dB added from 7:00 PM to 10:00 PM and 10 dB from 10:00 PM to 7:00 AM. NOTE: For general community/environmental noise, CNEL and L_{dn} values rarely differ by more than 1 dB (with the CNEL being only slightly more restrictive – that is, higher than the L_{dn} value). As a matter of practice, L_{dn} and CNEL values are interchangeable and are treated as equivalent in this assessment.

- **Peak Particle Velocity (PPV).** The peak rate of speed at which soil particles move (e.g., inches per second) due to ground vibration.

- **Sensitive Receptor.** Noise- and vibration-sensitive receptors include land uses where quiet environments are necessary for enjoyment and public health and safety. Residences, schools, motels and hotels, libraries, religious institutions, hospitals, and nursing homes are examples.

1.3.1 Characteristics of Sound

When an object vibrates, it radiates part of its energy in the form of a pressure wave. Sound is that pressure wave transmitted through the air. Technically, airborne sound is a rapid fluctuation or oscillation of air pressure above and below atmospheric pressure that creates sound waves.

Sound can be described in terms of amplitude (loudness), frequency (pitch), or duration (time). Loudness or amplitude is measured in dB, frequency or pitch is measured in Hertz [Hz] or cycles per second, and duration or time variations is measured in seconds or minutes.

Amplitude

Unlike linear units such as inches or pounds, decibels are measured on a logarithmic scale. Because of the physical characteristics of noise transmission and perception, the relative loudness of sound does not closely match the actual amounts of sound energy. Table 1, *Noise Perceptibility*, presents the subjective effect of changes in sound pressure levels. Ambient sounds generally range from 30 dBA (very quiet) to 100 dBA (very loud). Changes of 1 to 3 dBA are detectable under quiet, controlled conditions, and changes of less than 1 dBA are usually not discernible (even under ideal conditions). A 3 dBA change in noise levels is considered the minimum change that is detectable with human hearing in outside environments. A change of 5 dBA is readily discernible to most people in an exterior environment, and a 10 dBA change is perceived as a doubling (or halving) of the sound.

Table 1 Noise Perceptibility

Change in dB	Noise Level
± 3 dB	Threshold of human perceptibility
± 5 dB	Clearly noticeable change in noise level
± 10 dB	Half or twice as loud
± 20 dB	Much quieter or louder

Source: California Department of Transportation (Caltrans). 2013a, September. Technical Noise Supplement ("TeNS").

Frequency

The human ear is not equally sensitive to all frequencies. Sound waves below 16 Hz are not heard at all, but are "felt" more as a vibration (predominantly, in a person's chest cavity). Similarly, though people with extremely sensitive hearing can hear sounds as high as 20,000 Hz, most people cannot hear above 15,000 Hz. In all cases, hearing acuity falls off rapidly above about 10,000 Hz and below about 200 Hz.

When describing sound and its effect on a human population, A-weighted (dBA) sound levels are typically used to approximate the response of the human ear. The A-weighted noise level has been found to correlate well with people's judgments of the "noisiness" of different sounds and has been used for many years as a measure of community and industrial noise.

Duration

Time variation in noise exposure is typically expressed in terms of a steady-state energy level equal to the energy content of the time varying period (called L_{eq}), or alternately, as a statistical description of the sound level that is exceeded over some fraction of a given observation period. For example, the L_{50} noise level represents the noise level that is exceeded 50 percent of the time; half the time the noise level exceeds this level and half the time the noise level is less than this level. This level is also representative of the level that is exceeded 30 minutes in an hour. Similarly, the L_2, L_8 and L_{25} values represent the noise levels that are exceeded 2, 8, and 25 percent of the time or 1, 5, and 15 minutes per hour, respectively. These "n" values are typically used to demonstrate compliance for stationary noise sources with many cities' noise ordinances. Other values typically noted during a noise survey are the L_{min} and L_{max}. These values represent the minimum and maximum root-mean-square noise levels obtained over the measurement period, respectively.

Because community receptors are more sensitive to unwanted noise intrusion during the evening and at night, state law and many local jurisdictions use an adjusted 24-hour noise descriptor called the Community Noise Equivalent Level (CNEL) or Day-Night Noise Level (L_{dn}). The CNEL descriptor requires that an artificial increment (or "penalty") of 5 dBA be added to the actual noise level for the hours from 7:00 PM to 10:00 PM and 10 dBA for the hours from 10:00 PM to 7:00 AM. The L_{dn} descriptor uses the same methodology except that there is no artificial increment added to the hours between 7:00 PM and 10:00 PM. Both descriptors give roughly the same 24-hour level, with the CNEL being only slightly more restrictive (i.e., higher). The CNEL or L_{dn} metrics are commonly applied to the assessment of roadway and airport-related noise sources.

1. Introduction

Sound Propagation

Sound dissipates exponentially with distance from the noise source. This phenomenon is known as "spreading loss." For a single-point source, sound levels decrease by approximately 6 dBA for each doubling of distance from the source (conservatively neglecting ground attenuation effects, air absorption factors, and barrier shielding). For example, if a backhoe at 50 feet generates 84 dBA, at 100 feet the noise level would be 78 dBA, and at 200 feet it would be 72 dBA. This drop-off rate is appropriate for noise generated by on-site operations from stationary equipment or activity at a project site. If noise is produced by a line source, such as highway traffic, the sound decreases by 3 dBA for each doubling of distance over a reflective ("hard site") surface such as concrete or asphalt. Line source noise in a relatively flat environment with ground-level absorptive vegetation decreases by an additional 1.5 dBA for each doubling of distance.

Psychological and Physiological Effects of Noise

Physical damage to human hearing begins at prolonged exposure to noise levels higher than 85 dBA. Exposure to high noise levels affects the entire system, with prolonged noise exposure in excess of 75 dBA increasing body tensions, thereby affecting blood pressure and functions of the heart and the nervous system. Extended periods of noise exposure above 90 dBA results in permanent cell damage, which is the main driver for employee hearing protection regulations in the workplace. For community environments, the ambient or background noise problem is widespread, through generally worse in urban areas than in outlying, less-developed areas. Elevated ambient noise levels can result in noise interference (e.g., speech interruption/masking, sleep disturbance, disturbance of concentration) and cause annoyance. Although the A-weighted scale and the energy-equivalent metric are commonly used to quantify the range of human response to individual events or general community sound levels, the degree of annoyance or other response also depends on several other perceptibility factors, including:

- Ambient (background) sound level
- General nature of the existing conditions (e.g., quiet rural or busy urban)
- Difference between the magnitude of the sound event level and the ambient condition
- Duration of the sound event
- Number of event occurrences and their repetitiveness
- Time of day that the event occurs

Since most people do not routinely work with decibels or A-weighted sound levels, it is often difficult to appreciate what a given sound pressure level number means. To help relate noise level values to common experience, Table 2, *Typical Noise Levels*, shows typical noise levels from familiar sources.

Table 2 Typical Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	110	Rock Band
Jet Flyover at 1,000 feet		
	100	
Gas Lawn Mower at three feet		
	90	
Diesel Truck at 50 feet, at 50 mph		Food Blender at 3 feet
	80	Garbage Disposal at 3 feet
Noisy Urban Area, Daytime		
	70	Vacuum Cleaner at 10 feet
Commercial Area		Normal speech at 3 feet
Heavy Traffic at 300 feet	60	
		Large Business Office
Quiet Urban Daytime	50	Dishwasher Next Room
Quiet Urban Nighttime	40	Theater, Large Conference Room (background)
Quiet Suburban Nighttime		
	30	Library
Quiet Rural Nighttime		Bedroom at Night, Concert Hall (background)
	20	
Very Remote & Unpopulated Area Nighttime		Broadcast/Recording Studio
	10	
Lowest Threshold of Human Hearing	0	Lowest Threshold of Human Hearing

Source: California Department of Transportation (Caltrans). 2013a, September. Technical Noise Supplement ("TeNS").

1.3.2 Characteristics of Vibration

Vibration is an oscillatory motion through a solid medium in which the motion's amplitude can be described in terms of displacement, velocity, or acceleration. Vibration is normally associated with activities stemming from operations of railroads or vibration-intensive stationary sources, but can also be associated with construction equipment such as jackhammers, pile drivers, and hydraulic hammers. As with noise, vibration can be described by both its amplitude and frequency. Vibration displacement is the distance that a point on a surface moves away from its original static position; velocity is the instantaneous speed that a point on a surface moves; and acceleration is the rate of change of the speed. Each of these descriptors can be used to correlate vibration to human response, building damage, and acceptable equipment vibration levels. During construction, the operation of construction equipment can cause groundborne vibration. During the operational phase of a project, receptors may be subject to levels of vibration that can cause annoyance due to noise generated from vibration of a structure or items within a structure.

Vibration amplitudes are usually described in terms of either the peak particle velocity (PPV) or the root mean square (RMS) velocity. PPV is the maximum instantaneous peak of the vibration signal and RMS is the square

1. Introduction

root of the average of the squared amplitude of the signal. PPV is more appropriate for evaluating potential building damage and RMS is typically more suitable for evaluating human response.

As with airborne sound, annoyance with vibrational energy is a subjective measure, depending on the level of activity and the sensitivity of the individual. To sensitive individuals, vibrations approaching the threshold of perception can be annoying. Persons accustomed to elevated ambient vibration levels, such as in an urban environment, may tolerate higher vibration levels. Table 3, *Human Reaction to Typical Vibration Levels,* displays the human response and the effects on buildings resulting from continuous vibration (in terms of various levels of PPV).

Table 3 Human Reaction to Typical Vibration Levels

Vibration Level, PPV (in/sec)	Human Reaction	Effect on Buildings
0.006–0.019	Threshold of perception, possibility of intrusion	Vibrations unlikely to cause damage of any type
0.08	Vibrations readily perceptible	Recommended upper level of vibration to which ruins and ancient monuments should be subjected
0.10	Level at which continuous vibration begins to annoy people	Virtually no risk of "architectural" (i.e. not structural) damage to normal buildings
0.20	Vibrations annoying to people in buildings	Threshold at which there is a risk to "architectural" damage to normal dwelling – houses with plastered walls and ceilings
0.4–0.6	Vibrations considered unpleasant by people subjected to continuous vibrations and unacceptable to some people walking on bridges	Vibrations at a greater level than normally expected from traffic, but would cause "architectural" damage and possibly minor structural damage

Source: California Department of Transportation (Caltrans). 2020b, April. *Transportation and Construction Vibration Guidance Manual.* Prepared by ICF International.

2. Regulatory Setting

To limit people's exposure to physically and/or psychologically damaging as well as intrusive noise levels, federal, state, and local agencies have established standards and ordinances to control noise. Potential noise and vibration impacts were evaluated based on the Approved Project (Midtown Specific Plan EIR) baseline and the applicable noise standards from the City of Long Beach to determine the net change in construction and operational noise impacts due to implementation of the Proposed Project.

Federal Regulations

US Department of Housing and Urban Development

The US Department of Housing and Urban Development (HUD) has set the goal of 65 dBA L_{dn} as a desirable maximum exterior standard for residential units developed under HUD funding (This level is also generally accepted within the State of California). Although HUD does not specify acceptable interior noise levels, standard construction of residential dwellings typically provides 20 dBA or more of attenuation with the windows closed. Based on this premise, the interior L_{dn} should not exceed 45 dBA.

2.1 STATE

2.1.1 California Building Code

The California Building Code (CBC), Title 24, Part 2, Volume 1, Chapter 12, Section 1207.11.2, Allowable Interior Noise Levels, requires that interior noise levels attributable to exterior sources shall not exceed 45 dB in any habitable room. The noise metric is evaluated as either the day-night average sound level (L_{dn}) or the community noise equivalent level (CNEL), consistent with the noise element of the local general plan.

Structures with habitable rooms that are near major transportation noise sources within the 60 dBA CNEL noise contour require an acoustical analysis showing that the structure has been designed to limit intruding noise in the prescribed allowable levels. To comply with these regulations, applicants of new the residential projects are required to submit an acoustical report in areas where noise and land use compatibility is a concern. The report is required to analyze exterior noise sources affecting the proposed dwelling site, predicted noise spectra at the exterior of the proposed dwelling structure considering present and future land usage, basis for the prediction (measured or obtained from published data), noise attenuation measures to be applied, and an analysis of the noise insulation effectiveness of the proposed construction showing that the prescribed interior noise level requirements are met. If interior allowable noise levels are met by requiring that windows be inoperable or closed, the design for the structure must also specify the means that will be employed to provide ventilation and cooling, if necessary, to provide a habitable interior environment.

The California Green Building Standards Code (CALGreen) has requirements for insulation that affect exterior-interior noise transmission for nonresidential structures. Pursuant to CALGreen Section 5.507.4.1, Exterior Noise Transmission, an architectural acoustics study may be required when a project site is within a 65 dBA CNEL or Ldn noise contour of an airport, freeway or expressway, railroad, industrial source or fixed-guideway source. Where noise contours are not readily available, if buildings are exposed to a noise level of 65 dBA L_{eq} during any hour of operation, specific wall and ceiling assembly and sound-rated windows may be necessary to reduce interior noise to acceptable levels.

2.2 LOCAL

2.2.1 City of Long Beach General Plan

The City's General Plan Noise Element includes an assessment of the existing community noise environment, including surveys of residents, and an action plan for achieving goals for the future noise environment within the City. The Noise Element aims to protect the health and well-being of the City's residents by establishing and preserving quiet environments within the City. Applicable goals from the General Plan Noise Element to the Proposed Project are:

- To attain a healthier and quieter environment for all its citizens while maintaining a reasonable level of economic progress and development.
- To protect and preserve both the property rights of owners and the right to quietness of the citizenry at large.
- To make the City a quieter, more pleasant place in which to live.
- To diminish the transportation roar that impacts on the population.
- To respond to demands for a reasonably quiet environment which is compatible with both existing ambient noise levels and continuing building and industrial development.
- To reduce both noise exposure to the population and noise level outputs generated by the population.
- To attain the lowest possible level of harmful effects of noise on the people by the implementation of information, monitoring, and advisory programs.

  Maximum acceptable noise levels by land use and time of day are summarized in Table 4, *Recommended Criteria for Maximum Acceptable Noise Levels*, per the Long Beach General Plan Noise Element.

Table 4 Recommended Criteria for Maximum Acceptable Noise Levels[1]

Receiving Land Use District	Outdoor			Indoor
	Maximum Single Hourly Peak[1,2]	L_{10}[2]	L_{50}[3]	L_{dn}[5]
Residential (7:00 AM – 10:00 PM)[4]	70	55	45	45
Residential (10:00 PM – 7:00 AM)[4]	60	45	35	35
Commercial (anytime)	75	65	55	See Table note 6
Industrial (anytime)	85	70	60	See Table note 6

Source: City of Long Beach General Plan Noise Element, Table 11

1 Based on existing ambient level ranges in Long Beach.

2 Noise levels that exceed ten percent of the time.

3 Noise levels that exceed fifty Percent of the time.

4 Includes all residential categories and all noise sensitive land uses such as hospitals, schools, etc.

5. Day/night average sound level. The 24-hour A-weighted equivalent sound level with a 10-decibel penalty applied to nighttime levels.

6. Since different types of commercial and industrial activities appear to be associated with different noise levels, identification of a maximum indoor level for activity interferences is infeasible.

2.2.2 City of Long Beach Municipal Code

Chapter 8.80 (Noise) of the Long Beach Municipal Code (LBMC) provides regulations to control unnecessary, excessive, and annoying noise and vibration in the City. Exterior noise limits based on land use are shown in Table 5, *Long Beach Exterior Noise Limits.*

Table 5 Long Beach Exterior Noise Standards

Receiving Land Use District	Noise Level, dBA[1,2]	
	7:00 AM to 10:00 PM	10:00 PM to 7:00 AM
District One	50	45
District Two	60	50
District Three	65	65
District Four	70	70
District Five	Regulated by other agencies and laws	

Source: City of Long Beach Municipal Code, Chapter 8.80, *Noise*.

Note: District One is predominantly residential with other land use types; District Two is predominantly commercial with other land use types; Districts Three and Four are predominantly industrial with other land use types; District Five covers the airport, freeways, and waterways regulated by other agencies. Districts Three and Four limits are intended primarily for use at their boundaries rather than for noise control within those districts.

1 If the alleged offensive noise contains a steady audible tone such as a whine, screech, or hum, or is a repetitive noise such as hammering or riveting or contains music or speech conveying informational content, the noise levels shall be reduced by 5 dBA.

2 Noise levels may not exceed the noise standard:

- for a cumulative period of more than thirty minutes in any hour (L50);
- plus 5 dBA for a cumulative period of more than fifteen minutes in any hour (L25);
- plus 10 dBA for a cumulative period of more than five minutes in any hour (L8);
- plus 15 dBA for a cumulative period of more than one minute in any hour (L1); or
- plus 20 dBA for any period of time (Lmax).

2. Regulatory Setting

In addition to the residential noise standards outlined above, Section 8.80.130, *Disturbing Noises Prohibited,* of the City's Municipal Code states that it is unlawful to make any loud, unnecessary, and unusual noise which disturbs the peace or quiet, or which causes discomfort or annoyance to any reasonable person, regardless of whether the noise level exceeds the standards specified above.

Section 8.80.200, *Noise Disturbances-Acts Specified,* of the City's Municipal Code prohibits loading, unloading, opening, closing or other handling of boxes, crates, containers, building materials, garbage cans, or similar objects between the hours of 10:00 PM and 7:00 AM that causes a noise disturbance across a residential property line or at any time violates the standards in Table 5.

Construction Noise

Under Section 8.80.202, *Construction Activity, Noise Regulations*, the City prohibits construction activities from 7:00 PM to 7:00 AM Monday through Friday (including federal holidays), and before 9:00 AM or after 6:00 PM on Saturdays that produce loud or unusual noise which annoys or disturbs a reasonable person of normal sensitivity. Construction is prohibited on Sundays unless a permit has been issued.

Vibration

According to Section 8.80.200 (Noise Disturbances-Acts Specified) of the City's Municipal Code, it is illegal to operate any device that creates vibration above the vibration perception threshold of an individual at the property boundary of the source if on private property, or at 150 feet from the source in a public space. For the purposes of this section, "vibration perception threshold" means the minimum ground or structure-borne vibrational motion necessary to cause a normal person to be aware of the vibration by such directed means as, but not limited to, sensation by touch or visual observation of moving objects.

HVAC

Air conditioning or air refrigerating equipment noise standards are enforced by the LBMC Section 8.80.200(N). Equipment installed after January 1, 1980 shall not exceed:

- 55 dBA, at any point on neighboring property line, five feet above grade level, no closer than three feet from any wall.
- 50 dBA, outside the neighboring living area window nearest the equipment location, not more than three feet from the window opening, but at least three feet from another surface.

3. Environmental Setting

3.1 EXISTING NOISE ENVIRONMENT

The 1.54-acre project site is at 1401 Long Beach Boulevard at the northwest corner of Long Beach Boulevard and 14th Street. The project site is bounded by Long Beach Boulevard to the east, 14th Street to the south, a four-story apartment building and parking structure to the west and northwest, and commercial uses (Horn's Collision Center, Sam's Auto Body) to the north. Metro's A Line (formerly known as the Blue Line) is at street level and runs within the Long Beach Boulevard median. The Anaheim Street station is 0.2 mile south of the site. The vacated North Palmer Court alleyway bisects the east and west portions of the 1.09-acre-parcel. The entire site is currently vacant, paved, and used as parking. The Proposed Project also includes improvements on a 0.45-acre (19,700 square feet) area south of the project site. This site is proposed by the City as a park. It was formerly occupied by a fast-food building, which has been demolished. This site also includes the 14th street right-of-way (ROW) and the former fast-food parcel—though the City of Long Beach has already secured environmental review and clearances for developing a park on this parcel.

The existing noise environment in the Project Area is primarily influenced by traffic noise on Long Beach Boulevard and 14th Street and rail noise from the Metro A Line. Secondary noise characteristics of the site include noise associated with the surrounding businesses such as Horn's Collision Center and Sam's Auto Body adjacent to the north, and outdoor activities associated with the recreational uses to the south of the proposed mixed-use development and west of the proposed parklet. According the to the General Plan Noise Element Update Existing Conditions Report, traffic noise contours show the project site to be within the 60 and 65 dBA Ldn noise contours.

As a result of the California Supreme Court decision regarding the assessment of the environment's impacts on projects (*California Building Industry Association (CBIA) v. Bay Area Air Quality Management District (BAAQMD)*, 62 Cal. 4th 369 (No. S 213478) issued December 17, 2015), it is generally no longer the purview of the CEQA process to evaluate the impact of existing environmental conditions on any given project. The direct effects of exterior noise from nearby noise sources relative to land use compatibility of a future project as a result of the Proposed Project is no longer typically a required topic for impact evaluation under CEQA. Generally, no determination of significance is required except for certain school projects, project's affected by airport noise, and project's that would exacerbate existing conditions (i.e., projects that would have a significant operational impact). Though the Proposed Project would place residences within the "Conditionally Acceptable" range per the State's noise and land use compatibility standards, no CEQA impact determination is needed. However, as required by Mitigation Measure N-5 of the 2016 Certified EIR, the project applicant shall submit an acoustical report prepared to the satisfaction of the City of Long Beach Development Services Department. The report shall demonstrate that the residential development will be sound-attenuated to meet City interior standards, specifically to meet the 45 dBA CNEL interior noise levels, as required by the California Building Code and California Noise Insulation Standards (Title 24 and 25 of the California Code of Regulations).

3.2 SENSITIVE RECEPTORS

Certain land uses are particularly sensitive to noise and vibration, including residential, schools, hospitals, and open space/recreation areas where quiet environments are necessary for enjoyment, public health, and safety.

The nearest existing sensitive receptors to the project site include multifamily residential uses adjacent to the west and the Grace Presbyterian Church to the southwest. Other, more distant sensitive receptors in the vicinity of the project include single-family and multifamily residential to the north and south, and Un Mundo De Amigos Preschool to the northeast.

4. CEQA Thresholds

4.1 NOISE THRESHOLDS

According to Appendix G of the CEQA Guidelines, a project would normally have a significant effect on the environment if the project would result in:

N-1 Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.

N-2 Generation of excessive groundborne vibration or groundborne noise levels.

N-3 For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, if the project would expose people residing or working in the project area to excessive noise levels.

4.2 SIGNIFICANCE THRESHOLDS

Traffic Noise

A significant impact could occur if the proposed development would result in an increase of 5 dBA but the resultant noise level remains within the objectives of the City's General Plan of 65 dBA CNEL at a noise-sensitive location, or if an increase of 3 dBA would occur and the resultant noise level meets or exceeds 65 dBA CNEL.

Construction Noise

The City of Long Beach does not have an established criterion for construction noise, nor was one established in the Approved Project. The FTA provides criteria for acceptable construction noise levels and recommends a daytime noise threshold of 80 dBA $L_{eq(8hr)}$ for residential uses. For the purposes of this analysis, the FTA criterion is applied to nearby sensitive receptors to determine impact significance.

Stationary Noise

As discussed above in Section 2, *Regulatory Setting*, the City's noise ordinance establishes exterior noise levels based on receiving land use. For the purposes of this analysis, these exterior noise standards are used to determine impact significance at nearby sensitive receptors.

4. CEQA Thresholds

Vibration

As stated in the Approved Project, the FTA criteria for human annoyance of 78 VdB and structural damage of 0.20 inches per second peak particle velocity (in/sec PPV) are used as thresholds to determine impact significant at nearby sensitive receptors.

5. Environmental Impacts

5.1 SUMMARY OF IMPACTS IDENTIFIED WITH THE 2016 CERTIFIED EIR

Construction Noise

The Approved Project found that the Midtown Specific Plan area is made up of residential, commercial, and medical uses. Construction of individual developments under the Approved Project would temporarily increase the noise ambient in the vicinity of future developments and existing sensitive uses. Because construction activities associated with any individual development project under the Approved Project may occur near noise-sensitive receptors and disturbances may occur for prolonged periods of time, construction noise impacts were found to be significant and unavoidable even with implementation of Mitigation Measure N-1.

Traffic Noise

The Approved Project found that impacts associated with traffic noise to be less than significant. Traffic noise increases due to implementation of the Approved Project would be up to 1 dBA CNEL in an existing environment of 68.5 dBA CNEL. No roadway segments were found to result in a traffic noise increase greater than 5 dBA or to experience substantial noise increases greater than 3 dBA resulting in noise levels at or greater than 65 dBA CNEL.

Stationary Noise

The Approved Project found that stationary noise sources such as heating ventilation and air conditioning equipment (HVAC) would not substantially increase the noise environment and, in addition, are regulated by the City's Municipal Code. Therefore, stationary noise impacts associated with implementation of the Approved Project were found to be less than significant.

Vibration

Construction Vibration

Construction vibration impacts were found to potentially exceed the FTA criterion of 78 VdB for human annoyance and 0.20 in/sec PPV. However, with implementation of Mitigation Measure N-2 of the Approved Project, vibration impacts were found to be reduced to less than significant.

Operational Vibration

The Approved Project found operational vibration impacts to be potentially significant. However, with implementation of Mitigation Measure N-4 of the Approved Project, impacts were found to be reduced to less than significant.

Transportation-Related Vibration

The Approved Project found roadway routes within the Project Area were not expected to generate excessive vibration and traffic-induced vibration levels and would be less than significant. The Approved Project stated that according to Caltrans the highest traffic-generated vibration levels are along freeways and state routes. Vibration levels measured on the freeway shoulders have never exceeded 0.08 in/sec PPV (which is the level coinciding with maximum recommended safe exposure level for historic buildings).

Under the Approved Project, the Metro Green Line was planned to be expanded within the Midtown Specific Plan area, potentially adding new sensitive receptors adjacent to the Green Line railway. The Approved Project found that vibration associated with railroad operations to be significant. However, with implementation of Mitigation Measure N-3 of the Approved Project, impacts were found to be reduced to less than significant.

Airport Noise Exposure

The Initial Study for the Approved Project determined that because there are no private airstrips adjacent to or within the vicinity of the project site, that no impact with regard to exposure of excessive aircraft noise to people residing or working in the Project Area would occur.

5.2 METHODOLOGY

Daily trip generation associated with the Proposed Project (Fehr & Peers 2020) is used in this analysis to estimate traffic noise increases when compared to the Approved Project baseline. The Approved Project daily trips baseline are compared logarithmically to the Proposed Project daily trips [10*log(Proposed Project daily/Approved Project daily trip)] trips to determine the traffic noise increases. The construction noise analysis uses the Roadway Construction Noise Model (RCNM) based on CalEEMod equipment mix defaults verified by the Applicant to determine construction noise levels. The simultaneous use of the top three loudest pieces of equipment for each construction activity is modeled from the acoustical center of the construction site to the nearest sensitive receptor property line. Groundborne vibration and vibration noise is determined using FTA methodology and reference vibration levels for typical construction equipment (FTA 2018).

5.3 IMPACTS

This section discusses the project-specific impacts related to noise and vibration.

NOISE-1	**Construction activities would result in temporary noise increases in the vicinity of the Proposed Project that would not exceed standards. [Threshold N-1]**

Construction Vehicles

The transport of workers and materials to and from the construction site would incrementally increase noise levels along Long Beach Boulevard. Individual construction vehicle pass-bys may create momentary noise levels of up to approximately 85 dBA (Lmax) at 50 feet from the vehicle, but these occurrences would generally be infrequent and short lived. Based on CalEEMod construction defaults, the Proposed Project would generate up to 133 combined temporary worker and vendor and 10 daily haul trips (the haul trips would be during a

separate phase). The addition of these construction trips on the road would be temporary and would not substantially increase ambient noise levels when compared to the thousands of existing daily trips along Long Beach Boulevard. The traffic noise increase would be less than 0.1 dBA CNEL. Therefore, the Proposed Project would not result in new or greater significant impacts than the Approved Project.

Construction Equipment

Noise generated by on-site construction equipment is based on the type of equipment used, its location relative to sensitive receptors, and the timing and duration of noise-generating activities. Each phase of construction involves different types of equipment and has distinct noise characteristics. Noise levels from construction activities are typically dominated by the loudest several pieces of equipment. The dominant equipment noise source is typically the engine, although work-piece noise (such as dropping of materials) can also be noticeable.

The noise produced at each construction phase is determined by combining the L_{eq} contributions from the top three loudest pieces of equipment used at a given time, while accounting for the ongoing time-variations of noise emissions (commonly referred to as the usage factor). Heavy equipment, such as a dozer or a loader, can have maximum, short-duration noise levels of up to 85 dBA at 50 feet. However, overall noise emissions vary considerably, depending on what specific activity is being performed at any given moment.

Noise attenuation due to distance, the number and type of equipment, and the load and power requirements to accomplish tasks at each construction phase would result in different noise levels from construction activities at a given receptor. Since noise from construction equipment is intermittent and diminishes at a rate of at least 6 dBA per doubling of distance (conservatively ignoring other attenuation effects from air absorption, ground effects, and shielding effects), the average noise levels at noise-sensitive receptors could vary considerably, because mobile construction equipment would move around the site (site of each development phase) with different loads and power requirements. The City of Long Beach does not have an established construction noise threshold. Therefore, the FTA criterion of 80 dBA L_{eq} is used to determine impact significance at and off-site receptors.

Under the Approved Project, construction-related noise was found to be significant and unavoidable. Project level details were not known at the time of the 2016 Certified EIR and noise levels were anticipated to range between 71 dBA L_{max} and 101 dBA L_{max} at a distance of 50 feet. Construction noise levels associated with the Proposed Project were modeled using RCNM from the acoustical center of the construction site to the nearest sensitive receptors. Results are summarized in Table 6, *Proposed Project Related Construction Noise, dBA L_{eq}*. Construction noise levels due to the Proposed Project would not be significantly greater than that analyzed in the Approved Project and would be below the FTA 80 dBA $L_{eq(8\ hr)}$ threshold.

5. Environmental Impacts

Table 6 Proposed Project Related Construction Noise, dBA L_{eq}

Construction Activity Phase	RCNM output noise level - 50 feet	Un Mundo de Amigos Preschool to northeast - 450 feet	Grace Presbyterian Church to southwest - 460 feet	Residential to west - 190 feet	Exceeds 80 dBA $L_{eq(8\ hr)}$ Threshold?
Asphalt Demolition	85	66	66	74	No
Site Prep/Rough Grading	85	66	65	73	No
Parking/Building Construction	83	63	63	71	No
Utility Trenching	77	58	57	65	No
Paving	85	66	66	73	No
Finish/Landscaping	77	58	57	65	No
Architectural Paving	74	55	54	62	No

Notes: Calculations performed with the FHWA's RCNM software are included in Appendix A.
Distance to sensitive receivers measured from the construction site's acoustical center to receptor property line.

NOISE-2 Project implementation would result in long-term operation-related noise that would not exceed local standards. [Threshold N-1]

Mobile-Source Noise Impacts

The Approved Project included three roadway segments in the vicinity of the Proposed Project: Pacific Avenue from 16th Street to 15th Street, Atlantic Avenue from 16th Street to 15th Street, and Long Beach Boulevard from 11th Street to 10th Street. Existing Plus Project ADT volumes at these roadway segments ranged between 13,800 and 20,500 ADT. The Proposed Project is anticipated to generate 855 daily trips. To calculate the net traffic noise increase between the Proposed Project and the Approved Project, the 855 daily trips are added to the Approved Baseline No Project ADT scenario and compared logarithmically to the Approved Baseline No Project Plus Proposed Project ADT scenario. Table 7, *Net Traffic Noise Increases,* shows the net change in trips and the resulting traffic noise increases to be up to 0.2 dBA CNEL. Therefore, project related traffic noise would not exceed the 3 dBA threshold for existing noise environments greater than 65 dBA CNEL, and the Proposed Project would not result in new or greater impacts than the Approved Project.

Table 7 Net Traffic Noise Increases

Roadway Segment	2016 Certified EIR No Project ADT	2016 Certified EIR Plus Approved Project ADT	Proposed Project Daily Trip Generation[1]	2016 Certified EIR No Project Plus Proposed Project ADT	Net Daily Segment Volume Increase	Net Increase, dBA CNEL
Pacific Ave - 16th to 15th	12,952	13,800	855	13,807	7	<0.1
Atlantic Ave - 16th to 15th	19,672	20,500	855	20,527	27	<0.1
Long Beach Blvd - 11th to 10th	17,835	17,900	855	18,690	790	0.2

Source: Fehr & Peers 2020
[1] Daily trip generation of 855 applied to all segments for conservative approach.

Stationary-Source Noise Impacts

Stationary noise impacts were found to be less than significant under the Approved Project and are regulated by the City of Long Beach Municipal Code.

Loading and Unloading

The Proposed Project is a mixed-use project with both residential and retail components. Minimal loading and unloading activities would be associated with the retail uses. Loading and unloading equipment would be subject to limited hours of 7:00 AM to 10:00 PM from the City's Municipal Code. No major loading or industrial loading activities would be associated with the Proposed Project and impacts would not be greater than analyzed in the Approved Project.

Mechanical Equipment

The Approved Project determined that noise associated with air condition units would be less than significant. The Proposed Project would include use of rooftop HVAC systems for the mixed-use buildings. HVAC equipment would be located no closer than 40 feet from the nearest receptor property line. HVAC equipment would also be shielded via a parapet wall, penthouse structure, or roof forms that would obstruct line-of-sight to nearby receptors. This would result in noise attenuation of at least 5 dBA. Typical HVAC noise is approximately 72 dBA at a distance of 3 feet. At 40 feet, HVAC noise would attenuate to approximately 45 dBA (with the 5 dBA reduction from parapet wall or screening structure). HVAC noise would, therefore, not exceed the Municipal Code air conditioning and air refrigeration noise standards of:

- 55 dBA at any point on neighboring property line, five feet above grade level, no closer than three feet from any wall.

- 50 dBA outside the neighboring living area window nearest the equipment location, not more than three feet from the window opening, but at least three feet from any other surface.

Outdoor Common Areas

The Project proposes outdoor roof decks on the eastern building, adjacent to Long Beach Boulevard. The dominant noise source associated with the proposed roof deck is speech from persons talking. A typical conversation between two people at a distance of 6 feet is approximately 54 dBA (Engineering ToolBox, 2005). The nearest noise sensitive receptor to the roof deck area is the apartment building approximately 180 feet to the west. At a distance of 180 feet, noise levels would attenuate to 25 dBA or less. This would not exceed the City of Long Beach daytime and nighttime noise standard of 50 dBA under the District One land use (Table 5).

14th Street Parklet

The Proposed Project includes the development of a 0.45-acre parklet abutting the southeast corner of the project site. The primary noise sources associated with the passive park would be from foot traffic and use of the wood pavilion stage, picnic tables, and the concrete plaza. The pavilion stage would not have a permanent installation of sound amplification equipment. The nearest sensitive receptor to the passive park is the

apartment building approximately 250 feet to the northwest across 14th Street. Noise levels associated with operation of the passive park would be similar existing noise levels associated with the 14th Street Fitness Park, plaza, and basketball courts directly across from the residential building. The proposed passive park would be east of these existing uses, placing it further from the nearest sensitive receptors. Therefore, noise from the proposed parklet would be the same or less than existing noise levels associated with outdoor recreational uses.

NOISE-3 The project would create short-term or long-term groundborne vibration and groundborne noise. [Threshold N-2]

Operational Vibration

Roadway-Related Vibration Impacts

The Proposed Project would not introduce substantial roadway vibration sources. As cited in the Approved Project, "vibrations measured on freeway shoulders (five meters from the centerline of the nearest lane) have never exceeded 0.08 inches per second, with the worst combinations of heavy trucks. This level coincides with the maximum recommended safe level for ruins and ancient monuments (and historic buildings)."

Railway-Related Vibration Impacts

The Proposed Project does not propose new rail lines nor the expansion of rail lines. The mix-use project would place sensitive receptors near existing rail, however, per *California Building Industry Association v. Bay Area Air Quality Management District*, 62 Cal. 4th 369 (No. S 213478), noise compatibility for onsite sensitive receptors is no longer the purview of CEQA.

Construction Vibration Impacts

Construction can generate varying degrees of ground vibration, depending on the construction procedures and equipment. Operation of construction equipment generates vibrations that spread through the ground and diminish with distance from the source. The effect on buildings in the vicinity of the construction site varies depending on soil type, ground strata, and receptor-building construction. The effects 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. Vibration from construction activities rarely reaches the levels that can damage structures.

Table 8, *Proposed Project's Vibration Levels (in/sec PPV),* summarizes vibration levels for typical construction equipment at a reference distance of 25 feet. Typical construction equipment can generate vibration levels ranging up to 0.21 in/sec PPV at 25 feet. Vibration levels at a distance greater than 25 feet would attenuate to 0.2 in/sec PPV or less.

The Approved Project found impacts related to construction vibration to be significant and unavoidable. Stating that construction could generate substantial vibration levels with vibration levels as high as 1.518 in/sec PPV (used to assess architectural damage) and 112 VdB (used to assess vibration annoyance) for pile driving. It is not anticipated that the Proposed Project will require pile driving.

5. Environmental Impacts

Under the Proposed Project, the nearest structures to construction activities are the apartment building to the west and the parking structure to the north. Both are within 15 feet of anticipated paving areas. Paving typically requires the use of a vibratory roller, which would result in vibration levels of up to 0.452 in/sec PPV at the nearest sensitive receptors. However, with implementation of Mitigation Measure N-2 from the Approved Project, if vibration levels could exceed 0.20 in/sec PPV, alternative equipment, such as a static roller, shall be used. Therefore, vibration levels would not exceed 0.20 in/sec PPV and impacts would not be greater than that analyzed in the Approved Project.

Table 8 Proposed Project's Vibration Levels (in/sec PPV)

Equipment	FTA Reference PPV (in/sec) at 25 feet	PPV (in/sec) at 15 feet West - Residential uses
Vibratory Roller	0.21	0.452
Large Bulldozer	0.089	0.191
Loaded Trucks	0.079	0.164
Jackhammer	0.035	0.075
Small Bulldozer	0.003	0.006

Source: FTA, 2018. *Transit Noise and Vibration Impact Assessment*, September.

For vibration annoyance, average attenuated VdB at sensitive receptors are determined by measuring the distance from the acoustical center of the construction site to the receptor property line, as construction equipment is mobile throughout the site. The nearest sensitive receptor is the apartment building to the west. Table 9, *Proposed Project's Construction Vibration Levels (VdB)*, shows vibration levels for typical construction equipment at a reference distance of 25 feet and at the nearest sensitive receptors. As shown in the table, the Proposed Project would not exceed established thresholds from the Approved Project.

Table 9 Proposed Project's Construction Vibration Levels (VdB)

Construction Equipment	FTA Reference VdB at 25 feet	Un Mundo de Amigos Preschool – northeast at 450 feet	Worship – southwest at 460 feet	Residential – west at 190 feet	Exceeds 78 VdB Threshold?
Vibratory Roller	94	56	56	68	No
Hoe Ram	87	49	49	61	No
Large Bulldozer	87	49	49	61	No
Caisson Drilling	87	49	49	61	No
Loaded Trucks	86	48	48	60	No
Jackhammer	79	41	41	53	No
Small Bulldozer	58	20	20	32	No

Notes: Calculations are included in Appendix A.
Distance to sensitive receivers measured from the construction site's acoustical center to receptor property line.

NOISE-4	**The proximity of the project site to an airport or airstrip would not result in exposure of future resident and/or workers to excessive airport-related noise. [Threshold N-3]**

The Approved Project found the nearest airport to the Midtown Specific Plan area to be the Long Beach Airport, approximately 1.8 miles to the northeast. Other airstrips in the area included Goodyear Blimp Base and Compton Airport, approximately 5.6 miles and 6.1 miles northwest, respectively. Under the Proposed Project, the nearest airport would remain Long Beach Airport at approximately 2.5 miles to the northeast. The Proposed Project would be approximately 0.7 miles farther from the Long Beach Airport than previously analyzed.

5.4 ADOPTED MITIGATION MEASURES APPLICABLE TO THE PROPOSED PROJECT

This section includes the mitigation measures identified in the 2016 Certified EIR. Revisions to the mitigation measures where appropriate to reflect the Proposed Project are identified in ~~strikethrough~~ for deletion and double-underline for addition.

N-1 Prior to issuance of demolition, grading and/or building permits for development projects accommodated by the Midtown Specific Plan, a note shall be provided on development plans which indicates that during grading, demolition, and construction, the property owner/developer shall be responsible for requiring contractors to implement the following measures to limit construction-related noise:

- Construction activity is limited to the daytime hours between 7 AM to 7 PM on Monday through Friday and 9 AM to 6PM on Saturday, as prescribed in the City's Municipal Code. Construction is prohibited on Sundays.
- All internal combustion engines on construction equipment and trucks are fitted with properly maintained mufflers.
- Stationary equipment such as generators and air compressors shall be located as far as feasible from nearby noise-sensitive uses.
- Stockpiling is located as far as feasible from nearby noise-sensitive receptors.
- Construction traffic shall be limited to the haul routes established by the City of Long Beach.

N-2 Prior to issuance of a building permit for any development project requiring pile driving, paving, or blasting during construction, the project applicant/developer shall prepare a noise and vibration analysis to assess and mitigate potential noise and vibration impacts related to these activities. The maximum levels shall not exceed 0.2 inches/second, which is the level that can cause architectural damage for typical residential construction. If maximum levels would exceed these thresholds, alternative uses such static rollers, non-explosive blasting, and drilling piles as opposed to pile driving shall be used.

N-3 Prior to the issuance of building permits for development projects accommodated by the Midtown Specific Plan, if proposed vibration-sensitive land uses are located within 200 feet of any railroad line, the property owner/developer shall retain an acoustical engineer to conduct an acoustic analysis that includes a vibration analysis for potential impacts from vibration generated by operation of the rail line. Mixed-use buildings shall be designed to eliminate vibration amplifications due to resonances of floors, walls, and ceilings. The detailed acoustical analysis shall be submitted to the City of Long Beach Development Services Department prior to issuance of building permits and shall demonstrate that the vibration levels would be below 65, 72, or 75 VdB, which are the Federal Transit Administration's rail-focused groundborne vibration criteria for Category 1, 2, and 3 land uses, respectively. Category 1 uses are buildings where vibration would interfere with interior operations; Category 2 uses are residences and buildings were people normally sleep; and Category 3 uses are institutional land uses with primarily daytime use.

N-4 Prior to issuance of a building permit for projects involving the development of new industrial uses within 200 feet of any existing residential use or Development District 3 of the Midtown Specific Plan, the property owner/developer shall retain an acoustical engineer to conduct an acoustic analysis that includes a vibration analysis for potential impacts from vibration generated by industrial activities. The detailed acoustical analysis shall be submitted to the City of Long Beach Development Services Department for review and shall demonstrate that the vibration levels to any nearby residential use would be below 78 VdB during the daytime (7 AM to 10 PM) and 72 VdB during the nighttime (10 PM to 7 AM), which are the Federal Transit Administration's daytime and nighttime criteria to regulate general vibration impacts at affected residential uses.

N-5 Prior to issuance of a building permit for residential development projects accommodated by the Midtown Specific Plan, the project applicant/developer shall submit a final acoustical report prepared to the satisfaction of the City of Long Beach Development Services Department. The report shall demonstrate that the residential development will be sound-attenuated against present and projected noise levels, including roadway, railway, aircraft, helicopter, and stationary sources (e.g., industrial, commercial, etc.) to meet City interior standards. Specifically, the report shall demonstrate that the proposed residential design will result in compliance with the 45 dBA CNEL interior noise levels, as required by the California Building Code and California Noise Insulation Standards (Title 24 and 25 of the California Code of Regulations). The project applicant/developer shall submit the final acoustical report to the City of Long Beach Development Services Department for review and approval. Upon approval by the City, the project's acoustical design features shall be incorporated into construction of the proposed development project.

5. Environmental Impacts

This page intentionally left blank.

6. References

Airnav, LLC. 2020. Airport Information. Accessed December 30, 2020. http://www.airnav.com/airports.

California Department of Transportation (Caltrans). 2013a, September. *Technical Noise Supplement ("TeNS").* Prepared by ICF International. Available at: http://www.dot.ca.gov/hq/env/noise/pub/TeNS_Sept_2013B.pdf

———. 2020b, April. *Transportation and Construction Vibration Guidance Manual.* Prepared by ICF International. https://dot.ca.gov/programs/environmental-analysis/noise-vibration/guidance-manuals

Engineering ToolBox. 2005 (Engineering ToolBox, 2005). Voice Level at Distance. Accessed December 29, 2020. https://www.engineeringtoolbox.com/voice-level-d_938.html

Federal Highway Administration. 2006. *Roadway Construction Noise Model (RCNM), Version 1.1.* Available at: https://www.fhwa.dot.gov/Environment/noise/construction_noise/rcnm/

Fehr & Peers. 2020. *Technical Memorandum for 14th & Long Beach Boulevard Affordable Housing Project Traffic Assessment.*

Federal Transit Administration. 2018, September. *Transit Noise and Vibration Impact Assessment Manual.* US Department of Transportation.

Harris, Cyril M. 1998. Handbook of Acoustical Measurements and Noise Control. 3rd edition. Woodbury, NY: Acoustical Society of America.

Long Beach, City of. 2018. General Plan Noise Element Update, Existing Conditions Report. http://www.longbeach.gov/lbds/planning/advance/general-plan/noise-element/

Long Beach, City of. May 2020. City of Long Beach Municipal Code. https://library.municode.com/ca/long_beach/codes/municipal_code?nodeId=TIT8HESA_CH8.80NO

Long Beach, City of. 1975, March 25. Noise Element, Long Beach General Plan.

6. References

This page intentionally left blank.

APPENDIX A
NOISE AND VIBRATION

CONSTRUCTION NOISE MODELING

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 12/28/2020
Case Description: PAC6-01

Receptor #1

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Asphalt Demo	Residential	60.0	55.0	50.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Saw	No	20		89.6	50.0	0.0
Dozer	No	40		81.7	50.0	0.0
Tractor	No	40		84.0	50.0	0.0

Results

	Calculated (dBA)		Noise Limits (dBA)				Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Saw	89.6	82.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	81.7	77.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84.0	80.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	89.6	85.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 12/28/2020
Case Description: PAC6-01

Receptor #1

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Site Prep/Rough Grading	Residential	60.0	55.0	50.0

Equipment

Description	Impact Device	Spec Usage (%)	Actual Lmax (dBA)	Receptor Lmax (dBA)	Estimated Distance (feet)	Shielding (dBA)
Grader	No	40	85.0		50.0	0.0
Dozer	No	40	81.7		50.0	0.0
Tractor	No	40	84.0		50.0	0.0

Results

	Calculated (dBA)		Noise Limits (dBA)				Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader	85.0	81.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Dozer	81.7	77.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84.0	80.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	85.0	84.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 12/28/2020
Case Description: PAC6-01

Receptor #1

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Parking/Building Construction	Residential	60.0	55.0	50.0

Equipment

Description	Impact Device	Spec Usage (%)	Actual Lmax (dBA)	Receptor Lmax (dBA)	Estimated Distance (feet)	Shielding (dBA)
Crane	No	16		80.6	50.0	0.0
Generator	No	50		80.6	50.0	0.0
Tractor	No	40	84.0		50.0	0.0

Results

	Calculated (dBA)		Noise Limits (dBA)				Noise Limit Exceedance (dBA)					
			Day		Evening		Night		Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Crane	80.6	72.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Generator	80.6	77.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84.0	80.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	84.0	82.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 12/28/2020
Case Description: PAC6-01

Receptor #1

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Utility Trenching	Residential	60.0	55.0	50.0

Equipment

Description	Impact Device	Spec Usage (%)	Actual Lmax (dBA)	Receptor Lmax (dBA)	Estimated Distance (feet)	Shielding (dBA)
Excavator	No	40	80.7	50.0	0.0	

Results

	Calculated (dBA)		Noise Limits (dBA) Day		Evening		Night		Noise Limit Exceedance (dBA) Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Excavator	80.7	76.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	80.7	76.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 12/28/2020
Case Description: PAC6-01

Receptor #1

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Paving	Residential	60.0	55.0	50.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Paver	No	50		77.2	50.0	0.0
Pavement Scarafier	No	20		89.5	50.0	0.0
Tractor	No	40		84.0	50.0	0.0

Results

Equipment	Calculated (dBA) Lmax	Calculated (dBA) Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq	Day Lmax	Day Leq	Evening Lmax	Evening Leq	Night Lmax	Night Leq
Paver	77.2	74.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pavement Scarafier	89.5	82.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tractor	84.0	80.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	89.5	84.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 12/28/2020
Case Description: PAC6-01

Receptor #1

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Finishing Landscaping	Residential	60.0	55.0	50.0

Equipment

Description	Impact Device	Spec Usage (%)	Actual Lmax (dBA)	Receptor Lmax (dBA)	Estimated Distance (feet)	Shielding (dBA)
Excavator	No	40	80.7	50.0	0.0	

Results

	Calculated (dBA)		Noise Limits (dBA) Day		Evening		Night		Noise Limit Exceedance (dBA) Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Excavator	80.7	76.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	80.7	76.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 12/28/2020
Case Description: PAC6-01

Receptor #1

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Architectural Coating	Residential	60.0	55.0	50.0

Equipment

Description	Impact Device	Usage (%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	50.0	0.0

Results

	Calculated (dBA)		Noise Limits (dBA) Day		Evening		Night		Noise Limit Exceedance (dBA) Day		Evening		Night	
Equipment	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)	77.7	73.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total	77.7	73.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Attachment 11b. HUD DNL Calculator

DNL Calculator

The Day/Night Noise Level Calculator is an electronic assessment tool that calculates the Day/Night Noise Level (DNL) from roadway and railway traffic. For more information on using the DNL calculator, view the **Day/Night Noise Level Calculator Electronic Assessment Tool Overview (/programs/environmental-review/daynight-noise-level-electronic-assessment-tool/)**.

Guidelines

- To display the Road and/or Rail DNL calculator(s), click on the "Add Road Source" and/or "Add Rail Source" button(s) below.
- All Road and Rail input values must be positive non-decimal numbers.
- All Road and/or Rail DNL value(s) must be calculated separately before calculating the Site DNL.
- All checkboxes that apply must be checked for vehicles and trains in the tables' headers.
- **Note #1:** Tooltips, containing field specific information, have been added in this tool and may be accessed by hovering over all the respective data fields (site identification, roadway and railway assessment, DNL calculation results, roadway and railway input variables) with the mouse.
- **Note #2:** DNL Calculator assumes roadway data is always entered.

DNL Calculator

Distance (input value must be in units of feet (ft)) from the Noise Assessment Location (NAL) to the center of all travel lanes.

Site ID	14th & Long Beach Boulevard Affordable Housing Project
Record Date	March 26, 2021
User's Name	Keith Lay, HDR

Road # 1 Name:	**Long Beach Boulevard**

Road #1

Vehicle Type	**Cars** ☑	**Medium Trucks** ☑	**Heavy Trucks** ☑
Effective Distance	65	65	65
Distance to Stop Sign			
Average Speed	30	30	30
Average Daily Trips (ADT)	18130	375	185
Night Fraction of ADT	15	15	15
Road Gradient (%)			1
Vehicle DNL	63	56	65
Calculate Road #1 DNL	67	Reset	

Railroad #1 Track Identifier:	**Metro A Line**

Rail # 1

Train Type	**Electric** ☑	**Diesel** ☐
Effective Distance	65	
Average Train Speed	30	
Engines per Train	4	
Railway cars per Train	0	
Average Train Operations (ATO)	180	
Night Fraction of ATO	20	
Railway whistles or horns?	Yes: ☐ No: ☑	Yes: ☐ No: ☐
Bolted Tracks?	Yes: ☐ No: ☑	Yes: ☐ No: ☐

Train DNL	61	0
Calculate Rail #1 DNL	61	Reset

Add Road Source | Add Rail Source

Airport Noise Level	
Loud Impulse Sounds?	○Yes ◉No
Combined DNL for all Road and Rail sources	**68**
Combined DNL including Airport	**N/A**
Site DNL with Loud Impulse Sound	

Calculate | Reset

Mitigation Options

If your site DNL is in Excess of 65 decibels, your options are:

- **No Action Alternative**: Cancel the project at this location
- **Other Reasonable Alternatives**: Choose an alternate site
- **Mitigation**
  - **Contact your Field or Regional Environmental Officer (/programs/environmental-review/hud-environmental-staff-contacts/)**
  - Increase mitigation in the building walls (only effective if no outdoor, noise sensitive areas)
  - Reconfigure the site plan to increase the distance between the noise source and noise-sensitive uses
  - Incorporate natural or man-made barriers. See ***The Noise Guidebook (/resource/313/hud-noise-guidebook/)***
  - Construct noise barrier. See the **Barrier Performance Module (/programs/environmental-review/bpm-calculator/)**

Tools and Guidance

Day/Night Noise Level Assessment Tool User Guide (/resource/3822/day-night-noise-level-assessment-tool-user-guide/)

Day/Night Noise Level Assessment Tool Flowcharts (/resource/3823/day-night-noise-level-assessment-tool-flowcharts/)

Attachment 12. Sole Source Aquifers Worksheet

Sole Source Aquifers (CEST and EA)

General requirements	Legislation	Regulation
The Safe Drinking Water Act of 1974 protects drinking water systems which are the sole or principal drinking water source for an area and which, if contaminated, would create a significant hazard to public health.	Safe Drinking Water Act of 1974 (42 U.S.C. 201, 300f et seq., and 21 U.S.C. 349)	40 CFR Part 149
Reference		
https://www.hudexchange.info/environmental-review/sole-source-aquifers		

1. **Does your project consist solely of acquisition, leasing, or rehabilitation of an existing building(s)?**

   ☐Yes → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below.*

   ☒No → *Continue to Question 2.*

2. **Is the project located on a sole source aquifer (SSA)[1]?**

   ☒No → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide documentation used to make your determination, such as a map of your project (or jurisdiction, if appropriate) in relation to the nearest SSA and its source area.*

   ☐Yes → *Continue to Question 3.*

3. **Does your region have a memorandum of understanding (MOU) or other working agreement with EPA for HUD projects impacting a sole source aquifer?**

   Contact your Field or Regional Environmental Officer or visit the HUD webpage at the link above to determine if an MOU or agreement exists in your area.

   ☐Yes → *Provide the MOU or agreement as part of your supporting documentation. Continue to Question 4.*

   ☐No → *Continue to Question 5.*

4. **Does your MOU or working agreement exclude your project from further review?**

   ☐Yes → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide documentation used to make your determination and document where your project fits within the MOU or agreement.*

[1] A sole source aquifer is defined as an aquifer that supplies at least 50 percent of the drinking water consumed in the area overlying the aquifer. This includes streamflow source areas, which are upstream areas of losing streams that flow into the recharge area.

☐No → *Continue to Question 5.*

5. **Will the proposed project contaminate the aquifer and create a significant hazard to public health?**

   Consult with your Regional EPA Office. Your consultation request should include detailed information about your proposed project and its relationship to the aquifer and associated streamflow source area. EPA will also want to know about water, storm water and waste water at the proposed project. Follow your MOU or working agreement or contact your Regional EPA office for specific information you may need to provide. EPA may request additional information if impacts to the aquifer are questionable after this information is submitted for review.

   ☐No → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide your correspondence with the EPA and all documents used to make your determination*.

   ☐Yes → *Work with EPA to develop mitigation measures. If mitigation measures are approved, attach correspondence with EPA and include the mitigation measures in your environmental review documents and project contracts. <u>If EPA determines that the project continues to pose a significant risk to the aquifer, federal financial assistance must be denied.</u> Continue to Question 6.*

6. **In order to continue with the project, any threat must be mitigated, and all mitigation must be approved by the EPA. Explain in detail the proposed measures that can be implemented to mitigate for the impact or effect, including the timeline for implementation.**

   → *Continue to the Worksheet Summary below. Provide documentation of the consultation (including the Managing Agency's concurrence) and any other documentation used to make your determination.*

Worksheet Summary

Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

The project is not located on a sole source aquifer and is served by the Long Beach Water department. The nearest sole source aquifer is over 100 miles south near the Mexico border, east of San Diego, California.

Are formal compliance steps or mitigation required?

☐ Yes

☒ No

Attachment 13. Wetlands Protection Worksheet

Wetlands (CEST and EA)

General requirements	Legislation	Regulation
Executive Order 11990 discourages that direct or indirect support of new construction impacting wetlands wherever there is a practicable alternative. The Fish and Wildlife Service's National Wetlands Inventory can be used as a primary screening tool, but observed or known wetlands not indicated on NWI maps must also be processed. Off-site impacts that result in draining, impounding, or destroying wetlands must also be processed.	Executive Order 11990	24 CFR 55.20 can be used for general guidance regarding the 8 Step Process.
References		
https://www.hudexchange.info/environmental-review/wetlands-protection		

1. **Does this project involve new construction as defined in Executive Order 11990, expansion of a building's footprint, or ground disturbance?**
   The term "new construction" shall include draining, dredging, channelizing, filling, diking, impounding, and related activities and any structures or facilities begun or authorized after the effective date of the Order.

   ☒ No → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below.*

   ☐ Yes → *Continue to Question 2.*

2. **Will the new construction or other ground disturbance impact an on- or off-site wetland?**
   The term "wetlands" means those areas that are inundated by surface or ground water with a frequency sufficient to support, and under normal circumstances does or would support, a prevalence of vegetative or aquatic life that requires saturated or seasonally saturated soil conditions for growth and reproduction. Wetlands generally include swamps, marshes, bogs, and similar areas such as sloughs, potholes, wet meadows, river overflows, mud flats, and natural ponds. Wetlands under E.O. 11990 include isolated and non-jurisdictional wetlands.

   ☐ No, a wetland will not be impacted in terms of E.O. 11990's definition of new construction.
   → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide a map or any other relevant documentation to explain your determination.*

   ☐ Yes, there is a wetland that be impacted in terms of E.O. 11990's definition of new construction.

→*You must determine that there are no practicable alternatives to wetlands development by completing the 8-Step Process.*
Provide a completed 8-Step Process as well as all documents used to make your determination, including a map. Be sure to include the early public notice and the final notice with your documentation.
Continue to Question 3.

3. **For the project to be brought into compliance with this section, all adverse impacts must be mitigated. Explain in detail the exact measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation.**

Which of the following mitigation actions have been or will be taken? Select all that apply:

- ☐ Permeable surfaces
- ☐ Natural landscape enhancements that maintain or restore natural hydrology through infiltration
- ☐ Native plant species
- ☐ Bioswales
- ☐ Evapotranspiration
- ☐ Stormwater capture and reuse
- ☐ Green or vegetative roofs with drainage provisions
- ☐ Natural Resources Conservation Service conservation easements
- ☐ Compensatory mitigation

Worksheet Summary

Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

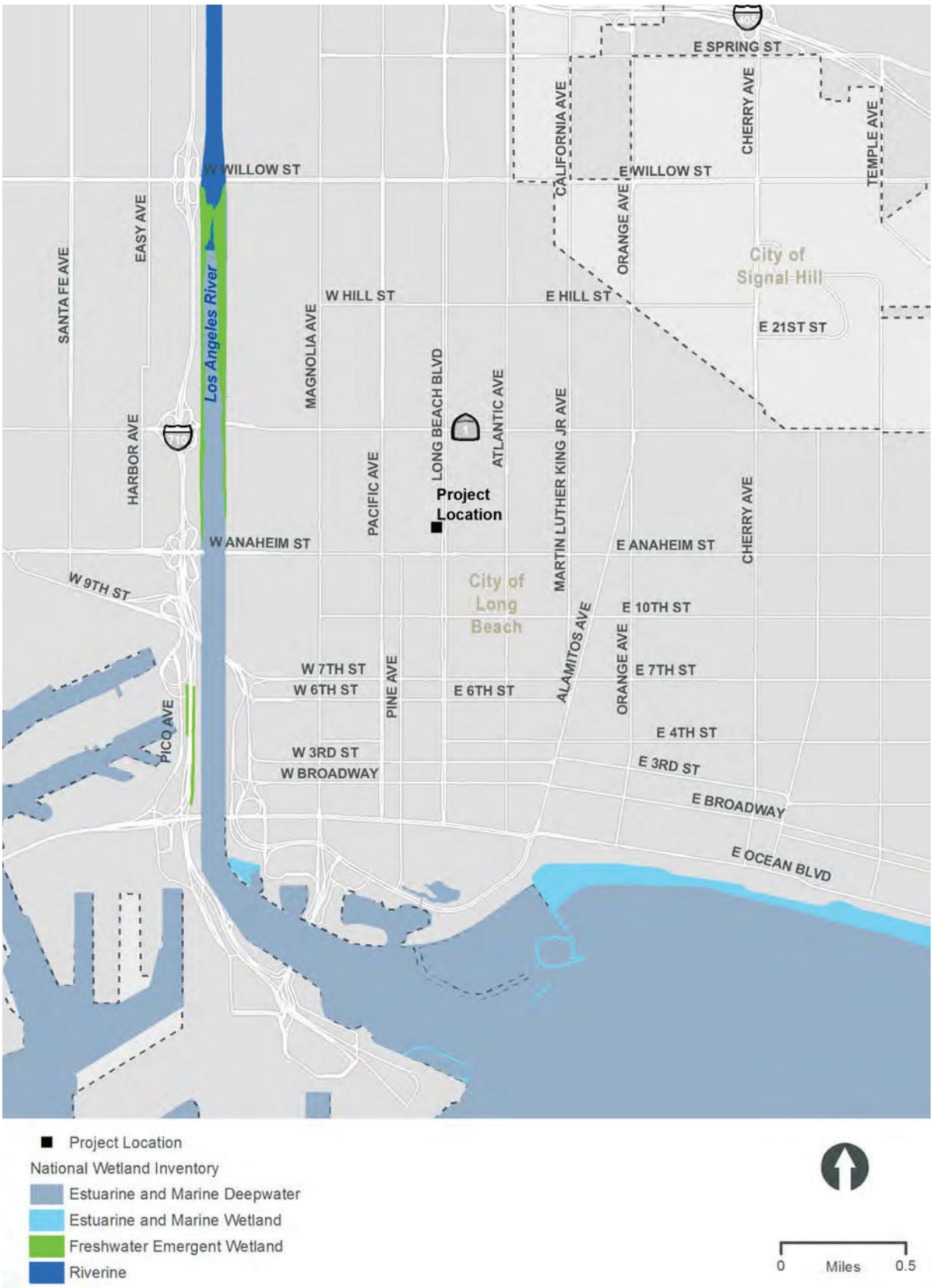
The project exists in a highly urbanized area and does not propose any of the following: draining, dredging, channelizing, filling, diking, impounding, and related activities. According to the National Wetlands Inventory, there are no wetlands near the project site. See Figure 1 below.

Are formal compliance steps or mitigation required?

☐ Yes

☒ No

Figure 1. National Wetlands Inventory



Attachment 14. Wild and Scenic River Worksheet

Wild and Scenic Rivers (CEST and EA)

General requirements	Legislation	Regulation
The Wild and Scenic Rivers Act provides federal protection for certain free-flowing, wild, scenic and recreational rivers designated as components or potential components of the National Wild and Scenic Rivers System (NWSRS) from the effects of construction or development.	The Wild and Scenic Rivers Act (16 U.S.C. 1271-1287), particularly section 7(b) and (c) (16 U.S.C. 1278(b) and (c))	36 CFR Part 297
References		
https://www.hudexchange.info/environmental-review/wild-and-scenic-rivers		

1. **Is your project within proximity of a NWSRS river as defined below?**
   Wild & Scenic Rivers: These rivers or river segments have been designated by Congress or by states (with the concurrence of the Secretary of the Interior) as wild, scenic, or recreational
   Study Rivers: These rivers or river segments are being studied as a potential component of the Wild & Scenic River system.
   Nationwide Rivers Inventory (NRI): The National Park Service has compiled and maintains the NRI, a register of river segments that potentially qualify as national wild, scenic, or recreational river areas

   ☒ No
   → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide documentation used to make your determination, such as a map identifying the project site and its surrounding area or a list of rivers in your region in the Screen Summary at the conclusion of this screen.*

   ☐ Yes, the project is in proximity of a Nationwide Rivers Inventory (NRI) River.
   → *Continue to Question 2.*

2. **Could the project do *any* of the following?**
   - Have a direct and adverse effect within Wild and Scenic River Boundaries,
   - Invade the area or unreasonably diminish the river outside Wild and Scenic River Boundaries, or
   - Have an adverse effect on the natural, cultural, and/or recreational values of a NRI segment.

Consultation with the appropriate federal/state/local/tribal Managing Agency(s) is required, pursuant to Section 7 of the Act, to determine if the proposed project may have an adverse effect on a Wild & Scenic River or a Study River and, if so, to determine the appropriate avoidance or mitigation measures.
Note: Concurrence may be assumed if the Managing Agency does not respond within 30 days; however, you are still obligated to avoid or mitigate adverse effects on the rivers identified in the NWSRS

☐ No, the Managing Agency has concurred that the proposed project will not alter, directly, or indirectly, any of the characteristics that qualifies or potentially qualifies the river for inclusion in the NWSRS.

→ *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below. Provide documentation of the consultation (including the Managing Agency's concurrence) and any other documentation used to make your determination.*

☐ Yes, the Managing Agency was consulted and the proposed project may alter, directly, or indirectly, any of the characteristics that qualifies or potentially qualifies the river for inclusion in the NWSRS.

→ *Continue to Question 3.*

3. For the project to be brought into compliance with this section, all adverse impacts must be mitigated. Explain in detail the proposed measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation.

→ *Continue to the Worksheet Summary below. Provide documentation of the consultation (including the Managing Agency's concurrence) and any other documentation used to make your determination.*

Worksheet Summary

Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

The scenic rivers in California include:
• Amargosa River
• American River (Lower)
• American River (North Fork)
• Bautista Creek
• Big Sur River
• Black Butte River
• Cottonwood Creek
• Deep Creek
• Eel River
• Feather River
• Fuller Mill Creek
• Kern River
• Kings River
• Klamath River
• Merced River
• Owens River Headwaters
• Palm Canyon Creek
• Piru Creek
• San Jacinto River (North Fork)
• Sespe Creek
• Sisquoc River
• Surprise Canyon Creek
• Smith River
• Trinity River
• Tuolumne River
• Whitewater River
The project is not located on or near any of the above rivers.

Are formal compliance steps or mitigation required?

☐ Yes

☒ No

Attachment 15. Environmental Justice Worksheet

Environmental Justice (CEST and EA)

General requirements	Legislation	Regulation
Determine if the project creates adverse environmental impacts upon a low-income or minority community. If it does, engage the community in meaningful participation about mitigating the impacts or move the project.	Executive Order 12898	
References		
https://www.hudexchange.info/environmental-review/environmental-justice		

HUD strongly encourages starting the Environmental Justice analysis only after all other laws and authorities, including Environmental Assessment factors if necessary, have been completed.

1. **Were any adverse environmental impacts identified in any other compliance review portion of this project's total environmental review?**

   ☒Yes → *Continue to Question 2.*

   ☐No → *Based on the response, the review is in compliance with this section. Continue to the Worksheet Summary below.*

2. **Were these adverse environmental impacts disproportionately high for low-income and/or minority communities?**

   ☐Yes

   Explain:

   → *Continue to Question 3. Provide any supporting documentation.*

   ☒No

   Explain:

   → *Continue to the Worksheet Summary and provide any supporting documentation.*

3. **All adverse impacts should be mitigated. Explain in detail the proposed measures that must be implemented to mitigate for the impact or effect, including the timeline for implementation.**

☒Mitigation as follows will be implemented:

perational oise

Mitigation Measure NOI-1

Mitigation Measure NOI-1: Final Acoustical Report

→ *Continue to Question 4.*

☐No mitigation is necessary.

Explain why mitigation will not be made here:

4. **Describe how the affected low-income or minority community was engaged or meaningfully involved in the decision on what mitigation actions, if any, will be taken.**

Location	Date
1 1	
1	
1	1
	1 1
	1
	1

→ *Continue to the Worksheet Summary and provide any supporting documentation.*

Worksheet Summary

Compliance Determination

Provide a clear description of your determination and a synopsis of the information that it was based on, such as:

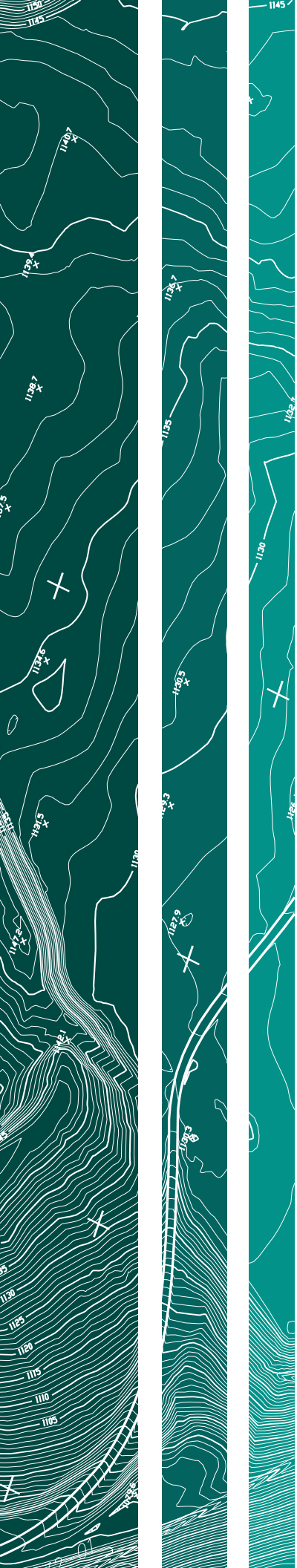
- Map panel numbers and dates
- Names of all consulted parties and relevant consultation dates
- Names of plans or reports and relevant page numbers
- Any additional requirements specific to your region

Are formal compliance steps or mitigation required?

☒ Yes

☐ No

Attachment 16. Geotechnical Investigation



GEOCON

GEOTECHNICAL INVESTIGATION

PROPOSED MULTI-FAMILY
RESIDENTIAL DEVELOPMENT
1401 & 1423 LONG BEACH BOULEVARD
AND 217 & 237 EAST 14TH STREET
LONG BEACH, CALIFORNIA

JANUARY 26, 2024
PROJECT NO. A9525-06-02

PREPARED FOR:
Century Affordable Development, Inc.
Culver City, California

Project No. A9525-06-02
January 26, 2024

Mr. Jordan Johnson
Century Affordable Development, Inc.
1000 Corporate Pointe
Culver City, California 90230

Subject: GEOTECHNICAL INVESTIGATION
PROPOSED MULTI-FAMILY RESIDENTIAL DEVELOPMENT
1401 AND 1423 LONG BEACH BOULEVARD AND 217 AND 237 EAST 14TH STREET
LONG BEACH, CALIFORNIA

Dear Mr. Johnson:

In accordance with your authorization of our proposal dated August 23, 2023, we have performed a geotechnical investigation for the proposed multi-family residential development located at 1401 & 1423 Long Beach Boulevard and 217 & 237 East 14th Street in the City of Long Beach, California. The accompanying report presents the findings of our study, and our conclusions and recommendations pertaining to the geotechnical aspects of proposed design and construction. Based on the results of our investigation, it is our opinion that the site can be developed as proposed, provided the recommendations of this report are followed and implemented during design and construction.

If you have any questions regarding this report, or if we may be of further service, please contact the undersigned.

Very truly yours,

GEOCON WEST, INC.

REGISTERED PROFESSIONAL ENGINEER
H. HARRY DERKALOUSDIAN
C 79694
CIVIL
STATE OF CALIFORNIA

PROFESSIONAL GEOLOGIST
GERALD KASMAN
NO. 2251
CERTIFIED ENGINEERING GEOLOGIST
STATE OF CALIFORNIA

Joshua Kulas	Harry Derkalousdian	Gerald A. Kasman
Staff Engineer	PE 79694	CEG 2251

(EMAIL) Addressee

TABLE OF CONTENTS

1. PURPOSE AND SCOPE 1
2. SITE AND PROJECT DESCRIPTION 2
3. GEOLOGIC SETTING 3
4. SOIL AND GEOLOGIC CONDITIONS 3
   - 4.1 Artificial Fill 4
   - 4.2 Old Paralic Deposits 4
5. GROUNDWATER 4
6. GEOLOGIC HAZARDS 5
   - 6.1 Surface Fault Rupture 5
   - 6.2 Seismicity 6
   - 6.3 Seismic Design Criteria 7
   - 6.4 Liquefaction Potential 9
   - 6.5 Slope Stability 10
   - 6.6 Earthquake-Induced Flooding 11
   - 6.7 Tsunamis, Seiches, and Flooding 11
   - 6.8 Oil Fields & Methane Potential 12
   - 6.9 Subsidence 12
7. CONCLUSIONS AND RECOMMENDATIONS 13
   - 7.1 General 13
   - 7.2 Soil and Excavation Characteristics 15
   - 7.3 Minimum Resistivity, pH, and Water-Soluble Sulfate 16
   - 7.4 Grading 16
   - 7.5 Shrinkage 19
   - 7.6 Foundation Design 19
   - 7.7 Miscellaneous Foundations 21
   - 7.8 Lateral Design 22
   - 7.9 Concrete Slabs-on-Grade 22
   - 7.10 Preliminary Pavement Recommendations 24
   - 7.11 Retaining Wall Design 26
   - 7.12 Retaining Wall Drainage 29
   - 7.13 Elevator Pit Design 29
   - 7.14 Elevator Piston 30
   - 7.15 Temporary Excavations 30
   - 7.16 Slot Cutting 31
   - 7.17 Stormwater Infiltration 34
   - 7.18 Surface Drainage 36
   - 7.20 Plan Review 36

LIMITATIONS AND UNIFORMITY OF CONDITIONS

LIST OF REFERENCES

TABLE OF CONTENTS (CONT.)

MAPS, TABLES, AND ILLUSTRATIONS
- Figure 1, Vicinity Map
- Figure 2, Site Plan
- Figure 3, Regional Fault Map
- Figure 4, Regional Seismicity Map
- Figures 5 and 6, Retaining Wall Drainage Details
- Figures 7 and 8, Percolation Testing Calculations

APPENDIX A
- Field Investigation
- Figures A1 through A5, Boring Logs

APPENDIX B
- Laboratory Testing
- Figures B1 through B5, Direct Shear Test Results
- Figures B6 through B19, Consolidation Test Results
- Figures B20 and B21, Compaction Characteristics Using Modified Effort Test Results
- Figure B22 and B23, Expansion Index Test Results
- Figure B24, Corrosivity Test Results

GEOTECHNICAL INVESTIGATION

1. PURPOSE AND SCOPE

This report presents the results of a geotechnical investigation for the proposed multi-family residential development located at 1401 & 1423 Long Beach Boulevard and 217 & 237 East 14th Street (the site) in the City of Long Beach, California (see Vicinity Map, Figure 1). The purpose of the investigation was to evaluate the subsurface soil and geologic conditions underlying the site and, based on conditions encountered, to provide conclusions and recommendations pertaining to the geotechnical aspects of design and construction.

The scope of this investigation included a site reconnaissance, field exploration, laboratory testing, engineering analysis, and the preparation of this report. The site was explored on December 11, 2023, by excavating three 8-inch diameter borings to a maximum depth of 26 feet below the existing ground surface utilizing a truck-mounted hollow-stem auger drilling machine. Percolation testing for the design of a stormwater infiltration system was performed in boring B3 on December 11, 2023. In addition, the site was previously explored by Geocon on December 14, 2016 by excavating two 8-inch diameter borings to a maximum depth of 31½ feet below the existing ground surface utilizing a truck-mounted hollow-stem auger drilling machine. The approximate locations of the exploratory borings from both investigations are depicted on the Site Plan (see Figure 2). A detailed discussion of the field investigation, including boring logs, is presented in Appendix A.

Laboratory tests were performed on selected soil samples obtained during the investigation to determine pertinent physical and chemical soil properties. Appendix B presents a summary of the laboratory test results.

The recommendations presented herein are based on analysis of the data obtained during the investigation and our experience with similar soil and geologic conditions. References reviewed to prepare this report are provided in the *List of References* section.

If project details vary significantly from those described herein, Geocon should be contacted to determine the necessity for review and possible revision of this report.

2. SITE AND PROJECT DESCRIPTION

The site is located at 1401 & 1423 Long Beach Boulevard and 217 & 237 East 14th Street in the City of Long Beach, California. The site is comprised of two rectangular lots, that are bisected by an alleyway, Palmer Court, in a north-south direction. The site is identified by Los Angeles County assessor parcel numbers 7269-016-042, -041, -159, -158, and -157. The western lot is bounded by a four-story parking structure and single-story commercial structure to the north, Palmer Court to the east, East 14th Street to the south, and a four-story multi-family development to the west. The eastern lot, which was previously explored in December of 2016, is bounded by a single-story commercial structure to the north, Long Beach Boulevard to the east, East 14th Street to the south, and Palmer Court to the west.

The site is relatively level, with no pronounced highs or lows. The United States Geological Survey (USGS) *Long Beach*, *California* topographic map depicts the elevation of the site at approximately 35 feet above mean sea level (MSL; USGS, 1964). Surface water drainage at the site appears to be by sheet flow along the existing ground contours to the city streets. Approximately three quarters of the site is asphalt-paved. Vegetation onsite consists of grasses which are predominately located in the unpaved southern portion of the eastern lot.

Based on the information provided, it is our understanding that the proposed development will consist of a five- to six-story multi-family residential structure to be constructed at or near present grade. Due to the preliminary nature of the project, formal plans depicting the proposed development are not available for inclusion in this report. The existing site conditions are depicted on the Site Plan (see Figure 2).

Based on the preliminary nature of the design at this time, wall and column loads were not available. It is anticipated that column loads for the proposed residential structures will be up to 600 kips, and wall loads will be up to 6 kips per linear foot.

Once the design phase and foundation loading configuration proceeds to a more finalized plan, the recommendations within this report should be reviewed and revised, if necessary. Any changes in the design, location or elevation of any structure, as outlined in this report, should be reviewed by this office. Geocon should be contacted to determine the necessity for review and possible revision of this report.

3. GEOLOGIC SETTING

The site is located within the northern portion of the Peninsular Ranges geomorphic province of Southern California (California Geological Survey [CGS], 2002). The Peninsular Ranges are bounded by the Transverse Ranges to the north and the Colorado Desert to the east (CGS, 2002). The Peninsular Ranges consists of rugged northwest-southeast-trending mountain ranges with intervening valleys that extend approximately 900 miles from their northern terminus against the Transverse ranges, north of the Los Angeles Basin, southward to the tip of Baja California. The province varies in width from approximately 30 to 100 miles and is traversed by a group of faults and fault zones trending roughly northwest-southeast. The Peninsular Ranges are composed of predominantly Cretaceous-age rocks with lesser amounts of Jurassic-age rocks. Post-Cretaceous marine sedimentary formations up to 40,000 feet in thickness are present in the northernmost portion of the ranges (Norris and Webb, 1990).

The site is located along the southern margin of the Los Angeles Basin southwest of Signal Hill (Norris and Webb, 1990). The Los Angeles Basin is a coastal plain between the Santa Monica Mountains of the Transverse Ranges geomorphic province to the north, the Peninsular Ranges geomorphic province to the east and south, and the Pacific Ocean to the west. The Los Angeles basin is a deep structural depression filled with both marine and continental sedimentary deposits, which overlies a basement complex of presumably igneous and metamorphic composition (Yerkes, 1965). Marine and nonmarine Cretaceous to Pleistocene sedimentary rocks in the central portion of the basin extend to a maximum depth of approximately 32,000 feet (Norris and Webb, 1990). Prominent structural features within the Los Angeles Basin include the central lowland plain, the uplifted Palos Verdes Hills, and a northwest-trending line of low hills and mesas underlain by the Newport-Inglewood Fault Zone. The Newport-Inglewood Fault Zone is located approximately 1.6 miles northeast of the site (California Division of Mines and Geology [CDMG], 1986).

4. SOIL AND GEOLOGIC CONDITIONS

Based on our field investigation and published geologic maps of the area, the site is underlain by artificial fill and Pleistocene age old paralic deposits (interbedded marine and continental deposits) consisting of varying amounts of clay, silt, and sand (CGS, 2003). Detailed stratigraphic profiles are provided on the boring logs, see Appendix A.

4.1 Artificial Fill

Artificial fill was encountered in our field explorations to a maximum depth of 2½ feet below existing ground surface. The artificial fill generally consists of sandy silt and silty sand with gravel. The artificial fill is characterized as stiff to firm or medium dense, slightly moist to moist, and by varying hues of brown. The fill is likely the result of past grading or construction activities at the site. Deeper fill may exist between excavations and in other portions of the site that were not directly explored.

4.2 Old Paralic Deposits

The artificial fill is underlain by uplifted Pleistocene age old paralic (nearshore lagoon and estuary) deposits (CGS, 2010). The deposits encountered in our site explorations generally consist of varying silt which is underlain by sand at a depth of approximately 12 feet below existing grade. The deposits are characterized as poorly graded, stiff to hard or dense to very dense, slightly moist to moist, and predominately brown with varying intensity and hues of yellow, red, and grey.

5. GROUNDWATER

Review of the Seismic Hazard Zone Report for the Long Beach Quadrangle (CDMG, 1998) indicates that the project site is not located within a groundwater basin and very little groundwater data is available within the site vicinity. As previously stated, the soils underlying the site consist of uplifted Pleistocene soils that are considered stiff to hard or dense to very dense and are not considered water bearing. Groundwater information presented in this document is generated from data collected in the early 1900s to the late 1990s.

The Los Angeles County Department of Public Works (LACDPW) maintains an online mapping system of current and historical groundwater level measurements throughout Los Angeles County. The online mapping system does not depict any active groundwater monitoring wells within one mile of the site.

Groundwater was not encountered in our borings drilled to a maximum depth of 31½ feet beneath the existing ground surface. The lack of groundwater in our borings, and the planned depth of the proposed construction, it is not likely that groundwater will be encountered during construction or will have an adverse impact on the proposed development. However, it is not uncommon for groundwater levels to vary seasonally or for groundwater seepage conditions to develop where none previously existed, especially in impermeable fine-grained soils which are heavily irrigated or after seasonal rainfall. In addition, recent requirements for stormwater infiltration could result in shallower seepage conditions in the immediate site vicinity. Proper surface drainage of irrigation and precipitation will be critical for future performance of the project. Recommendations for drainage are provided in the S*urface Drainage* section of this report (see Section 7.18).

6. GEOLOGIC HAZARDS

6.1 Surface Fault Rupture

The numerous faults in Southern California include Holocene-active, pre-Holocene, and inactive faults. The criteria for these major groups are based on criteria developed by the California Geological Survey for the Alquist-Priolo Earthquake Fault Zone Program (CGS, 2018). By definition, a Holocene-active fault is one that has had surface displacement within Holocene time (about the last 11,700 years). A pre-Holocene fault has demonstrated surface displacement during Quaternary time (approximately the last 1.6 million years) but has had no known Holocene movement. Faults that have not moved in the last 1.6 million years are considered inactive.

The site is not within a state-designated Alquist-Priolo Earthquake Fault Zone for surface fault rupture hazards (CGS, 2023; CDMG, 1986). No Holocene-active or pre-Holocene faults with the potential for surface fault rupture are known to pass directly beneath the site. Therefore, the potential for surface rupture due to faulting occurring beneath the site during the design life of the proposed development is considered low. However, the site is located in the seismically active Southern California region and could be subjected to moderate to strong ground shaking in the event of an earthquake on one of the many active Southern California faults. The faults in the vicinity of the site are shown in Figure 3, Regional Fault Map.

The closest surface trace of an active fault to the site is the Newport-Inglewood Fault Zone located approximately 1.6 miles to the northeast (CDMG, 1986). Other nearby active faults are the Palos Verdes Fault Zone, the Whittier Fault, the Santa Monica Fault, and the Hollywood Fault located approximately 5½ miles southwest, 16½ miles northeast, 23 miles northwest, and 24 miles north of the site, respectively (Ziony and Jones, 1989). The active San Andreas Fault Zone is located approximately 50 miles northeast of the site (Ziony and Jones, 1989).

Several buried thrust faults, commonly referred to as blind thrusts, underlie the Los Angeles Basin at depth. These faults are not exposed at the ground surface and are typically identified at depths greater than 3.0 kilometers. The October 1, 1987, M_w 5.9 Whittier Narrows earthquake and the January 17, 1994, M_w 6.7 Northridge earthquake were a result of movement on the Puente Hills Blind Thrust and the Northridge Thrust, respectively. These thrust faults and others in the Los Angeles area are not exposed at the surface and do not present a potential surface fault rupture hazard at the site; however, these deep thrust faults are considered active features capable of generating future earthquakes that could result in moderate to significant ground shaking at the site.

6.2 Seismicity

As with all of Southern California, the site has experienced historic earthquakes from various regional faults. The seismicity of the region surrounding the site was formulated based on research of an electronic database of earthquake data. The epicenters of recorded earthquakes with magnitudes equal to or greater than 5.0 in the site vicinity are depicted on Figure 4, Regional Seismicity Map. A partial list of moderate to major magnitude earthquakes that have occurred in the Southern California area within the last 100 years is included in the following table.

LIST OF HISTORIC EARTHQUAKES

EARTHQUAKE (OLDEST TO YOUNGEST)	DATE OF EARTHQUAKE	MAGNITUDE	DISTANCE TO EPICENTER (MILES)	DIRECTION TO EPICENTER
Long Beach	March 10, 1933	6.4	17	SE
Tehachapi	July 21, 1952	7.5	96	NW
San Fernando	February 9, 1971	6.6	45	NNW
Whittier Narrows	October 1, 1987	5.9	20	NNE
Sierra Madre	June 28, 1991	5.8	35	NNE
Landers	June 28, 1992	7.3	104	ENE
Big Bear	June 28, 1992	6.4	83	ENE
Northridge	January 17, 1994	6.7	36	NW
Hector Mine	October 16, 1999	7.1	123	ENE
Ridgecrest	July 5, 2019	7.1	141	NNE

The site could be subjected to strong ground shaking in the event of an earthquake. However, this hazard is common in Southern California and the effects of ground shaking can be mitigated if the proposed structures are designed and constructed in conformance with current building codes and engineering practices.

6.3 Seismic Design Criteria

The following table summarizes site-specific design criteria obtained from the 2022 California Building Code (CBC; Based on the 2018 International Building Code [IBC] and ASCE 7-16), Chapter 16 Structural Design, Section 1613 Earthquake Loads. The data was calculated using the online application *Seismic Design Maps*, provided by OSHPD. The short spectral response uses a period of 0.2 second. We evaluated the Site Class based on the discussion in Section 1613.2.2 of the 2022 CBC and Table 20.3-1 of ASCE 7-16. The values presented on the following page are for the risk-targeted maximum considered earthquake (MCE_R).

B SE S ES A A E E S

PARAMETER	VALUE	2022 CBC REFERENCE
Site Class	D	Section 1613.2.2
MCE_R Ground Motion Spectral Response Acceleration – Class B (short), S_S	1.647g	Figure 1613.2.1(1)
MCE_R Ground Motion Spectral Response Acceleration – Class B (1 sec), S_1	0.597g	Figure 1613.2.1(2)
Site Coefficient, F_A	1	Table 1613.2.3(1)
Site Coefficient, F_V	1.703*	Table 1613.2.3(2)
Site Class Modified MCE_R Spectral Response Acceleration (short), S_{MS}	1.647g	Section 1613.2.3 (Eqn 16-36)
Site Class Modified MCE_R Spectral Response Acceleration – (1 sec), S_{M1}	1.016g*	Section 1613.2.3 (Eqn 16-37)
5% Damped Design Spectral Response Acceleration (short), S_{DS}	1.098g	Section 1613.2.4 (Eqn 16-38)
5% Damped Design Spectral Response Acceleration (1 sec), S_{D1}	0.677g*	Section 1613.2.4 (Eqn 16-39)

Note:

*Per Section 11.4.8 of ASCE/SEI 7-16, a ground motion hazard analysis shall be performed for projects for Site Class “E” sites with Ss greater than or equal to 1.0g and for Site Class “D” and “E” sites with S1 greater than 0.2g. Section 11.4.8 also provides exceptions which indicates that the ground motion hazard analysis may be waived provided the exceptions are followed. Using the code based values presented in the table above, in lieu of a performing a ground motion hazard analysis, requires the exceptions outlined in ASCE 7-16 Section 11.4.8 be followed.

The table below presents the mapped maximum considered geometric mean (MCE_G) seismic design parameters for projects located in Seismic Design Categories of D through F in accordance with ASCE 7-16.

AS E 1 EA A ELE A

Parameter	Value	ASCE 7-16 Reference
Mapped MCE_G Peak Ground Acceleration, PGA	0.728g	Figure 22-9
Site Coefficient, F_{PGA}	1.1	Table 11.8-1
Site Class Modified MCE_G Peak Ground Acceleration, PGA_M	0.8g	Section 11.8.3 (Eqn 11.8-1)

Deaggregation of the MCE peak ground acceleration was performed using the USGS online Unified Hazard Tool, 2014 Conterminous U.S. Dynamic edition (v4.2.0). The result of the deaggregation analysis indicates that the predominant earthquake contributing to the MCE peak ground acceleration is characterized as a 6.81 magnitude event occurring at a hypocentral distance of 7.36 kilometers from the site.

Deaggregation was also performed for the Design Earthquake (DE) peak ground acceleration, corresponding to two-thirds of the MCE peak ground acceleration. Tand the result of the analysis indicates that the predominant earthquake contributing to the DE peak ground acceleration is characterized as a 6.65 magnitude occurring at a hypocentral distance of 13.15 kilometers from the site.

Conformance to the criteria in the above tables for seismic design does not constitute any kind of guarantee or assurance that significant structural damage or ground failure will not occur if a large earthquake occurs. The primary goal of seismic design is to protect life, not to avoid all damage, since such design may be economically prohibitive.

6.4 Liquefaction Potential

Liquefaction is a phenomenon in which loose, saturated, relatively cohesionless soil deposits lose shear strength during strong ground motions. Primary factors controlling liquefaction include intensity and duration of ground motion, gradation characteristics of the subsurface soils, in-situ stress conditions, and the depth to groundwater. Liquefaction is typified by a loss of shear strength in the liquefied layers due to rapid increases in pore water pressure generated by earthquake accelerations.

The current standard of practice, as outlined in the "Recommended Procedures for Implementation of DMG Special Publication 117, Guidelines for Analyzing and Mitigating Liquefaction in California" and "Special Publication 117A, Guidelines for Evaluating and Mitigating Seismic Hazards in California" requires liquefaction analysis to a depth of 50 feet below the lowest portion of the proposed structure. Liquefaction typically occurs in areas where the soils below the water table are composed of poorly consolidated, fine to medium-grained, primarily sandy soil. In addition to the requisite soil conditions, the ground acceleration and duration of the earthquake must also be of a sufficient level to induce liquefaction.

The State of California Seismic Hazard Zone Map for the Long Beach Quadrangle (CDMG, 1999) does not depict the site in an area designated as having a potential for liquefaction. In addition, a review of the County of Los Angeles Safety Element (Leighton, 1990) indicates that the site is not located within an area identified as having a potential for liquefaction. The site is underlain by dense Pleistocene age sediments that are not prone to liquefaction. Based on these considerations, it is our opinion that the potential for liquefaction and associated ground deformations to occur beneath the site is very low.

6.5 Slope Stability

The topography at the site is relatively level. The topography within the site vicinity is relatively level to gently sloping in all directions away from a topographic high approximately ¼ mile south-southwest of the site. The City of Long Beach Public Safety Element indicates that "slope stability is not a major consideration in overall land planning" (City of Long Beach, 2004). The City's Public Safety Element also indicates that the enforcement of Chapter 70 of the Uniform Building Code, which relates to grading that may create safety hazards, results in slope instability not being a significant or imminent threat to public safety. Plate 5, Landslide Inventory, included in the County of Los Angeles' Safety Element does not depict the site in nor within ¼ mile of a hillside area or location where a landslide has been recorded (Leighton, 1990). Also, the site is not within an area identified as having a potential for seismic slope instability (CDMG, 1999). There are no known landslides near the site, nor is the site in the path of any known or potential landslides. Therefore, the potential for slope stability hazards to adversely affect the proposed development is considered low.

6.6 Earthquake-Induced Flooding

Earthquake-induced flooding is inundation caused by failure of dams or other water-retaining structures due to earthquakes. Plate 5 of the Safety Element of the Los Angeles County General Plan does not depict the site within an inundation zone (Leighton, 1990). The Public Safety Element of the Long Beach General Plan indicates that three reservoirs lie upstream of the City. Two of the reservoirs are considered to be too far to impact the City and therefore unlikely to impact the site. The third reservoir, the Whittier Narrows Dam, is considered a potential hazard if it were to fail while full. However, given the regions "infrequent periods of high precipitation and high river flow, the probability of flooding as a result of seismically induced failure is considered to be very low" (City of Long Beach, 2004). Reservoirs in California are continually monitored by various governmental agencies (such as the State of California Division of Safety of Dams and the U.S. Army Corps of Engineers) to guard against the threat of dam failure. Current design, construction practices, and ongoing programs of review, modification, or total reconstruction of existing dams are intended to ensure that all dams are capable of withstanding the maximum considered earthquake (MCE) for the location. Therefore, the potential for inundation at the site as a result of an earthquake-induced dam failure is considered low.

6.7 Tsunamis, Seiches, and Flooding

The site is located approximately 1.7 miles north of the Pacific Ocean at an approximate elevation 35 feet above MSL. The City of Long Beach estimates that substantial damage from such an event to be limited to the shoreline from waves estimated to range from 3 to 6 feet in height (City of Long Beach, 2004). The site's distance and elevated suggest that it is unlikely to be impacted from such an event. The site is not depicted in a tsunami inundation zone on the *Tsunami Inundation Map For Emergency Planning* prepared for the Long Beach quadrangle by the CGS and others (CGS, 2009). Therefore, tsunamis, seismic sea waves, are not considered a significant hazard at the site.

Seiches are large waves generated in enclosed bodies of water in response to ground shaking. No major water-retaining structures are located immediately up gradient from the project site. Therefore, flooding resulting from a seismically-induced seiche is considered unlikely.

The site is located within an area labeled Flood Zone X by the Federal Emergency Management Agency (FEMA). Flood Zone X is designated as an area of minimal flooding (FEMA, 2023).

6.8 Oil Fields & Methane Potential

The California Geologic Energy Management Division's (CalGEM) Well Finder, an online petroleum field and well mapping system, depicts the site within the boundaries of the Wilmington oil and gas field. No oil and/or gas wells are depicted within ½ mile of the site. However, due to the voluntary nature of record reporting by the oil well drilling companies, wells may be improperly located or not shown on the location map. Other wells could be encountered during construction. Any wells encountered will need to be properly abandoned in accordance with the current requirements of CalGEM.

The site is located within the boundaries of the Wilmington Oil Field. Therefore, there could be a potential for methane and other volatile gases to occur at the site which could require a permanent methane gas control system beneath the proposed buildings. Should it be determined that a methane study is required for the proposed development it is recommended that a qualified methane consultant be retained to perform the study and provide mitigation measures as necessary.

6.9 Subsidence

Subsidence occurs when a large portion of land is displaced vertically, usually due to the withdrawal of groundwater, oil, or natural gas. Subsidence commonly occurs in such small magnitudes and over such large areas that it is generally imperceptible at an individual locality. Accordingly, it affects only regionally extensive structures sensitive to slight elevation changes, such as canals and pipelines. The rate of elevation change is usually uniform over a large enough area that it does not result in differential settlements that would cause damage to individual buildings. Soils that are particularly subject to subsidence include those with high silt or clay content.

Within the Long Beach area, a substantial level of subsidence has occurred between 1926 through 1967 due to petroleum production from the Wilmington Oil Field and as much as 30 feet of subsidence has been recorded near the Navy drydock on Terminal Island (City of Long Beach, 2004). The site is located north-northeast of this documented subsidence.

As of 1958 local agencies began full-scale-water injection operations to impede further subsidence within the Long Beach area. In addition, subsidence is continually monitored by a network of 5 microearthquake monitoring stations that have been in operation since 1971 (City of Long Beach, 2004). As a result, no further manifestation of subsidence has occurred in the area since the implementation of this system. As long as the water injection operations are implemented and the ground surface is monitored to control changes, the potential for subsidence to impact the proposed development is low.

7. CONCLUSIONS AND RECOMMENDATIONS

7.1 General

7.1.1 It is our opinion that neither soil nor geologic conditions were encountered during the investigation that would preclude the construction of the proposed development provided the recommendations presented herein are followed and implemented during design and construction.

7.1.2 This statement is made in accordance with Los Angeles County Section 111. It is the opinion of this office, based on the findings of this investigation, provided our recommendations are followed and properly maintained (1) the proposed grading and structure will be safe for its intended use against hazard from landslide, settlement or slippage and (2) the proposed grading and structure will have no adverse effect on the stability of the site or adjoining properties.

7.1.3 Up to 2½ feet of existing artificial fill was encountered during the site investigation. The existing fill encountered is believed to be the result of past grading and construction activities at the site. Deeper fill may exist in other areas of the site that were not directly explored. It is our opinion that the existing fill, in its present condition, is not suitable for direct support of proposed foundations or slabs. The existing fill and site soils are suitable for re-use as engineered fill provided the recommendations in the *Grading* section of this report are followed (see Section 7.4).

7.1.4 Based on these considerations, it is recommended that the upper three feet of existing earth materials within the building footprint area be excavated and properly compacted for foundation and slab support. Deeper excavations should be conducted as necessary to completely remove all artificial fill at the direction of the Geotechnical Engineer (a representative of Geocon). Where excavation and compaction is to be conducted, the excavation should extend laterally a minimum distance of 3 feet beyond the building footprint area or for a distance equal to the depth of fill below the foundation, whichever is greater. Recommendations for earthwork are provided in the *Grading* section of this report (see Section 7.4).

7.1.5 Subsequent to the recommended grading, the proposed structure may be supported on a conventional shallow spread foundation system deriving support in both newly placed engineered fill and/or dense Old Paralic Deposits found at or below a depth of three feet below the ground surface. It is the intent of the Geotechnical Engineer to allow foundations for the structure to derive support in newly placed engineered fill and/or competent undisturbed Old Paralic Deposits, if conditions warrant such an occurrence. Recommendations for the design of a conventional foundation system are provided in Section 7.6.

7.1.6 It is anticipated that stable excavations for the recommended grading associated with the proposed structure can be achieved with sloping measures. However, if excavations in close proximity to an adjacent property line and/or structure are required, special excavation measures may be necessary in order to maintain lateral support of offsite improvements. Excavation recommendations are provided in the *Temporary Excavations* section of this report (Section 7.15).

7.1.7 All excavations must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon). Prior to placing any fill, the excavation bottom must be proof-rolled in the presence of the Geotechnical Engineer (a representative of Geocon West, Inc.).

7.1.8 Foundations for small outlying structures, such as block walls up to 6 feet in height, planter walls or trash enclosures, which will not be tied to the proposed structure, may be supported on conventional foundations deriving support on a minimum of 12 inches of newly placed engineered fill which extends laterally at least 12 inches beyond the foundation area. Where excavation and compaction cannot be performed or is undesirable, foundations may derive support directly in the competent undisturbed Old Paralic Deposits soils found at or below a depth of 24 inches, and should be deepened as necessary to maintain a minimum 12-inch embedment into the recommended bearing materials. If the soils exposed in the excavation bottom are soft or loose, compaction of the soils will be required prior to placing steel or concrete. Compaction of the foundation excavation bottom is typically accomplished with a compaction wheel or mechanical whacker and must be observed and approved by a Geocon representative.

7.1.9 Where new paving is to be placed, it is recommended that all existing fill and soft or disturbed Old Paralic Deposits be excavated and properly compacted for paving support. The client should be aware that excavation and compaction of all existing fill and disturbed Old Paralic Deposits in the area of new paving is not required; however, paving constructed over existing uncertified fill or unsuitable Old Paralic Deposits may experience increased settlement and/or cracking, and may therefore have a shorter design life and increased maintenance costs. As a minimum, the upper 12 inches of subgrade soil should be scarified and properly compacted for paving support. Paving recommendations are provided in *Preliminary Pavement Recommendations* section of this report (see Section 7.10).

7.1.10 Based on the results of percolation testing performed at the site, a stormwater infiltration system is considered feasible for this project. Recommendations for infiltration are provided in the *Stormwater Infiltration* section of this report (see Section 7.17).

7.1.9 Once the design and foundation loading configuration for the proposed structure proceeds to a more finalized plan, the recommendations within this report should be reviewed and revised, if necessary. Based on the final foundation loading configurations, the potential for settlement should be re-evaluated by this office.

7.1.10 Any changes in the design, location or elevation, as outlined in this report, should be reviewed by this office. Geocon should be contacted to determine the necessity for review and possible revision of this report.

7.2 Soil and Excavation Characteristics

7.2.1 The in-situ soils can be excavated with moderate effort using conventional excavation equipment. Some caving should be anticipated in unshored excavations, especially where granular soils are encountered.

7.2.2 It is the responsibility of the contractor to ensure that all excavations and trenches are properly shored and maintained in accordance with applicable OSHA rules and regulations to maintain safety and maintain the stability of existing adjacent improvements.

7.2.3 All onsite excavations must be conducted in such a manner that potential surcharges from existing structures, construction equipment, and vehicle loads are resisted. The surcharge area may be defined by a 1:1 projection down and away from the bottom of an existing foundation or vehicle load. Penetrations below this 1:1 projection will require special excavation measures such as sloping or shoring. Excavation recommendations are provided in the *Temporary Excavations* section of this report (see Section 7.15).

7.2.4 The upper 5 feet of existing site soils encountered during this investigation are considered to have a "very low" to "low" expansive potential (EI's = 20 and 34); and are classified as "expansive" based on the 2022 California Building Code (CBC) Section 1803.5.3. Recommendations presented herein assume that the building foundations and slabs will derive support in these materials.

7.3 Minimum Resistivity, pH, and Water-Soluble Sulfate

7.3.1 Potential of Hydrogen (pH) and resistivity testing as well as chloride content testing were performed on representative samples of soil to generally evaluate the corrosion potential to surface utilities. The tests were performed in accordance with California Test Method Nos. 643 and 422 and indicate that the soils are considered "corrosive" with respect to corrosion of buried ferrous metals on site. The results are presented in Appendix B (Figure B24) and should be considered for design of underground structures Due to the corrosive potential of the soils, it is recommended that PVC, ABS or other approved plastic piping be utilized in lieu of cast-iron when in direct contact with the site soils.

7.3.2 Laboratory tests were performed on representative samples of the site soils to measure the percentage of water-soluble sulfate content. Results from the laboratory water-soluble sulfate tests are presented in Appendix B (Figure B24) and indicate that the on-site materials possess a sulfate exposure class of "S0" to concrete structures as defined by 2022 CBC Section 1904 and ACI 318-14 Table 19.3.1.1.

7.3.3 Geocon West, Inc. does not practice in the field of corrosion engineering and mitigation. If corrosion sensitive improvements are planned, it is recommended that a corrosion engineer be retained to evaluate corrosion test results and incorporate the necessary precautions to avoid premature corrosion of buried metal pipes and concrete structures in direct contact with the soils.

7.4 Grading

7.4.1 Grading is anticipated to include preparation of building pad, excavation of site soils for proposed foundations, utility trenches, and placement of backfill for utility trenches.

7.4.2 A preconstruction conference should be held at the site prior to the beginning of grading operations with the owner, contractor, civil engineer, geotechnical engineer, and building official in attendance. Special soil handling requirements can be discussed at that time.

7.4.3 Earthwork should be observed, and compacted fill tested by representatives of Geocon West, Inc. The existing fill and Older Paralic Deposits encountered during exploration is suitable for re-use as engineered fill, provided any encountered oversize material (greater than 6 inches) and any encountered deleterious debris are removed.

7.4.4 Grading should commence with the removal of all existing vegetation and existing improvements from the area to be graded. Deleterious debris such as wood and root structures should be exported from the site and should not be mixed with the fill soils. Asphalt and concrete should not be mixed with the fill soils unless approved by the Geotechnical Engineer. All existing underground improvements planned for removal should be completely excavated and the resulting depressions properly backfilled in accordance with the procedures described herein. Once a clean excavation bottom has been established it must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon West, Inc.).

7.4.5 As a minimum, it is recommended that the upper 3 feet of existing site soils be excavated and properly compacted within the proposed building footprint area. Deeper excavations should be conducted as necessary to remove all artificial fill at the direction of the Geotechnical Engineer (a representative of Geocon). Where excavation and compaction is to be conducted, the excavation should extend laterally a minimum distance of 3 feet beyond the building footprint area or for a distance equal to the depth of fill below the foundation, whichever is greater. The limits of existing fill and/or soft alluvial soils removal will be verified by the Geocon representative during site grading activities.

7.4.6 Subsequent to the recommended grading, a conventional foundation system bearing in newly placed engineered fill and/or competent undisturbed Old Paralic Deposits found at and below a depth of three feet from the existing grade may be utilized for support of the proposed structure. It is the intent of the Geotechnical Engineer to allow foundations for the structure to derive support in newly placed engineered fill and/or undisturbed Older Paralic Deposits, if conditions warrant such an occurrence.

7.4.7 All excavations must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon). Prior to placing any fill, the excavation bottom must be proof-rolled in the presence of the Geotechnical Engineer (a representative of Geocon West, Inc.).

7.4.8 All fill and backfill soils should be placed in horizontal loose layers approximately 6 to 8 inches thick, moisture conditioned to optimum moisture content, and properly compacted to a minimum 90 percent of the maximum dry density in accordance with ASTM D 1557 (latest edition).

7.4.9 Where new paving is to be placed, it is recommended that all existing fill and soft Old Paralic Deposits be excavated and properly compacted for paving support. The client should be aware that excavation and compaction of all existing fill and soft soils in the area of new paving is not required; however, paving constructed over existing uncertified fill or unsuitable Old Paralic Deposits soil may experience increased settlement and/or cracking, and may therefore have a shorter design life and increased maintenance costs. As a minimum, the upper 12 inches of soil should be scarified, moisture conditioned to optimum moisture content, and compacted to at least 95 percent relative compaction, as determined by ASTM Test Method D 1557 (latest edition). Paving recommendations are provided in *Preliminary Pavement Recommendations* section of this report (see Section 7.10).

7.4.10 It is anticipated that stable excavations for the recommended grading can be achieved with sloping measures. However, if excavations in close proximity to an adjacent property line and/or structure are required, special excavation measures may be necessary in order to maintain lateral support of the existing offsite improvements. Excavation recommendations are provided in the *Temporary Excavations* section of this report (Section 7.15).

7.4.11 Foundations for small outlying structures, such as block walls up to 6 feet in height, planter walls or trash enclosures, which will not be tied to the proposed building, may be supported on conventional foundations deriving support on a minimum of 12 inches of newly placed engineered fill which extends laterally at least 12 inches beyond the foundation area. Where excavation and proper compaction cannot be performed or is undesirable, foundations may derive support directly in the undisturbed Old Paralic Deposits at or below a depth of 24 inches, and should be deepened as necessary to maintain a minimum 12 inch embedment into the recommended bearing materials. If the soils exposed in the excavation bottom are soft or loose, compaction of the soils will be required prior to placing steel or concrete. Compaction of the foundation excavation bottom is typically accomplished with a compaction wheel or mechanical whacker and must be observed and approved by a Geocon representative.

7.4.12 Utility trenches should be properly backfilled in accordance with the following requirements. The pipe should be bedded with clean sands (Sand Equivalent greater than 30) to a depth of at least 1 foot over the pipe, and the bedding material must be inspected and approved in writing by the Geotechnical Engineer (a representative of Geocon). The use of gravel is not acceptable unless used in conjunction with filter fabric to prevent the gravel from having direct contact with soil. The remainder of the trench backfill may be derived from onsite soil or approved import soil, compacted as necessary, until the required compaction is obtained. The use of minimum 2-sack slurry is also acceptable as backfill. Prior to placing any bedding materials or pipes, the excavation bottom must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon).

7.4.13 All imported fill shall be observed, tested, and approved by Geocon West, Inc. prior to bringing soil to the site. Rocks larger than 6 inches in diameter shall not be used in the fill. If necessary, import soils used as structural fill should have an expansion index less than 30 and corrosivity properties that are equally or less detrimental to that of the existing onsite soils (see Figure B24). Import soils placed in the building area should be placed uniformly across the building pad or in a manner that is approved by the Geotechnical Engineer (a representative of Geocon).

7.4.14 All trench and foundation excavation bottoms must be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon), prior to placing bedding materials, fill, steel, gravel, or concrete.

7.5 Shrinkage

7.5.1 Shrinkage results when a volume of material removed at one density is compacted to a higher density. A shrinkage factor of up to 5 percent should be anticipated when excavating and compacting the upper five feet of existing earth materials on the site to an average relative compaction of 92 percent.

7.5.2 If import soils will be utilized in the building pad, the soils must be placed uniformly and at equal thickness at the direction of the Geotechnical Engineer (a representative of Geocon West, Inc.). Soils can be borrowed from non-building pad areas and later replaced with imported soils.

7.6 Foundation Design

7.6.1 Subsequent to the recommended grading, a conventional shallow spread foundation system may be utilized for support of the proposed structure provided foundations derive support

in newly placed engineered fill and/or dense Old Paralic Deposits at or below a depth of 3 feet below the existing ground surface.

7.6.2 Conventional shallow spread foundations for the proposed structure should consist of continuous strip footings and/or isolated spread footings and should be designed using the parameters in the table below.

SUMMARY OF FOUNDATION RECOMMENDATIONS

Parameter	Value
Minimum Continuous Foundation Width	12 Inches
Minimum Isolated Foundation Width	24 Inches
Minimum Foundation Depth	18 Inches Below Lowest Adjacent Grade
Minimum Steel Reinforcement	4 No. 4 Bars, 2 Top and 2 Bottom
Allowable Bearing Capacity – Continuous Foundation	2,000 psf
Allowable Bearing Capacity – Isolated Foundation	2,400 psf
Bearing Capacity Increases	400 psf per Foot of Width
	800 psf per Foot of Depth
Maximum Allowable Bearing Capacity	6,000 psf
Estimated Total Settlement	1½ Inch
Estimated Differential Settlement	¾ Inch over 20 Feet

7.6.3 The allowable bearing pressures may be increased by one-third for transient loads due to wind or seismic forces.

7.6.4 If depth increases are utilized for the perimeter foundations, this office should be provided a copy of the final construction plans so that the excavation recommendations presented herein could be properly reviewed and revised if necessary.

7.6.5 Once the design and foundation loading configurations for the proposed structure proceeds to a more finalized plan, the estimated settlements presented in this report should be reviewed and revised, if necessary. If the final foundation loading configurations are greater than the assumed loading conditions, the potential for settlement should be reevaluated by this office.

7.6.6 The above foundation dimensions and minimum reinforcement recommendations are based on soil conditions and building code requirements only, and are not intended to be used in lieu of those required for structural purposes.

7.6.7 No special subgrade presaturation is required prior to placement of concrete. However, the slab and foundation subgrade should be sprinkled as necessary; to maintain a moist condition as would be expected in any concrete placement.

7.6.8 Foundation excavations should be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon West, Inc.), prior to the placement of reinforcing steel and concrete to verify that the excavations and exposed soil conditions are consistent with those anticipated. If unanticipated soil conditions are encountered, foundation modifications may be required.

7.6.9 This office should be provided a copy of the final construction plans so that the excavation recommendations presented herein could be properly reviewed and revised if necessary.

7.7 Miscellaneous Foundations

7.7.1 Foundations for small outlying structures, such as block walls up to 6 feet in height, planter walls or trash enclosures which will not be tied to the proposed structure may be supported on conventional foundations bearing on a minimum of 12 inches of newly placed engineered fill which extends laterally at least 12 inches beyond the foundation area. Where excavation and compaction cannot be performed or is undesirable, such as adjacent to property lines, foundations may derive support in the undisturbed Old Paralic Deposits at or below a depth of 24 inches and should be deepened as necessary to maintain a minimum 12 inch embedment into the recommended bearing materials.

7.7.2 If the soils exposed in the excavation bottom are soft, compaction of the soft soils will be required prior to placing steel or concrete. Compaction of the foundation excavation bottom is typically accomplished with a compaction wheel or mechanical whacker and must be observed and approved by a Geocon representative. Miscellaneous foundations may be designed for a bearing value of 1,500 psf and should be a minimum of 12 inches in width, 18 inches in depth below the lowest adjacent grade and 12 inches into the recommended bearing material. The allowable bearing pressure may be increased by up to one-third for transient loads due to wind or seismic forces.

7.7.3 Foundation excavations should be observed and approved in writing by the Geotechnical Engineer (a representative of Geocon West, Inc.), prior to the placement of reinforcing steel and concrete to verify that the excavations and exposed soil conditions are consistent with those anticipated.

7.8 Lateral Design

7.8.1 Resistance to lateral loading may be provided by friction acting at the base of foundations, slabs and by passive earth pressure. An allowable coefficient of friction of 0.37 may be used with the dead load forces in the dense Old Paralic Deposits and in properly compacted engineered fill.

7.8.2 Passive earth pressure for the sides of foundations and slabs poured against properly compacted engineered fill or dense Old Paralic Deposits may be computed as an equivalent fluid having a density of 230 pcf with a maximum earth pressure of 2,300 psf. When combining passive and friction for lateral resistance, the passive component should be reduced by one-third.

7.9 Concrete Slabs-on-Grade

7.9.1 Concrete slabs-on-grade subject to vehicle loading should be designed in accordance with the recommendations in the *Preliminary Pavement Recommendations* section of this report (Section 7.10).

7.9.2 Subsequent to the recommended grading, concrete slabs-on-grade for structures, not subject to vehicle loading, should be a minimum of 4 inches thick and minimum slab reinforcement should consist of No. 3 steel reinforcing bars placed 18 inches on center in both horizontal directions. Steel reinforcing should be positioned vertically near the slab midpoint.

7.9.3 Slabs-on-grade at the ground surface that may receive moisture-sensitive floor coverings or may be used to store moisture-sensitive materials should be underlain by a vapor retarder placed directly beneath the slab. The vapor retarder and acceptable permeance should be specified by the project architect or developer based on the type of floor covering that will be installed. The vapor retarder design should be consistent with the guidelines presented in Section 9.3 of the American Concrete Institute's (ACI) Guide for Concrete Slabs that Receive Moisture-Sensitive Flooring Materials (ACI 302.2R-06) and should be installed in general conformance with ASTM E 1643 (latest edition) and the manufacturer's recommendations. A minimum thickness of 15 mils extruded polyolefin plastic is recommended; vapor retarders which contain recycled content or woven materials are not recommended. The vapor retarder should have a permeance of less than 0.01 perms demonstrated by testing before and after mandatory conditioning. The vapor retarder should be installed in direct contact with the concrete slab with proper perimeter seal. If the California Green Building Code requirements apply to this project, the vapor retarder should be underlain by 4 inches of clean aggregate. It is important that the vapor retarder be puncture resistant since it will be in direct contact with angular gravel. As an alternative to the clean aggregate suggested in the Green Building Code, it is our opinion that the concrete slab-on-grade may be underlain by a vapor retarder over 4 inches of clean sand (sand equivalent greater than 30), since the sand will serve a capillary break and will minimize the potential for punctures and damage to the vapor barrier.

7.9.4 For seismic design purposes, a coefficient of friction of 0.37 may be utilized between concrete slabs and subgrade soils without a moisture barrier, and 0.15 for slabs underlain by a moisture barrier.

7.9.5 The moisture content of the slab subgrade should be maintained and sprinkled as necessary to maintain a moist condition as would be expected in any concrete placement.

7.9.6 Exterior slabs for walkways or flatwork, not subject to traffic loads, should be at least 4 inches thick and reinforced with No. 3 steel reinforcing bars placed 18 inches on center in both horizontal directions, positioned near the slab midpoint. Prior to construction of slabs, the upper 12 inches of subgrade should be moistened to optimum moisture content and properly compacted to at least 95 percent relative compaction, as determined by ASTM Test Method D 1557 (latest edition). Crack control joints should be spaced at intervals not greater than 10 feet and should be constructed using saw-cuts or other methods as soon as practical following concrete placement. Crack control joints should extend a minimum depth of one-fourth the slab thickness. The project structural engineer should design construction joints as necessary.

7.9.7 The recommendations of this report are intended to reduce the potential for cracking of slabs due to settlement. However, even with the incorporation of the recommendations presented herein, foundations, stucco walls, and slabs-on-grade may exhibit some cracking due to minor soil movement and/or concrete shrinkage. The occurrence of concrete shrinkage cracks is independent of the supporting soil characteristics. Their occurrence may be reduced and/or controlled by limiting the slump of the concrete, proper concrete placement and curing, and by the placement of crack control joints at periodic intervals, in particular, where re-entrant slab corners occur.

7.10 Preliminary Pavement Recommendations

7.10.1 Where new paving is to be placed, it is recommended that all existing fill and soft or unsuitable Old Paralic Deposits be excavated and properly recompacted for paving support. The client should be aware that excavation and compaction of all existing artificial fill and soft Old Paralic Deposits in the area of new paving is not required; however, paving constructed over existing unsuitable material may experience increased settlement and/or cracking, and may therefore have a shorter design life and increased maintenance costs. As a minimum, the upper 12 inches of paving subgrade should be scarified, moisture conditioned to optimum moisture content, and properly compacted to at least 95 percent relative compaction, as determined by ASTM Test Method D 1557 (latest edition).

7.10.2 The following pavement sections are based on an assumed R-Value of 20. Once site grading activities are complete an R-Value should be obtained by laboratory testing to confirm the properties of the soils serving as paving subgrade, prior to placing pavement.

7.10.3 The Traffic Indices listed below are estimates. Geocon does not practice in the field of traffic engineering. The actual Traffic Index for each area should be determined by the project civil engineer. If pavement sections for Traffic Indices other than those listed below are required, Geocon should be contacted to provide additional recommendations. Pavement thicknesses were determined following procedures outlined in the *California Highway Design Manual* (Caltrans). It is anticipated that the majority of traffic will consist of automobile and large truck traffic.

PRELIMINARY PAVEMENT DESIGN SECTIONS

Location	Estimated Traffic Index (TI)	Asphalt Concrete (inches)	Class 2 Aggregate Base (inches)
Automobile Parking And Driveways	4.0	3.0	4.0
Trash Truck & Fire Lanes	7.0	4.0	12.0

7.10.4 Asphalt concrete should conform to Section 203-6 of the "*Standard Specifications for Public Works Construction*" (Green Book). Class 2 aggregate base materials should conform to Section 26-1.02A of the "*Standard Specifications of the State of California, Department of Transportation*" (Caltrans). The use of Crushed Miscellaneous Base in lieu of Class 2 aggregate base is acceptable. Crushed Miscellaneous Base should conform to Section 200-2.4 of the "*Standard Specifications for Public Works Construction*" (Green Book).

7.10.5 Unless specifically designed and evaluated by the project structural engineer, where exterior concrete paving will be utilized for support of vehicles, it is recommended that the concrete be a minimum of 6 inches of concrete reinforced with No. 3 steel reinforcing bars placed 18 inches on center in both horizontal directions. Concrete paving supporting vehicular traffic should be underlain by a minimum of 4 inches of aggregate base and a properly compacted subgrade. The subgrade and base material should be compacted to 95 percent relative compactions determined by ASTM Test Method D 1557 (latest edition).

7.10.6 The performance of pavements is highly dependent upon providing positive surface drainage away from the edge of pavements. Ponding of water on or adjacent to the pavement will likely result in saturation of the subgrade materials and subsequent cracking, subsidence and pavement distress. If planters are planned adjacent to paving, it is recommended that the perimeter curb be extended at least 12 inches below the bottom of the aggregate base to minimize the introduction of water beneath the paving.

7.11 Retaining Walls Design

7.11.1 The recommendations presented below are generally applicable to the design of rigid concrete or masonry retaining walls having a maximum height of 5 feet. In the event that walls significantly higher than 5 feet are planned, Geocon should be contacted for additional recommendations.

7.11.2 Retaining wall foundations may be designed in accordance with the recommendations provided in the *Foundation Design* sections of this report (see Section 7.6).

7.11.3 Retaining walls with a level backfill surface that are not restrained at the top should be designed utilizing a triangular distribution of pressure (active pressure). Restrained walls are those that are not allowed to rotate more than 0.001H (where H equals the height of the retaining portion of the wall in feet) at the top of the wall. Where walls are restrained from movement at the top, walls may be designed utilizing a triangular distribution of pressure (at-rest pressure). The table below presents recommended pressures to be used in retaining wall design, assuming that proper drainage will be maintained.

RETAINING WALL WITH LEVEL BACKFILL SURFACE

HEIGHT OF RETAINING WALL (FEET)	ACTIVE PRESSURE EQUIVALENT FLUID PRESSURE (POUNDS PER CUBIC FOOT)	AT-REST PRESSURE EQUIVALENT FLUID PRESSURE (POUNDS PER CUBIC FOOT)
Up to 5	44	62

7.11.4 The wall pressures provided above assume that the proposed retaining walls will support relatively undisturbed Old Paralic Deposits or engineered fill derived from onsite soils. If import soil is used to backfill proposed walls, revised earth pressures may be required to account for the geotechnical properties of the soil placed as engineered fill. This should be evaluated once the use of sloping measures is established and once the geotechnical characteristics of the engineered backfill soils can be further evaluated.

7.11.5 The wall pressures provided above assume that the retaining wall will be properly drained preventing the buildup of hydrostatic pressure. If retaining wall drainage is not implemented, the equivalent fluid pressure to be used in design of undrained walls is 90 pcf. The value includes hydrostatic pressures plus buoyant lateral earth pressures.

7.11.6 Additional active pressure should be added for a surcharge condition due to sloping ground, vehicular traffic or adjacent structures and should be designed for each condition as the project progresses.

7.11.7 It is recommended that line-load surcharges from adjacent wall footings, use horizontal pressures generated from NAV-FAC DM 7.2. The governing equations are:

$$For\ {}^{x}/_{H} \leq 0.4$$

$$\sigma_H(z) = \frac{0.20 \times \left(\frac{z}{H}\right)}{\left[0.16 + \left(\frac{z}{H}\right)^2\right]^2} \times \frac{Q_L}{H}$$

and

$$For\ {}^{x}/_{H} > 0.4$$

$$\sigma_H(z) = \frac{1.28 \times \left(\frac{x}{H}\right)^2 \times \left(\frac{z}{H}\right)}{\left[\left(\frac{x}{H}\right)^2 + \left(\frac{z}{H}\right)^2\right]^2} \times \frac{Q_L}{H}$$

where x is the distance from the face of the excavation or wall to the vertical line-load, H is the distance from the bottom of the footing to the bottom of excavation or wall, z is the depth at which the horizontal pressure is desired, Q_L is the vertical line-load and $\sigma_H(z)$ is the horizontal pressure at depth z.

7.11.8 It is recommended that vertical point-loads, from construction equipment outriggers or adjacent building columns use horizontal pressures generated from NAV-FAC DM 7.2. The governing equations are:

$$For\ {}^{x}/_{H} \leq 0.4$$

$$\sigma_H(z) = \frac{0.28 \times \left(\frac{z}{H}\right)^2}{\left[0.16 + \left(\frac{z}{H}\right)^2\right]^3} \times \frac{Q_P}{H^2}$$

and

$$For\ {}^{x}/_{H} > 0.4$$

$$\sigma_H(z) = \frac{1.77 \times \left(\frac{x}{H}\right)^2 \times \left(\frac{z}{H}\right)^2}{\left[\left(\frac{x}{H}\right)^2 + \left(\frac{z}{H}\right)^2\right]^3} \times \frac{Q_P}{H^2}$$

then

$$\sigma'_H\ (z) = \sigma_H(z) cos^2(1.1\theta)$$

where x is the distance from the face of the excavation/wall to the vertical point-load, H is distance from the outrigger/bottom of column footing to the bottom of excavation, z is the depth at which the horizontal pressure is desired, Q_P is the vertical point-load, $\sigma_H(z)$ is the horizontal pressure at depth z, θ is the angle between a line perpendicular to the excavation/wall and a line from the point-load to location on the excavation/wall where the surcharge is being evaluated, and $\sigma_H(z)$ is the horizontal pressure at depth z.

7.11.9 In addition to the recommended earth pressure, the upper 10 feet of the retaining wall adjacent to the street or driveway areas should be designed to resist a uniform lateral pressure of 100 psf, acting as a result of an assumed 300 psf surcharge behind the wall due to normal street traffic. If the traffic is kept back at least 10 feet from the wall, the traffic surcharge may be neglected.

7.11.10 Seismic lateral forces will be required for any retaining walls in excess of 6 feet. Recommendations for seismic lateral forces will be provided under separate cover should they become necessary.

7.12 Retaining Wall Drainage

7.12.1 Retaining walls not designed for hydrostatic pressures should be provided with a drainage system extended at least two-thirds the height of the wall. At the base of the drain system, a subdrain covered with a minimum of 12 inches of gravel should be installed, and a compacted fill blanket or other seal placed at the surface (see Figure 5). The clean bottom and subdrain pipe, behind a retaining wall, should be observed by the Geotechnical Engineer (a representative of Geocon), prior to placement of gravel or compacting backfill.

7.12.2 As an alternative, a plastic drainage composite such as Miradrain or equivalent may be installed in continuous, 4-foot wide columns along the entire back face of the wall, at 8 feet on center. The top of these drainage composite columns should terminate approximately 18 inches below the ground surface, where either hardscape or a minimum of 18 inches of relatively cohesive material should be placed as a cap (see Figure 6). These vertical columns of drainage material would then be connected at the bottom of the wall to a collection panel or a 1-cubic-foot rock pocket drained by a 4-inch subdrain pipe.

7.12.3 Subdrainage pipes at the base of the retaining wall drainage system should outlet to an acceptable location via controlled drainage structures. Drainage should not be allowed to flow uncontrolled over descending slopes.

7.12.4 Moisture affecting below grade walls is one of the most common post-construction complaints. Poorly applied or omitted waterproofing can lead to efflorescence or standing water. Particular care should be taken in the design and installation of waterproofing to avoid moisture problems, or actual water seepage into the structure through any normal shrinkage cracks which may develop in the concrete walls, floor slab, foundations and/or construction joints. The design and inspection of the waterproofing is not the responsibility of the geotechnical engineer. A waterproofing consultant should be retained in order to recommend a product or method, which would provide protection to subterranean walls, floor slabs and foundations.

7.13 Elevator Pit Design

7.13.1 The elevator pit slab and retaining wall should be designed by the project structural engineer. Elevator pit walls may be designed in accordance with the recommendations in the *Foundation Design and Retaining Wall Design* sections of this report (see Sections 7.6 and 7.11).

7.13.2 Additional active pressure should be added for a surcharge condition due to sloping ground, vehicular traffic or adjacent foundations and should be designed for each condition as the project progresses.

7.13.3 If retaining wall drainage is to be provided, the drainage system should be designed in accordance with the *Retaining Wall Drainage* section of this report (see Section 7.12).

7.13.4 It is suggested that the exterior walls and slab be waterproofed to prevent excessive moisture inside of the elevator pit. Waterproofing design and installation is not the responsibility of the geotechnical engineer.

7.14 Elevator Piston

7.14.1 If a plunger-type elevator piston is installed for this project, a deep drilled excavation will be required. It is important to verify that the drilled excavation is not situated immediately adjacent to a foundation or shoring pile, or the drilled excavation could compromise the existing foundation or pile support, especially if the drilling is performed subsequent to the foundation or pile construction.

7.14.2 Some caving is expected and the contractor should be prepared to use casing and should have it readily available at the commencement of drilling activities. Continuous observation of the drilling and installation of the elevator piston by the Geotechnical Engineer (a representative of Geocon West, Inc.) is required.

7.14.3 The annular space between the piston casing and drilled excavation wall should be filled with a minimum of 1½-sack slurry pumped from the bottom up. As an alternative, pea gravel may be utilized. The use of soil to backfill the annular space is not acceptable.

7.15 Temporary Excavations

7.15.1 Excavations on the order of 5 feet in height may be required during grading and foundation excavations. The excavations are expected to expose artificial fill and Old Paralic Deposits, which are suitable for vertical excavations up to 5 feet in height where loose soils or caving sands are not present, and where not surcharged by adjacent traffic or structures.

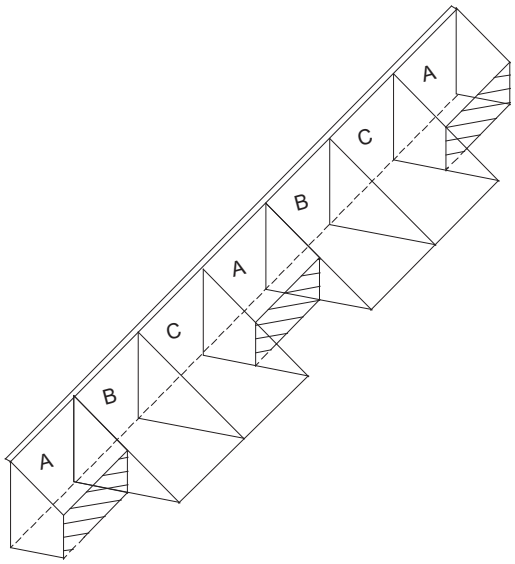
7.15.2 Vertical excavations greater than 5 feet or where surcharged by existing structures will require sloping or shoring measures in order to provide a stable excavation. Where sufficient space is available, temporary unsurcharged embankments could be sloped back at a uniform 1:1 slope gradient or flatter up to maximum height of 10 feet. A uniform slope does not have a vertical portion.

7.15.3 If excavations in close proximity to an adjacent property line and/or structure are required, special excavation measures such as slot-cutting or shoring may be necessary in order to maintain lateral support of offsite improvements. Recommendations for slot-cutting are provided in the following section.

7.15.4 Where temporary construction slopes are utilized, the top of the slope should be barricaded to prevent vehicles and storage loads at the top of the slope within a horizontal distance equal to the height of the slope. If the temporary construction embankments are to be maintained during the rainy season, berms are suggested along the tops of the slopes where necessary to prevent runoff water from entering the excavation and eroding the slope faces. Geocon personnel should inspect the soils exposed in the cut slopes during excavation so that modifications of the slopes can be made if variations in the soil conditions occur. All excavations should be stabilized within 30 days of initial excavation.

7.16 Slot Cutting

7.16.1 Where insufficient space is available to perform uniform 1:1 (H:V) sloped excavations along a property line, slot-cutting methods can be used. The slot-cutting method employs the earth as a buttress and allows the earth excavation to proceed in phases. It is recommended that the initial temporary excavation along the property line be sloped back at a uniform 1:1 (H:V) slope gradient or flatter for excavation of the existing soils to the necessary depth. The temporary slope may then be excavated using the slot-cutting (see illustration below).



7.16.2 Alternate "A" slots of 8 feet in width may be worked. The remaining earth buttresses ("B" and "C" slots) should also be 8 feet in width. The wall, foundation, or backfill should be completed in the "A" slots to a point where support of the offsite property and/or any existing structures is restored before the "B" slots are excavated. After completing the wall, foundation, or backfill in the "B" slots, finally the "C" slots may be excavated. Slot-cutting is not recommended for vertical excavations greater than 5 feet in height or where surcharged by more than 1,500 pounds per linear foot. The surcharge load should be evaluated by a qualified structural engineer, and the slot-cut calculation revised as necessary. A slot-cut calculation is provided on the following page.

Slot ut alculat on

Input:

Height of Slots	(H)	5.0	feet
Unit Weight of Soils	(γ)	132.0	pcf
Friction Angle of Soils	(ϕ)	31.0	degrees
Cohesion of Soils	(c)	450.0	psf
Factor of Safety	(FS)	1.25	

Factor of Safety = Resistance Force/Driving Force

es gn E uat ons

b = H/(tan α)

A = 0.5*H*b

W = 0.5*H*b*γ *pe l eal t l t dt*

F_1 = d*W*(sin α)

R_1 = d*[W*(cosα)*(tan ϕ)+(c*b)]

R_2 = 2*[(0.5*H*b)*c]

S es stance o ce v ng o ce

S $_1$ $_1$

Surcharge Pressure:

Line Load	(q_L)	1500.0	plf
Distance Away from Edge of Excavation	(X)	0.0	feet

Failure Angle (α) degrees	Width of Failure Wedge (b) feet	Area of Failure Wedge (A) $feet^2$	Weight of Failure Wedge (W) lbs/lineal foot	**v ng o ce** Wedge + Surcharge per lineal foot of Slot Wdith	**es st ng o ce** Failure Wedge per lineal foot of Slot Width	**es st ng o ce** Side Resistance Force lbs	**Allo a le dth o Slots** (d) feet
45	5.0	13	1650.0	2227.4	4520.3	11250.0	8.0
46	4.8	12	1593.4	2225.2	4419.0	10864.0	8.0
47	4.7	12	1538.6	2222.3	4321.7	10490.8	8.0
48	4.5	11	1485.7	2218.8	4228.1	10129.5	8.0
49	4.3	11	1434.3	2214.6	4138.0	9779.5	8.0
50	4.2	10	1384.5	2209.7	4051.2	9439.9	8.0
51	4.0	10	1336.1	2204.1	3967.7	9110.1	8.0
52	3.9	10	1289.1	2197.9	3887.1	8789.5	8.0
53	3.8	9	1243.4	2190.9	3809.3	8477.5	8.0
54	3.6	9	1198.8	2183.4	3734.3	8173.6	8.0
55	3.5	9	1155.3	2175.1	3661.9	7877.3	8.0
56	3.4	8	1112.9	2166.2	3591.9	7588.2	8.0
57	3.2	8	1071.5	2156.7	3524.4	7305.8	8.0
58	3.1	8	1031.0	2146.4	3459.1	7029.8	8.0
59	3.0	8	991.4	2135.6	3395.9	6759.7	8.0
60	2.9	7	952.6	2124.0	3334.9	6495.2	8.0
61	2.8	7	914.6	2111.9	3275.9	6236.0	8.0
62	2.7	7	877.3	2099.0	3218.9	5981.7	8.0
63	2.5	6	840.7	2085.6	3163.7	5732.2	8.0
64	2.4	6	804.8	2071.5	3110.4	5487.0	8.0
65	2.3	6	769.4	2056.8	3058.9	5246.0	8.0
66	2.2	6	734.6	2041.4	3009.1	5008.8	8.0
67	2.1	5	700.4	2025.5	2960.9	4775.3	8.0
68	2.0	5	666.6	2008.9	2914.4	4545.3	8.0
69	1.9	5	633.4	1991.7	2869.5	4318.5	8.0
70	1.8	5	600.6	1973.9	2826.1	4094.7	8.0

* Width of Slots to achieve a minimum of 1.25 Factor of Safety, with a Maximum Allowable Slot Width of 8-feet.

Critical Slot Width with Factor of Safety equal or exceeding 1.25:

d_{allo} eet

7.17 Stormwater Infiltration

7.17.1 During the December 11, 2023, site exploration, boring B3 was utilized to perform percolation testing. The boring was advanced to the depth listed in the table below. Slotted casing was placed in the boring, and the annular space between the casing and excavation was filled with filter pack. The boring was then filled with water to pre-saturate the soils. After the presaturation period was complete, the casing was refilled with water and percolation test readings were performed after repeated flooding of the cased excavations. Based on the test results, the field-measured percolation rate and the design infiltration rate are provided in the following table. The Reduction Factor (Rf), to convert the field-measured percolation rate to an infiltration rate, is also shown in the table below. This value has been calculated in accordance with the Boring Percolation Test Procedure in the County of Los Angeles Department of Public Works GMED Guidelines for Geotechnical Investigation and Reporting, Low Impact Development Stormwater Infiltration (June 2021). Percolation test field data and calculation of the measured percolation rate and design infiltration rate are provided on Figures 7.

BORING	INFILTRATION DEPTH (FT)	MEASURED PERCOLATION RATE (IN CH/ HOUR)	DESIGN INFILTRATION RATE (INCH / HOUR)
B3	15-25	11.2	3.8

7.17.2 Based on the test method utilized (Boring Percolation Test), the reduction factor RFt may be taken as 1.0 in the infiltration system design. Based on the number of tests performed and consistency of the soils throughout the site, it is suggested that the reduction factor RFv be taken as 1.0. In addition, provided proper maintenance is performed to minimize long-term siltation and plugging, the reduction factor RFs may be taken as 1.0. Additional reduction factors may be required and should be applied by the engineer in responsible charge of the design of the stormwater infiltration system and based on applicable guidelines.

7.17.3 The results of the percolation testing indicate that the soils are conductive to infiltration. It is our opinion that the soil zone encountered at the depths and location as listed in the table above are suitable for infiltration of stormwater.

7.17.4 It is our opinion that the introduction of stormwater at the depth and location indicated above will not induce excessive hydro-consolidation, will not create a perched groundwater condition, will not affect soil structure interaction of existing or proposed foundations due to expansive soils, will not saturate soils supported by existing or proposed retaining walls, and will not increase the potential for liquefaction. Resulting settlements are anticipated to be less than ¼ inch, if any.

7.17.5 The infiltration system must be located such that the closest distance between an adjacent foundation is at least 15 feet in all directions from the zone of saturation. The zone of saturation may be assumed to project downward from the discharge of the infiltration facility at a gradient of 1:1. Additional property line or foundation setbacks may be required by the governing jurisdiction and should be incorporated into the stormwater infiltration system design as necessary.

7.17.6 Where the 15-foot horizontal setback cannot be maintained between the infiltration system and an adjacent footing, and the infiltration system penetrates below the foundation influence line, the proposed stormwater infiltration system must be designed to resist the surcharge from the adjacent foundation. The foundation surcharge line may be assumed to project down away from the bottom of the foundation at a 1:1 gradient. The stormwater infiltration system must still be sufficiently deep to maintain the 15-foot vertical offset between the bottom of the footing and the zone of saturation

7.17.7 Subsequent to the placement of the infiltration system, it is acceptable to backfill the resulting void space between the excavation sidewalls and the infiltration system with minimum two-sack slurry provided the slurry is not placed in the infiltration zone. It is recommended that pea gravel be utilized adjacent to the infiltration zone so communication of water to the soil is not hindered.

7.17.8 Due to the preliminary nature of the project at this time, the type of stormwater infiltration system and location of the stormwater infiltration systems has not yet been determined. The design drawings should be reviewed and approved by the Geotechnical Engineer. The installation of the stormwater infiltration system should be observed and approved by the Geotechnical Engineer (a representative of Geocon).

7.18 Surface Drainage

7.18.1 Proper surface drainage is critical to the future performance of the project. Uncontrolled infiltration of irrigation excess and storm runoff into the soils can adversely affect the performance of the planned improvements. Saturation of a soil can cause it to lose internal shear strength and increase its compressibility, resulting in a change in the original designed engineering properties. Proper drainage should be maintained at all times.

7.18.2 All site drainage should be collected and controlled in non-erosive drainage devices. Drainage should not be allowed to pond anywhere on the site, and especially not against any foundation or retaining wall. The site should be graded and maintained such that surface drainage is directed away from structures in accordance with 2022 CBC 1804.4 or other applicable standards. In addition, drainage should not be allowed to flow uncontrolled over any descending slope. Discharge from downspouts, roof drains and scuppers are not recommended onto unprotected soils within five feet of the building perimeter. Planters which are located adjacent to foundations should be sealed to prevent moisture intrusion into the soils providing foundation support. Landscape irrigation is not recommended within 5 feet of the building perimeter footings except when enclosed in protected planters.

7.18.3 Positive site drainage should be provided away from structures, pavement, and the tops of slopes to swales or other controlled drainage structures. The building pad and pavement areas should be fine graded such that water is not allowed to pond.

7.18.4 Landscaping planters immediately adjacent to paved areas are not recommended due to the potential for surface or irrigation water to infiltrate the pavement's subgrade and base course. Either a subdrain, which collects excess irrigation water and transmits it to drainage structures, or an impervious above-grade planter boxes should be used. In addition, where landscaping is planned adjacent to the pavement, it is recommended that consideration be given to providing a cutoff wall along the edge of the pavement that extends at least 12 inches below the base material.

7.20 Plan Review

7.20.1 Grading, and foundation plans should be reviewed by the Geotechnical Engineer (a representative of Geocon West, Inc.), prior to finalization to verify that the plans have been prepared in substantial conformance with the recommendations of this report and to provide additional analyses or recommendations.

LIMITATIONS AND UNIFORMITY OF CONDITIONS

1. The recommendations of this report pertain only to the site investigated and are based upon the assumption that the soil conditions do not deviate from those disclosed in the investigation. If any variations or undesirable conditions are encountered during construction, or if the proposed construction will differ from that anticipated herein, Geocon West, Inc. should be notified so that supplemental recommendations can be given. The evaluation or identification of the potential presence of hazardous or corrosive materials was not part of the scope of services provided by Geocon West, Inc.

2. This report is issued with the understanding that it is the responsibility of the owner, or of his representative, to ensure that the information and recommendations contained herein are brought to the attention of the architect and engineer for the project and incorporated into the plans, and the necessary steps are taken to see that the contractor and subcontractors carry out such recommendations in the field.

3. The findings of this report are valid as of the date of this report. However, changes in the conditions of a property can occur with the passage of time, whether they are due to natural processes or the works of man on this or adjacent properties. In addition, changes in applicable or appropriate standards may occur, whether they result from legislation or the broadening of knowledge. Accordingly, the findings of this report may be invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review and should not be relied upon after a period of three years.

4. The firm that performed the geotechnical investigation for the project should be retained to provide testing and observation services during construction to provide continuity of geotechnical interpretation and to check that the recommendations presented for geotechnical aspects of site development are incorporated during site grading, construction of improvements, and excavation of foundations. If another geotechnical firm is selected to perform the testing and observation services during construction operations, that firm should prepare a letter indicating their intent to assume the responsibilities of project geotechnical engineer of record. A copy of the letter should be provided to the regulatory agency for their records. In addition, that firm should provide revised recommendations concerning the geotechnical aspects of the proposed development, or a written acknowledgement of their concurrence with the recommendations presented in our report. They should also perform additional analyses deemed necessary to assume the role of Geotechnical Engineer of Record.

LIST OF REFERENCES

Bryant, W. A. and Hart, E. W., 2007, *Fault-Rupture Hazard Zones in California, Alquist-Priolo Earthquake Fault Zoning Act with Index to Earthquake Fault Zone Maps*, California Geological Survey Special Publication 42, interim revision.

California Division of Mines and Geology, 1999; *State of California Seismic Hazard Zones, Long Beach Quadrangle,* Official Map, Released: March 25, 1999.

California Division of Mines and Geology, 1998, *Seismic Hazard Evaluation of the Long Beach 7.5-Minute Quadrangle, Los Angeles County, California,* Open File Report 98-19.

California Division of Mines and Geology, 1986; *Alquist-Priolo Special Studies Zones, Long Beach Quadrangle, Revised Official Map, Effective: July 1, 1986.*

California Geologic Energy Management Division, 2024, Geologic Energy Management Division Well Finder website, http://maps.conservation.ca.gov.doggr/index.html#close, accessed January 2024.

California Geological Survey, 2023, Earthquake Zones of Required Investigation, https://maps.conservation.ca.gov/cgs/EQZApp/app/, accessed December 2023.

California Geological Survey, 2018, *Earthquake Fault Zones, A Guide for Government Agencies, Property Owners/Developers, and Geoscience Practitioners for Assessing Fault Rupture Hazards in California,* Special Publication 42, Revised 2018.

California Geological Survey, 2010, *Geologic Compilation of Quaternary Surficial Deposits in Southern California, Onshore Portion of the Long Beach 30' X 60' Quadrangle, A Project for the Department of Water Resources by the California Geological Survey,* dated July, 2010.

California Geological Survey, 2003, *Geologic Map of the Long Beach 30' X 60' Quadrangle,* dated 2003.

California Geological Survey, 2009, *Tsunami Inundation Map for Emergency Planning, State of California, County of Los Angeles, Long Beach Quadrangle*, March 1, 2009.

LIST OF REFERENCES (cont.)

California Geological Survey, 2002, *Note 36, California Geomorphic Provinces*.

Federal Emergency Management Agency, 2024, FEMA's National Flood Hazard Layer (NFHL) Viewer, https://msc.fema.gov/nfhl, accessed January 2024.

Leighton and Associates, Inc., 1990, *Technical Appendix to the Safety Element of the Los Angeles County General Plan*, Hazard Reduction in Los Angeles County.

City of Long Beach, 2004, *Public Safety Element of the Long Beach General Plan Program*.

Los Angeles County Department of Public Works, 2023, Ground Water Wells Website, http://dpw2.co.la.ca.us/website/wells/viewer.asp, accessed December 2023.

Los Angeles County Department of Public Works, 2023, Flood Zone Determination Website, http://dpw.lacounty.gov/apps/wmd/floodzone/map.htm, accessed December 2023.

Norris, R.M., Webb, R. W., 1990, *Geology of California: 2nd Edition*.

Structural Engineers Association of California and The Office of Statewide Health Planning and Development, 2024, Seismic Design Maps Web Application, http://earthquake.usgs.gov/designmaps/us/application.php, accessed December 2023.

Toppozada, T., Branum, D., Petersen, M, Hallstrom, C., and Reichle, M., 2000, *Epicenters and Areas Damaged by M> 5 California Earthquakes, 1800 – 1999,* California Geological Survey, Map Sheet 49.

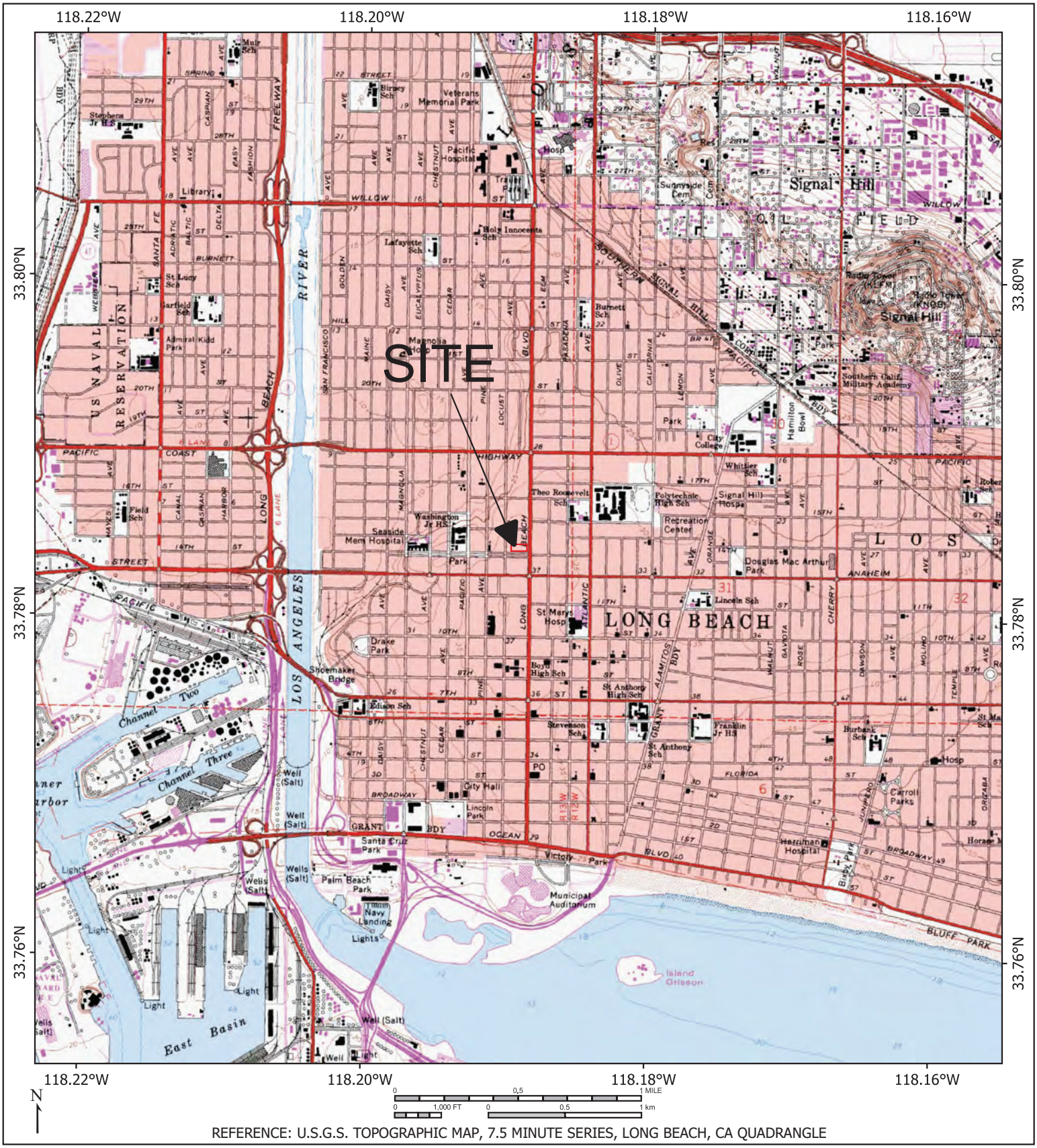
United States Geological Survey, *Inglewood, California*, 7.5-minute Topographic Quadrangle Map, Scale 1:24,000, 1964.

United States Geological Survey, Unified Hazard Tool, https://earthquake.usgs.gov/hazards/interactive/, accessed December 2023.

LIST OF REFERENCES (cont.)

Yerks R. F., McCulloh, T.H., et.al., 1965, *Geology of the Los Angeles Basin California- an Introduction*, Geological Survey Professional paper 420-A.

Ziony, J. I., and Jones, L. M., 1989, *Map Showing Late Quaternary Faults and 1978–1984 Seismicity of the Los Angeles Region, California*, U.S. Geological Survey Miscellaneous Field Studies Map MF-1964.



REFERENCE: U.S.G.S. TOPOGRAPHIC MAP, 7.5 MINUTE SERIES, LONG BEACH, CA QUADRANGLE

GEOCON WEST, INC.

ENVIRONMENTAL GEOTECHNICAL MATERIALS

500 NORTH VICTORY BOULEVARD, BURBANK, CA 91502

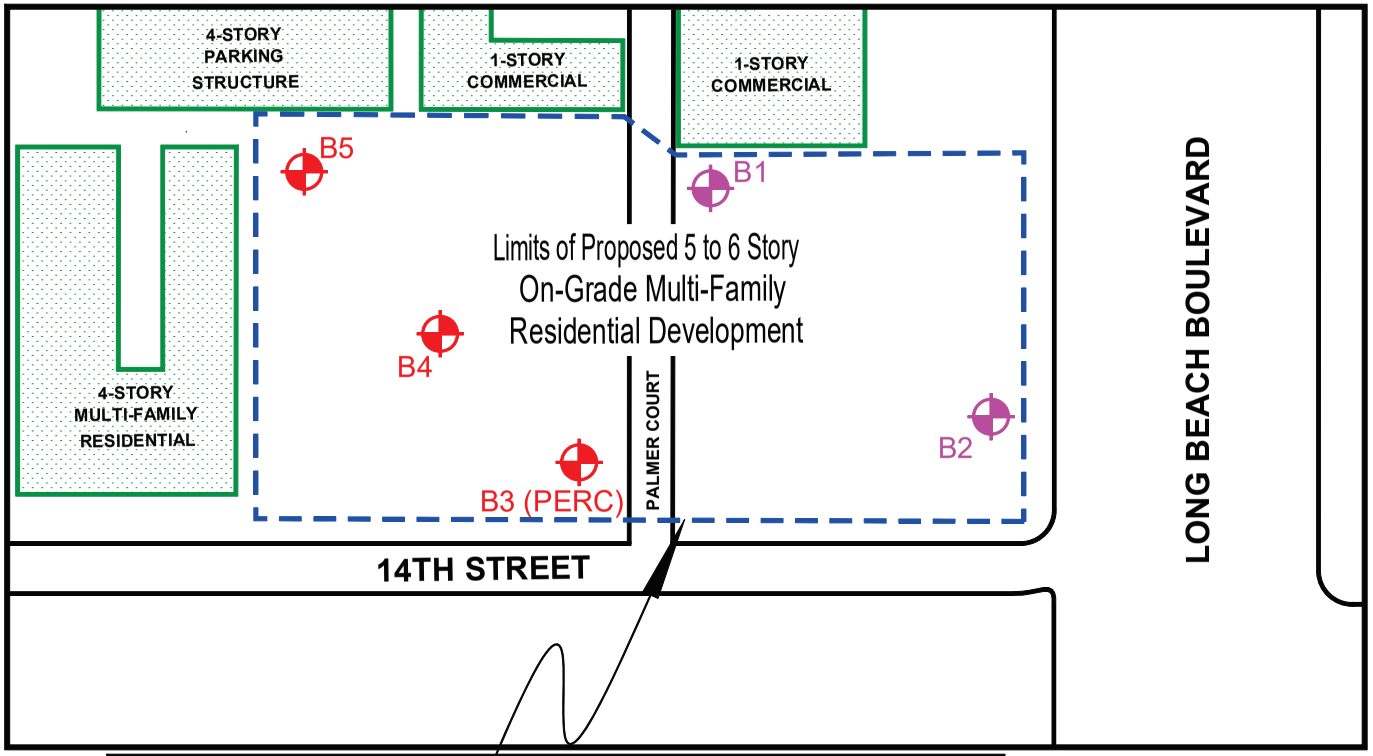
PHONE (818) 841-8388 - FAX (818) 841-1704

VICINITY MAP

1401 & 1423 LONG BEACH BOULEVARD
217 & 237 EAST 14TH STREET
LONG BEACH, CALIFORNIA

DRAFTED BY: ARE	CHECKED BY: GAK

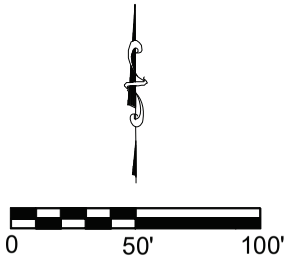
JAN. 2024	PROJECT NO. A9525-06-02	FIG. 1



LEGEND

- B5 — Approximate Location of Boring
- B2 — Approximate Location of Boring (2016 Exploration)
- Approximate Limits of Proposed Development
- Approximate Location of Existing Offsite Structure





GEOCON
WEST, INC.
ENVIRONMENTAL GEOTECHNICAL MATERIALS
500 NORTH VICTORY BOULEVARD. - BURBANK, CA 91502
PHONE (818) 841-8388 - FAX (818) 841-1704

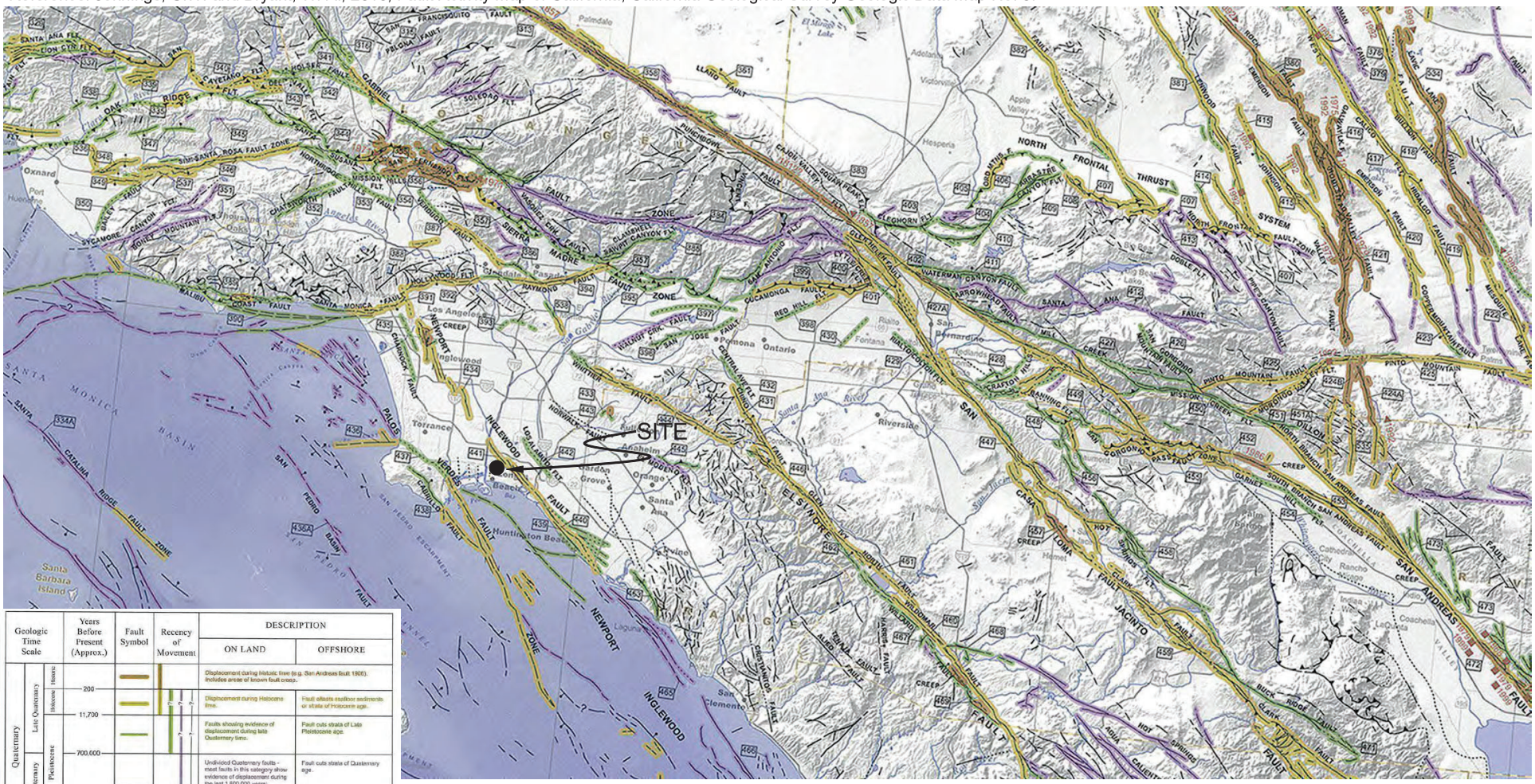
DRAFTED BY: JJK | CHECKED BY: HHD

SITE PLAN

1401 & 1423 LONG BEACH BOULEVARD
217 & 237 EAST 14TH STREET
LONG BEACH, CALIFORNIA

JAN. 2024 | PROJECT NO. A9525-06-02 | FIG. 2

Reference: Jennings, C.W. and Bryant, W. A., 2010, Fault Activity Map of California, California Geological Survey Geologic Data Map No. 6.



Geologic Time Scale			Years Before Present (Approx.)	Fault Symbol	Recency of Movement	DESCRIPTION	
						ON LAND	OFFSHORE
Quaternary	Late Quaternary	Holocene	200			Displacement during historic time (e.g. San Andreas fault 1906). Includes areas of known fault creep.	
			11,700			Displacement during Holocene time.	Fault offsets shallow sediments or strata of Holocene age.
		Pleistocene				Faults showing evidence of displacement during late Quaternary time.	Fault cuts strata of Late Pleistocene age.
	Early Quaternary		700,000			Undivided Quaternary faults - most faults in this category show evidence of displacement during the last 1,600,000 years; possible exceptions are faults which displace rocks of undifferentiated Plio-Pleistocene age.	Fault cuts strata of Quaternary age.
			1,600,000*				
Pre-Quaternary						Faults without recognized Quaternary displacement or showing evidence of no displacement during Quaternary time. Not necessarily inactive.	Fault cuts strata of Pliocene or older age.
			4.5 billion (Age of Earth)				

* Quaternary now recognized as extending to 2.6 Ma (Walker and Geissman, 2009). Quaternary faults in this map were established using the previous 1.8 Ma criterion.

0 12 24 Miles

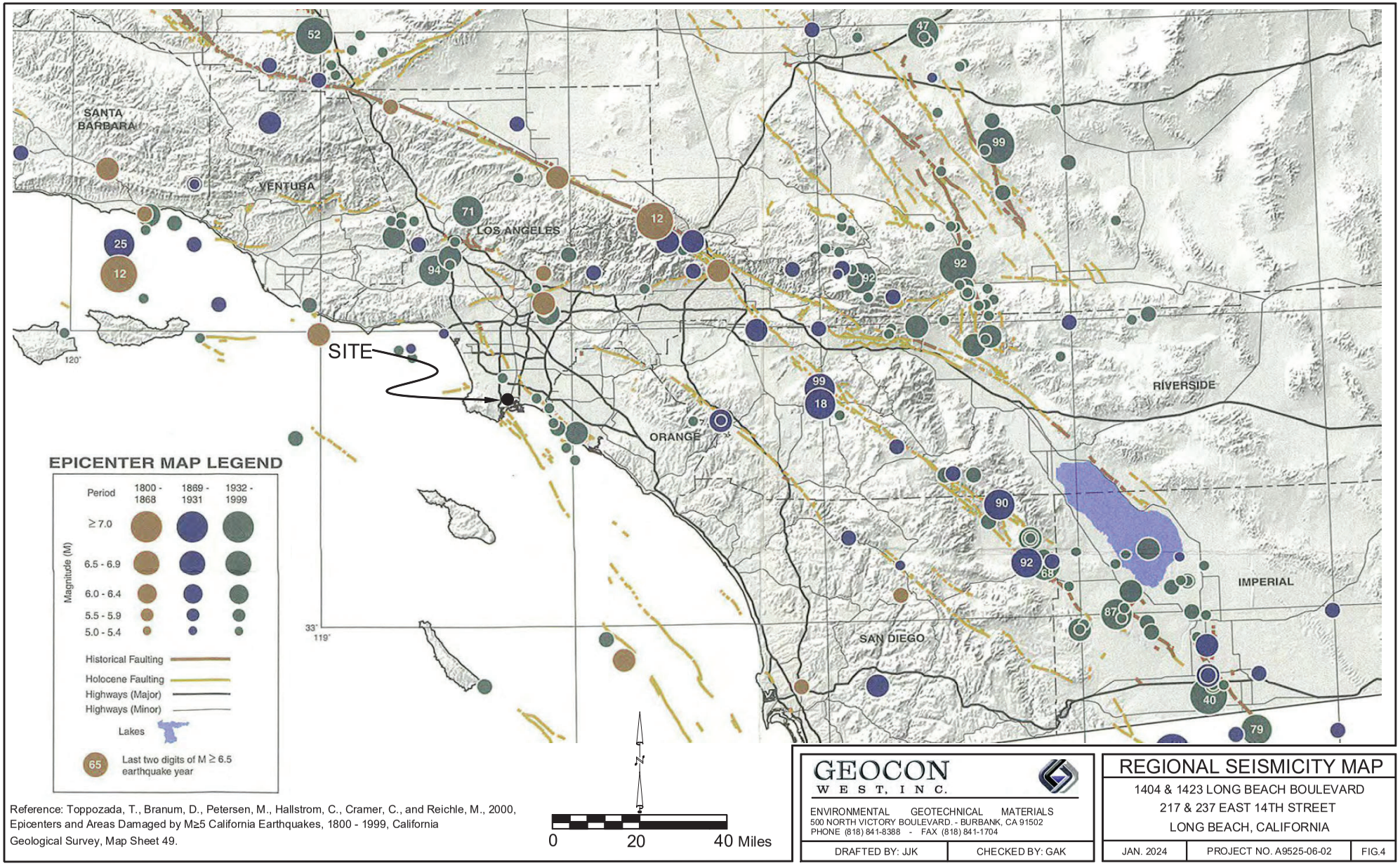
GEOCON WEST, INC.
ENVIRONMENTAL GEOTECHNICAL MATERIALS
500 NORTH VICTORY BOULEVARD - BURBANK, CA 91502
PHONE (818) 841-8388 - FAX (818) 841-1704

DRAFTED BY: JJK | CHECKED BY: GAK

REGIONAL FAULT MAP

1401 & 1423 LONG BEACH BOULEVARD
217 & 237 EAST 14TH STREET
LONG BEACH, CALIFORNIA

JAN. 2024 | PROJECT NO. A9525-06-02 | FIG. 3



Reference: Toppozada, T., Branum, D., Petersen, M., Hallstrom, C., Cramer, C., and Reichle, M., 2000, Epicenters and Areas Damaged by M≥5 California Earthquakes, 1800 - 1999, California Geological Survey, Map Sheet 49.

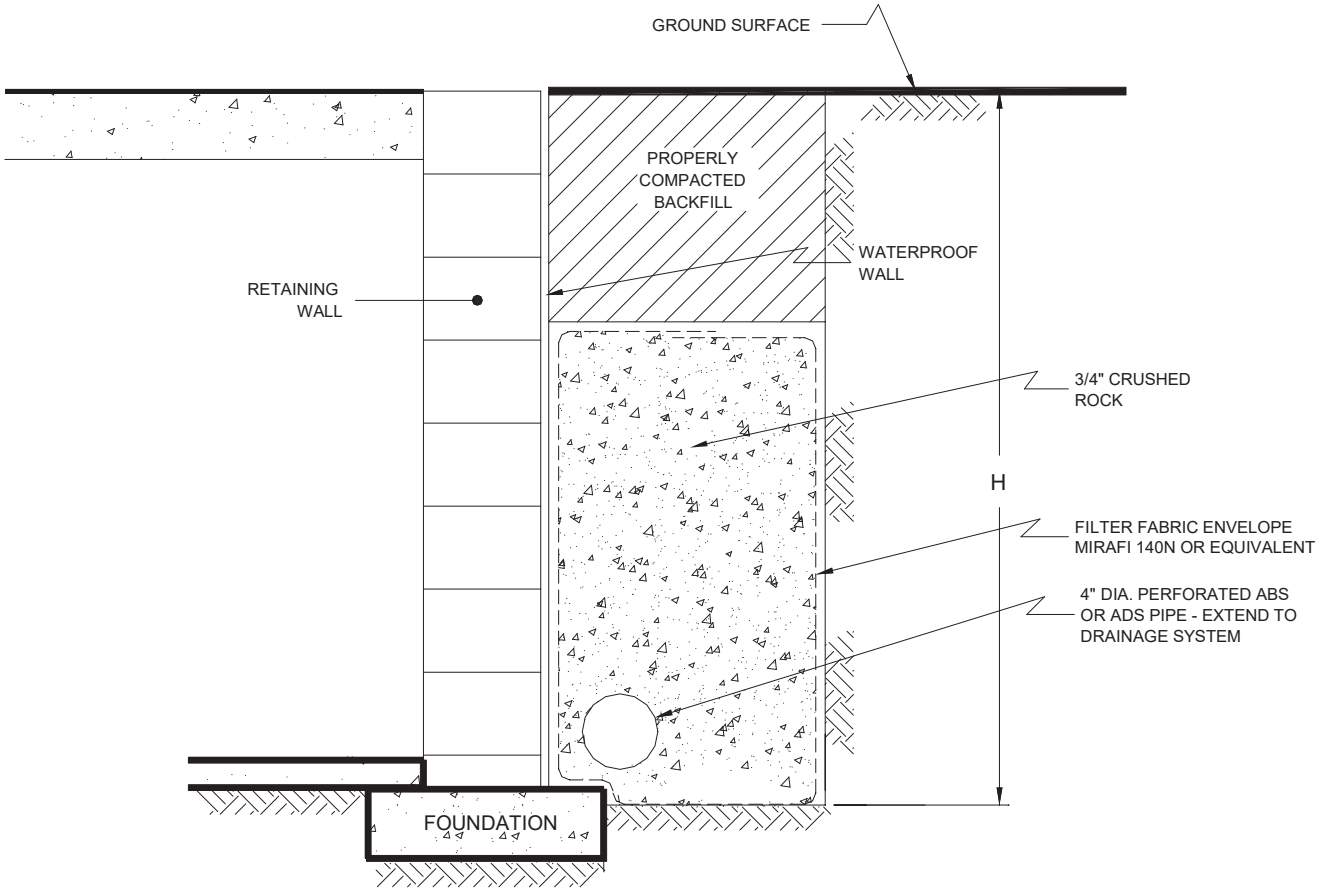
GEOCON WEST, INC.
ENVIRONMENTAL GEOTECHNICAL MATERIALS
500 NORTH VICTORY BOULEVARD. - BURBANK, CA 91502
PHONE (818) 841-8388 - FAX (818) 841-1704

DRAFTED BY: JJK	CHECKED BY: GAK

REGIONAL SEISMICITY MAP

1404 & 1423 LONG BEACH BOULEVARD
217 & 237 EAST 14TH STREET
LONG BEACH, CALIFORNIA

JAN. 2024	PROJECT NO. A9525-06-02	FIG.4



NO SCALE

GEOCON WEST, INC.

ENVIRONMENTAL GEOTECHNICAL MATERIALS

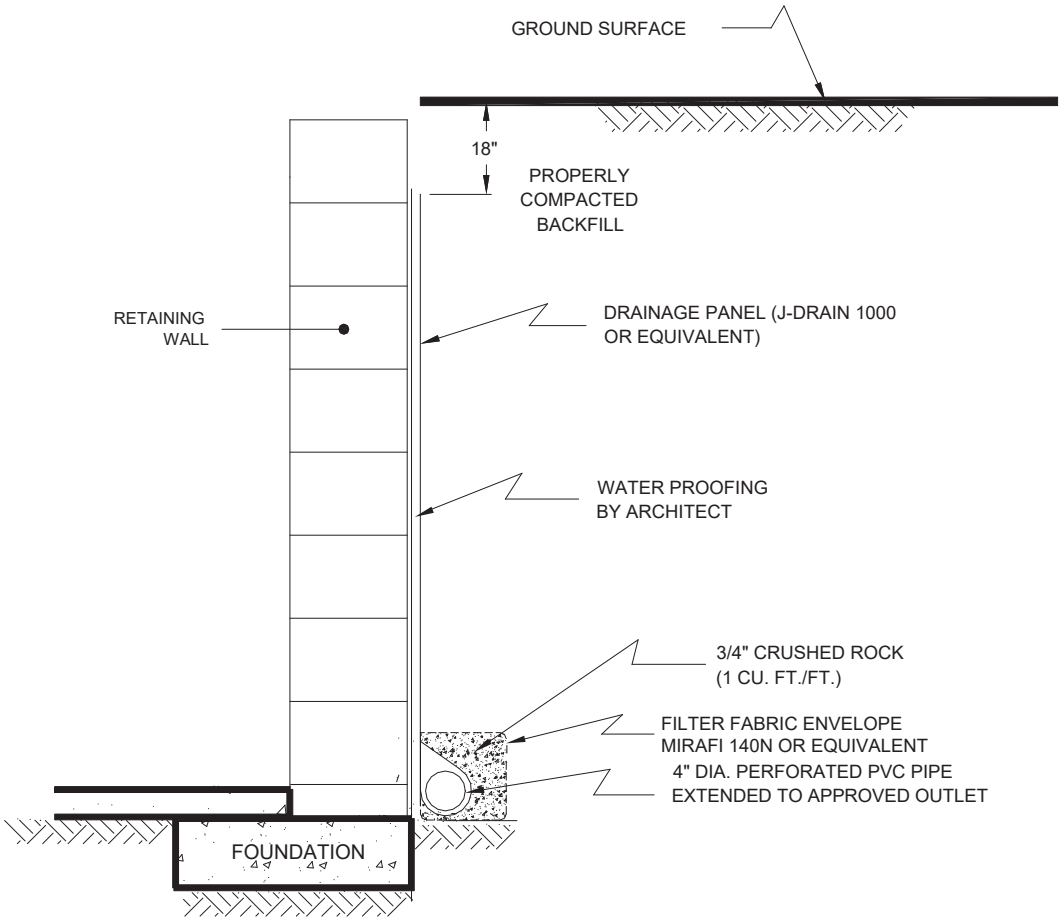
500 NORTH VICTORY BOULEVARD, BURBANK, CA 91502
PHONE (818) 841-8388 - FAX (818) 841-1704

DRAFTED BY: JJK	CHECKED BY: HHD

RETAINING WALL DRAIN DETAIL

1401 & 1423 LONG BEACH BOULEVARD
217 & 237 EAST 14TH STREET
LONG BEACH, CALIFORNIA

JAN. 2024	PROJECT NO. A9525-06-02	FIG. 5



NO SCALE

GEOCON
WEST, INC.

ENVIRONMENTAL GEOTECHNICAL MATERIALS
500 NORTH VICTORY BOULEVARD, BURBANK, CA 91502
PHONE (818) 841-8388 - FAX (818) 841-1704

DRAFTED BY: JJK	CHECKED BY: HHD

RETAINING WALL DRAIN DETAIL

1401 & 1423 LONG BEACH BOULEVARD
217 & 237 EAST 14TH STREET
LONG BEACH, CALIFORNIA

JAN. 2024	PROJECT NO. A9525-06-02	FIG. 6

BORING PERCOLATION TEST FIELD LOG

Date:	Monday, December 11, 2023	**Boring/Test Number:**	Boring B3
Project Number:	A9525-06-02	**Diameter of Boring:**	8 inches
Project Location:	1401 Long Beach Blvd.	**Diameter of Casing:**	2 inches
Earth Description:	SP	**Depth of Boring:**	25 feet
Tested By:	JJK	**Depth to Invert of BMP:**	15 feet
Liquid Description:	Water	**Depth to Water Table:**	>50 feet
Measurement Method:	Sounder	**Depth to Initial Water Depth (d_1):**	180 inches
Start Time for Pre-Soak:	9:30 AM	**Water Remaining in Boring (Y/N):**	No
Start Time for Standard:	10:30 AM	**Standard Time Interval Between Readings:**	10 minutes

Reading Number	Time Start (hh:mm)	Time End (hh:mm)	Elapsed Time Δtime (min)	Water Drop During Standard Time Interval, Δd (in)	Soil Description Notes Comments
1	10:30 AM	10:40 AM	10	118.2	
2	11:00 AM	11:10 AM	10	116.6	
3	11:30 AM	11:40 AM	10	115.9	
4	12:00 PM	12:10 PM	10	115.7	
5	12:30 PM	12:40 PM	10	115.3	
6	1:00 PM	1:10 PM	10	114.2	Stabilized Readings
7	1:30 PM	1:40 PM	10	114.1	Achieved with Readings
8	2:00 PM	2:10 PM	10	114.4	6, 7, and 8

MEASURED PERCOLATION RATE & DESIGN INFILTRATION RATE CALCULATIONS*

* Calculations Below Based on Stabilized Readings Only

Boring Radius, r: 4 inches

Test Section Height, h: 120.0 inches

$$Test\ Section\ Surface\ Area, A = 2\pi rh + \pi r^2$$

A = **3066** in^2

$$Discharged\ Water\ Volume, V = \pi r^2 \Delta d$$

$$Percolation\ Rate = \left(\frac{V/A}{\Delta T}\right)$$

Reading 6	V =	**5742**	in^3	Percolation Rate =	**11.24**	inches/hour
Reading 7	V =	**5736**	in^3	Percolation Rate =	**11.22**	inches/hour
Reading 8	V =	**5748**	in^3	Percolation Rate =	**11.25**	inches/hour

Measured Percolation Rate = **11.24** inches/hour

Reduction Factors

Small Diameter Boring, RF_t = 1

Site Variability, RF_v = 1

Long Term Siltation, RF_s = 1

$$Total\ Reduction\ Factor, RF = RF_t + RF_v + RF_s$$

Total Reduction Factor = 3

Design Infiltration Rate

$$Design\ Infiltration\ Rate = Measured\ Percolation\ Rate\ /RF$$

Design Infiltration Rate = **3.75** inches/hour

GEOCON WEST, INC.

ENVIRONMENTAL GEOTECHNICAL MATERIALS

500 NORTH VICTORY BOULEVARD - BURBANK, CA 91502

PHONE (818) 841-8388 - FAX (818) 841-1704

DRAFTED BY: JJK | CHECKED BY: HHD

PERCOLATION TEST RESULTS

1401 & 1423 LONG BEACH BOULEVARD
201 & 237 EAST 14TH STREET
LONG BEACH, CALIFORNIA

JAN. 2024 | PROJECT NO. A9525-06-02 | FIG. 7

APPENDIX A

APPENDIX A
FIELD INVESTIGATION

The site was explored on December 11, 2023, by excavating three 8-inch-diameter borings utilizing a truck-mounted hollow-stem auger drilling machine, the borings were excavated to depths of approximately 25½ feet below the ground surface. The eastern portion of the site was previously explored on December 14, 2016, by excavating two 8-inch-diameter borings utilizing a truck-mounted hollow-stem auger drilling machine. The borings were each excavated to depths of approximately 31½ feet below the existing ground surface. Representative and relatively undisturbed samples were obtained by driving a 3-inch, O. D., California Modified Sampler into the "undisturbed" soil mass with blows from a 140-pound auto-hammer falling 30 inches. The California Modified Sampler was equipped with 1-inch high by 2 3/8-inch diameter brass sampler rings to facilitate soil removal and testing. Bulk samples were also obtained.

The soil conditions encountered in the borings were visually examined, classified and logged in general accordance with the Unified Soil Classification System (USCS). Logs of the borings are presented on Figures A1 through A5. The logs depict the soil and geologic conditions encountered and the depth at which samples were obtained. The logs also include our interpretation of the conditions between sampling intervals. Therefore, the logs contain both observed and interpreted data. We determined the lines designating the interface between soil materials on the logs using visual observations, penetration rates, excavation characteristics and other factors. The transition between materials may be abrupt or gradual. Where applicable, the logs were revised based on subsequent laboratory testing. The approximate locations of the borings are shown on Figure 2.

PROJECT NO. A9525-06-01

BORING 1

ELEV. (MSL.) **41** DATE COMPLETED **12/14/16**

EQUIPMENT **HOLLOW STEM AUGER** BY: **MDS**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0					**AC: 3" BASE: 12"**			
					ARTIFICIAL FILL			
2					Silty Sand, medium dense, slightly moist, dark brown to brown, fine- to coarse-grained, gravel (to 1").			
					OLDER PARALIC DEPOSITS			
4					Sandy Silt, stiff, slightly moist, reddish brown, very fine- to fine-grained.			
					- grades to silt with sand			
6	B1@6'			ML		45	123.4	15.1
8								
10								
	B1@11'				Silt, hard, moist, light yellowish brown to brown, trace fine-grained sand.	47	112.7	16.4
12				ML				
					Sand, poorly graded, dense, moist, light yellowish brown, fine- to medium-grained.			
14								
16	B1@16'					69	111.1	101.7
18								
20					- fine-grained sand			
	B1@21'			SP		67	101.7	12.8
22								
24								
26	B1@26'				- very dense	50 (5")	96.7	3.8
28								

A9525-06-01 BORING LOGS.GPJ

Figure A1,
Log of Boring 1, Page 1 of 2

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. A9525-06-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING 1** ELEV. (MSL.) **41** DATE COMPLETED **12/14/16** EQUIPMENT **HOLLOW STEM AUGER** BY: **MDS**	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
30								
	B1@31'			SP		50 (5")	97.2	4.0
					Total depth of boring: 31.5 feet Fill to 2 feet. No groundwater encountered. Backfilled with soil cuttings and tamped. Asphalt patched. *Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer.			

A9525-06-01 BORING LOGS.GPJ

Figure A1,
Log of Boring 1, Page 2 of 2

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◥ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. A9525-06-01

BORING 2

ELEV. (MSL.) **40** DATE COMPLETED **12/14/16**

EQUIPMENT **HOLLOW STEM AUGER** BY: **MDS**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0					**ARTIFICIAL FILL** Silty Sand, medium dense, slighty moist, dark brown to brown, fine- to coarse-grained.			
2					**OLDER PARALIC DEPOSITS** Sandy Silt, stiff, slightly moist, reddish brown, fine-grained.			
4				ML				
6	B2@6'				Silt, hard, slightly moist, yellowish brown, trace fine-grained sand.	35	116.0	15.9
8				ML				
10								
12	B2@11'					80	114.5	18.5
14					Sand, poorly graded, dense, slightly moist, light yellowish brown, fine-grained, some medium-grained.			
16	B2@16'					67	109.4	3.0
18								
20				SP	- yellowish brown, slightly increase in medium-rained sand, shell fragments			
22	B2@21'					83	106.4	3.2
24								
26	B2@26'				- very dense, light yellowish brown	50 (4")	100.7	2.4
28								

A9525-06-01 BORING LOGS.GPJ

Figure A2,
Log of Boring 2, Page 1 of 2

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◪ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. A9525-06-01

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	**BORING 2** ELEV. (MSL.) **40** DATE COMPLETED **12/14/16** EQUIPMENT **HOLLOW STEM AUGER** BY: **MDS**	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
					MATERIAL DESCRIPTION			
30								
	B2@31'			SP		50 (3")	94.0	3.7
					Total depth of boring: 31.5 feet Fill to 2 feet. No groundwater encountered. Backfilled with soil cuttings and tamped. *Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer.			

A9525-06-01 BORING LOGS.GPJ

Figure A2,
Log of Boring 2, Page 2 of 2

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◥ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. A9525-06-02

BORING 3

ELEV. (MSL.) -- DATE COMPLETED **12/11/2023**

EQUIPMENT **HOLLOW STEM AUGER** BY: **JJK**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0	BULK 0-5'				**ASPHALT: 4" BASE: 16"** **ARTIFICIAL FILL** Sandy Silt, stiff, moist, dark brown and dark reddish brown, fine-grained.			
2	B3@2.5'			ML	**OLDER PARALIC DEPOSITS** Sandy Silt, hard, moist, brown and dark reddish brown, fine-grained.	50 (6")	120.3	13.0
4								
6	B3@5.5'					50 (6")	127.8	11.5
8	B3@7.5'				- grayish brown	50 (4")	122.2	12.7
10	B3@10.5'			SM	Silty Sand, very dense, moist, light brown to brown, fine-grained.	94	119.3	9.6
12								
14				SP	Sand, poorly graded, very dense, slightly moist, light grayish brown, fine-grained.			
16	B3@15.5'					50 (5")	105.6	2.3
18								
20	B3@20.5'				- dry to slightly moist, light yellowish brown	50 (6")	97.4	2.3
22								
24								
26	B3@25.5'				- slightly moist, light olive gray, seashells	50 (6")	95.8	5.6

Total depth of boring: 26 feet Fill to 2 feet.
No groundwater encountered. Percolation testing performed.
Backfilled with soil cuttings and tamped. Cold patched with A/C.
*Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer. NOTE: The stratification lines presented herein represent the approximate boundary between earth types; the transitions may be gradual.

A9525-06-02 BORING LOGS.GPJ

Figure A3,
Log of Boring 3, Page 1 of 1

SAMPLE SYMBOLS

- ... SAMPLING UNSUCCESSFUL
- ... STANDARD PENETRATION TEST
- ... DRIVE SAMPLE (UNDISTURBED)
- ... DISTURBED OR BAG SAMPLE
- ... CHUNK SAMPLE
- ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. A9525-06-02

BORING 4

ELEV. (MSL.) -- DATE COMPLETED **12/11/2023**

EQUIPMENT **HOLLOW STEM AUGER** BY: **JJK**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0	BULK 0-5'				**ASPHALT: 7.5"** **ARTIFICIAL FILL** Sandy Silt, firm, moist, grayish brown, fine-grained, glass fragments.			
2	B4@2.5'					51	119.1	13.4
4					**OLDER PARALIC DEPOSITS** Sandy Silt, hard, moist, reddish brown, fine-grained.			
6	B4@5.5'					46	117.8	16.5
8	B4@7.5'			ML	- stiff, moist, brown, fine-grained	35	122.1	13.5
10	B4@10.5'				- hard, brown to grayish brown	50 (5")	118.4	14.4
12				SP-SM	Sand with Silt, dense, moist, light brown, fine-grained.			
14					Sand, poorly graded, very dense, light grayish brown, fine-grained.			
16	B4@15.5'					50 (6")	104.0	14.4
18				SP				
20	B4@20.5'				- moist	50 (6")	98.6	1.6
22								
24								
26	B4@25.5'				- slightly moist	50 (6")	98.7	2.0

Total depth of boring: 26 feet Fill to 2.5 feet.
No groundwater encountered.
Backfilled with soil cuttings and tamped. Cold patched with A/C.
*Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer. NOTE: The stratification lines presented herein represent the approximate boundary between earth types; the transitions may be gradual.

A9525-06-02 BORING LOGS.GPJ

Figure A4,
Log of Boring 4, Page 1 of 1

SAMPLE SYMBOLS

- ... SAMPLING UNSUCCESSFUL
- ... STANDARD PENETRATION TEST
- ... DRIVE SAMPLE (UNDISTURBED)
- ... DISTURBED OR BAG SAMPLE
- ... CHUNK SAMPLE
- ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

GEOCON

PROJECT NO. A9525-06-02

BORING 5

ELEV. (MSL.) -- DATE COMPLETED **12/11/2023**

EQUIPMENT **HOLLOW STEM AUGER** BY: **JJK**

DEPTH IN FEET	SAMPLE NO.	LITHOLOGY	GROUNDWATER	SOIL CLASS (USCS)	MATERIAL DESCRIPTION	PENETRATION RESISTANCE (BLOWS/FT*)	DRY DENSITY (P.C.F.)	MOISTURE CONTENT (%)
0	BULK 0-5'				**ASPHALT: 4" CONCRETE: 4"** **ARTIFICIAL FILL** Sandy Silt, firm, moist, brown to dark brown, fine-grained.			
2								
	B5@2.5'				**OLDER PARALIC DEPOSITS** Sandy Silt, hard, slightly moist, reddish brown, fine-grained.	50 (6")	124.2	12.4
4								
	B5@5'			ML	- slightly moist to moist, brown to light brown	50 (6")	121.3	12.2
6								
8	B5@7.5'				- moist, light brown	52	119.1	13.3
10					Silt with Sand, hard, slightly moist to moist, light brown to light grayish brown.			
	B5@10.5'			ML		57	115.5	16.6
12								
14					Sand, poorly graded, dense, slightly moist, light grayish brown and light yellowish brown, fine-grained.			
16	B5@15.5'					54	103.4	4.2
18				SP				
20								
	B5@20.5'				- very dense, light olive gray	50 (5")	107.0	3.6
22								
24								
26	B5@25.5'				- slightly moist to moist, light gray and light reddish brown	50 (5")	100.2	10.8

Total depth of boring: 26 feet Fill to 2.5 feet.
No groundwater encountered.
Backfilled with soil cuttings and tamped. Cold patched with A/C.
*Penetration resistance for 140-pound hammer falling 30 inches by auto-hammer. NOTE: The stratification lines presented herein represent the approximate boundary between earth types; the transitions may be gradual.

A9525-06-02 BORING LOGS.GPJ

Figure A5,
Log of Boring 5, Page 1 of 1

SAMPLE SYMBOLS

- ☐ ... SAMPLING UNSUCCESSFUL
- ◧ ... STANDARD PENETRATION TEST
- ■ ... DRIVE SAMPLE (UNDISTURBED)
- ⊠ ... DISTURBED OR BAG SAMPLE
- ◥ ... CHUNK SAMPLE
- ▼ ... WATER TABLE OR SEEPAGE

NOTE: THE LOG OF SUBSURFACE CONDITIONS SHOWN HEREON APPLIES ONLY AT THE SPECIFIC BORING OR TRENCH LOCATION AND AT THE DATE INDICATED. IT IS NOT WARRANTED TO BE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

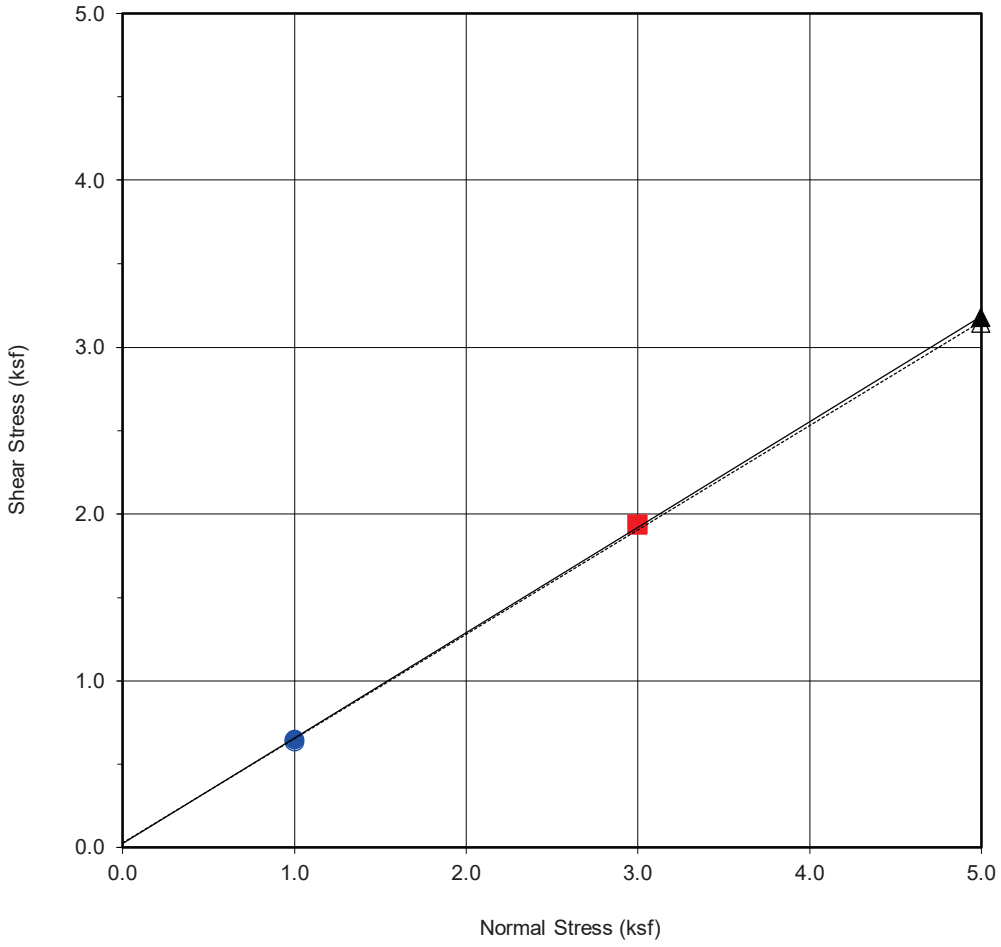
GEOCON

APPENDIX B

APPENDIX B

LABORATORY TESTING

Laboratory tests were performed in accordance with generally accepted test methods of the "American Society for Testing and Materials (ASTM)", or other suggested procedures. Selected samples were tested for direct shear strength, consolidation and expansion characteristics, corrosivity, and maximum dry density and optimum moisture content relationship. The results of the laboratory tests are summarized in Figures B1 through B24. The in-place dry density and moisture content of the samples tested are presented on the boring logs, Appendix A.



Boring No.	**B1+B2**
Sample No.	**B1+B2@0-5'**
Depth (ft)	**0-5'**
Sample Type:	Bulk

Soil Identification:		
Silty Sand (SM)		
Strength Parameters		
	C (psf)	ϕ (^{o})
Peak	25	32
Ultimate	27	32

Normal Stress (kip/ft²)	1	3	5
Peak Shear Stress (kip/ft²)	● 0.65	■ 1.94	▲ 3.18
Shear Stress @ End of Test (ksf)	○ 0.64	□ 1.94	△ 3.14
Deformation Rate (in./min.)	0.04	0.04	0.04
Initial Sample Height (in.)	1.0	1.0	1.0
Ring Inside Diameter (in.)	2.375	2.375	2.375
Initial Moisture Content (%)	9.6	9.6	9.5
Initial Dry Density (pcf)	117.0	117.0	117.0
Initial Degree of Saturation (%)	58.6	58.6	58.0
Soil Height Before Shearing (in.)	1.2	1.2	1.2
Final Moisture Content (%)	16.2	14.6	13.8

GEOCON

DIRECT SHEAR TEST RESULTS

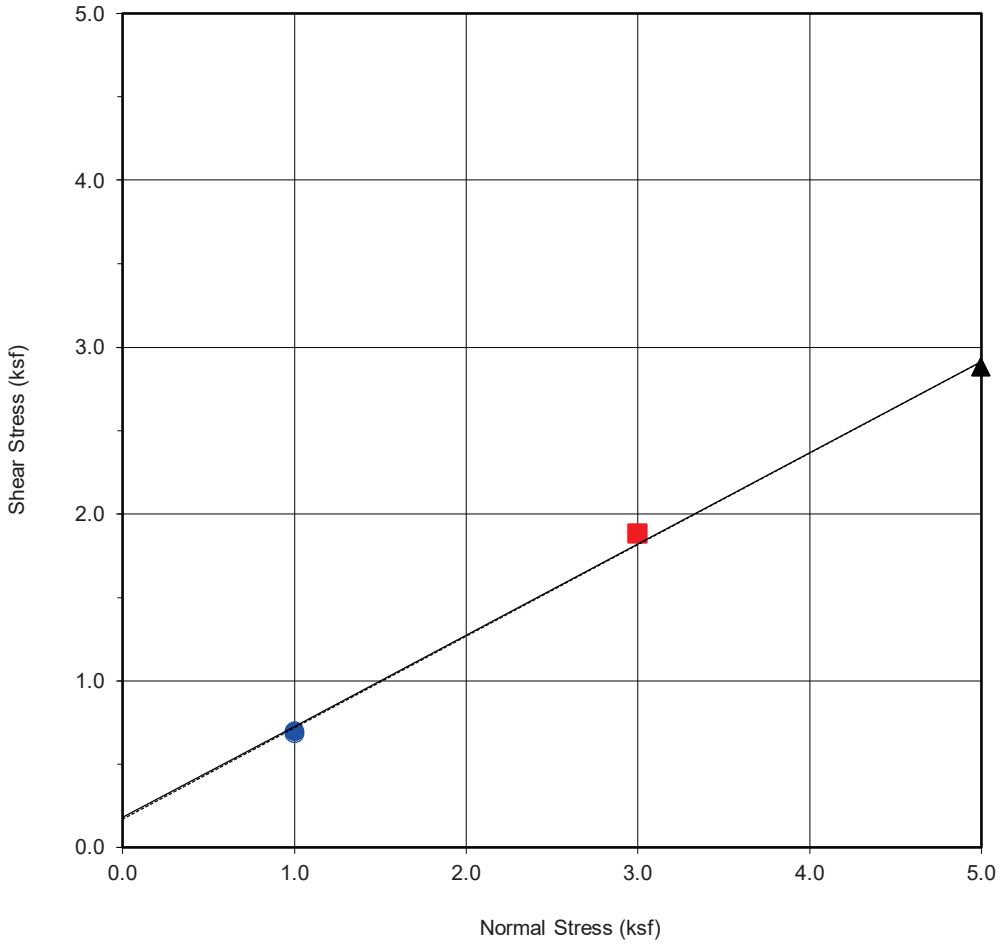
Consolidated Drained ASTM D-3080

Checked by: JJK

Project No.: A9525-06-02

1401 & 1423 LONG BEACH BOULEVARD
201 & 237 EAST 14TH STREET
LONG BEACH, CALIFORNIA

JAN. 2024 Figure B1



Boring No.	**B3+B4+B5**
Sample No.	**B3+B4+B5@0-5'**
Depth (ft)	**0-5'**
Sample Type:	Bulk

Soil Identification:		
Sandy Silt (ML)		
Strength Parameters		
	C (psf)	ϕ (^{o})
Peak	182	29
Ultimate	169	29

Normal Stress (kip/ft²)	1	3	5
Peak Shear Stress (kip/ft²)	● 0.70	■ 1.88	▲ 2.88
Shear Stress @ End of Test (ksf)	○ 0.68	□ 1.88	△ 2.88
Deformation Rate (in./min.)	0.05	0.05	0.05
Initial Sample Height (in.)	1.0	1.0	1.0
Ring Inside Diameter (in.)	2.375	2.375	2.375
Initial Moisture Content (%)	11.5	11.5	11.7
Initial Dry Density (pcf)	112.6	112.7	112.5
Initial Degree of Saturation (%)	62.4	62.7	63.4
Soil Height Before Shearing (in.)	1.2	1.2	1.2
Final Moisture Content (%)	18.6	17.6	16.4

GEOCON

DIRECT SHEAR TEST RESULTS

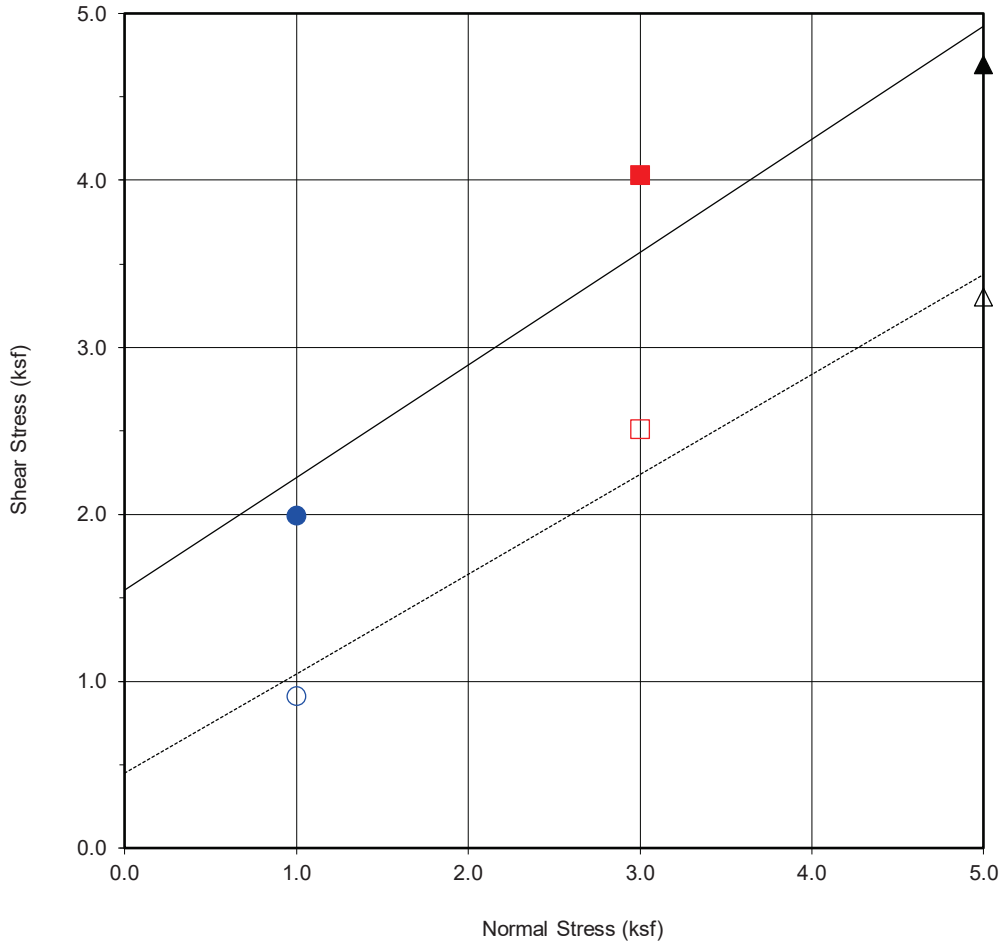
Consolidated Drained ASTM D-3080

Checked by: JJK

Project No.: A9525-06-02

1401 & 1423 LONG BEACH BOULEVARD
201 & 237 EAST 14TH STREET
LONG BEACH, CALIFORNIA

JAN. 2024 Figure B2



Boring No.	**B3**
Sample No.	**B3@2.5**
Depth (ft)	**2.5'**
Sample Type:	Ring

Soil Identification:		
Sandy Silt (ML)		
Strength Parameters		
	C (psf)	ϕ (^{o})
Peak	1547	34
Ultimate	449	31

Normal Stress (kip/ft²)	1	3	5
Peak Shear Stress (kip/ft²)	● 1.99	■ 4.03	▲ 4.69
Shear Stress @ End of Test (ksf)	○ 0.91	□ 2.51	△ 3.30
Deformation Rate (in./min.)	0.05	0.05	0.05
Initial Sample Height (in.)	1.0	1.0	1.0
Ring Inside Diameter (in.)	2.375	2.375	2.375
Initial Moisture Content (%)	13.0	13.2	13.2
Initial Dry Density (pcf)	123.2	120.9	121.5
Initial Degree of Saturation (%)	95.0	90.1	92.0
Soil Height Before Shearing (in.)	1.2	1.2	1.2
Final Moisture Content (%)	15.8	14.9	14.7

GEOCON

DIRECT SHEAR TEST RESULTS

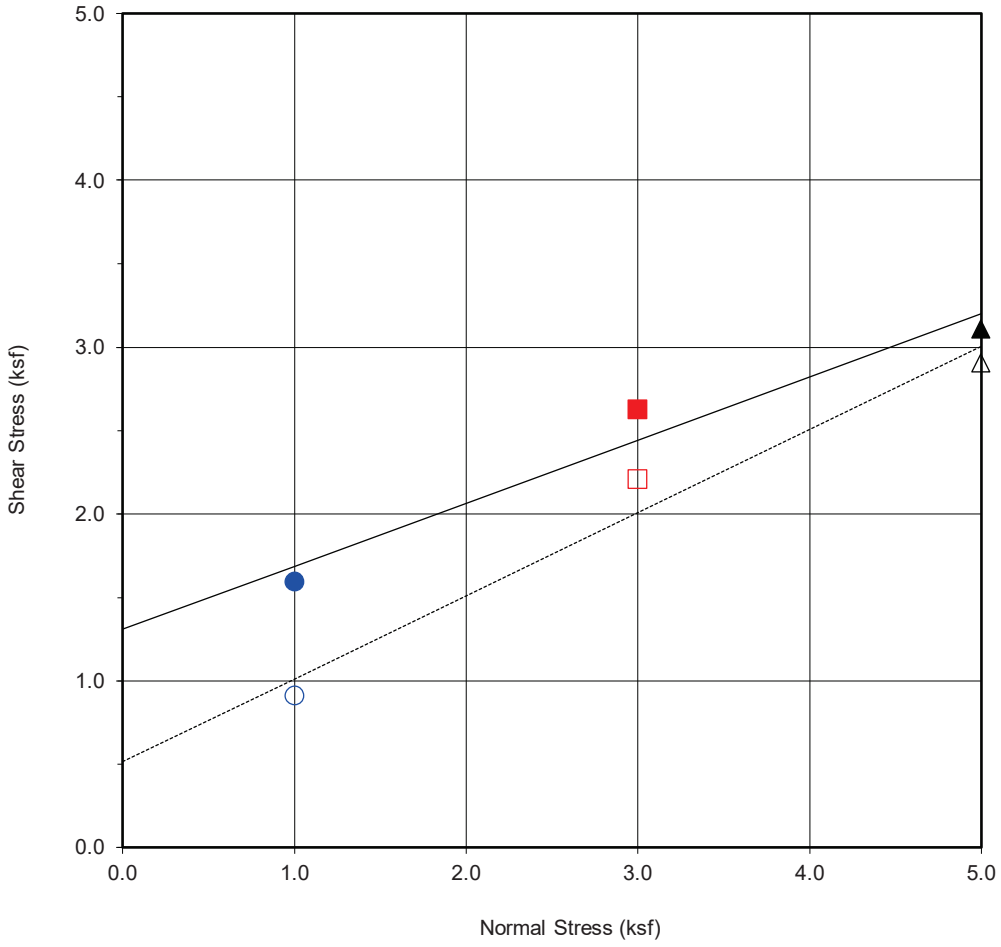
Consolidated Drained ASTM D-3080

Checked by: JJK

Project No.: A9525-06-02

1401 & 1423 LONG BEACH BOULEVARD
201 & 237 EAST 14TH STREET
LONG BEACH, CALIFORNIA

JAN. 2024 Figure B3



Boring No.	B4
Sample No.	B4@5.5
Depth (ft)	5.5'
Sample Type:	Ring

Soil Identification:		
Sandy Silt (ML)		
Strength Parameters		
	C (psf)	ϕ (°)
Peak	1310	21
Ultimate	514	26

Normal Stress (kip/ft²)	1	3	5
Peak Shear Stress (kip/ft²)	● 1.60	■ 2.63	▲ 3.11
Shear Stress @ End of Test (ksf)	○ 0.91	□ 2.21	△ 2.90
Deformation Rate (in./min.)	0.05	0.05	0.05
Initial Sample Height (in.)	1.0	1.0	1.0
Ring Inside Diameter (in.)	2.375	2.375	2.375
Initial Moisture Content (%)	16.5	16.7	16.8
Initial Dry Density (pcf)	115.1	116.1	115.8
Initial Degree of Saturation (%)	95.7	99.8	99.3
Soil Height Before Shearing (in.)	1.2	1.2	1.2
Final Moisture Content (%)	19.3	18.4	17.6

GEOCON

DIRECT SHEAR TEST RESULTS

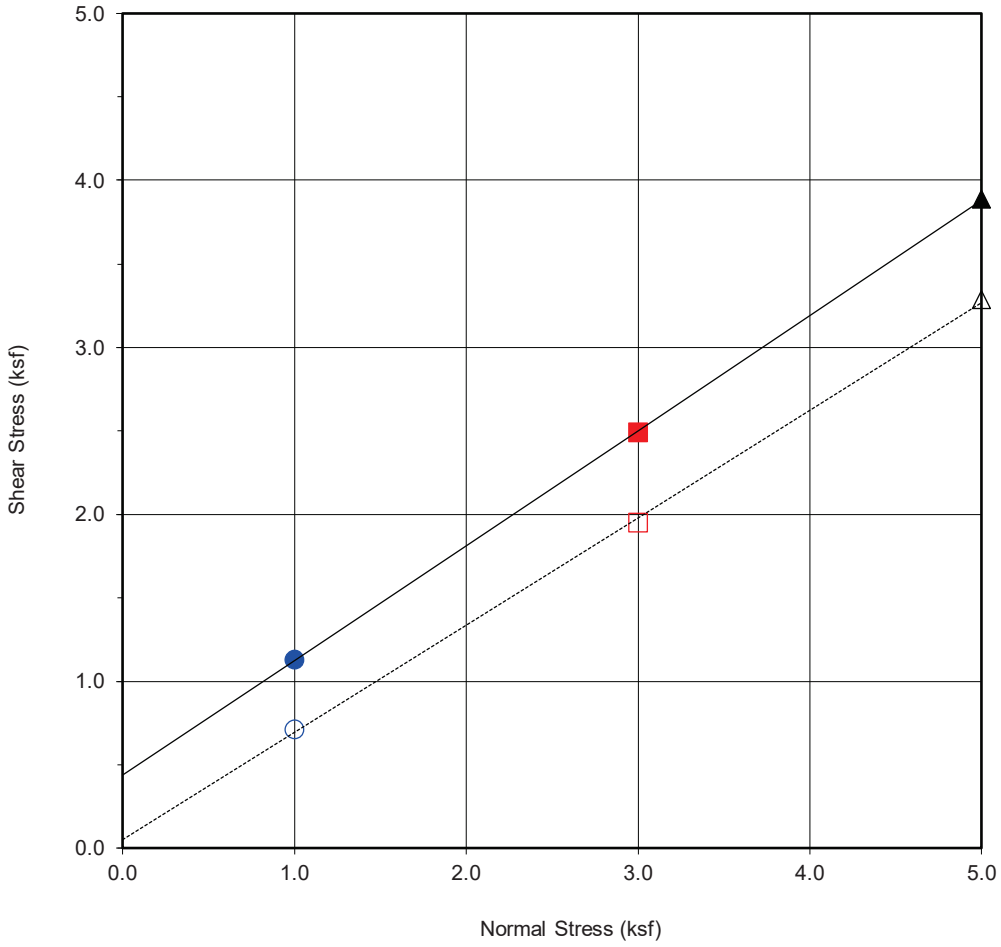
Consolidated Drained ASTM D-3080

Checked by: JJK

Project No.: A9525-06-02

1401 & 1423 LONG BEACH BOULEVARD
201 & 237 EAST 14TH STREET
LONG BEACH, CALIFORNIA

JAN. 2024 Figure B4



Boring No.	**B2**
Sample No.	**B2@ '**
Depth (ft)	**'**
Sample Type:	Ring

Soil Identification:

Silt (ML)

Strength Parameters

	C (psf)	ϕ (^{o})
Peak	437	35
Ultimate	51	33

Normal Stress (kip/ft²)	1	3	5
Peak Shear Stress (kip/ft²)	● 1.13	■ 2.49	▲ 3.89
Shear Stress @ End of Test (ksf)	○ 0.71	□ 1.95	△ 3.28
Deformation Rate (in./min.)	0.04	0.04	0.04
Initial Sample Height (in.)	1.0	1.0	1.0
Ring Inside Diameter (in.)	2.375	2.375	2.375
Initial Moisture Content (%)	13.3	12.3	12.3
Initial Dry Density (pcf)	117.6	113.9	119.8
Initial Degree of Saturation (%)	82.9	69.2	81.8
Soil Height Before Shearing (in.)	1.2	1.2	1.2
Final Moisture Content (%)	17.6	17.9	15.9

GEOCON

DIRECT SHEAR TEST RESULTS

Consolidated Drained ASTM D-3080

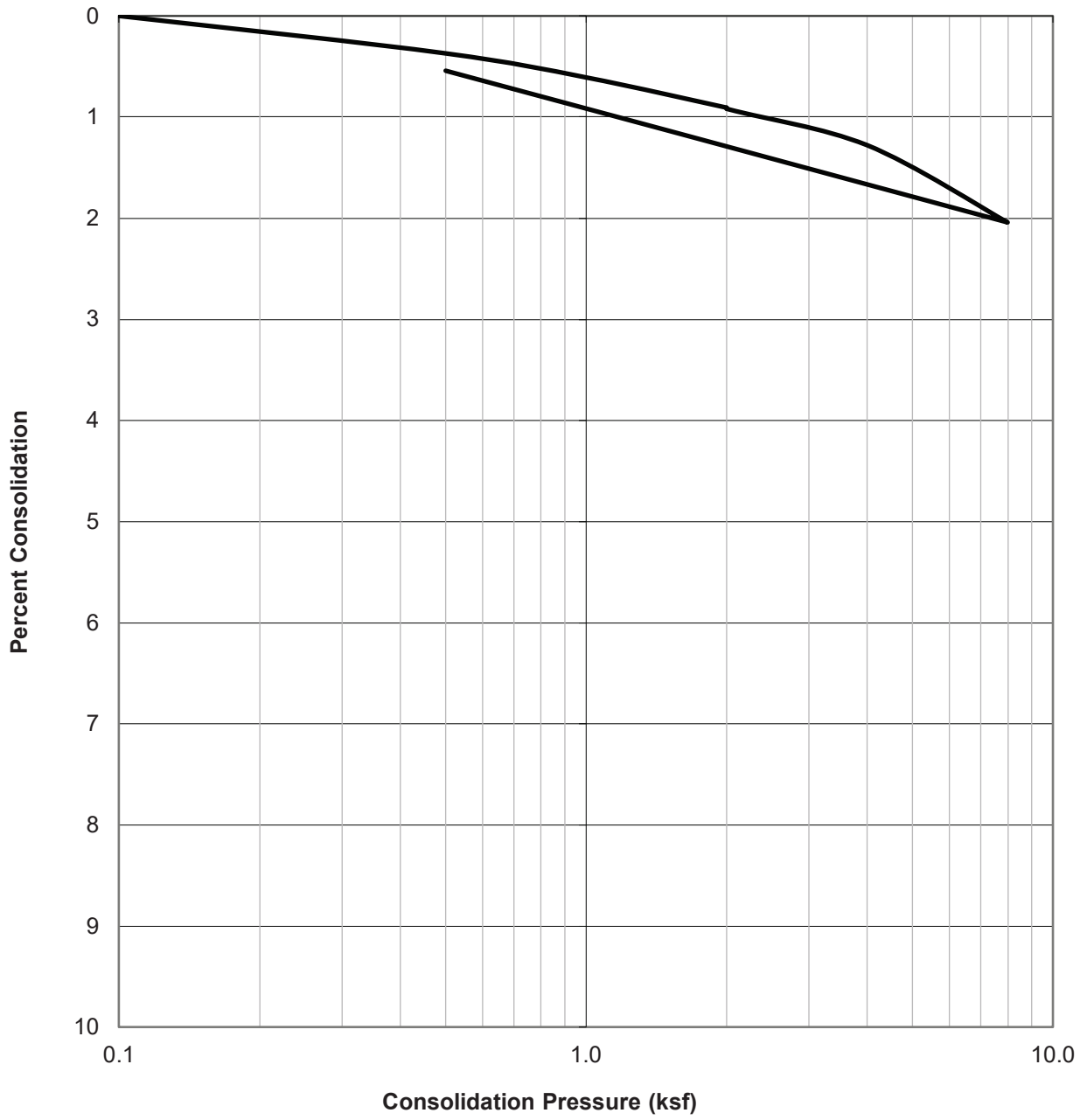
Checked by: JJK

Project No.: A9525-06-02

1401 & 1423 LONG BEACH BOULEVARD
201 & 237 EAST 14TH STREET
LONG BEACH, CALIFORNIA

JAN. 2024 Figure B5

ATER ADDED AT 2.0 KSF



SA PLE ID.	S IL T PE	DR DENSIT (PC)	INITIAL ISTURE ( )	INAL ISTURE ( )
B1@6	Sandy Silt (ML)	118.7	15.6	16.7

GEOCON

C NS LIDATI N TEST RESULTS

ASTM D-2435

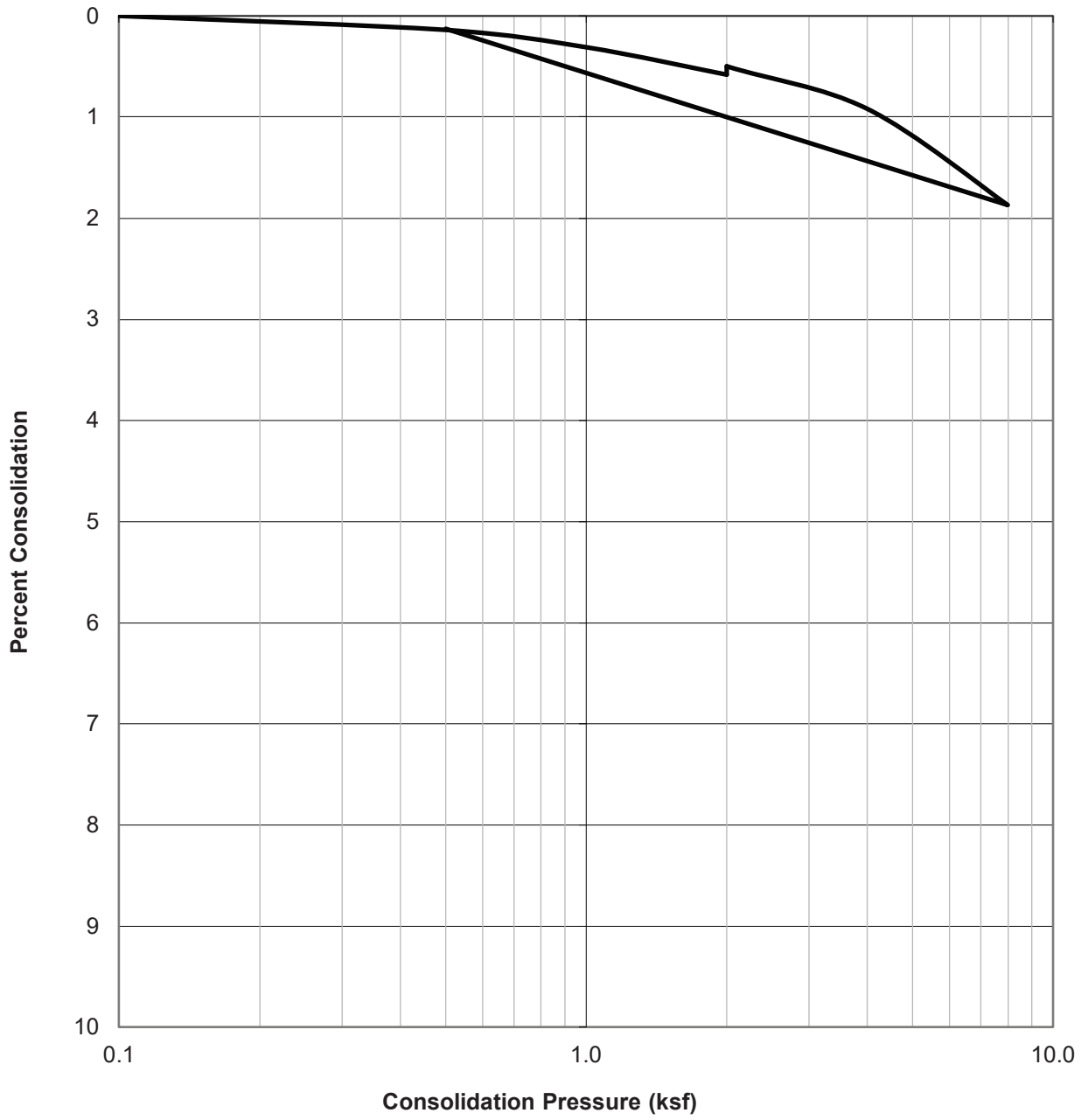
Checked by: JJK

Project No.: 0

1401 & 1423 LONG BEACH BOULEVARD
201 & 237 EAST 14TH STREET
LONG BEACH, CALIFORNIA

JAN. 2024 Figure B6

ATER ADDED AT 2.0 KSF



SA PLE ID.	S IL T PE	DR DENSIT (PC)	INITIAL ISTURE ( )	INAL ISTURE ( )
B2@6	Silt (ML)	116.3	12.5	17.0

GEOCON

C NS LIDATI N TEST RESULTS

ASTM D-2435

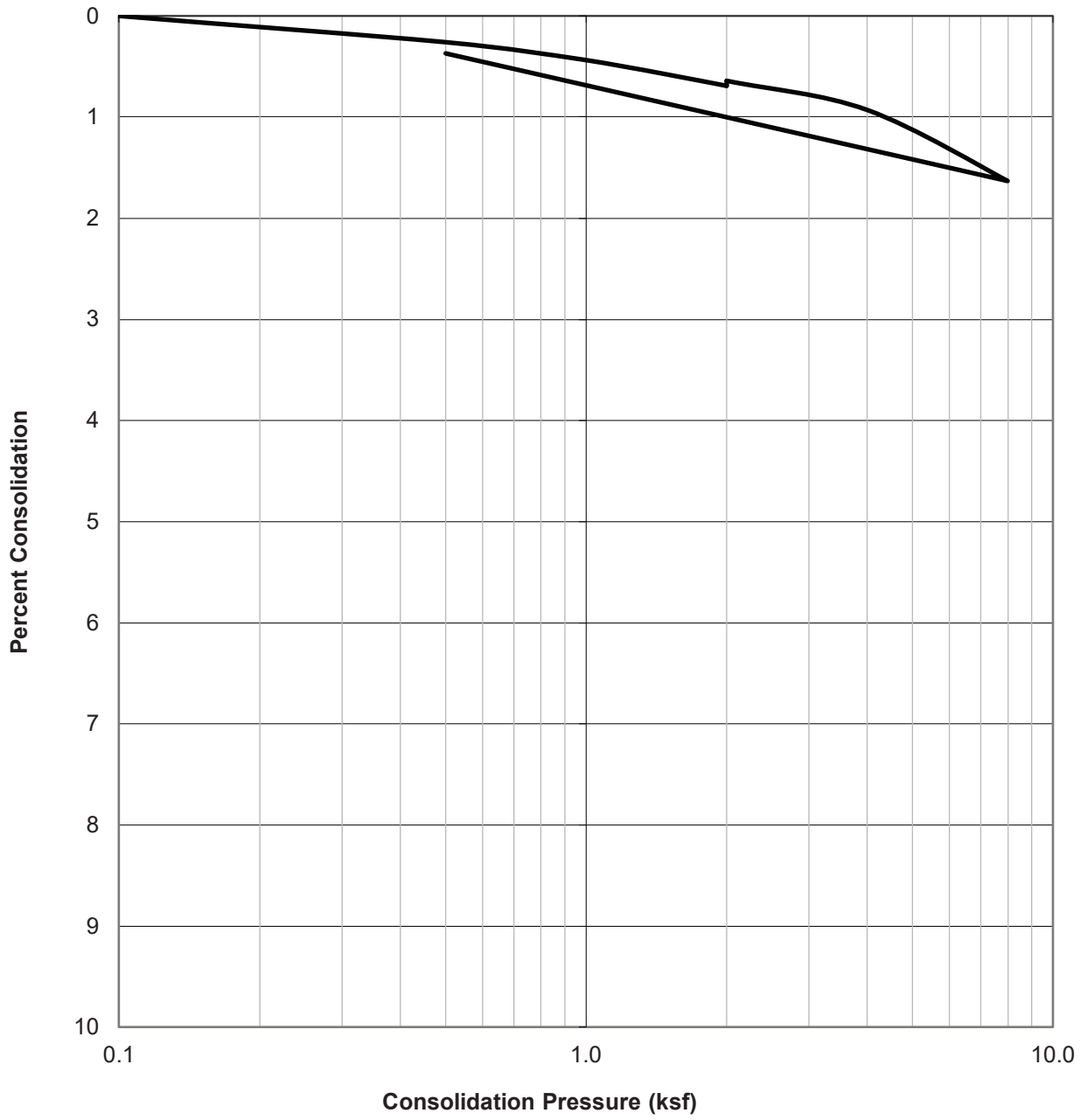
Checked by: JJK

Project No.: 0

1401 & 1423 LONG BEACH BOULEVARD
201 & 237 EAST 14TH STREET
LONG BEACH, CALIFORNIA

JAN. 2024 Figure B7

ATER ADDED AT 2.0 KSF



SA PLE ID.	S IL T PE	DR DENSIT (PC)	INITIAL ISTURE ( )	INAL ISTURE ( )
B3@7.5	Sandy Silt (ML)	121.0	12.8	14.7

GEOCON

C NS LIDATI N TEST RESULTS

ASTM D-2435

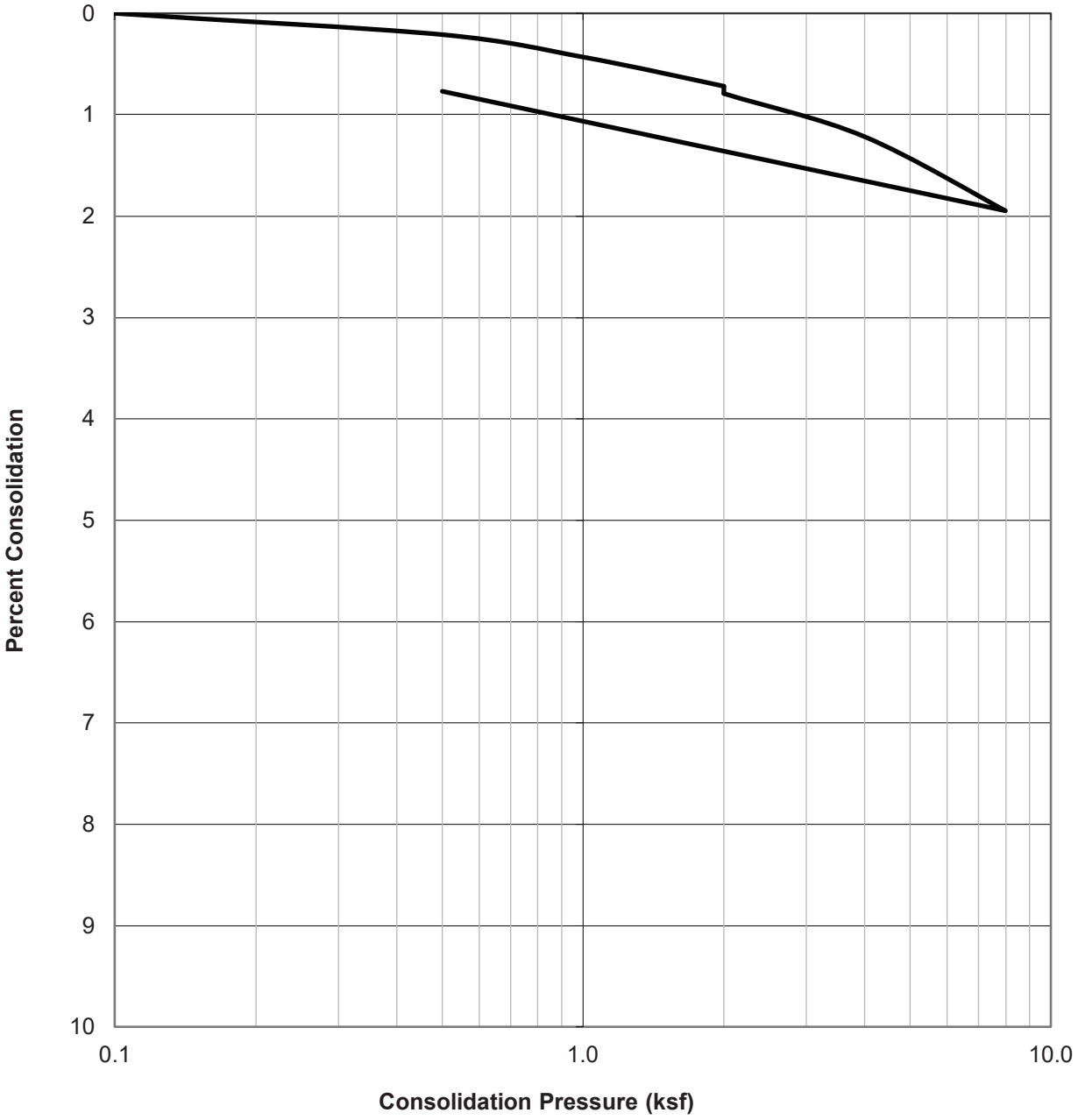
Checked by: JJK

Project No.: A9525-06-02

1401 & 1423 LONG BEACH BOULEVARD
201 & 237 EAST 14TH STREET
LONG BEACH, CALIFORNIA

JAN. 2024 Figure B8

ATER ADDED AT 2.0 KSF



SA PLE ID.	S IL T PE	DR DENSIT (PC)	INITIAL ISTURE ( )	INAL ISTURE ( )
B5@7.5	Sandy Silt (ML)	113.0	13.3	17.7

GEOCON

C NS LIDATI N TEST RESULTS

ASTM D-2435

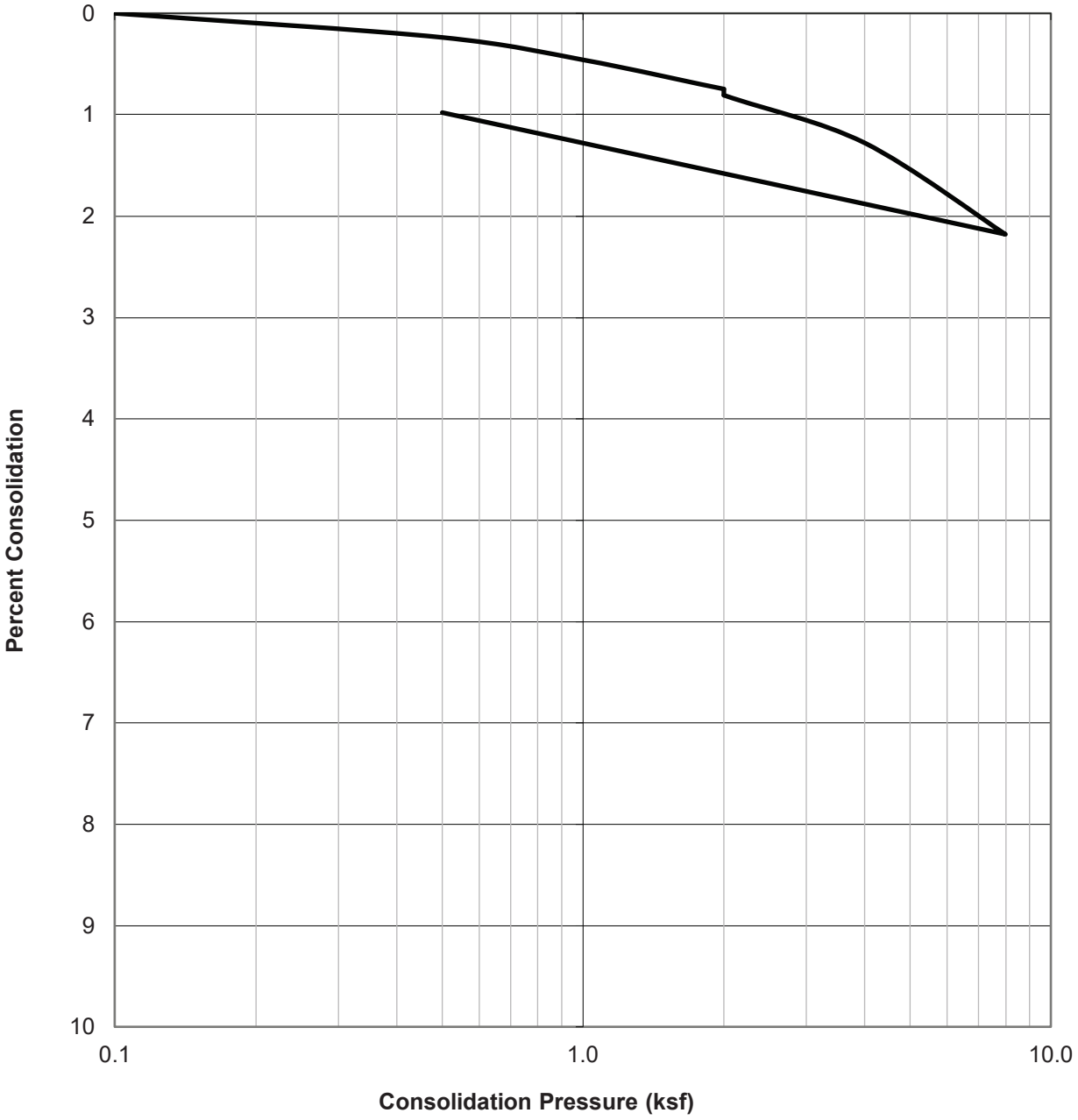
Checked by: JJK

Project No.: A9525-06-02

1401 & 1423 LONG BEACH BOULEVARD
201 & 237 EAST 14TH STREET
LONG BEACH, CALIFORNIA

JAN. 2024 Figure B9

ATER ADDED AT 2.0 KSF



SA PLE ID.	S IL T PE	DR DENSIT (PC)	INITIAL ISTURE ( )	INAL ISTURE ( )
B3@10.5	Silty Sand(SM)	117.0	9.7	15.3

GEOCON

C NS LIDATI N TEST RESULTS

ASTM D-2435

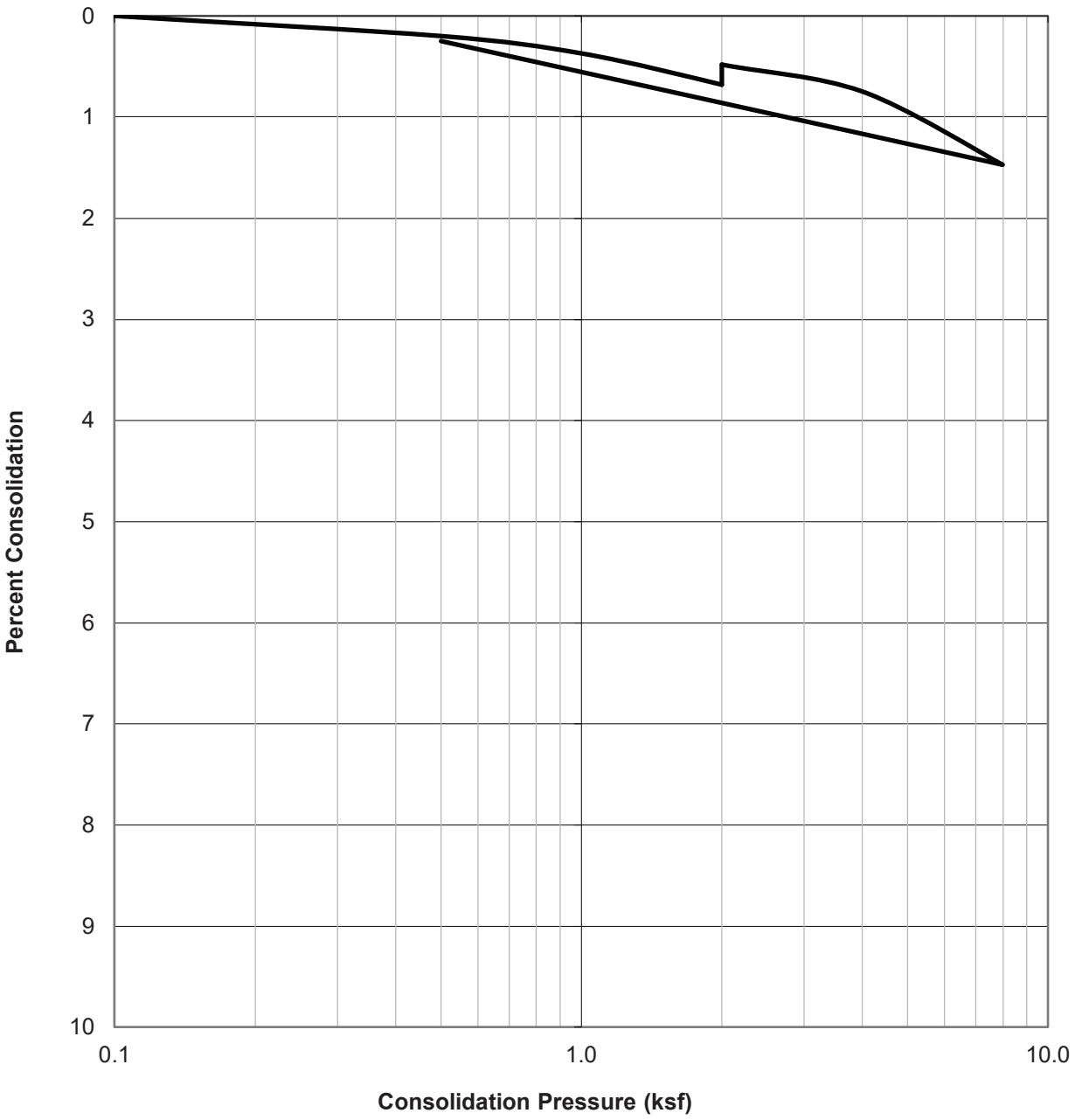
Checked by: JJK

Project No.: A9525-06-02

1401 & 1423 LONG BEACH BOULEVARD
201 & 237 EAST 14TH STREET
LONG BEACH, CALIFORNIA

JAN. 2024 Figure B10

ATER ADDED AT 2.0 KSF



SA PLE ID.	S IL T PE	DR DENSIT (PC)	INITIAL ISTURE ( )	INAL ISTURE ( )
B5@10.5	Silt / Sand (ML)	113.8	16.6	18.6

GEOCON

C NS LIDATI N TEST RESULTS

ASTM D-2435

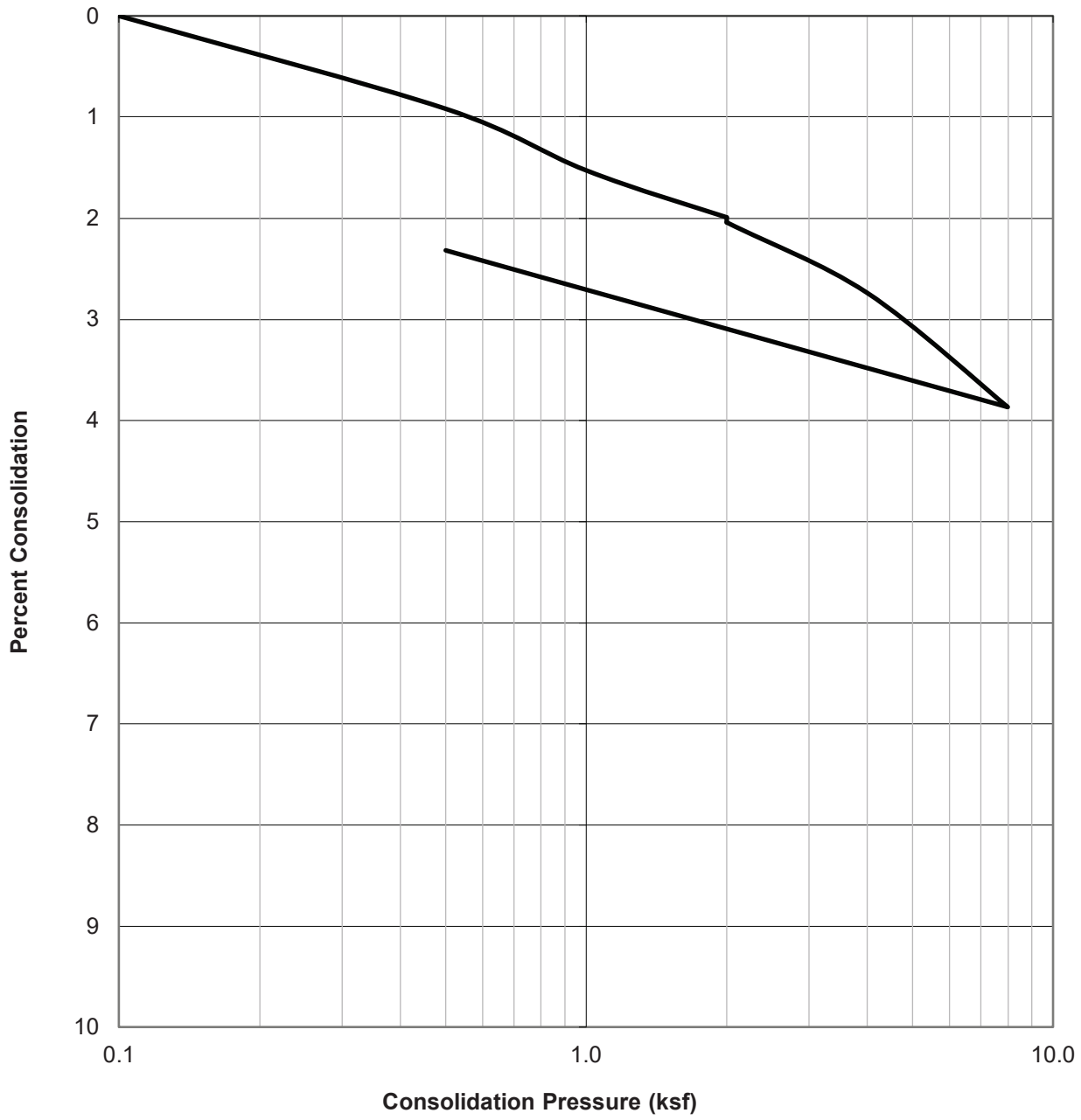
Checked by: JJK

Project No.: A9525-06-02

1401 & 1423 LONG BEACH BOULEVARD
201 & 237 EAST 14TH STREET
LONG BEACH, CALIFORNIA

JAN. 2024 Figure B11

ATER ADDED AT 2.0 KSF



SA PLE ID.	S IL T PE	DR DENSIT (PC)	INITIAL ISTURE ( )	INAL ISTURE ( )
B1@11	Silt (ML)	116.2	16.3	17.3

GEOCON

C NS LIDATI N TEST RESULTS

ASTM D-2435

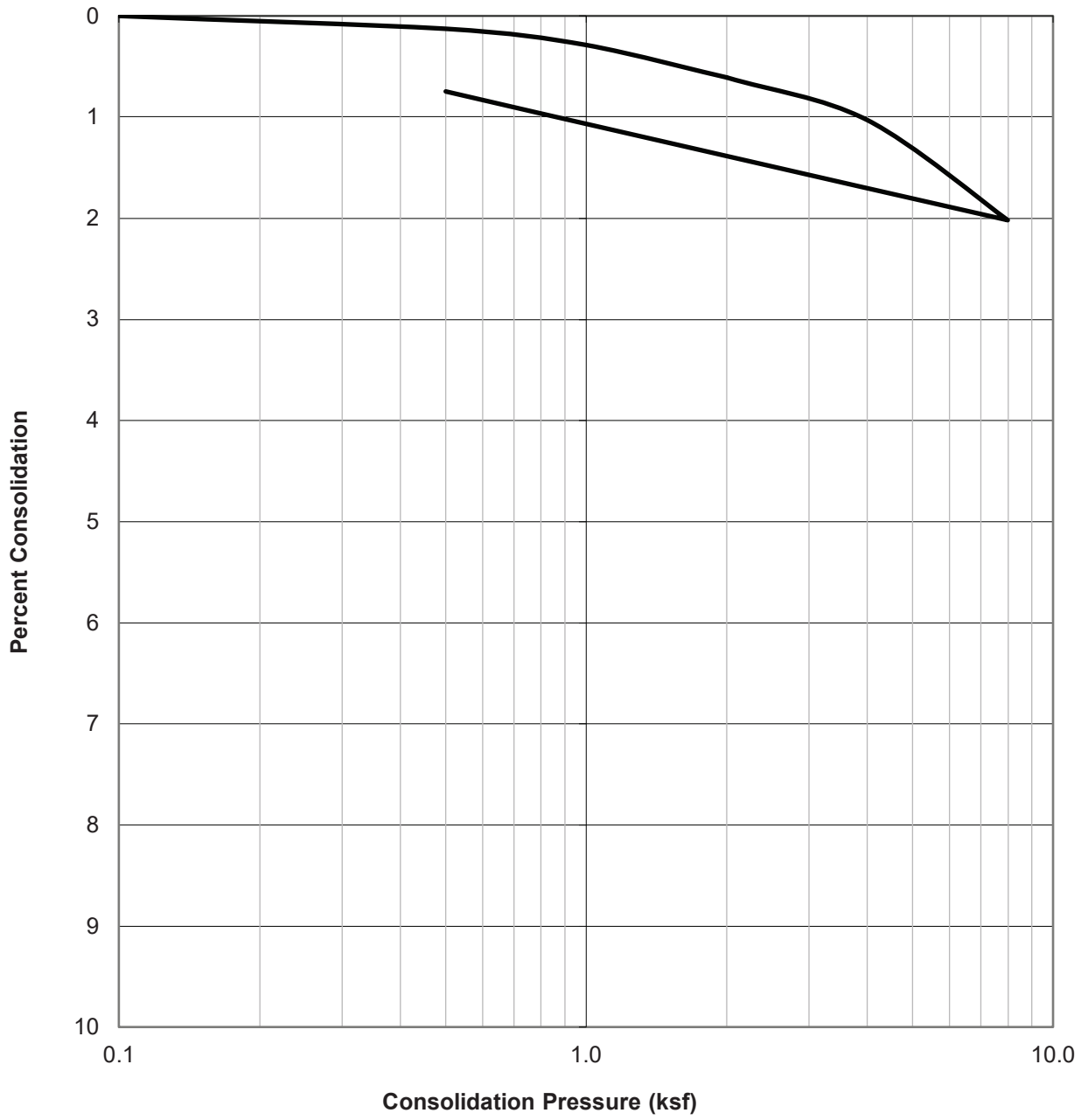
Checked by: JJK

Project No.: A9525-06-02

1401 & 1423 LONG BEACH BOULEVARD
201 & 237 EAST 14TH STREET
LONG BEACH, CALIFORNIA

JAN. 2024 Figure B12

ATER ADDED AT 2.0 KSF



SA PLE ID.	S IL T PE	DR DENSIT (PC)	INITIAL ISTURE ( )	INAL ISTURE ( )
B2@11	Silt (ML)	105.9	20.3	22.2

GEOCON

C NS LIDATI N TEST RESULTS

ASTM D-2435

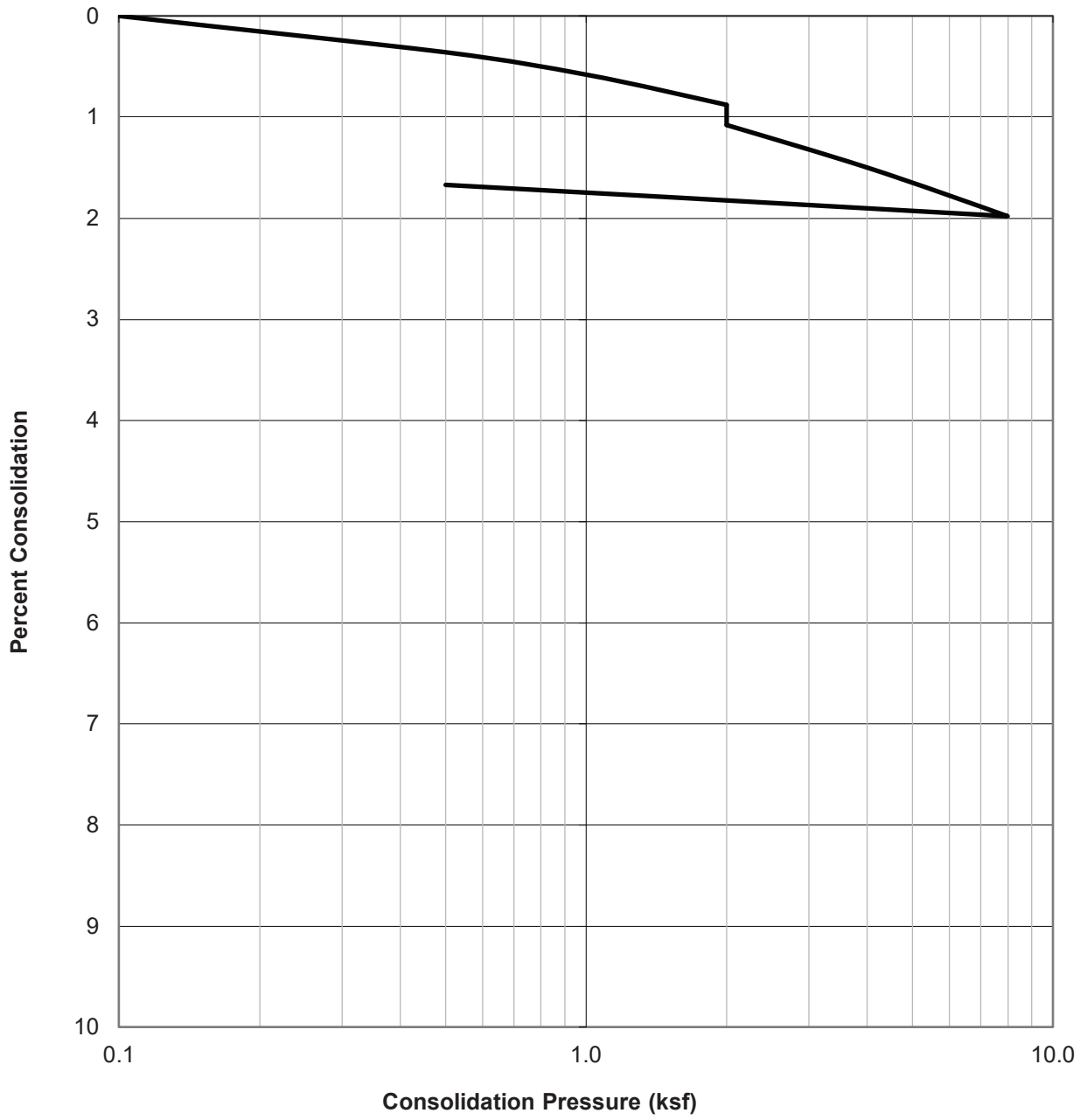
Checked by: JJK

Project No.: A9525-06-02

1401 & 1423 LONG BEACH BOULEVARD
201 & 237 EAST 14TH STREET
LONG BEACH, CALIFORNIA

JAN. 2024 Figure B13

ATER ADDED AT 2.0 KSF



SA PLE ID.	S IL T PE	DR DENSIT (PC)	INITIAL ISTURE ( )	INAL ISTURE ( )
B3@15.5	Sand (SP)	101.1	2.3	22.1

GEOCON

C NS LIDATI N TEST RESULTS

ASTM D-2435

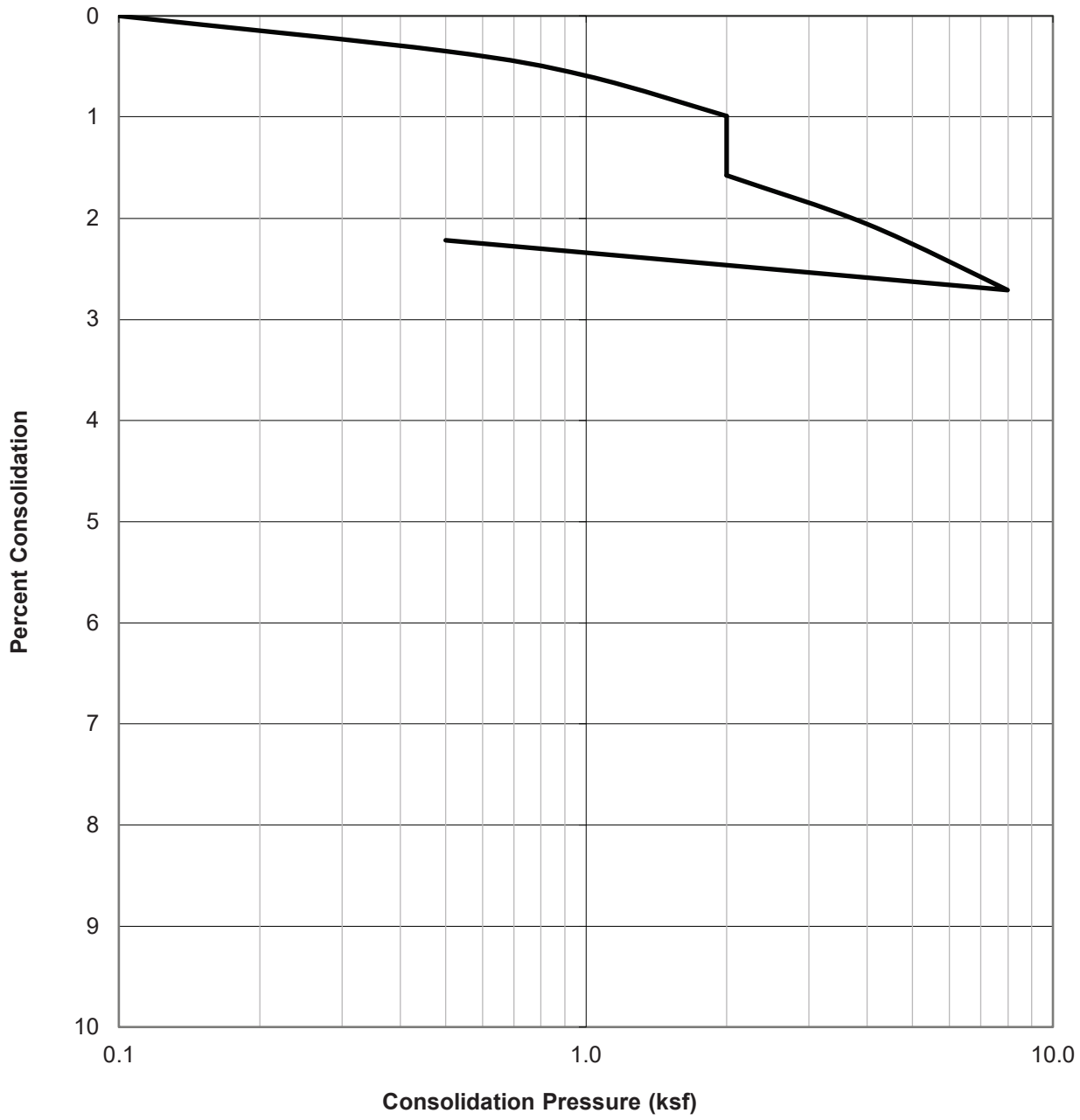
Checked by: JJK

Project No.: A9525-06-02

1401 & 1423 LONG BEACH BOULEVARD
201 & 237 EAST 14TH STREET
LONG BEACH, CALIFORNIA

JAN. 2024 Figure B14

ATER ADDED AT 2.0 KSF



SA PLE ID.	S IL T PE	DR DENSIT (PC)	INITIAL ISTURE ( )	INAL ISTURE ( )
B5@15.5	Sand (SP)	101.9	4.3	20.2

GEOCON

C NS LIDATI N TEST RESULTS

ASTM D-2435

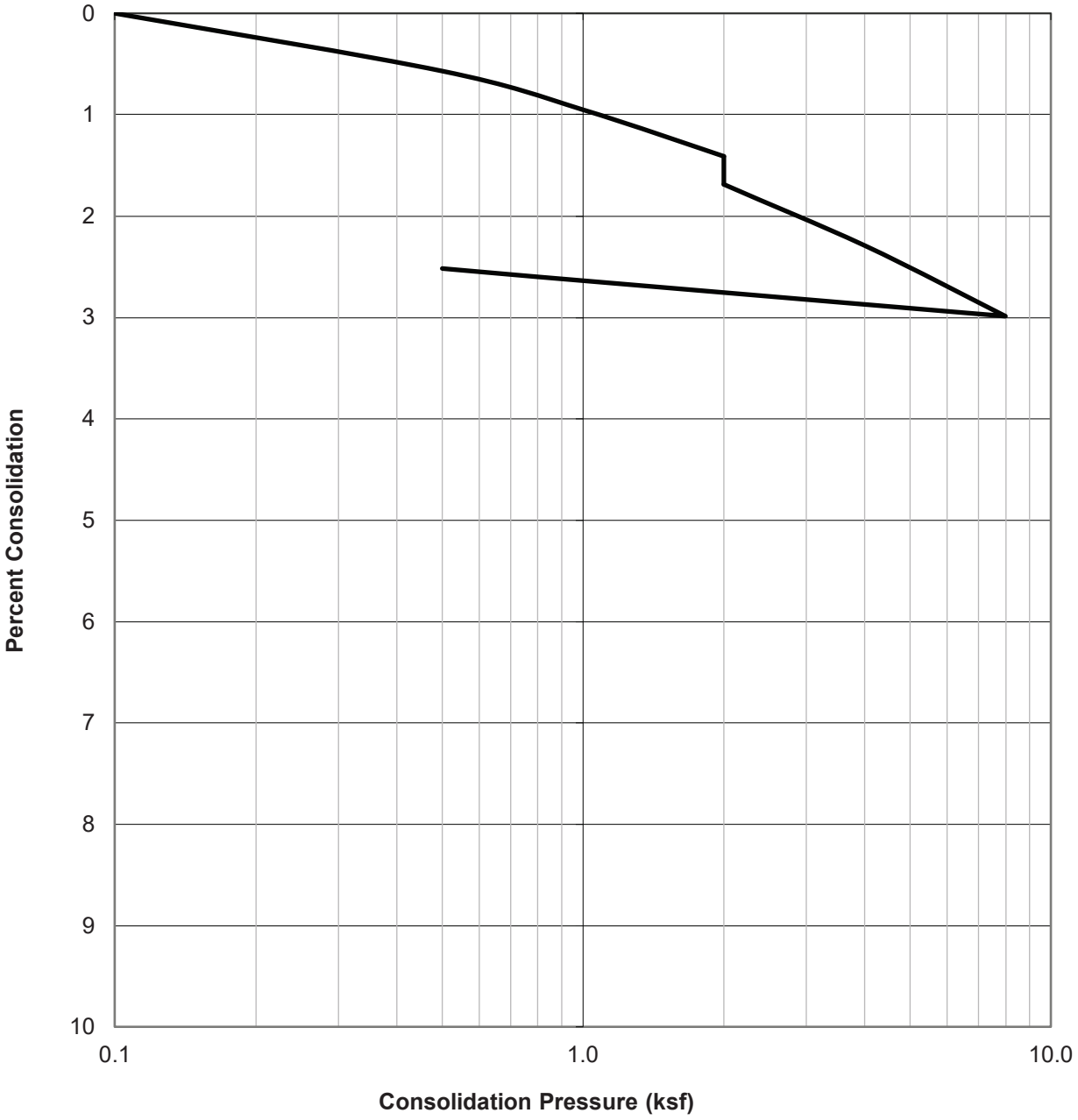
Checked by: JJK

Project No.: A9525-06-02

1401 & 1423 LONG BEACH BOULEVARD
201 & 237 EAST 14TH STREET
LONG BEACH, CALIFORNIA

JAN. 2024 Figure B15

ATER ADDED AT 2.0 KSF



SA PLE ID.	S IL T PE	DR DENSIT (PC)	INITIAL ISTURE ( )	INAL ISTURE ( )
B1@16	Sand (SP)	104.0	6.0	19.1

GEOCON

C NS LIDATI N TEST RESULTS

ASTM D-2435

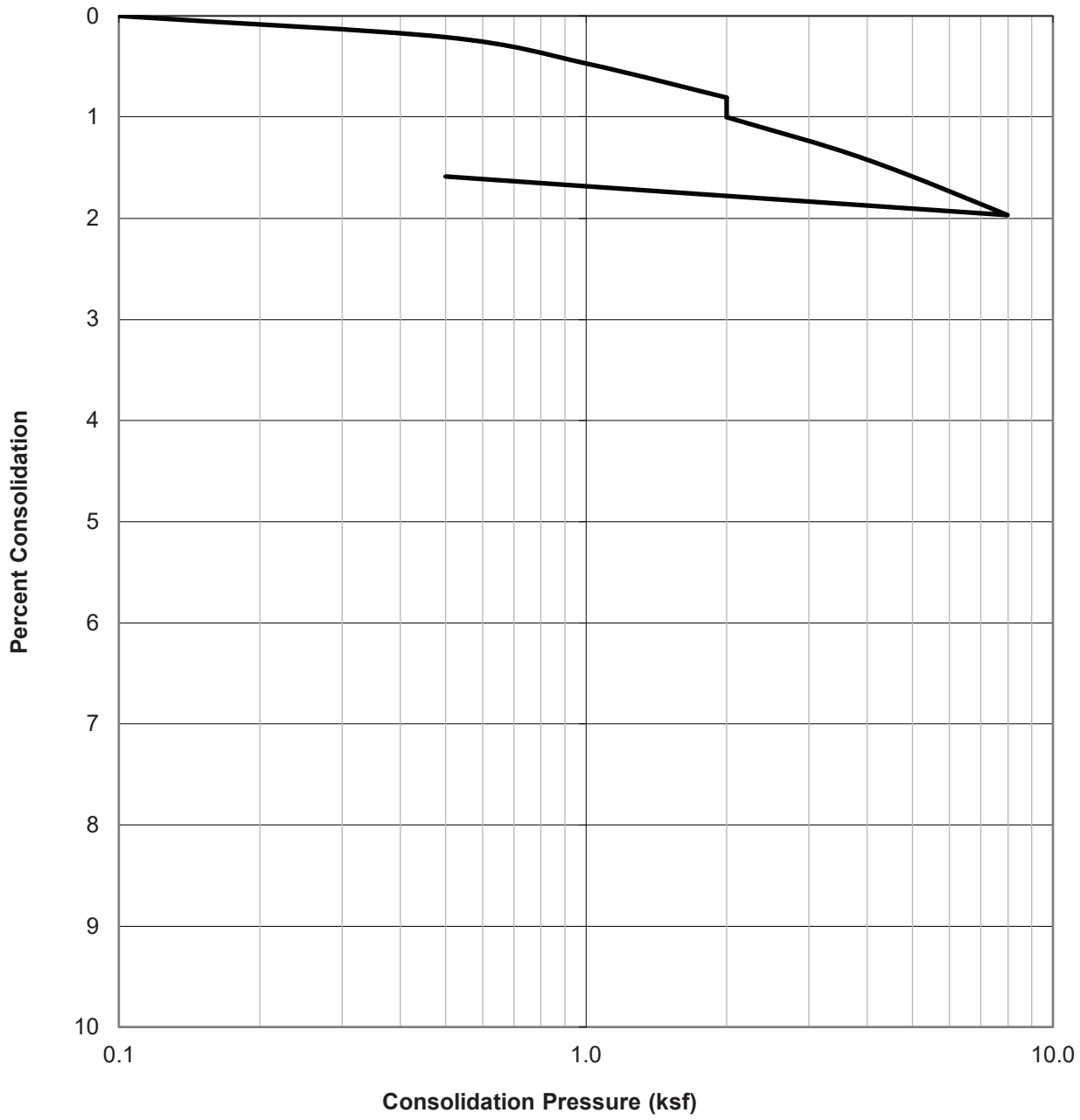
Checked by: JJK

Project No.: A9525-06-02

1401 & 1423 LONG BEACH BOULEVARD
201 & 237 EAST 14TH STREET
LONG BEACH, CALIFORNIA

JAN. 2024 Figure B16

ATER ADDED AT 2.0 KSF



SA PLE ID.	S IL T PE	DR DENSIT (PC)	INITIAL ISTURE ( )	INAL ISTURE ( )
B3@20.5	Sand (SP)	97.8	2.3	23.0

GEOCON

C NS LIDATI N TEST RESULTS

ASTM D-2435

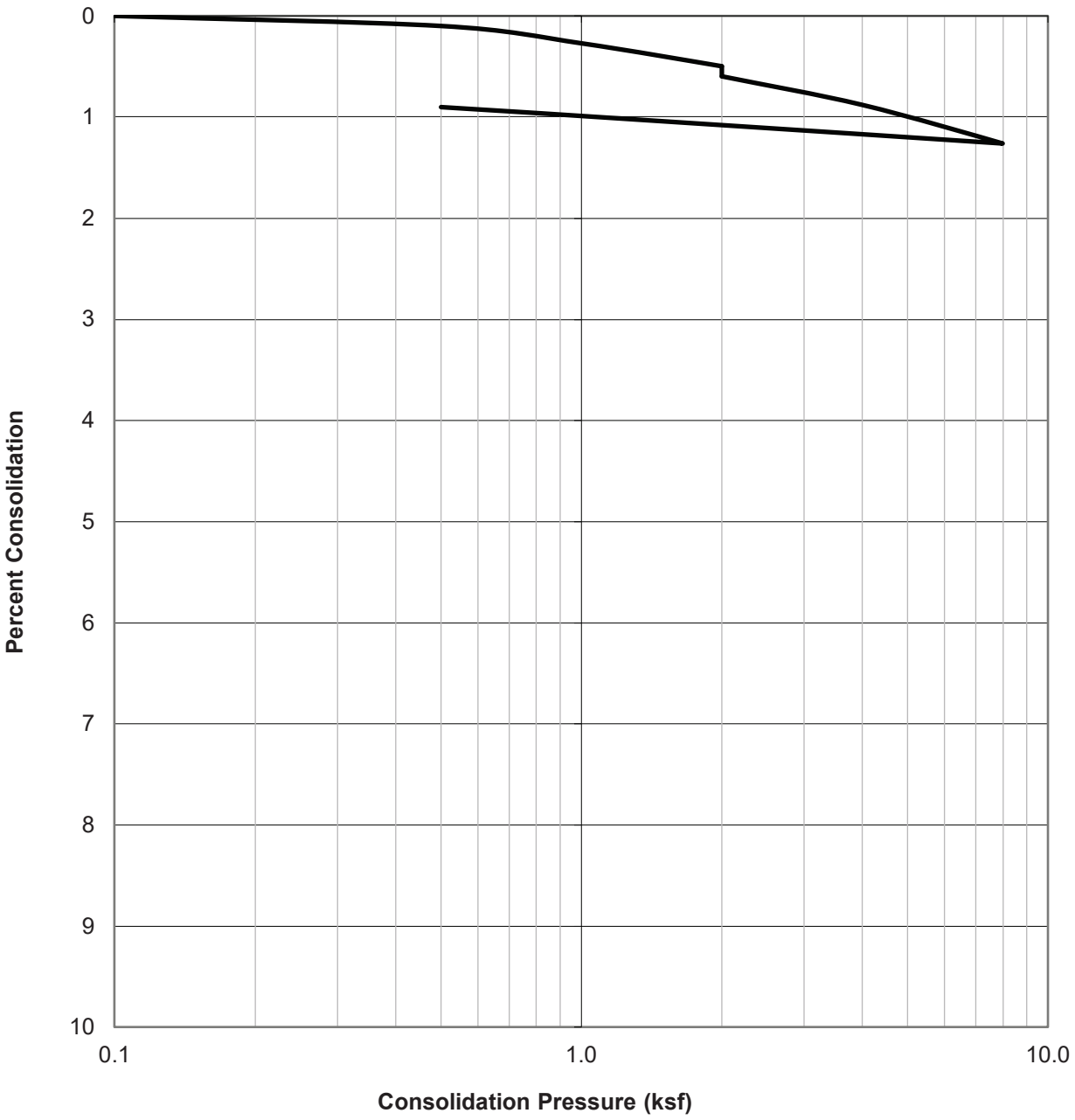
Checked by: JJK

Project No.: A9525-06-02

1401 & 1423 LONG BEACH BOULEVARD
201 & 237 EAST 14TH STREET
LONG BEACH, CALIFORNIA

JAN. 2024 Figure B17

ATER ADDED AT 2.0 KSF



SA PLE ID.	S IL T PE	DR DENSIT (PC)	INITIAL ISTURE ( )	INAL ISTURE ( )
B5@20.5	Sand (SP)	101.3	3.6	22.8

GEOCON

C NS LIDATI N TEST RESULTS

ASTM D-2435

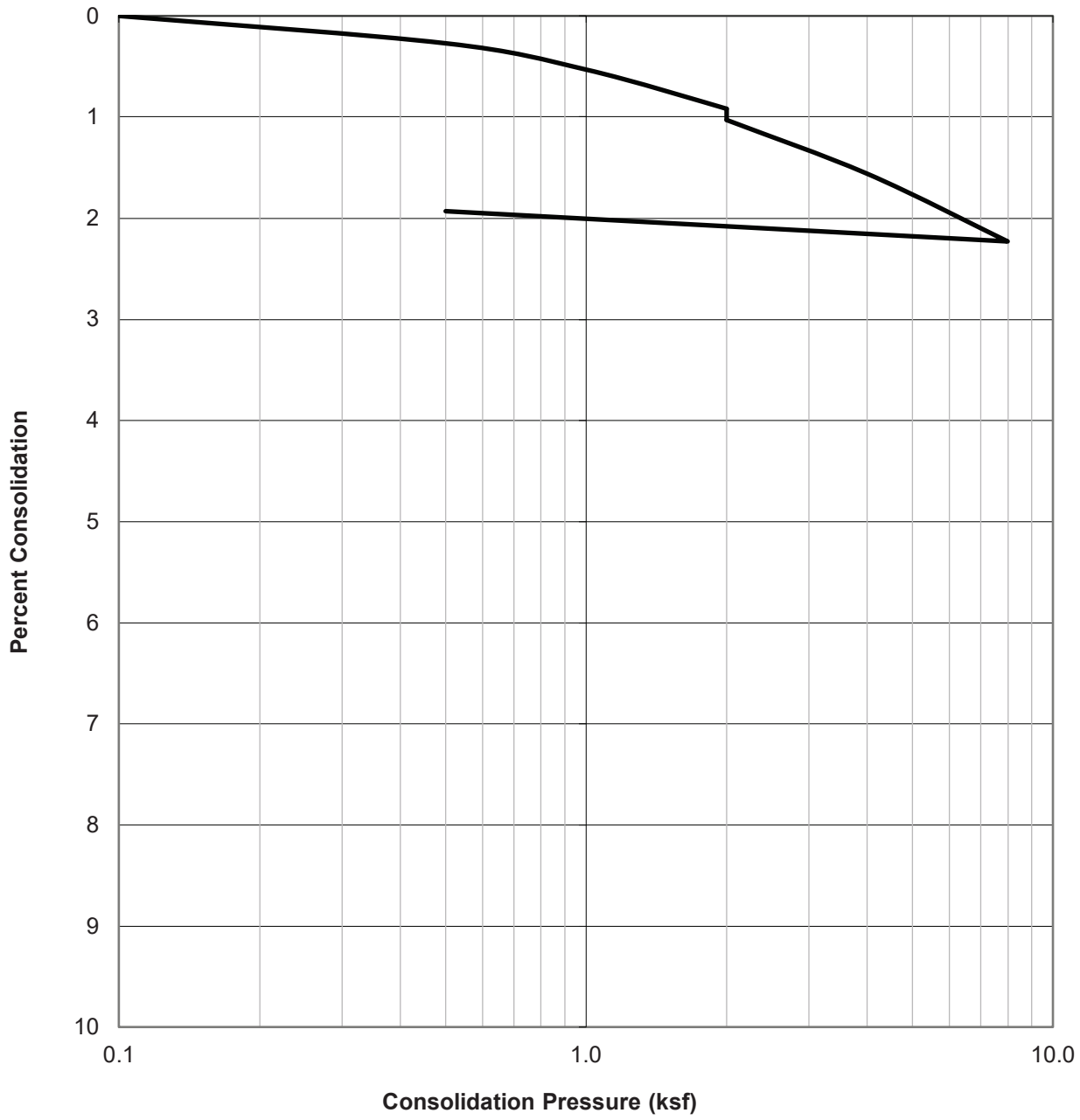
Checked by: JJK

Project No.: A9525-06-02

1401 & 1423 LONG BEACH BOULEVARD
201 & 237 EAST 14TH STREET
LONG BEACH, CALIFORNIA

JAN. 2024 Figure B18

ATER ADDED AT 2.0 KSF



SA PLE ID.	S IL T PE	DR DENSIT (PC)	INITIAL ISTURE ( )	INAL ISTURE ( )
B3@25.5	Sand (SP)	91.4	5.6	27.5

GEOCON

C NS LIDATI N TEST RESULTS

ASTM D-2435

Checked by: JJK

Project No.: A9525-06-02

1401 & 1423 LONG BEACH BOULEVARD
201 & 237 EAST 14TH STREET
LONG BEACH, CALIFORNIA

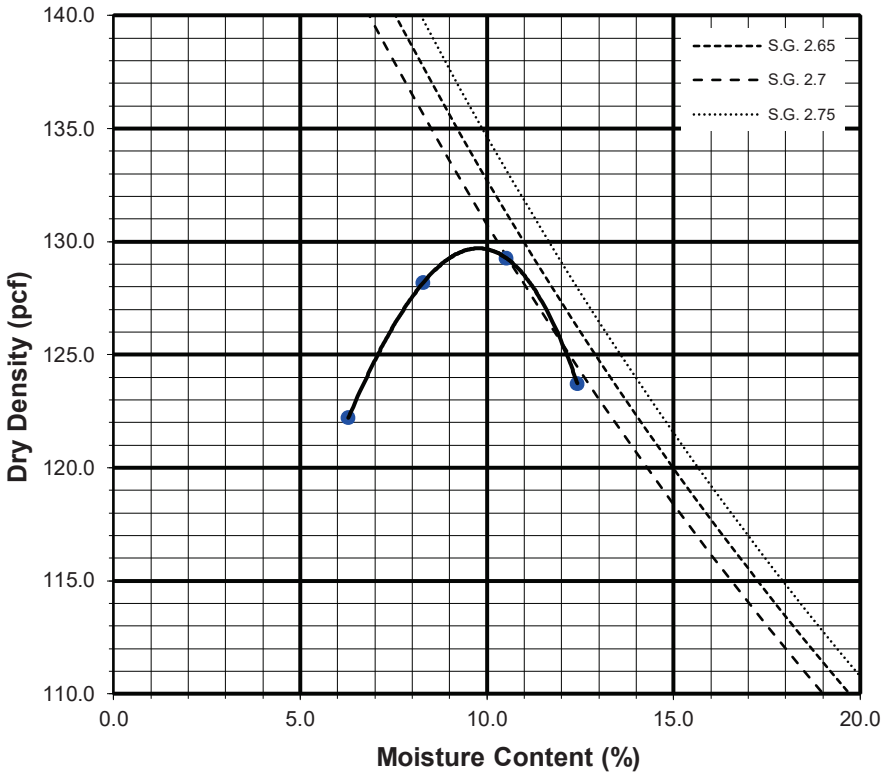
JAN. 2024 Figure B19

Sample No:

B1+B2@0-5'	Silty Sand (SM)

TEST NO.		1	2	3	4	5	6
t. Compacted Soil Mold	(g)	4131	4074	4070	3935		
eight of Mold	(g)	1973	1973	1973	1973		
Net eight of Soil	(g)	2158	2101	2097	1962		
et eight of Soil Cont.	(g)	657.1	677.4	726.8	536.5		
Dry eight of Soil Cont.	(g)	606.5	618.5	681.5	513.5		
eight of Container	(g)	125.6	144.4	135.4	147.6		
Moisture Content	(%)	10.5	12.4	8.3	6.3		
et Density	(pcf)	142.9	139.1	138.8	129.9		
Dry Density	(pcf)	129.3	123.7	128.2	122.2		

a im m Dr Densit (p f)	**130.0**
ptim m oist re Content ( )	**.5**



Preparation Method: A

GEOCON

C PACTI N CHARACTERISTICS USIN DI IED E RT TEST RESULTS

ASTM D-1557

Checked by: JJK

Project No.: A9525-06-02

1401 & 1423 LONG BEACH BOULEVARD
201 & 237 EAST 14TH STREET
LONG BEACH, CALIFORNIA

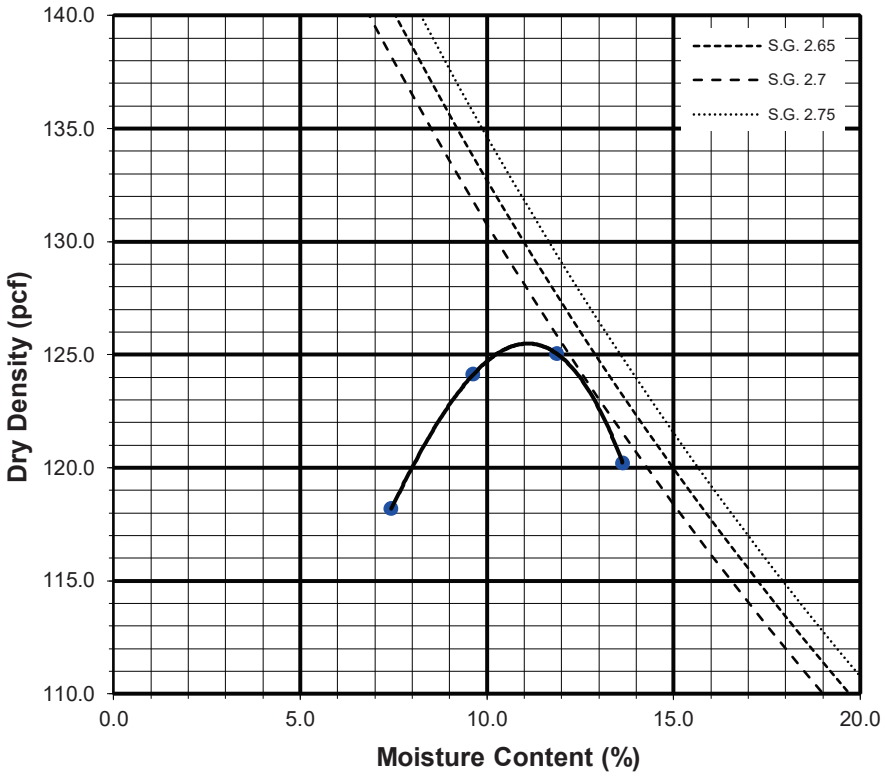
JAN. 2024 Figure B20

Sample No:

B3+B4+B5@0-5'	Sandy Silt (ML)

TEST NO.		1	2	3	4	5	6
t. Compacted Soil Mold	(g)	6001	6139	6196	6147		
eight of Mold	(g)	4083	4083	4083	4083		
Net eight of Soil	(g)	1918	2056	2113	2063		
et eight of Soil Cont.	(g)	648.0	727.0	671.4	748.6		
Dry eight of Soil Cont.	(g)	611.8	676.1	613.6	676.4		
eight of Container	(g)	125.1	147.7	126.4	146.9		
Moisture Content	(%)	7.4	9.6	11.9	13.6		
et Density	(pcf)	127.0	136.1	139.9	136.6		
Dry Density	(pcf)	118.2	124.1	125.1	120.2		

a im m Dr Densit (p f)	**12 .0**
ptim m oist re Content ( )	**11.0**



Preparation Method: A

GEOCON

C PACTI N CHARACTERISTICS USIN DI IED E RT TEST RESULTS

ASTM D-1557

Checked by: JJK

Project No.: A9525-06-02

1401 & 1423 LONG BEACH BOULEVARD
201 & 237 EAST 14TH STREET
LONG BEACH, CALIFORNIA

JAN. 2024 Figure B21

B1+B2@0-5'

MOLDED SPECIMEN		BEFORE TEST	AFTER TEST
Specimen Diameter	(in.)	4.0	4.0
Specimen Height	(in.)	1.0	1.0
t. Comp. Soil Mold	(gm)	783.0	785.3
t. of Mold	(gm)	369.0	369.0
Specific Gra ity	(Assumed)	2.7	2.7
et t. of Soil Cont.	(gm)	487.3	785.3
Dry t. of Soil Cont.	(gm)	464.3	382.2
t. of Container	(gm)	187.3	369.0
Moisture Content	(%)	8.3	8.9
et Density	(pcf)	124.9	125.4
Dry Density	(pcf)	115.3	115.1
Void Ratio		0.5	0.5
Total Porosity		0.3	0.3
Pore Volume	(cc)	65.4	69.6
Degree of Saturation	(%) S_{meas}	48.9	49.0

Date	Time	Pressure (psi)	Elapsed Time (min)	Dial Readings (in.)
10/6/2023	10:00	1.0	0	0.532
10/6/2023	10:10	1.0	10	0.532
Add Distilled ater to the Specimen				
10/7/2023	10:00	1.0	1430	0.552
10/7/2023	11:00	1.0	1490	0.552

E pansion Inde (EI meas)	20
E pansion Inde (Report)	**20**

E pansion Inde , EI_{50}	CBC CLASSIFICATION	UBC CLASSIFICATION
0-20	Non-E pansi e	Very Lo
21-50	E pansi e	Lo
51-90	E pansi e	Medium
91-130	E pansi e	High
130	E pansi e	Very High

Reference: 2022 California Building Code, Section 1803.5.3
Reference: 1997 Uniform Building Code, Table 18-I-B.

GEOCON

E PANSI N INDE TEST RESULTS
ASTM D-4829

Checked by: JJK

Project No.: A9525-06-02
1401 & 1423 LONG BEACH BOULEVARD
201 & 237 EAST 14TH STREET
LONG BEACH, CALIFORNIA

JAN. 2024 Figure B22

B3+B4+B5@0-5'

MOLDED SPECIMEN		BEFORE TEST	AFTER TEST
Specimen Diameter	(in.)	4.0	4.0
Specimen Height	(in.)	1.0	1.0
t. Comp. Soil Mold	(gm)	764.2	808.7
t. of Mold	(gm)	367.4	367.4
Specific Gra ity	(Assumed)	2.7	2.7
et t. of Soil Cont.	(gm)	487.3	808.7
Dry t. of Soil Cont.	(gm)	461.3	362.3
t. of Container	(gm)	187.3	367.4
Moisture Content	(%)	9.5	21.8
et Density	(pcf)	119.7	132.9
Dry Density	(pcf)	109.3	109.1
Void Ratio		0.5	0.6
Total Porosity		0.4	0.4
Pore Volume	(cc)	72.8	79.7
Degree of Saturation	(%) S_{meas}	47.7	99.1

Date	Time	Pressure (psi)	Elapsed Time (min)	Dial Readings (in.)
12/18/2023	10:00	1.0	0	0.3075
12/18/2023	10:10	1.0	10	0.3065
Add Distilled ater to the Specimen				
12/19/2023	10:00	1.0	1430	0.34
12/19/2023	11:00	1.0	1490	0.34

E pansion Inde (EI meas)	33.5
E pansion Inde (Report)	**34**

E pansion Inde , EI_{50}	CBC CLASSIFICATION	UBC CLASSIFICATION
0-20	Non-E pansi e	Very Lo
21-50	E pansi e	Lo
51-90	E pansi e	Medium
91-130	E pansi e	High
130	E pansi e	Very High

Reference: 2022 California Building Code, Section 1803.5.3
Reference: 1997 Uniform Building Code, Table 18-I-B.

GEOCON

E PANSI N INDE TEST RESULTS
ASTM D-4829

Checked by: JJK

Project No.: A9525-06-02
1401 & 1423 LONG BEACH BOULEVARD
201 & 237 EAST 14TH STREET
LONG BEACH, CALIFORNIA

JAN. 2024 Figure B23

SUMMAR OF LABORATOR
POTENTIAL OF H DROGEN (pH) AND RESISTIVIT TEST RESULTS
AASHTO T289 ASTM D4972 and AASHTO T288 ASTM G187

Sample No.	pH	Resisti it (ohm entimeters)
B1 B2@0-5	8.1	1300 (Corrosi e)
B3 B4 B5@0-5	8.4	1600 (Corrosi e)

SUMMAR OF LABORATOR CHLORIDE CONTENT TEST RESULTS
AASHTO T291 ASTM C1218

Sample No.	Chlori e Ion Content ( )
B1 B2@0-5	0.020
B3 B4 B5@0-5	0.008

SUMMAR OF LABORATOR ATER SOLUBLE SULFATE TEST RESULTS
AASHTO T290 ASTM C1580

Sample No.	ater Sol le S lfate (S_4)	S lfate E pos re
B1 B2@0-5	0.018	S0
B3 B4 B5@0-5	0.009	S0

Attachment 17. Transportation Memorandum

FEHR PEERS

TECHNICAL MEMORANDUM

Date: January 14, 2021
To: Brian Ulaszewski, LEED AP, City Fabrick
From: Paul Herrmann, PE and Michael Kennedy, AICP
Subject: 14th & Long Beach Boulevard Affordable Housing Project Traffic Assessment

LB20-0020

This technical memorandum presents the traffic assessment for the proposed redevelopment project located on a vacant site at the northwest corner of 14th Street and Long Beach Boulevard in Long Beach, California. The proposed project consists of affordable housing units and commercial space. This memorandum presents the trip generation of the existing and proposed site, an assessment of Vehicle Miles Traveled (VMT), and a site access assessment.

Project Description

The proposed project consists of 160 apartment units and approximately 4,000 square feet of commercial use. All 160 units are designated as affordable housing with approximately 50 percent of the units dedicated for permanent supportive housing. The commercial space is flexible and could contain any of the following uses:

- In-line retail/shops/quick-serve
- Offices for nonprofit organizations
- Wellness center operated through nonprofit center (small fitness center, yoga/dance studio, meditation space, etc.)
- Small family health clinic (not urgent care)
- Social enterprise
- Community Space/amenities (meeting rooms, gather spaces, co-working, etc)

Trip Generation

Trip generation rates from *Trip Generation, 10th Edition* (Institute of Transportation Engineers [ITE], 2017) were used to estimate the number of trips associated with the Project. The Multi-Family (Mid-Rise) land use type (Code 221) was determined to be the most appropriate trip generation rate to represent the project's residential component. Several other ITE residential trip rates were referenced, including Mid-Rise Residential with First Floor Commercial (Code 231) and Affordable Housing – Income Limits (Code 223), along with affordable housing trip generation data collected in Los Angeles. These rates and trip generation estimates are included in **Attachment A**. Using the Multi-Family (Mid-Rise) rates is considered the most

conservative approach as these are highest trip rates of the options. Of the available trip rates, this rate was also calculated using the most robust sample size and available data.

The commercial component of the project has not been finalized so the generic Shopping Center (Code 820) was chosen to represent the project's commercial component. Several other ITE residential trip rates were referenced, including Clinic (Code 630), Health/Fitness Club (Code 492) and Recreational Community Center (Code 495). These rates and trip generation estimates are included in **Attachment A**. Using any of these codes would not dramatically alter the results of the trip generation assessment as the commercial component of the Project represents a small portion of the Project[1].

The commercial component of the project is anticipated to be complimentary to the residential component and an assumed internalization of 10% was applied to reduce the net external commercial trips. The Project is also within a Transit Priority Area (TPA) with access to the Metro Blue Line and Long Beach Transit Lines 1, 46 51, 60, and 232. Given the access to these transit options and the typical lower vehicle ownership rates associated with affordable housing, a 15% transit credit was applied to the trip generation estimate.[2]

The Project trip generation estimates are presented in **Table 1**. As noted below, the project is expected to generate 855 daily, 52 AM peak hour, and 71 PM peak hour net external trips.

TABLE 1 – Project Trip Generation Estimates

Land Use	Units	ITE Code	Quantity	Daily	AM Peak Hour			PM Peak Hour		
					In	Out	Total	In	Out	Total
Apartments	DUs	221	160	870	15	43	58	43	27	70
Retail	KSF	820	4.00	151	2	2	4	7	8	15
Subtotal				1,021	17	45	62	50	35	85
Internal Capture Reductions (10%)				*(15)*	*0*	*0*	*0*	*(1)*	*(1)*	*(2)*
Transit Credit (15%)				*(151)*	*(3)*	*(7)*	*(10)*	*(7)*	*(5)*	*(12)*
Net External Trips				**855**	**14**	**38**	**52**	**42**	**29**	**71**

Notes:
1. KSF = 1,000 square feet, DUs = Dwelling Units

Source: Fehr & Peers, 2020

Midtown Specific Plan Consistency

As shown in **Figure 1**, the Project is located within the Transit Node District 7 of the Midtown Specific Plan. The Project is consistent with the Midtown Specific Plan and the growth studied in the EIR Traffic Study assumed more multi-family units than currently proposed by the Project or other approved projects. The Midtown Specific Plan EIR studied the previously adopted land use plan against the

[1] AM peak hour trip generation would be higher by approximately ten total trips if Code 630 were used instead of Code 820, however the PM peak hour and daily trip generation would not change significantly, and the overall conclusions of the trip generation assessment would not be affected.

[2] Please note that the Midtown Specific Plan EIR Traffic Study assumed the following reductions in net external trip generation for the Transit Node District 7 due to internal capture between land uses and access to transit: 31% daily trip reduction, 42% AM peak hour trip reduction, 47% PM peak hour trip reduction.

proposed specific plan land use. The planned development in Transit Node District 7 included 401 multi-family dwelling units. The project proposes 160 multi-family dwelling units. The only other entitled project within Transit Node District 7 is the 65-unit project at 1400 Long Beach Boulevard. These projects are within the proposed 401 units proposed as part of Transit Node District 7.

The net number of trips studied due to development within the Transit Node District 7 was 3,371 daily trips, 336 AM peak hour trips and 99 PM peak hour trips. The project would add 855 daily, 52 AM peak hour, and 71 PM peak hour trips. The nearest study intersection from the Midtown Specific Plan EIR is Long Beach Boulevard at Anaheim Street, which is forecast to operate at LOS A in the AM peak hour and LOS C in the PM peak hour under Year 2035 With Project conditions. As the planned development and resulting trip generation are below the assumed conditions in the Midtown Specific Plan, no effects on local intersection LOS are expected.

The Project is not anticipated to generate more trips than was studied in the Midtown Specific Plan EIR. The addition of Project trips is not anticipated to degrade nearby intersection operations. The Project is therefore within the allowance of the Midtown Specific Plan EIR.

VMT Assessment

SB 743, signed by the Governor in 2013, has directed the Office of Planning and Research (OPR) to look at different metrics for identifying transportation impacts under CEQA. The Final OPR Technical Advisory was released in December 2018 and identified VMT as the preferred metric for transportation impact analysis for California Environmental Quality Act (CEQA) assessment. The City of Long Beach adopted local guidelines for VMT assessment in June 2020.

Since the proposed Project is a mixed-use project, the draft City guidelines indicate the land uses should be evaluated separately, or predominant land use should be used to evaluate the potential VMT impacts of the Project. For the purposes of this evaluation the land uses were evaluated separately. The draft City guidelines includes a list of screening criteria that screen projects from project-level assessment under the presumption that those projects will result in a less-than-significant impact. The following is from the draft City guidelines regarding residential project screening:

> "The OPR Technical Advisory on Evaluating Transportation Impacts in CEQA states that residential and office projects that have similar density, mix of uses, and transit accessibility as surrounding similar uses will likely have similar VMT generation as those uses. Therefore, maps showing VMT-efficient areas can be used to screen residential and office projects from further analysis. Figure 2 presents a map of VMT per capita for all existing Long Beach residential areas. These data were obtained from the 2016 Southern California Association of Governments (SCAG) Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) travel demand model… In these green areas, projects with similar characteristics to the surrounding development would be presumed to have a less than significant transportation impact."

The Project is located in a "green" area for VMT per capita, which indicates that the apartments would be eligible for screening in a VMT efficient area as projects in those areas are assumed to generate VMT per capita more than 15 percent below the regional average. VMT maps are included as **Figure 2** and **Figure 3**.

In addition to low-VMT area screening, the Project is eligible for project type screening since it is 100 percent affordable housing:

> "Affordable residential development in areas with inadequate affordable housing has the potential to shorten commute distances and/or increase the proportion of residents using transit, which would reduce VMT. Residential projects (or the residential portion of mixed-use projects) with 100 percent affordable dwelling units will be presumed to have a less than significant transportation impact related to CEQA Guidelines Section 15064.3, subdivision (b)."

The commercial space would qualify as local-serving retail under 50,000 square feet according to the following regarding retail project screening:

> "Retail development that is 50,000 square feet (sf) or less is likely to be local-serving and tends to shorten trips within Long Beach. Therefore, any retail project 50,000 sf or less will be presumed to have a less than significant transportation impact related to CEQA Guidelines Section 15064.3, subdivision (b)."

Projects located within a TPA may also be screened from a full VMT assessment. 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[3].The project site is located within a half mile of a high-quality transit corridor and within a half mile of a major transit stop. The Long Beach TPA map is included as **Figure 4**.

Projects can be presumed less-than-significant and screened from further VMT analysis when it meets the requirements outlined in the City's guidelines for TPA screening. The project's ability to be screened from VMT assessment is summarized below in **Table 2.**

TABLE 2 - VMT Transit Priority Area Screening Criteria

Criteria	Project Eligibility
Project is located within a half mile of high-quality transit	As shown in Figure 4, the project is located within a half mile of high-quality transit

[3] Pub. Resources Code, § 21064.3 - 'Major transit stop' means a site containing an existing rail transit station, a ferry terminal served by either a bus or rail transit service, or the intersection of two or more major bus routes with a frequency of service interval of 15 minutes or less during the morning and afternoon peak commute periods.

Pub. Resources Code, § 21155 - For purposes of this section, a 'high-quality transit corridor' means a corridor with fixed route bus service with service intervals no longer than 15 minutes during peak commute hours.

Project has a minimum FAR of 0.75	Project has a FAR of greater than 0.75. FAR was calculated by the following formula: (Total usable square footage of the proposed building/Total land area of project parcels). The project site is 1.09 acres and proposes a building with 184,725 square feet (or 4.24 acres) of rentable area. This results in a FAR of 3.89
Project shall not supply more parking than is required by the City code	Project proposes parking supply below what is required by the City Code
Project is consistent with the RTP/SCS land use assumptions	The land use growth assumed in the RTP/SCS includes an increase in multi-family housing units in the project location greater than the number of multi-family housing units proposed, which indicates the project is consistent with the RTP/SCS.
Project does not replace affordable housing with market-rate housing units	The existing project site is vacant, there are no existing affordable housing units on the Project site which would be replaced. The project is proposing 100% affordable housing be constructed on the site.

Source: Fehr & Peers, 2020

Given that the retail land use is local-serving retail under 50,000 square feet, the location of the project is within identified VMT-efficient areas for VMT per capita, the housing units are 100 percent affordable housing, and the project is located in a TPA, this project should be screened from a full VMT assessment under the presumption that it will result in **a less-than-significant impact**.

Site Access Review

Pedestrian Access

Pedestrian access is provided by sidewalks adjacent to the Project. The Project is proposing sidewalk improvement on 14th Street and Long Beach Boulevard. A parklet is proposed adjacent to the Project on 14th Street.

Bicycle Access

14th Street, adjacent to the Project, is a Bike Boulevard. The next nearest bicycle facilities are Class III bike routes on Pacific Avenue and Pacific Coast Highway. The City has Active Transportation Plan (ATP) grant applications for a bike boulevard on Pine and Class IV transformation on Pacific Avenue. Long Beach Boulevard is proposed to be a Class III bike route. The Project proposes secure bike parking in the building and convenient bike racks within the streetscape.

Transit Access

A transit stop for the Metro Blue Line is located just south of Anaheim Street approximately 800' south of the Project. Transit stops for Long Beach Transit Lines are located on each side of Long Beach Boulevard within 300' of the project.

Vehicle Access

Vehicle access to the proposed site will be provided through the parking garage access driveway on Long Beach Boulevard. This will be a right-in/right-out driveway. The proposed design is considered the preferred access in order to separate vehicles from bicyclists and pedestrians on 14th Street.

Project Enhancements

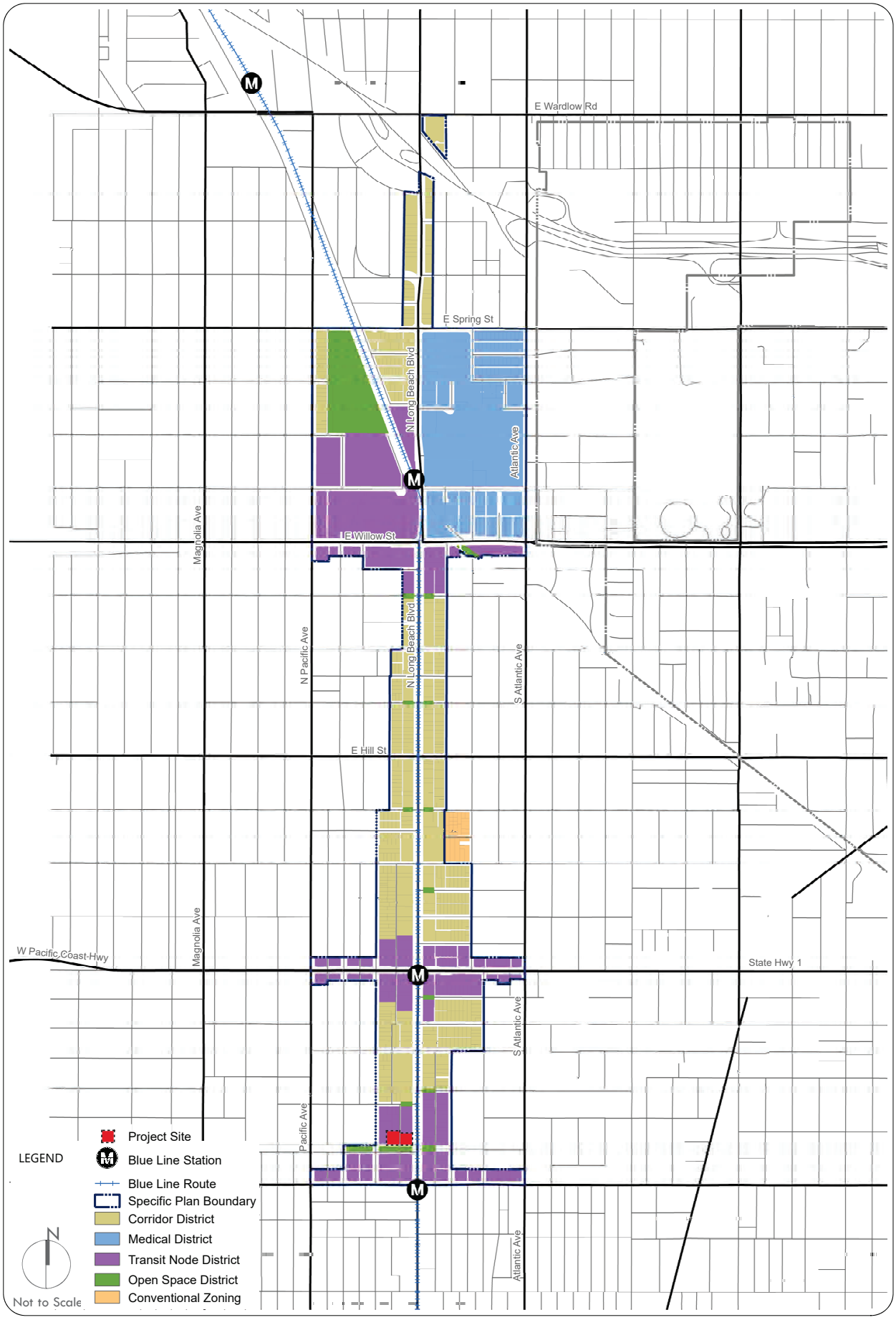
The development team and City are pursuing Affordable Housing and Sustainable Communities (AHSC) Program funding for additional bicycle, transit, and pedestrian enhancements. These tentatively include:

- New bike boulevard on Linden Avenue
- Pedestrian enhancements along 14th Street Park
- New bus island for future cycle track at northwest corner of 14th Street and Long Beach Boulevard

The Project does not conflict with any of these existing facilities or proposed facilities.

Attachments

- Figure 1 – Project Location
- Figure 2 – Long Beach Existing VMT per Population Compared to Regional Average
- Figure 3 – Long Beach Existing VMT per Employee Compared to Regional Average
- Figure 4 – Long Beach Transit Priority Areas
- Attachment A – Trip Generation Rates



FEHR & PEERS

N:\2012Projects\OC_Projects\OC12-0193_LongBeachBlvdx\GIS\MXD\fig01_ProposedProject.mxd

Project Location

FIGURE 1

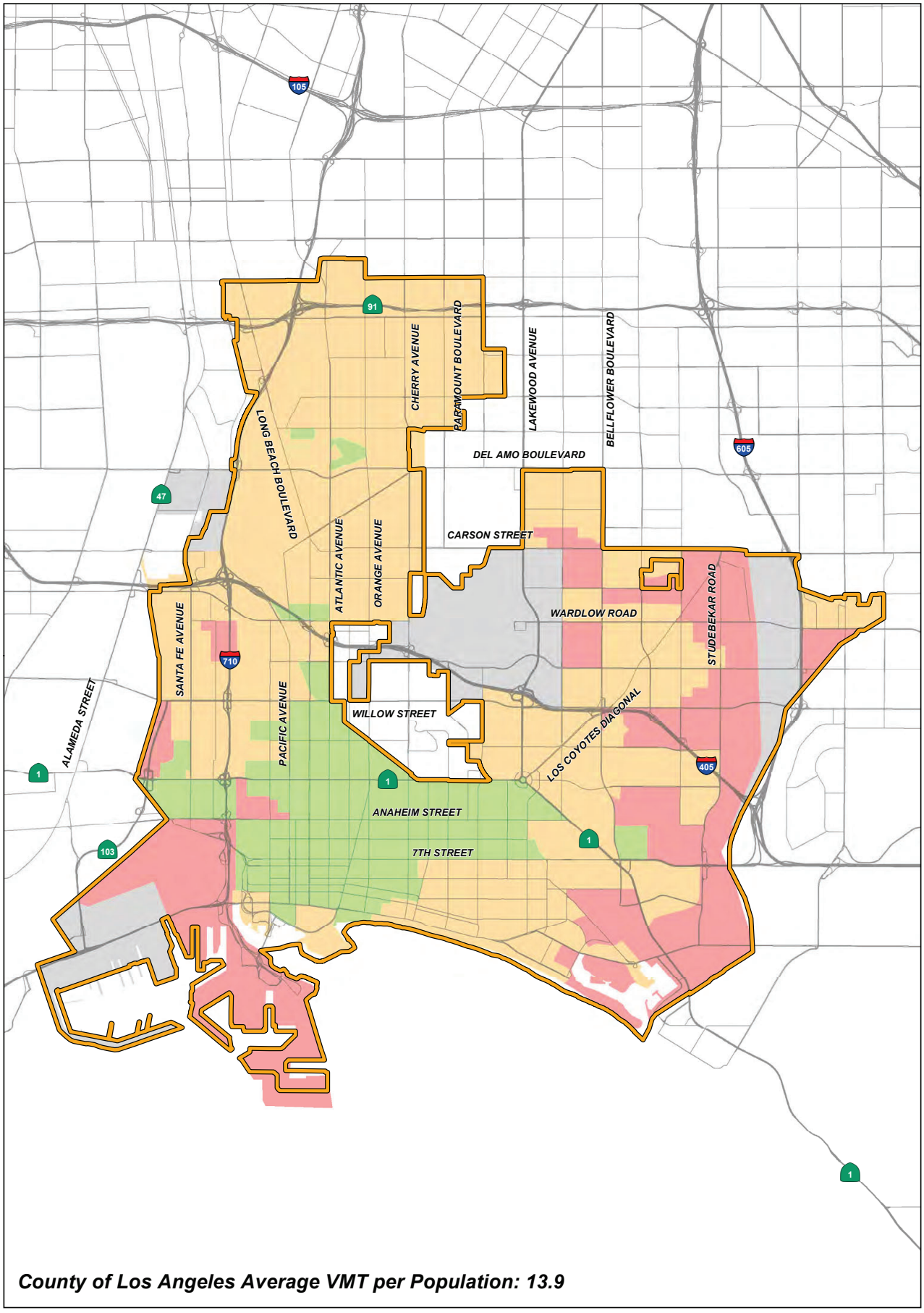


FIGURE 2

VMT per Population

- No Population
- Less than 11.8 (less than 85% of the regional average)
- 11.8 - 16.0 (85% to 115% of the regional average)
- Greater than 16.0 (greater than 115% of the regional average)

City of Long Beach

0 3000 6000
FEET

SOURCE: SCAG RTP/SCS Model; ESRI Streetmap, 2013.

I:\CLB1904.09\Reports\Traffic\fig2_VMT_Capita_Cnty.mxd (5/4/2020)

Existing VMT per Population Compared to Regional Average

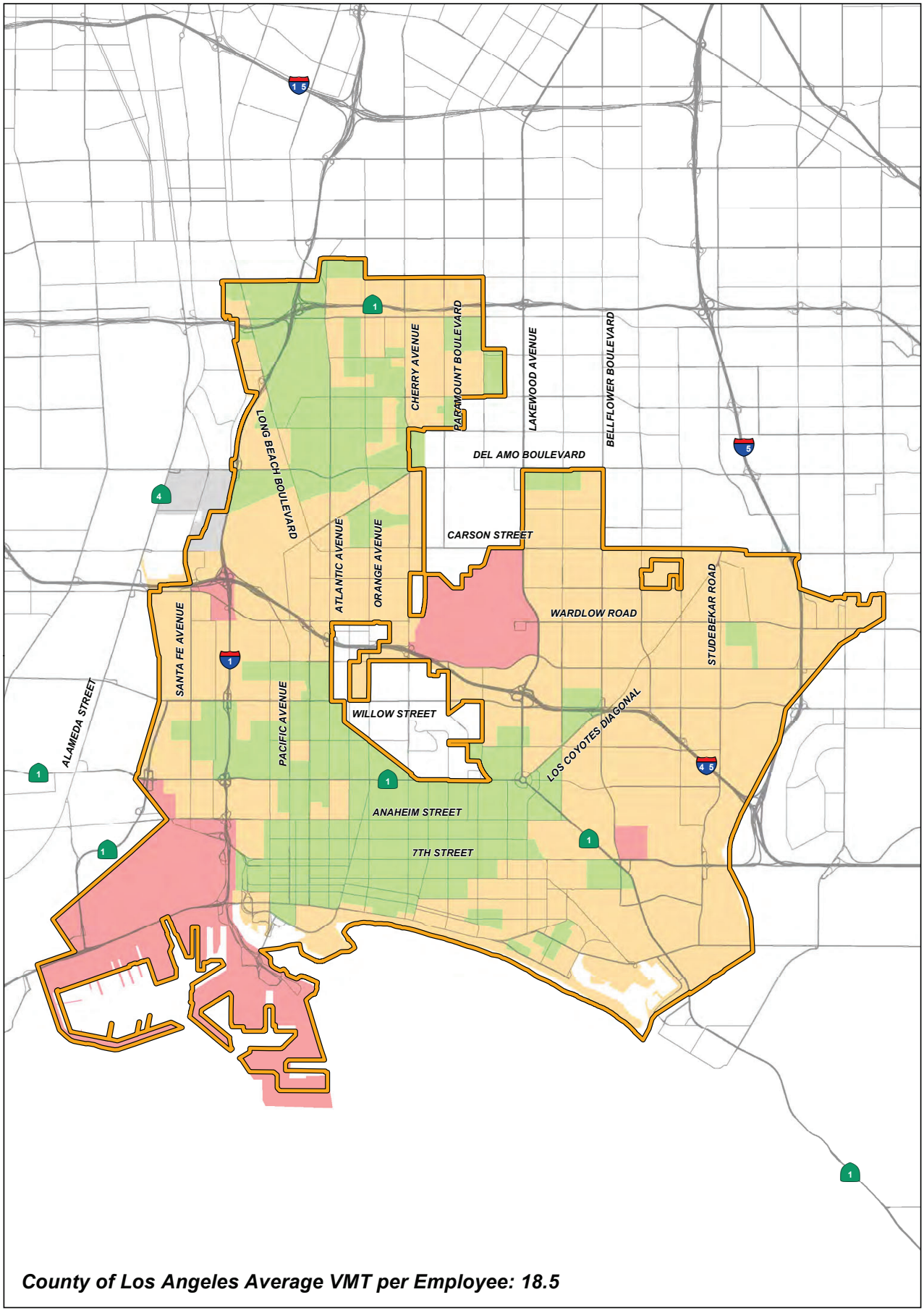


FIGURE 3

VMT per Employee

- No Employee
- Less than 15.7 (less than 85% of the regional average)
- 15.7 - 21.3 (85% to 115% of the regional average)
- Greater than 21.3 (greater than 115% of the regional average)

City of Long Beach

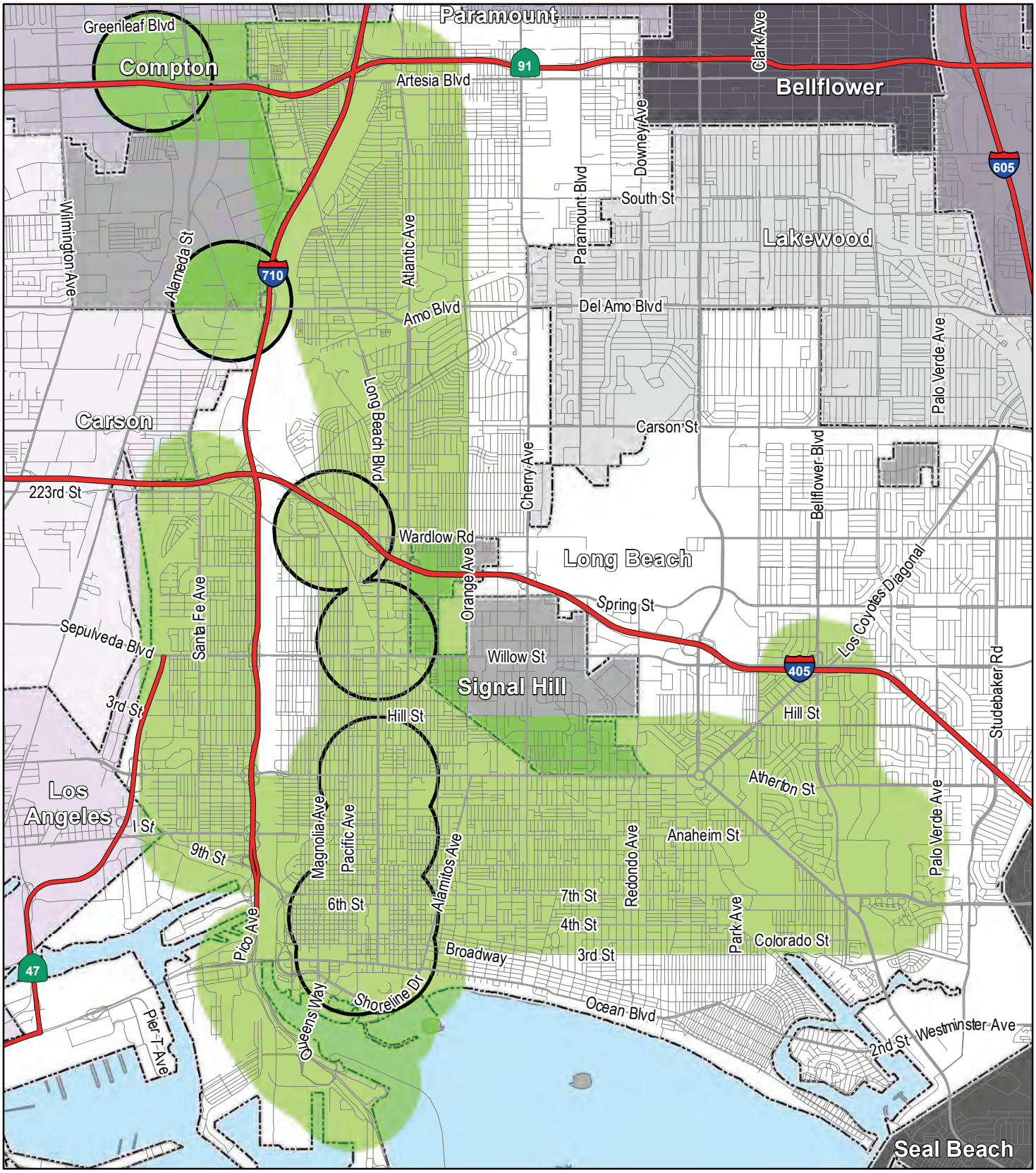
0 3000 6000
FEET

SOURCE: SCAG RTP/SCS Model; ESRI Streetmap, 2013.

I:\CLB1904.09\Reports\Traffic\fig3_VMT_Employee_Cnty.mxd (5/29/2020)

Traffic Impact Analysis Guidelines

Existing VMT per Employee Compared to Regional Average



LEGEND

Half mile from High Quality Transit Corridor or Major Transit Stop

Half mile from Major Transit Stop

FIGURE 4

N

0 3000 6000

FEET

SOURCE: Esri (2008); City of Long Beach (3/16/2020)

I:\CLB1904.09\GIS\MXD\LB_TPA.mxd (5/28/2020)

Traffic Impact Analysis Guidelines

Long Beach Transit Priority Areas

Attachment A
TRIP GENERATION RATES
14TH STREET AND LONG BEACH BOULEVARD MIXED-INCOME COMMUNITY

Land Use Type	ITE Land Use Code	Size	Trip Generation Rates [a]							Estimated Trip Generation						
			Daily Rate	AM Peak Hour			PM Peak Hour			Daily Trips	AM Peak Hour Trips			PM Peak Hour Trips		
				Rate	% In	% Out	Rate	% In	% Out		In	Out	Total	In	Out	Total
Residential Types																
Multifamily Housing (Mid-Rise)	221	160 DUs	5.44	0.36	26%	74%	0.44	61%	39%	870	15	43	58	43	27	70
Mid-Rise Residential with First Floor Commercial	231	160 DUs	3.44	0.30	28%	72%	0.36	70%	30%	550	13	35	48	41	17	58
Affordable Housing - Income Limits	223	211 Bedrooms	-	0.45	70%	30%	0.27	50%	50%	-	67	28	95	29	29	57
Affordable Housing - LA Study	LA	160 DUs	4.16	0.49	37%	63%	0.35	56%	44%	666	29	49	78	31	25	56
Commercial Types																
Shopping Center	820	4.0 ksf	37.75	0.94	62%	38%	3.81	48%	52%	151	2	2	4	7	8	15
Clinic	630	4.0 ksf	38.16	3.69	78%	22%	3.28	29%	71%	153	12	3	15	4	9	13
Health/Fitness Club	492	4.0 ksf	-	1.31	51%	49%	3.45	57%	43%	-	3	2	5	8	6	14
Recreational Community Center	495	4.0 ksf	28.82	1.76	66%	34%	2.31	47%	53%	115	5	2	7	4	5	9

Notes:
1 ksf = 1,000 square feet
2 Affordable Housing - Income Limits does not have daily rates or PM peak hour distribution (50% was assumed). Health/Fitness Club does not have a daily rate.