City of Banning

Community Development Department

NOTICE OF INTENT (NOI) TO ADOPT A MITIGATED NEGATIVE DECLARATION (MND) AND MITIGATION/MONITORING MATRIX (MMRP) AND NOTICE OF PUBLIC HEARING FOR CONDITIONAL USE PERMIT 19-8005 AND DESIGN REVIEW 19-7013 TO ALLOW THE CONSTRUCTION AND OPERATION OF A TRUCK TERMINAL FACILITY (CUP 19-8005) FOR APN 532-130-008, LOCATED EAST OF HATHAWAY STREET AT THE TERMINUS OF EAST BARBOUR STREET, THE PROJECT IS LOCATED WITHIN THE INDUSTRIAL (I) ZONING DISTRICT IN THE CITY OF BANNING, CALIFORNIA.

Pursuant *Governor's Executive Order N-29-20 all public gatherings, regardless of venue or size, the Council Chambers shall occur with limited capacity and by videoconferencing. For this meeting, the Planning Commissioners, City staff, and public will be able to observe and participate in this meeting in one of the following ways listed below:*

Videoconference: https://join.freeconferencecall.com/cityofbanning
Online meeting ID: cityofbanning.
To just listen to the meeting or to offer audio comments only when recognized for that purpose: Dial-in number: (617) 793-8135

NOTE: Due to COVID-19, the Council Chambers will be open to the public in a limited capacity only.

Information regarding the Notice of Intent, the Initial Study/Mitigated Negative Declaration (IS/MND), MMRP, CUP, and DR can be obtained by contacting the City's Community Development Department at (951) 922-3125, or by visiting the following link: http://www.ci.banning.ca.us/426/Public-Notices-Announcements

NOTICE IS HEREBY GIVEN of a public hearing before the City of Banning Planning Commission, to be held on **Wednesday, September 2, 2020 at 6:30 p.m. in the Council Chambers, City Hall, 99 East Ramsey Street, Banning, California,** to consider the proposed project. The project site encompasses approximately 39-acres in the southeastern portion of the City of Banning, one mile south of Interstate-10, east of the intersection of S. Hathaway Street and E. Barbour Street. The proposed project consists of **the following development applications:** (1) Conditional Use Permit (CUP) 19-8005 and (2) Design Review (DR) 19-7013 proposes to construct and operate a truck terminal including an 11,670 square foot office building, 63,360 square-foot cross loading dock terminal, a 1,042 square foot line haul building , a 14, 232 square-foot maintenance building diesel fuel storage, and an 80-square foot security guard building within the Industrial (I) Land Use District in the City of Banning. Information regarding the Mitigated Negative Declaration, MMRP, Conditional Use Permit, and Design Review, can be obtained by contacting the City's Community Development Department, Planning Division at (951) 922-3125, or by going to the City of Banning website at http://www.ci.banning.ca.us/426/Public-Notices-Announcements.

All parties interested in speaking either in support of or in opposition to this item are invited to attend the hearing by accessing the videoconference or by sending their written comments by email to scalderon@banningca.us or by mail to the **Community Development Department, Planning Division, City of Banning at 99 E. Ramsey Street, Banning, California, 92220**.

If you challenge any decision regarding the above proposal in court, you may be limited to raising only those issues you or someone else raised in written correspondence delivered to the Planning Commission Recording Secretary prior to, at, or during the time the Planning Commission makes its recommendation on the proposal; or, you or someone else raised at the public hearing or in written correspondence delivered to the hearing body at, or prior to, the hearing (California Government Code, Section 65009).

BY ORDER OF THE COMMUNITY DEVELOPMENT DIRECTOR OF THE CITY OF BANNING, CALIFORNIA

Adam Rush, M.A., AICP
Community Development Director

Dated: August 11, 2020
Publish: August 14, 2020

INITIAL STUDY &
MITIGATED NEGATIVE DECLARATION
FOR

PREPARED FOR:
City of Banning
99 East Ramsey Street
Banning, CA 92220
Contact:
(951) 922-3130

PREPARED BY

Lilburn Corporation
1905 Business Center Drive
San Bernardino, CA 92408
909-890-1818

DATE

September 2019

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Project Title: Estes Truck Terminal

Lead Agency Name: City of Banning Community Development Department
Planning Division
Address: 99 E. Ramsey Street
Banning, CA 92220

Contact Person: Sonia Pierce
Phone Number: (951) 922- 3152

Project Sponsor: Bremco Construction, Inc.
Address: 3270 East Spring Street
Long Beach, CA 90806

Existing General Plan Designation/Zoning:
Industrial

Proposed Banning General Plan Designation:
Industrial

Zone Change: N/A

Project Location (Address/Nearest cross-streets): No address has been assigned to the property. It is located east of Barbour Street, north of Westward Avenue and south of the Banning Airport, Banning, CA 92220

Assessor Parcel Number: 532-130-008

Project Description: Bremco Construction ("Applicant") is proposing a truck terminal to be developed on a vacant 39.1-acre property (APN 532-130-008) in the southeasterly portion of the City of Banning (see Figure 1). The property is located adjacent to the Banning Municipal Airport to the south and approximately 0.2 miles south of Interstate 10 (see Figure 2).

The Proposed Project is to consist of a new truck terminal with a 134-door terminal, an office building, a truck maintenance building, and a fuel station. On-site uses at buildout will specifically include a 2-story office building attached to the main building with 134 dock doors, an 800 square-foot line-haul building, a 10,520 square-foot shop building with three service bays, truck wash and one office parts bay, two above ground diesel fuel storage tanks, and a guard house. The line-haul building is an office space for the logistics side of the business and for organizing city to city truck routes. The fuel will be dispensed from two dispensers connected to the above ground storage tanks. There will be parking stalls for pup trailers which are 20 to 28 feet in length and can go out with tractor as a single or a double. Site improvements will also include paved employee and tractor parking, signage, landscaping, and a storm water retention basin.

Total estimated employees: 113
Shifts: 3
Hours of operations: M-F, 24/7
Saturday: close at 13:00
Sunday: open back up at 14:00.

Surrounding Land Uses and Setting (Briefly describe the project's surroundings):

The area directly to the north of the Project Site consists of the Banning Municipal Airport, which is a city-owned facility zoned as Public Facilities Airport (PF-A). The properties to the west of the Project Site are zoned PF-A and Industrial (I). The property to the east of the Project is zoned as Industrial (I), is mostly vacant and includes a single structure. The properties to the south are zoned as Public Facilities General (PF-G) and consist one structure and followed by a water treatment plant.

Given the proximity to the Banning Municipal Airport to the Proposed Project review by the Riverside County Airport Land Use Commission (ALUC) will be required. The Proposed Project is located within the Banning Municipal Airport overlay zones B2 and D. Airport Overlay Zone B2 is identified as “Adjacent to Runway”, which requires objects taller than 35 feet within this zone to conduct an airspace review and an aviation easement dedication. Airport Overlay Zone D is identified as “Primary Traffic Patterns and Runway Buffer Zone” and requires review for objects taller than 70 feet. However, according to the Riverside County Airport Land Use Compatibility Plan (Compatibility Plan), which is used by the ALUC when reviewing proposed land use development for compatibility with airport activity, parcels lying within two or more compatibility zones are encouraged to follow the more stringent requirements throughout the whole parcel. The analysis will hereby identify those scenarios based on the B2 and D compatibility zone requirements.

Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)

- Review by the Riverside County Airport Land Use Commission (ALUC)
- Regional Water Quality Control Board approval of Storm Water Pollution Prevention Plan
- Regional Water Quality Control Board consultation regarding Clean Water Act Section 401 Compliance

Have a California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuance to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significant of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

NOTE: Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21080.3.2.) Information may also be available from the California Native American Heritage Commission’s Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Please also note that Public Resources Code section 21082.3(c) contains provisions specific to confidentiality.



N

0 4

Miles

Source: Lilburn Corp., September, 2019.

LILBURN CORPORATION

REGIONAL LOCATION

Estes Truck Terminal

City of Banning, California

FIGURE 1



N

0 450

Feet

Source: Lilburn Corp., September, 2019.

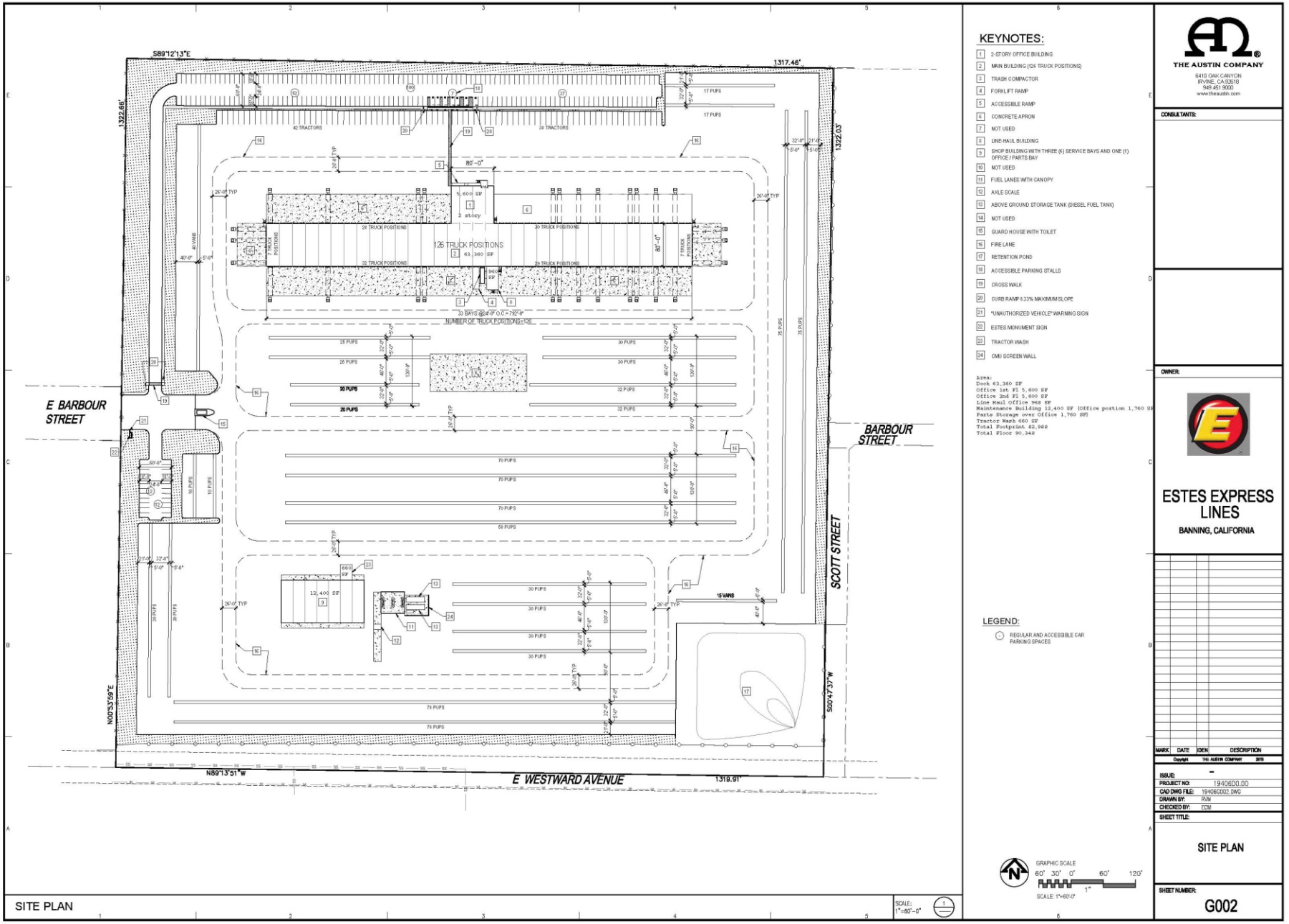
LILBURN CORPORATION

PROJECT VICINITY

Estes Truck Terminal

City of Banning, California

FIGURE 2



SITE PLAN

Estes Truck Terminal

City of Banning, California

FIGURE 3

LILBURN CORPORATION

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

☐ Aesthetics	☐ Agriculture and Forestry Resources	☐ Air Quality
☒ Biological Resources	☒ Cultural Resources	☐ Energy
☒ Geology / Soils	☐ Greenhouse Gas Emissions	☐ Hazards & Hazardous Materials
☐ Hydrology / Water Quality	☐ Land Use / Planning	☐ Mineral Resources
☐ Noise	☐ Population / Housing	☐ Public Services
☐ Recreation	☒ Transportation	☐ Tribal Cultural Resources
☐ Utilities / Service Systems	☐ Wildfire	☐ Mandatory Findings of Significance

DETERMINATION

On the basis of this initial evaluation:

( ) I find that the Proposed Project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

(✓) I find that although the Proposed Project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by, or agreed to, by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

( ) I find that the Proposed Project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

( ) I find that the Proposed Project MAY have a "Potentially Significant Impact" or "Potentially Significant Unless Mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standard and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

( ) I find that although the Proposed Project could have a significant effect on the environment, because all potentially significant effects 1) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and 2) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the Proposed Project, nothing further is required.

Signature: _____ Date: _____
Community Development Director

EVALUATION OF ENVIRONMENTAL IMPACTS:

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

   a) Earlier Analysis Used. Identify and state where they are available for review.

   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a

previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify:

   a) the significance criteria or threshold, if any, used to evaluate each question; and

   b) the mitigation measure identified, if any, to reduce the impact to less than significance

EVALUATION OF ENVIRONMENTAL IMPACTS

Issues:

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS. Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial effect on a scenic vista?	( )	( )	( )	(✓)
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a State Scenic Highway?	( )	( )	( )	(✓)
c) Substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point), If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	( )	( )	( )	(✓)
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	( )	( )	(✓)	( )

Impact Discussion:

a) **No Impact.** The City of Banning's General Plan 2006 Environmental Impact Report (Final EIR) identifies visual resources as those physical features that enhance the City's aesthetic and scenic character. The City is located within the narrow east-west trending valley of the San Gorgonio Pass between the San Jacinto Mountains to the south and the San Bernardino Mountains to the north. The Interstate 10 (I-10) Freeway runs parallel to Ramsey Street and bisects the southern portion of the City.

The Project Site is located adjacent to the southern boundary of the Banning Municipal Airport which is located south of the I-10 Freeway within an area that is surrounded mostly by vacant land and industrial buildings. Given the proximity of the Project Site to the Banning Municipal Airport, the Proposed Project will be reviewed by the ALUC for compliance with the standards established in the Riverside County Airport Land Use Compatibility Plan. The Project Site lies within Compatibility Zones B2 and D, and as encouraged in the Compatibility Plan will adopt the more stringent requirements of B2 zoning related to building heights as hereby identified:

Riverside County Airport Land Use Compatibility Plan 4.3.4 Height Restriction Criteria

(b) Within Compatibility Zones B1, B2, or Height Review Overlay Zone:
(1) Objects up to 35 feet tall are acceptable and do not require ALUC review for the purposes of height factors.
(2) ALUC review is required for any proposed object taller than 35 feet.

(3) Federal Aviation Administration review may be necessary for proposed objects adjacent to the runway edges and the FAA may require marking and lighting of certain objects (the affected areas are generally on airport property).

(c) Within Compatibility Zones C and D, generally, there is no concern with regard to any object up to 70 feet tall unless it is located on high ground or it is a solitary object (e.g., an antenna) more than 35 feet taller than other nearby objects.

The Proposed Project includes the development of a 134-door terminal, a guard house, a line-haul building, a truck maintenance building, a fuel station, and a two-story office building, which be no greater than 30 feet in height. Therefore, the Proposed Project will follow the requirements set forth in the Compatibility Plan and have a relatively low profile which would not affect the Banning Municipal Airport operations, nor substantially alter views of the San Bernardino or San Jacinto Mountains. Additionally, the Project site is located in an area that is generally surrounded by developed or disturbed land and does not constitute a scenic vista. No impacts are identified or anticipated, and no mitigation measures are required.

b) **No Impact.** According the Final EIR, a section of State Highway 243 is designated as a state scenic highway which occurs in the City's southern Sphere of Influence. The Project Site is located approximately one and a half miles northeast of the State Highway 243. The Project Site is currently vacant and does not contain any significant features such as rock outcroppings, trees, and/or historic buildings that could potentially be damaged by development of the Project Site. Therefore, no impacts are identified or anticipated, and no mitigation measures are required.

c) **No Impact.** The Proposed Project includes the development of a 134-door terminal, a guard house, a line-haul building, a truck maintenance building, a fuel station, and a two-story office building. The Project Site is relatively flat and currently vacant. It is adjacent to the Banning Municipal Airport and areas zoned as Airport Industrial and Industrial. The Proposed Project will not exceed 30 feet in height, which is consistent with both the ALUC's requirements for properties near an airport and with the requirements set forth in the City of Banning Municipal Code 17.12.030 for Industrial land uses. Therefore, no degradation to the existing visual character or quality of the site or its surroundings is anticipated. No impacts are identified or anticipated, and no mitigation measures are required.

d) **Less Than Significant.** Operation of the Proposed Project would result in an increase in indoor and outdoor illumination when compared to the current use of the Project Site, which is currently vacant. The lighting for the Proposed Project and construction will be in compliance with the City's Municipal Code Section 17.12.170(D) to alleviate impacts to adjacent land uses. Additionally, The City of Banning's Municipal Code Section 8.44.090 requires construction activity occur between the hours of 7:00 AM and 6:00 PM limiting the need for lighting during construction. Therefore, impacts associated with light and glare will be less than significant.

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
II.	**AGRICULTURAL AND FORESTRY RESOURCES.** In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a)	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	( )	( )	(✓)	()
b)	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	( )	( )	( )	(✓)
c)	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	( )	( )	( )	(✓)
d)	Result in the loss of forest land or conversion of forest land to non-forest use?	( )	( )	( )	(✓)
e)	Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?	( )	( )	( )	(✓)

Impact Discussion:

a) **Less Than Significant.** According to the California Department of Conservation California Important Farmland Finder, the agriculture designation of the Project Site is

considered Urban and Built-Up Land and Grazing Land. However, the Final EIR states that these lands are being phased out due to urbanization. Additionally, the Project Site and the surrounding area are not zoned for agricultural use by the General Plan. The Proposed Project is anticipated to have a less than significant impact in terms of converting any Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.

b) **No Impact**. The City's General Plan states that there are three Williamson Act contracts in effect within the City's boundaries. As shown on the California Department of Conservation DOC Maps: Agricultural land uses within the City of Banning for ranch/agriculture uses are located in the south-west portion of the City, approximately 3.3 miles west of the Project Site. The California Department of Conservation California Important Farmland Finder shows that the agriculture designation of the Project Site is a mixture of Urban and Built-Up Land and Grazing Land. According to the Final EIR, these lands are being phased out due to urbanization, although residential land uses allow for agricultural and ranching activities. The Proposed Project is not located within or adjacent to a Williamson Act contract. Additionally, The General Plan with Zoning Overlay Map shows that land uses surrounding the Project Site are not zoned ranch/agricultural. Therefore, the Proposed Project will have no impact.

c) **No Impact**. The Proposed Project is within the Industrial zoned area of the General Plan Zoning Overlay Map, which permits the development of a truck terminal. However, the Proposed Project Site is classified as Urban and Built-Up and Grazing Land by the California Department of Conservation, but the City's General Plan does not plan for future agricultural use in. Additionally, the General Plan does not identify any forest land uses within the City's limits. Therefore, no impacts are anticipated related to the conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use.

d) **No Impact**. The Proposed Project Site is within the City which does not have a zoning designation for forest land, timberland, or timberland zoned for timberland production within City limits. Additionally, no lands that would qualify as timberland exist within the City limits. Therefore, no impacts are identified or anticipated, and no mitigation measures are required.

e) **No Impact**. The Project Site is classified as Urban and Built-Up and Grazing Land by the California Department of Conservation and is not planned for future agricultural use in the City's General Plan. According to the Final EIR, these lands are being phased out due to urbanization, although residential land uses allow for agricultural and ranching activities. Additionally, the development of the Proposed Project Site does not include forest land use. Therefore, no impacts are anticipated related to the conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use.

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
III.	**AIR QUALITY.** Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:				
a)	Conflict with or obstruct implementation of the applicable air quality plan?	( )	( )	(✓)	( )
b)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard?	( )	( )	(✓)	( )
c)	Expose sensitive receptors to substantial pollutant concentrations?	( )	( )	(✓)	( )
d)	Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	( )	( )	(✓)	( )

Impact Discussion:

a) **Less Than Significant.** Urban Crossroads prepared an Air Quality Impact Analysis for the Proposed Project in September 2019 (included as Appendix A). The report is summarized herein. The Project Site is located within the South Coast Air Basin (SCAB), which is characterized by relatively poor air quality. The South Coast Air Quality Management District (SCAQMD) has jurisdiction over an approximately 10,743 square-mile area consisting of the four-county Basin and the Los Angeles County and Riverside County portions of what use to be referred to as the Southeast Desert Air Basin. In these areas, the SCAQMD is principally responsible for air pollution control, and works directly with the Southern California Association of Governments (SCAG), county transportation commissions, local governments, as well as state and federal agencies to reduce emissions from stationary, mobile, and indirect sources to meet state and federal ambient air quality standards.

Currently, these state and federal air quality standards are exceeded in most parts of the SCAB. In response, the SCAQMD has adopted a series of Air Quality Management Plans (AQMPs) to meet the state and federal ambient air quality standards. In March 2017, the SCAQMD released the Final 2016 AQMP. The 2016 AQMP continues to evaluate current integrated strategies and control measures to meet the NAAQS, as well as, explore new and innovative methods to reach its goals. Some of these approaches include utilizing incentive programs, recognizing existing co-benefit programs from other sectors, and developing a strategy with fair-share reductions at the federal, state, and local levels. Similar to the 2012 AQMP, the 2016 AQMP incorporates scientific and technological information and planning assumptions, including the 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS). As such, the Proposed Project's consistency with the AQMP is determined using the 2016 AQMP.

Criteria for determining consistency with the AQMP include the following indicator:

> *Consistency Criterion No. 1: The Project will not result in an increase in the frequency or severity of existing air quality violations or cause or contribute to new violations or delay the timely attainment of air quality standards or the interim emissions reductions specified in the AQMP.*

The violations that Consistency Criterion No. 1 refers to are the California Ambient Air Quality Standards (CAAQS) and National Ambient Air Quality Standards (NAAQS). CAAQS and NAAQS violations would occur if regional or localized significance thresholds were exceeded.

Construction Impacts – Consistency Criterion 1

CAAQS and NAAQS violations would occur if Localized Significance Thresholds (LSTs) or regional significance thresholds were exceeded. As evaluated and demonstrated in Section III(b), below, the Proposed Project's regional and localized construction-source emissions would not exceed applicable regional significance threshold and LST thresholds. As such, a less than significant impact is expected.

Operational Impacts – Consistency Criterion 1

As evaluated and demonstrated in Section III(b), below, the Proposed Project would not exceed the applicable regional significance thresholds and LST thresholds for operational activity. Therefore, the Proposed Project would not conflict with the AQMP according to this criterion and the Proposed Project is determined to be consistent with the first criterion.

> *Consistency Criterion No. 2: The Project will not exceed the assumptions in the AQMP based on the years of Project build-out phase.*

The 2016 AQMP demonstrates that the applicable ambient air quality standards can be achieved within the timeframes required under federal law. Growth projections from local general plans adopted by cities in the district are provided to the SCAG, which develops regional growth forecasts, which are then used to develop future air quality forecasts for the AQMP. Development consistent with the growth projections in City of Banning General Plan is considered to be consistent with the AQMP.

Construction Impacts – Consistency Criterion 2

Peak day emissions generated by construction activities are largely independent of land use assignments, but rather are a function of development scope and maximum area of disturbance. Irrespective of the Project Site's land use designation, development of the site to its maximum potential would likely occur, with disturbance of the entire site occurring during construction activities.

Operational Impacts – Consistency Criterion 2

The City of Banning's General Plan designates the Project Site for Industrial uses. The Industrial land use designation allows for the development of industrial parks and freestanding industrial users. Industrial uses include light and medium intensity

manufacturing operations, warehousing and distribution mini-storage, and associated offices. Auto storage and repair is also allowed (4). As previously stated, the Proposed Project proposes to consist of a truck terminal, two-story office building, line-haul building, truck maintenance building, and a fuel station for project trucks which is consistent with the City's land use designation. Therefore, the Proposed Project is determined to be consistent with the second criterion.

AQMP Consistency Conclusion

As concluded by Urban Crossroads, the Proposed Project would not result in or cause NAAQS or CAAQS violations. The Proposed Project is consistent with the land use and growth intensities reflected in the adopted General Plan. Furthermore, the Proposed Project would not exceed any applicable regional or local thresholds as demonstrated in Section III(b), below. As such, the Project is therefore considered to be consistent with the AQMP. No significant adverse impacts are identified or are anticipated, and no mitigation measures are required.

b) **Less Than Significant.** The Proposed Project's construction and operational emissions were screened by Urban Crossroads using the California Emissions Estimator Model (CalEEMod) version 2016.3.2 prepared by the SCAQMD. CalEEMod was used to estimate the on-site and off-site construction and operational emissions. The criteria pollutants screened for include nitrous oxides (NOx), carbon monoxide (CO), sulfur oxide (SO_X), and particulates (PM_{10} and $PM_{2.5}$). In addition, volatile organic compounds (VOC) emissions are analyzed. Two of the analyzed pollutants, VOC and NO_x, are ozone precursors.

Construction Emissions

The Proposed Project is located on approximately 39.1 acres and consists of a truck terminal and associated uses. It should be noted, however, that CalEEMod does not provide an extensive selection of land use subtype categories; therefore, land uses that most closely represent the Proposed Project, such as "Unrefrigerated Warehouse – No Rail" and "Other Asphalt Surfaces" were utilized in Urban Crossroads' analysis.

Construction emissions for construction worker vehicles traveling to and from the Project Site, as well as vendor trips (construction materials delivered to the Project Site) were estimated based on information from CalEEMod defaults. The associated construction equipment was generally based on CalEEMod 2016.3.2 defaults, and the Project Applicant has confirmed that the equipment list is reasonable for the Proposed Project's construction. Furthermore, construction is expected to commence in June 2020 and will last through March 2021. CalEEMod was used to calculate maximum daily emissions for summer and winter periods. The estimated maximum daily construction emissions without mitigation are summarized in Table 1.

Table 1
Overall Construction Emissions Summary (Without Mitigation)

Year	Emissions (lbs/day)					
	VOC	**NO_x**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Summer						
2020	7.78	67.54	52.71	0.20	11.63	6.65
2021	23.48	77.08	72.15	0.24	13.93	5.33
Winter						
2020	7.75	67.46	48.10	0.18	11.63	6.65
2021	23.44	76.96	66.7	0.22	13.93	5.33
Maximum Daily Emissions	**23.48**	**77.08**	**72.15**	**0.24**	**13.93**	**6.65**
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

Source: Urban Crossroads, Air Quality Impact Analysis (2019)

Table 1 shows that none of the Proposed Project's emissions will exceed regional thresholds. Therefore, a less than significant regional air quality impact would occur from construction of the Proposed Project.

Operational Emissions

Urban Crossroads utilized CalEEMod to analyze operational activities associated with the Proposed Project which will result in area source emissions, energy source emissions, and mobile source emissions. Area source emissions are comprised of architectural coatings, consumer product, and landscape maintenance equipment, while energy source emissions is comprised of combustion emissions associated with natural gas and electricity while accounting for Title 24 Energy Efficiency Standards. Mobile source emissions were estimated using trip characteristics available from the Estes Banning Traffic Impact Analysis (2019) prepared by Urban Crossroads. The resulting operational emissions produced by the Proposed Project for summer and winter scenarios are presented in Table 2.

Table 2 shows that none of the analyzed criteria pollutants would exceed the regional emissions thresholds. Therefore, a less than significant regional air quality impact would occur from operation of the Proposed Project.

As shown in Table 1 and Table 2, the Proposed Project would not emit criteria pollutants in excess of the regional emissions thresholds. Therefore, the Proposed Project would not
result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard. Less than significant impacts would occur, and no mitigation measures are required.

Table 2
Summary of Peak Operational Emissions (Without Mitigation)

Operational Activities – Summer	Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Area Source	2.88	0.00	0.17	0.00	0.00	0.00
Energy Source	0.00	0.04	0.03	0.00	0.00	0.00
Mobile Source (Passenger Cars)	0.66	0.56	9.56	0.03	2.86	0.77
Mobile Source (Trucks)	0.67	26.68	4.50	0.10	3.54	1.24
Total Maximum Daily Emissions	**4.22**	**27.28**	**14.27**	**0.13**	**6.40**	**2.02**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**
Operational Activities – Winter	**Emissions (lbs/day)**					
	VOC	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Area Source	2.88	0.00	0.17	0.00	0.00	0.00
Energy Source	0.00	0.04	0.03	0.00	0.00	0.00
Mobile Source (Passenger Cars)	0.58	0.58	7.74	0.02	2.86	0.77
Mobile Source (Trucks)	0.65	27.85	4.27	0.10	3.54	1.24
Total Maximum Daily Emissions	**4.12**	**28.47**	**12.21**	**0.12**	**6.40**	**2.01**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

Source: Urban Crossroads, Air Quality Impact Analysis (2019)

c) **Less Than Significant.** SCAQMD has developed a methodology to assess the localized impacts of emissions from a proposed project as outlined within the Final Localized Significance Threshold (LST) Methodology report; completed in June 2003 and revised in July 2008. The use of LSTs is voluntary, to be implemented at the discretion of local public agencies acting as a lead agency pursuant to CEQA. LSTs apply to projects that must undergo CEQA or the National Environmental Policy Act (NEPA) review and are five acres or less. The LSTs were developed to analyze the significance of potential air quality impacts of proposed projects to sensitive receptors (i.e. schools, single family residences, etc.) and provide screening tables for small projects (one, two, or five acres). Projects are evaluated based on geographic location and distance from sensitive receptors (25, 50, 100, 200, or 500 meters from the site).

For the purposes of a CEQA analysis, the SCAQMD considers a sensitive receptor to be a receptor such as a residence, hospital, convalescent facility or anywhere that it is possible for an individual to remain for 24 hours. Additionally, schools, playgrounds, childcare centers, and athletic facilities can also be considered as sensitive receptors. Sensitive receptors in the vicinity of the Project Site include residential and commercial uses. Localized air quality impacts were evaluated at sensitive receptor land uses

nearest to the Project Site. To assess the stationary source operational and construction air impacts, the following five sensitive receptor locations were identified:

R1: Located approximately 87 feet southwest of the Project Site, R1 represents existing residential homes on East Westward Avenue.

R2: Location R2 represents existing residential homes located approximately 701 feet southwest of the Project Site on Charles Street.

R3: Location R3 represents the existing residential homes located roughly 1,596 feet southwest of the Project Site on Charles Street.

R4: Location R4 represents the existing residential homes located roughly 1,369 feet west of the Project Site on South Hathaway Street.

The SCAQMD produced look-up tables for projects less than or equal to five acres in size, however, the Project Site is approximately 39.1 acres. For projects that exceed five acres, the 5-acre LST look-up tables are used as a screening tool to determine which pollutants require additional detailed analysis on a conservative basis. Therefore, Urban Crossroads utilized the LSTs for a 5-acre site in their analysis. Tables 3 and 4 demonstrate the localized impacts at the nearest sensitive receptor location in the vicinity of the Project Site for the construction and operational phases, respectively.

Table 3
Localized Significance Summary of Construction (Without Mitigation)

On-Site Rough Grading Emissions	**Emissions (lbs/day)**			
	NO_X	**CO**	**PM_{10}**	**$PM_{2.5}$**
Maximum Daily Emissions	60.88	32.40	6.47	3.74
SCAQMD Localized Threshold	209	2,446	20	10
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**
On-Site Preparation Emissions	**Emissions (lbs/day)**			
	NO_X	**CO**	**PM_{10}**	**$PM_{2.5}$**
Maximum Daily Emissions	63.79	22.39	11.28	6.59
SCAQMD Localized Threshold	195	2,230	18	9
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**
On-Site Fine Grading Emissions	**Emissions (lbs/day)**			
	NO_X	**CO**	**PM_{10}**	**$PM_{2.5}$**
Maximum Daily Emissions	60.88	32.40	6.47	3.74
SCAQMD Localized Threshold	209	2,446	20	10
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**

Source: Urban Crossroads, Air Quality Impact Analysis (2019)

Table 4
Localized Significance Summary of Operations (Without Mitigation)

Operational Activity	Emissions (lbs/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Maximum Daily Emissions	**1.46**	**0.91**	**0.32**	**0.10**
SCAQMD Localized Threshold	238	2,878	7	3
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**

Source: Urban Crossroads, Air Quality Impact Analysis (2019)

As shown in Tables 3 and 4, the construction and operational emissions will not exceed the LST thresholds for the nearest sensitive receptor. Therefore, the Proposed Project will have a less than significant localized impact, and no mitigation measures are required.

d) **Less Than Significant.** As concluded by Urban Crossroads, the Proposed Project does not contain land uses typically associated with emitting objectionable odors. Potential odor sources associated with the Proposed Project may result from construction equipment exhaust and the application of asphalt and architectural coatings during construction activities and the temporary storage of typical solid waste (refuse) associated with the Proposed Project's (long-term operational) uses. Standard construction requirements would minimize odor impacts from construction. The construction odor emissions would be temporary, short-term, and intermittent in nature and would cease upon completion of the respective phase of construction and is thus considered less than significant. It is expected that Project-generated refuse would be stored in covered containers and removed at regular intervals in compliance with the City's solid waste regulations. The Proposed Project would also be required to comply with SCAQMD Rule 402 to prevent occurrences of public nuisances. Therefore, odors associated with the Proposed Project construction and operations would be less than significant and no mitigation is required.

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

Impact Discussion:

a) **Less Than Significant with Mitigations Incorporated.** In July 2019, a General Biological Assessment (included as Appendix B) was prepared for the Banning Truck Terminal by Natural Resources Assessment, Inc. (NRAI) and is summarized herein. The assessment was completed under the requirements of the Western Riverside County's Multiple Species Habitat Conservation Plan (MSHCP). The MSHCP is intended to balance the growth of western Riverside county with the need to preserve open space and protect species of plants and animals that are threatened with extinction. The MSHCP requires an assessment of the Project Site for Narrow Endemic Plant Species, presence of burrowing owl habitat, riverine and riparian habitats, and for vernal pools and fairy shrimp habitat.

Habitat for burrowing owl was assessed over the entire property in accordance with MSHCP "Burrowing Owl Survey Instructions". The assessment included looking for burrowing owl burrows, whitewash, pellets, animal remains and other burrowing owl indicators. The property was found to provide marginal habitat for the burrowing owl, but suitable active burrows were not observed at the time of the survey. Beechey ground squirrel burrows were observed, but they were in active use by that species. The survey was conducted at a time when burrowing owls should have been observable if present. No signs of burrowing owl were present. However, there is a small likelihood that burrowing owls may use or occupy the property over time, especially since there is a large area of suitable foraging and nesting habitat within the airport property to the north and open space to the south and east.

The Project Site was also found to exist within a Narrow Endemic Plant Species survey area for two sensitive plant species: Yucaipa onion and the many-stemmed dudleya. Neither of these two Narrow Endemic Plant Species were detected during the field survey and the conditions on the Project Site were found not suitable for either species. Both species have a strong affinity for clay soils and the Project Site consists of loamy fine sands and coarse sandy loam. Furthermore, the Project Site is heavily impacted by non-native, ruderal vegetation and non-native grasses and has been subject to loss of habitat to development and by the alteration of fire regimes (mainly suppression). These species are not expected to be present and no impacts are expected.

The Project Site occurs within a relatively developed and fragmented area of the City of Banning and even though the Project Site shows signs of disturbance, there is enough scattered vegetation on-site to potentially provide suitable habitat for nesting birds. At the time of the survey, the Project Site had suitable nesting habitat for ground nesting bird species such as killdeer.

In general, impacts to burrowing owls and all bird species can be avoided by conducting work outside of the nesting season. However, possible significant adverse impacts have been identified or anticipated and the following mitigation measures are required as a condition of project approval to reduce these impacts to a level below significant. The required mitigation measures are:

- **Mitigation Measure BIO-1:** A pre-construction burrowing owl breeding bird survey following the recommended guidelines of the MSHCP will be required to determine if nesting is occurring.

- **Mitigation Measure BIO-2:** Occupied nests will not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist verifies through non-invasive methods that either (a) the adult birds have not begun egg-laying and incubation; or (b) the juveniles from the occupied nests are foraging independently and are capable of independent survival.

- **Mitigation Measure BIO-3:** If the biologist is not able to verify one of the above conditions, then no disturbance shall occur during the breeding season within a distance determined by the qualified biologist for each nest or nesting site. For the burrowing owl, the recommended distance is a minimum of 160 feet.

- **Mitigation Measure BIO-4:** If start of construction occurs between February 1 and August 31, then a qualified biologist shall conduct a breeding bird survey no

more than three days prior to the start of construction to determine if nesting is occurring. This survey can be conducted as part of the burrowing owl surveys.

- "Construction" includes selection of staging areas, demolition, tree, trash and debris removal, placement of equipment and machinery on to the property preparatory to grading, and any other project-related activity that increases noise and human activity on the project site beyond existing levels. Emergency measures are exempt from this definition.

- **Mitigation Measure BIO-5:** If occupied nests are found, they shall not be disturbed unless the qualified biologist verifies through non-invasive methods that either (a) the adult birds have not begun egg-laying and incubation; or (b) the juveniles from the occupied nests are capable of independent survival.

- **Mitigation Measure BIO-6:** If the biologist is not able to verify one of the above conditions, then no disturbance shall occur within a distance specified by the qualified biologist for each nest or nesting site. The qualified biologist will determine the appropriate distance in consultation with the California Department of Fish and Wildlife and the U.S. Fish and Wildlife Service.

b,c) **Less Than Significant.** The MSHCP describes the protection of Riparian/Riverine Areas within the MSHCP Plan Area pivotal to the conservation of certain amphibian, avian, fish, invertebrate and plant species. Surveys conducted for the Project Site occurred during the appropriate season to observe the target species in good weather conditions as outlined in Volume 1, Section 6.1.2 of the MSHCP. Two drainages were identified on the Project Site. The Project Site is mostly flat, with one well-defined drainage running west to east along the southern half of the property, and one less well-defined drainage in the northern half of the property. Neither of the drainages was found to support riparian/riverine plant communities as defined by the MSHCP.

The U.S. Army Corps of Engineers ("Corp") regulates discharges of dredged or fill material into waters of the United States. Neither drainage was found to have a clear connection to Smith Creek, a second tributary to Whitewater Creek, a Corps jurisdictional water.

The Corp has delegated the authority for use of 404 permits to each individual state which is regulated by the State Water Resources Control Board under Section 401 of the Clean Water Act regulations, with the authority in the state being vested in regional offices known as Regional Water Quality Control Boards (RWQCB). Of the two drainages supported by the Project Site, the southern drainage may provide one or more Beneficial Uses (BUs) that might come under RWQCB protection. Therefore, impacts to this drainage may require consultation with the RWQCB.

The California Department of Fish and Wildlife (CDFW), through provisions of the State of California Administrative Code, is empowered to issue agreements for any alteration of a river, stream, or lake where fish or wildlife resources may adversely be affected. The southern drainage on the Project Site is well-defined and is anticipated to come under jurisdiction of the CDFW. The northern drainage is less well-defined and may not meet the definition of a jurisdictional drainage. There are potential impacts to both drainages,

and consultation with the CDFW to determine jurisdiction and whether mitigation will be required is recommended.

However, no riparian areas or vernal pools were found within the Project Site and the Project Site is not anticipated to conflict with any state or federally protected wetlands. Therefore, no significant adverse impacts are identified or anticipated, and no mitigation measures are required.

d) **No Impact.** The Project Site is currently vacant in a relatively undeveloped area, adjacent to the Banning Municipal Airport and the I-10 Freeway on the northern boundary, light industrial development to the west, mostly open space to the east, and a mix of rural residential and agriculture to the south. The Proposed Project is not anticipated to add fragmentation to wildlife habitat or interfere with the movement of wildlife. No sensitive habitats exist on-site, nor were any sensitive species identified during site surveys. Therefore, development of the Proposed Project would not result in additional significant fragmentation to habitat. No impact is identified or anticipated, and no mitigation measures are required.

e) **No Impact.** According to the MSCHP, the property was classified as grassland in 1994, as desert scrub in 2005, and as grassland in 2012. According to a review of aerial imagery from Google Earth, the property has been disked and no longer supports the healthy scrub community it supported from 1996 to 2006. Currently, the Project Site is vacant with a small amount of shrub cover, mostly composed of California buckwheat (*Erigonum fasciculatum*), annual wildflowers, and weeds. The Project Site is not within a habitat conservation area aside from being in the boundaries of the MSHCP and does not conflict with any local policies or ordinances protecting biological resources. No further focused surveys are warranted or recommended. Therefore, no impacts are identified or anticipated, and no mitigation measures are required.

f) **No Impact.** The MSHCP is intended to balance the growth of the western Riverside County alongside the preservation of open space and protection of species. The MSHCP coverage area is divided into Area Plans (APs) based on Riverside County's General Plan Area Plan boundaries. Each of the AP's have established conservation criteria; species-specific surveys and areas identified for conservation. Based on the MSHCP GIS overlay, the Project Site falls within the Pass Area Plan, but it is not identified within a criteria cell or subunit area.

The Proposed Project is consistent with the MSHCP policies found in Section 6 which include Riparian/Riverine Areas/Vernal Pools; Narrow Endemic Plant Species; Urban/Wildlands Interface; and Surveys for Special Status Species (burrowing owls). Of the specific surveys completed for the Proposed Project, it was found that no burrowing owls or Narrow Endemic Plant Species exist within the Project Site or Project vicinity.

The Biological Resource Assessment included a survey for impact on the urban/wildlife interface by using guidelines from the MSHCP pertaining to open spaces. Overall the Proposed Project does not infringe on any provisions established by the MSHCP. Therefore, no impacts are identified or anticipated, and no mitigation measures are required.

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
V.	**CULTURAL RESOURCES.** Would the project:				
a)	Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?	( )	(✓)	( )	( )
b)	Cause a substantial adverse change in the significance of an archeological resource pursuant to § 15064.5?	( )	(✓)	( )	( )
c)	Disturb any human remains, including those interred outside of formal cemeteries?	( )	(✓)	( )	( )

Impact Discussion:

a,b) **Less Than Significant with Mitigation**. In March 2019, McKenna et al. (McKenna) prepared a Phase I Cultural Resources Investigation (included as Appendix C) for the Proposed Project which is summarized herein. An archaeological records check was completed at the University of California, Riverside, Eastern Information Center. Research identified a minimum of 66 cultural resources investigations within a one-mile radius around the Project Site. Two additional studies involved a long, linear transmission line alignment and the Banning General Plan, resulting in a total of 68 reports.

The review of the recorded cultural resources resulted in the identification of 68 resources within a one-mile radius of the Project Site. Of the studies reviewed, three involved all or part of the project area. According to Mckenna, report RI-08449 (Hogan et al. 2004) was an overview used as the basis for the General Plan discussion. Report RI-06853 (Pollack and Lerch 2005) addressed the transmission alignment running along E. Westward Avenue and the southern boundary of the Project Site. Report RI-10346 (George et al. 2017) involved monitoring along the Devers-Pola Verde transmission line, also along E. Westward Avenue. However, no surveys or studies, other than the General Plan overview, specifically involved the current Project Site.

McKenna completed an intensive survey and found the property to be covered in modest amount of grass and had surface rocks exposed by at least two major erosion drainages (one in the southeastern corner of the property and one near the western boundary, near E. Barbour Street). McKenna found no evidence of prehistoric or historical archaeological resources. Based on the recent historical research and documentation, McKenna has concluded the Project Site yielded no evidence of prehistoric archaeological resources and no evidence of historic archaeological resources. The Project Site is not culturally significant or sensitive and the proposed development would not result in any adverse environmental impacts; however, the possibility of discovering a significant unanticipated find remains. Therefore, potentially significant impacts could occur, and the following mitigation measures are recommended to reduce impacts to a level of less than significant.

Mitigation Measure CR-1:

If cultural resources are encountered during ground-disturbing activities, work in the immediate area shall cease and an archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards for archaeology (National Park Service [NPS] 1983) shall be contacted immediately to evaluate the find(s). If the discovery proves to be significant under CEQA, additional work such as data recovery excavation may be warranted and will be reported to the City.

Mitigation Measure CR-2:

Should human remains and/or cremations be encountered during any earthmoving activities, all work shall stop immediately in the area in which the find(s) are present (suggested 100-ft radius area around the remains and project personnel will be excluded from the area and no photographs will be permitted), and the County of Riverside Coroner will be notified. The City of Banning and the Project Proponent shall also be called and informed of the discovery. The Coroner will determine if the bones are historic/archaeological or a modern legal case. The Coroner will immediately contact the Native American Heritage Commission (NAHC) in the event that remains are determined to be human and of Native American origin, in accordance with California Public Resources Code Section 5097.98.

All discovered human remains shall be treated with respect and dignity. California state law (California Health & Safety Code 7050.5) and federal law and regulations ([Archaeological Resources Protection Act (ARPA) 16 USC 470 & 43 CFR 7], [Native American Graves Protection & Repatriation Act (NAGPRA) 25 USC 3001 & 43 CFR 10] and [Public Lands, Interior 43 CFR 8365.1-7]) require a defined protocol if human remains are discovered in the State of California regardless if the remains are modern or archaeological.

c) **Less Than Significant with Mitigation.** Construction activities, particularly grading, could potentially disturb human remains interred outside of a formal cemetery. Thus, the potential exists that human remains may be unearthed during grading and excavation activities associated with project construction. In the event that human remains are discovered during grading or other ground disturbing activities associated with the Proposed Project, all work in that area shall be halted or diverted until a qualified archaeologist can evaluate the nature and significance of the finds as detailed under Mitigation ***Measure CR-2***, listed in Section V(a, b), above. Less than significant impacts are anticipated with implementation of Mitigation ***Measure CR-2***. No additional mitigation measures are required.

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
VI.	**ENERGY.** Would the project:				
a)	Result in potentially significant environment impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	( )	()	(✓)	( )
b)	Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	( )	()	( )	(✓)

Impact Discussion:

An Energy Analysis was prepared by Urban Crossroads (included as Appendix D) using CalEEMod outputs from the Estes Banning Air Quality Analysis in September 2019 (available at the City for review) to provide an assessment of potential energy impacts resulting from a proposed truck terminal. The purpose of the energy analysis is to evaluate the potential energy impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation that may result from the development of the Proposed, and to recommend improvement to achieve acceptable energy use.

a) **Less Than Significant.** According to the Energy Analysis, construction duration is expected to commence in June 2020 and will last through March 2021. The duration of construction activity represents a reasonable approximation as required per CEQA Guidelines. The construction phases will include Site Preparation, Rough Grading, Fine Grading, Building Construction, Paving, and Architectural Coating.

Site specific construction fleet may vary due to specific project needs at the time of construction. The associated construction equipment was generally based on CalEEMod 2016.3.2 defaults, and the Project applicant has confirmed that the equipment list is reasonable for the Project's construction. The construction phases are assumed to include the crawler tractors, excavators, graders, rubber tire dozers and scrapers.

Construction:

Electricity

The Energy Analysis states that the construction equipment electricity implications of the construction process, specifically the power cost from on-site electricity consumption during construction of the Proposed Project. Based on the 2017 National Construction Estimator (Richard Pray, 2017) (26), the typical power cost per 1,000 square feet of construction per month is estimated to be $2.32. For the Estes Banning development, the Project plans to develop consist of 97,400 sf of truck terminal use which will include a 134-door cross-dock, a two-story office building, a line-haul building, a truck maintenance building, and a fuel station for project trucks. The Proposed Project is anticipated to be developed in one phase within a 9-month period. The energy analysis report states the total power cost of the on-site electricity usage during the construction of the Proposed Project is estimated to be approximately $2,033.71. Additionally, as of October 2018, BEU's general and industrial service rate schedule is $0.16 per kWh of

electricity (27)4. As shown on the Energy Analysis, the total electricity usage from on-site Project construction related activities is estimated to be approximately 12,404 kWh.

Fuel

The Energy Analysis states fuel consumed by construction equipment would be the primary energy resource expended over the course of Project construction. Project construction activity timeline estimates, construction equipment schedules, equipment power ratings, load factors, and associated fuel consumption estimates by eight-hour daily use of all equipment. The aggregate fuel consumption rate for all equipment is estimated at 18.5 horsepower-hour per gallon (hp-hr/gal.), obtained from CARB 2018 missions Factors Tables and cited fuel consumption rate factors presented in Table D-24 of the Moyer guidelines (28). For the purposes of this analysis, the calculations are based on all construction equipment being diesel-powered which is standard practice consistent with industry standards. Diesel fuel would be supplied by existing commercial fuel providers serving the City and region. According to Energy Report the Proposed Project's construction activities would consume an estimated 63,244 gallons of diesel fuel. Project construction would represent a "single-event" diesel fuel demand and would not require on-going or permanent commitment of diesel fuel resources for this purpose.

All construction worker trips would be from light duty autos (LDA) along area roadways. With respect to estimated vehicle miles travelled (VMT), the construction worker trips would generate an estimated 1,260,893 VMT. Vehicle fuel efficiencies for LDAs were estimated using information generated within the 2017 version of the EMFAC developed by the CARB. EMFAC2017 was run for the LDA vehicle class within the California sub-area for a 2021 calendar year. The annual fuel consumption resulting from the Proposed Project generated by LDAs related to construction worker trips and it is estimated that 39,920 gallons of fuel will be consumed related to construction worker trips during full construction of the Proposed Project. Construction worker trips would represent a "single-event" gasoline fuel demand and would not require on-going or permanent commitment of fuel resources for this purpose.

The Energy Analysis states that construction vendor trips would generate an estimated 202,136 VMT along area roadways. It is assumed that 50% of all vendor trips are from Medium-Heavy-Duty-Trucks (MHDT) and 50% are from Heavy-Heavy-Duty Trucks (HHDT). Additionally, HHDTs are estimated to have a fuel efficiency of 6.93 mpg. The Energy Analysis shows that an estimated 10,385 gallons of fuel will be consumed related to construction vendor trips (MHDTs) and estimated fuel economy of HHDTs accessing the Project Site during construction. The fuel consumption from construction vendor trips (HHDTs) will total approximately 14,580 gallons. The total fuel consumption from construction vendor trips (MHDTs and HHDTs) is 24,964 gallons. Project construction vendor trips would represent a "single-event" diesel fuel demand and would not require on-going or permanent commitment of diesel fuel resources for this purpose.

Energy Efficiency/Conservation Measures

The equipment used for construction of the Proposed Project would conform to CARB regulations and California emissions standards. There are no unusual project characteristics or construction processes that would require the use of equipment that would be more energy intensive than is used for comparable activities; or equipment that

would not conform to current emissions standards (and related fuel efficiencies). Equipment employed in construction of the Proposed Project would therefore not result in inefficient wasteful, or unnecessary consumption of fuel.

The Proposed Project would utilize construction contractors which practice compliance with applicable CARB regulation regarding retrofitting, repowering, or replacement of diesel off-road construction equipment. Additionally, CARB has adopted the Airborne Toxic Control Measure to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel particulate matter and other Toxic Air Contaminants (TAC). Compliance with anti-idling and emissions regulations would result in a more efficient use of construction-related energy and the minimization or elimination of wasteful or unnecessary consumption of energy. Idling restrictions and the use of newer engines and equipment would result in less fuel combustion and energy consumption. Additionally, certain incidental construction-source energy efficiencies would likely accrue through implementation of California regulations and best available control measures (BACM). More specifically, California Code of Regulations Title 13, Motor Vehicles, section 2449(d)(3) Idling, limits idling times of construction vehicles to no more than five minutes, thereby precluding unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment.

The Energy Analysis states that the construction processes promote conservation and efficient use of energy by reducing raw materials demands, with related reduction in energy demands associated with raw materials extraction, transportation, processing and refinement. Use of materials in bulk reduces energy demands associated with preparation and transport of construction materials as well as the transport and disposal of construction waste and solid waste in general, with corollary reduced demands on area landfill capacities and energy consumed by waste transport and landfill operations.

Operational

The Energy Analysis states that energy consumption in support of or related to Proposed Project operations would include transportation energy demands (energy consumed by employee and patron vehicles accessing the Project site) and facilities energy demands (energy consumed by building operations and site maintenance activities).

Electricity

The Project Site is within the service area of the Banning Electric Utility and is a member of the Southern California Public Power Authority (SCPPA). The Project Site is currently vacant and has no demand on electricity. Therefore, the development of the Proposed Project will create a permanent increase in demand of electricity. The Energy Analysis states that the Proposed Project would create 184,865 kBTU/year demand of electricity. The SCPPA work collectively to improve their operational efficiency for their customers and reduce the load on the electric grid by promoting energy efficiency and providing different programs. The Proposed Project would not result in a significant impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation and no mitigation measures are recommended.

Natural Gas

The Project Site and surrounding area are within the service area of Southern California Gas Company (SoCalGas). The Project Site is currently vacant and has no demand on natural gas. Therefore, the development of the Proposed Project will create a permanent increase demand of natural gas. According to SoCalGas, their facilities are expected to meet the increased demand of natural gas. The commercial demand of natural gas is anticipated to decrease from approximately 81 billion cubic feet (bcf) to 65 Bcf between the years 2015 to 2035. The Energy Analysis states that the Proposed Project would create 139,282 kBTU/year demand of natural gas. Therefore, the natural gas demand from the Proposed Project would represent an insignificant percentage of the overall demand in SoCalGas' service area. The Proposed Project would not result in a significant impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation and no mitigation measures are recommended.

Fuel

The Energy Analysis includes the estimated annual VMT and annual fuel use of various types of vehicles during operation of the Proposed Project. In the EMFAC2017 model, an aggregated fuel economy of various vehicle types ranging from model year 1974 to model year 2021 was used to generate annual fuel use. The Proposed Project's vehicles consist of Light-Duty Auto, Light-Duty Trucks, Light-Duty Trucks 2, Medium Duty Trucks, Light-Heavy Duty Trucks, and Heavy-Heavy Duty Trucks.

According to the Energy Analysis, Light-Duty Auto trip frequency and trip length estimated from the Proposed Project would generate an estimated 838,349 annual VMT along area roadways for all LDAs with full build-out of the Proposed Project. The estimated range of annual fuel consumption resulting from Project generated LDAs. The Energy Analysis states that the Proposed Project is estimated to consume 26,542 gallons of fuel from LDA trips.

The Energy Analysis states that the Light-Duty Trucks trip frequency and trip length estimated for the Proposed Project would generate an estimated 58,712 annual VMT along area roadways for all Light-Duty Trucks (vehicle weight rating (GVWR) of less than 6,000 lbs. and equivalent test weight (ETW) of less than or equal to 3,750 lbs.) with full build-out of the Project. The Proposed Project is estimated that 2,221 gallons of fuel will be consumed from Project generated LDT1 trips.

Light-Heavy Duty Trucks generate an estimated 286,732 annual VMT along area roadways for all Light Duty Trucks 2(Vehicles under the LDT2 category have a GVWR of less than 6,000 lbs. and ETW between 3,751 lbs. and 5,750 lbs.) vehicles with full build-out of the Project). The Energy Analysis states that it is estimated that 11,581 gallons of fuel will be consumed from Project generated LDT2 trips.

Medium-Duty Trucks trip frequency and trip length would generate an estimated 181,597 annual VMT along area roadways for all Medium-Duty Trucks (MDV) vehicles with full build-out of the Project. The Energy Analysis estimated that 9,113 gallons of fuel will be consumed from Project generated MDV trips.

Light Heavy Duty Trucks(LHDT) trip frequency and trip length methodologies cited in the Project's AQIA, the Project would generate an estimated 131,037 annual VMT along area roadways for all Light Heavy Duty Trucks with full build-out of the Project .As stated in the Energy Analysis, it is estimated that 9,297 gallons of fuel will be consumed from Project generated LHDT trips.

Heavy-Heavy Duty Trucks (HHDT) trip frequency and trip length would generate an estimated 1,179,327 annual VMT along area roadways for all HHDTs with full build-out of the Project. The Energy Analysis estimated that 170,125 gallons of fuel will be consumed from Project generated HHDT trips.

The Proposed Project will result in 2,675,752 annual VMT and an estimated annual fuel consumption of 228,879 gallons of fuel.

Energy Efficiency/Conservation Measures

The efficiency/energy conservation attributes of the Proposed Project would be complemented by increasingly stringent state and federal regulatory actions addressing vehicle fuel economies and vehicle emissions standards; and enhanced building/utilities energy efficiencies mandated under California building codes (e.g., Title24, California Green Building Standards Code). It should also be noted that the Project would not result in a substantial increase in demand or transmission service, resulting in the need for new or expanded sources of energy supply or new or expanded energy delivery systems or infrastructure because it would be served by the existing electric utility lines in the Project vicinity. Enhanced Vehicle Fuel Efficiencies Project annual fuel consumption estimates presented in Tables 4-15 of Energy Analysis (Appendix D) and represent likely potential maximums that would occur for the Project. Under subsequent future conditions, average fuel economies of vehicles accessing the Project site can be expected to improve as older, less fuel-efficient vehicles are removed from circulation, and in response to fuel economy and emissions standards imposed on newer vehicles entering the circulation system. Project site can be expected to improve as older, less fuel-efficient vehicles are removed from circulation, and in response to fuel economy and emissions standards imposed on newer vehicles entering the circulation system.

The Proposed Project operations would not result in the inefficient, wasteful or unnecessary consumption of energy. Further, the energy demands of the Project can be accommodated within the context of available resources and energy delivery systems. The Project would therefore not cause or result in the need for additional energy producing or transmission facilities. The Project would not engage in wasteful or inefficient uses of energy and aims to achieve energy conservations goals within the State of California.

b) **No Impact.**

Integrated Energy Policy Report

Senate Bill 1389 (Bowen, Chapter 568, Statutes of 2002) requires the CEC to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the state's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state's economy; and protect

public health and safety (Public Resources Code § 25301a]). The Energy Commission prepares these assessments and associated policy recommendations every two years, with updates in alternate years, as part of the Integrated Energy Policy Report.

The 2018 Integrated Energy Policy Report (2018 IEPR) was adopted February 20, 2019, and continues to work towards improving electricity, natural gas, and transportation fuel energy use in California. The 2018 IEPR focuses on a variety of topics such as including the environmental performance of the electricity generation system, landscape-scale planning, the response to the gas leak at the Aliso Canyon natural gas storage facility, transportation fuel supply reliability issues, updates on Southern California electricity reliability, methane leakage, climate adaptation activities for the energy sector, climate and sea level rise scenarios, and the California Energy Demand Forecast (19). Electricity would be provided to the Project by BEU and natural gas is provided by SoCalGas. BEU is a member of the Southern California Public Power Authority (SCPPA). SCPPA provides many energy efficiency programs that promote operational efficiency. SoCalGas' 2018 Corporate Sustainability Report builds on existing state programs and policies. As such, the Project is consistent with, and would not otherwise interfere with, nor obstruct implementation the goals presented in the 2018 IEPR.

State of California Energy Plan

The CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The Plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators and encouragement of urban designs that reduce VMT and accommodate pedestrian and bicycle access. The Project site is located along major transportation corridors with proximate access to the Interstate freeway system. The site selected for the Proposed Project because it facilitates access, acts to reduce VMT, takes advantage of existing infrastructure systems, and promotes land use compatibilities through the introduction of a truck terminal use on an industrial-designated site. The Proposed Project therefore supports urban design and planning processes identified under the State of California Energy Plan, is consistent with, and would not otherwise interfere with, nor obstruct implementation of the State of California Energy Plan.

California Code Title 24, Part 6, Energy Efficiency Standards

California Code of Regulations Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The 2019 version of Title 24 was adopted by the CEC and will become effective on January 1, 2020. The 2019 Title 24 standards go into effect on January 1, 2020 and are applicable to building permit applications submitted on or after that date. The 2019 Title 24 standards require solar photovoltaic systems for new homes, establish requirements for newly constructed healthcare facilities, encourage demand responsive

technologies for residential buildings, update indoor and outdoor lighting for nonresidential buildings. The CEC anticipates that single-family homes built with the 2019 standards will use approximately 7 percent less energy compared to the residential homes built under the 2016 standards. Additionally, after implementation of solar photovoltaic systems, homes built under the 2019 standards will about 53 percent less energy than homes built under the 2016 standards. Nonresidential buildings will use approximately 30 percent less energy due to lighting upgrades (20). The 2019 version of Title 24 (used in this analysis) was adopted by the CEC and will become effective on January 1, 2020.

The Proposed Project would comply with the California Green Building Standards Code (CALGreen; CCR, Title 24, Part 11) as implemented by the City of Banning.

The Proposed Project would provide for, and promote, energy efficiencies beyond those required under other applicable federal and State of California standards and regulations, and in so doing would meet or exceed all California Building Standards Code Title 24 standards. Moreover, energy consumed by the Project's operation is calculated to be comparable to, or less than, energy consumed by other truck terminal uses of similar scale and intensity that are constructed and operating in California. On this basis, the Proposed Project would not result in the inefficient, wasteful, or unnecessary consumption of energy. Further, the Proposed Project would not cause or result in the need for additional energy producing facilities or energy delivery systems.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. GEOLOGY AND SOILS. Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	( )	( )	(✓)	()
ii) Strong seismic ground shaking?	( )	( )	(✓)	( )
iii) Seismic-related ground failure, including liquefaction?	( )	( )	(✓)	( )
iv) Landslides?	( )	( )	( )	(✓)
b) Result in substantial soil erosion or the loss of topsoil?	( )	( )	(✓)	( )

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c)	Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	( )	( )	(✓)	( )
d)	Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?	( )	( )	( )	(✓)
e)	Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?	( )	( )	( )	(✓)
f)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	( )	( )	(✓)	( )

Impact Discussion:

a)

i) **Less Than Significant.** The Project Site is located in seismically active southern California with numerous fault systems in the region. However, as stated in the 2019 Geotechnical Investigation performed by Soils Southwest Inc (included as Appendix E), the Project Site is not situated within an Alquist Priolo Special Studies Zone and the potential for damage due to direct fault rupture is "low" considering the approximately of the nearest South San Andreas Fault is at about 3.34 miles away. Therefore, no significant adverse impacts are identified or are anticipated, and no mitigation measures are required.

ii) **Less Than Significant.** The Geotechnical Investigation states that the Project Site is located in an area of high regional seismicity and the San Andres fault is located less than 3.34 miles from the Project Site. Ground shaking originating from earthquakes along other active faults in the region is expected to induce lower horizontal accelerations due to smaller anticipated earthquakes and/or greater distances to other faults. Based upon Soils Southwest, Inc's site-specific evaluations, the Proposed Project is determined to be acceptable from a geotechnical engineering standpoint. By following the recommendations and guidelines set forth in the Geotechnical Investigation, the proposed structures will be safe from excessive settlements under the anticipated design loadings and conditions. The proposed development will be required to meet all requirements of the City Building Ordinance and will not impose any adverse effect on proposed or existing adjacent structures. Therefore, no significant adverse impacts are identified or are anticipated, and no mitigation measures are required.

iii) **Less Than Significant.** Liquefaction is a phenomenon in which cohesion-less, saturated, fine-grained sand and silt soils loose shear strength due to ground

shaking. As stated in the Geotechnical Investigation, the Project Site is expected to experience ground shaking and earthquake activity that is typical of the southern California area. It is during severe ground shaking that loose, granular soils below the groundwater table can liquefy. Soils Southwest, Inc's site-specific analysis indicates that the potential for liquefaction at the Project Site is considered to be remote based on a depth to groundwater in excess of 100 feet within the vicinity. Thus, the design of the proposed development in conformance with current Building Code provisions for earthquake design is expected to provide mitigation of ground shaking hazards that are typical to southern California. Furthermore, development of the Project Site will be required to be in accordance with the applicable requirements listed in the California Building Standards Code and the Buildings and construction requirements of the City of Banning. Therefore, no significant adverse impacts are identified or are anticipated, and no mitigation measures are required.

iv) **No Impact.** Soils Southwest, Inc states that landslides and other slope failures are common occurrences during or soon after earthquakes and the potential for seismically induced landslides to Project Site may be considered as remote. Therefore, no impacts are identified or are anticipated, and no mitigation measures are required.

b) **Less Than Significant.** During the development of the Project Site, which would include disturbance of approximately 39.1 acres, project-related dust may be generated due to the operation of machinery on-site or due to high winds. Additionally, erosion of soils could occur due to a storm event. Development of the Proposed Project would disturb more than one acre of soil; therefore, the Proposed Project is subject to the requirements of the State Water Resources Control Board General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit Order 2009-2009-DWQ). Construction activity subject to this permit includes clearing, grading, and disturbances to the ground such as stockpiling or excavation. The Construction General Permit requires the development and implementation of a Storm Water Pollution and Prevention Plan (SWPPP). The SWPPP must list Best Management Practices (BMPs) to avoid and minimize soil erosion. Adherence to BMPs is anticipated to ensure that the Proposed Project does not result in substantial soil erosion or the loss of topsoil. No significant adverse impacts are identified or are anticipated, and no mitigation measures are required.

c) **Less Than Significant.** The Geotechnical Investigation states that the Project Site is underlain by upper dry, loose, compressible and variable consistency alluviums off silty, fine to coarse sands, overlying silty gravely riverbed type coarse sands with numerous cobbles, rocks and boulders.

Liquefaction is caused by the build-up of excess hydrostatic pressure in saturated cohesion-less soils due to cyclic stress generated by ground shaking during an earthquake. The potential for liquefaction at the Project Site is considered to be remote due to the depth of groundwater in excess of 100 feet within the vicinity.

Seismically induced lateral spreading involves lateral movement of soils due to ground shaking. Later spreading is demonstrated near vertical cracks with predominantly horizontal movement of the soil mass involved. The topography of the subject site and

the adjacent properties has a near zero slope ratio and the potential for lateral spreading of the subject is considered remote.

Landslides and other slope failures are common occurrences during or soon after earthquakes and the potential for seismically induced landslides may be considered as remote.

Therefore, no significant adverse impacts are identified or anticipated, and no mitigation measures are required.

d) **No Impact.** Expansive soils are fine-grained silts and clays which are subject to swelling and contracting. The amount of this swelling and contracting is subject to the amount of fine-grained clay materials present in the soils and the amount moisture either introduced or extracted from the soils. Expansive soils are divided into five categories ranging from “very low” to “very high.” If the expansion index of the soils on-site is 21 or higher, the soils are considered to be expansive. However, the Geotechnical Engineering Investigation, describes the soils on-site as silty and gravely in nature with an expansion index of less than 20. Therefore, the potential expansion of the soil on-site is considered to be very low. No impacts are identified or are anticipated, and no mitigation measures are required.

e) **No Impact.** The City of Banning provides sewer service to the area within City limits and to unincorporated areas of Riverside County that surround the southeast portion of the City. The City of Banning is responsible for the collection, conveyance, treatment, and disposal of wastewater generated within its service area. The Proposed Project would connect to the existing sewer system located in Westward Avenue. No septic tanks or alternative wastewater disposal is proposed. No impacts are identified or are anticipated, and no mitigation measures are required.

f) **Less Than Significant.** The Cultural Resources Investigation states no paleontological resources were identified within the current project area. Paleontological resources would only be present if older alluvium extended into the project area. At this time, it is unlikely the limited grading and compaction activities will exceed the relative depth of the younger alluvium and, therefore, unlikely to yield evidence of paleontological specimens. Overall, the project area is considered clear of any potentially significant paleontological resources.

In addition, according to Figure 4.9.3 Paleontological Sensitivity Map of the County of Riverside Environmental Impact Report, the Project Site is located in an area that is considered “Low Potential” for paleontological sensitivity. Per the County’s General Plan Update EIR, Policy OS 19.7 states that whenever existing information indicates that a site proposed for development has low paleontological sensitivity no direct mitigation is required unless a fossil is encountered during site development. In the event fossil remains are encountered during site development, the following conditions shall be implemented by the Project Proponent:

a. All site earthmoving shall be ceased in the area of where the fossil remains are encountered. Earthmoving activities may be diverted to other areas of the site.

b. The owner of the property shall be immediately notified of the fossil discovery and shall in turn immediately notify the Riverside County Geologist of the discovery.

c. The applicant shall retain a qualified paleontologist approved by the County of Riverside.

d. The paleontologist shall determine the significance of the encountered fossil remains.

e. Paleontological monitoring of earthmoving activities will continue thereafter on an as-needed basis by the paleontologist during all earthmoving activities that may expose sensitive strata. Earthmoving activities in areas of the project area where previously undisturbed strata will be buried, but not otherwise disturbed, need not be monitored. The supervising paleontologist will have the authority to reduce monitoring once he/she determines the probability of encountering any additional fossils has dropped below an acceptable level.

f. If fossil remains are encountered by earthmoving activities when the paleontologist is not on site, these activities will be diverted around the fossil site and the paleontologist called to the site immediately to recover the remains.

g. Any recovered fossil remains will be prepared to the point of identification and identified to the lowest taxonomic level possible by knowledgeable paleontologists. The remains then will be curated (assigned and labeled with museum [or] repository fossil specimen numbers and corresponding fossil site numbers, as appropriate; placed in specimen trays or vials [along] with completed specimen data cards) and catalogued. Associated specimen data and corresponding geologic and geographic site data will be archived (specimen and site numbers, and corresponding data, entered into appropriate museum repository catalogs and computerized databases) at the museum [or] repository by a laboratory technician. The remains will then be accessioned into the museum [or] repository fossil collection, where they will be permanently stored, maintained and, along with associated specimen and site data, made available for future study by qualified scientific investigators. The County of Riverside must be consulted on the repository [or] museum to receive the fossil material prior to [its] being curated.

With adherence of the conditions above, potential impacts to a unique paleontological resource would be reduced to a less than significant level. The Proposed Project would not directly or indirectly destroy a unique geologic feature. No impacts are identified or are anticipated, and no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
VIII. GREENHOUSE GAS EMISSIONS. Would the project*:*				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	( )	( )	(✓)	( )
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	( )	( )	(✓)	( )

Impact Discussion:

a) **Less Than Significant.** As stated within the Greenhouse Gas Analysis prepared by Urban Crossroads in September 2019 (included as Appendix F), the Proposed Project is anticipated to generate greenhouse gas (GHG) emissions from the construction and operational phases.

The Air Quality Impact Analysis Report prepared by Urban Crossroads and discussed in Section III, above, concludes that construction related emissions are expected from construction activities such as rough grading, site preparation, fine grading, building construction, paving, and architectural coating. For construction phase Proposed Project emissions, GHGs are quantified and amortized over the life of the Proposed Project. To amortize the emissions over the life of a project, the SCAQMD recommends calculating the total GHG emissions for the construction activities, dividing it by a 30-year project life then adding that number to the annual operational phase GHG emissions. As such, construction emissions were amortized over a 30-year period and added to the annual operational phase GHG emissions. The amortized construction emissions are presented in metric tons per year (MT/yr) in Table 5.

Table 5
Amortized Annual Construction Emissions

Year	Emissions (MT/yr)			
	CO_2	CH_4	N_2O	Total CO_2E
2020	705.32	0.14	0.00	708.76
2021	601.44	0.07	0.00	603.16
SCAQMD Regional Threshold	1,306.76	0.21	0.00	1,311.93
Threshold Exceeded?	**43.56**	**0.01**	**0.00**	**43.73**

Source: Urban Crossroads, Greenhouse Gas Analysis (2019)

Operational activities associated with the Proposed Project will result in area source emissions, energy source emissions, mobile source emissions, emissions associated wither water supply, treatment, and distribution, and solid waste emissions. Area source emissions are comprised of landscape maintenance equipment, while energy source emissions are comprised of combustion emissions associated with natural gas and electricity while accounting for Title 24 Energy Efficiency Standards. Mobile source emissions were estimated using trip characteristics available from the Estes Banning Traffic Impact Analysis (2019) prepared by Urban Crossroads (available at the City offices for

review). The resulting annual GHG emissions produced by the Proposed Project are presented in Table 6.

Table 6
Project GHG Emissions

Emissions Source	Emissions (MT/yr)			
	CO_2	CH_4	N_2O	Total CO_2E
Annual construction-related emissions amortized over 30 years	43.56	0.01	0.00	43.73
Area Source	0.04	0.00	0.00	0.05
Energy source	91.42	0.00	0.00	91.67
Mobile Source (Passenger Car)	419.90	0.00	0.00	420.14
Mobile Source (Truck)	1,715.52	0.02	0.00	1,716.08
Waste	18.59	1.10	0.00	46.05
Water Usage	141.92	0.75	0.02	166.03
Total CO_2e (All Sources)	**2,483.74**			

Source: Urban Crossroads, Greenhouse Gas Analysis (2019)

As stated by Urban Crossroads, the City of Banning does not have an adopted threshold of significance for GHG emissions. For CEQA purposes, the City has discretion to select an appropriate significance criterion, based on substantial evidence. Therefore, the SCAQMD's adopted numerical threshold of 10,000 metric tons of CO_2 equivalent (MTCO2e) per year for industrial stationary source emissions was selected by the City because the Proposed Project is more analogous to an industrial use than any other land use such as commercial or residential in terms of its expected operating characteristics. Also, 10,000 MTCO2e has been used as the significance threshold by many local government lead agencies for logistics projects throughout the SCAG region since the SCAQMD adopted this threshold for its own use. Furthermore, to ensure that the threshold is conservative in its application, although the SCAQMD uses their adopted 10,000 MTCO2e threshold to determine the significance of stationary source emissions for industrial projects, the 10,000 MTCO2e threshold used in this CEQA document is applied to all sources of Project-related GHG emissions whether stationary source, mobile source, area source, or other.

As shown in Table 6, the Proposed Project will result in approximately 2,483.74 MTCO2e per year. As such, the Proposed Project would not exceed the SCAQMD's numeric threshold of 10,000 MTCO2e. Therefore, project-related emissions would not have a significant direct or indirect impact on GHG and climate change and no mitigation or further analysis is required.

b) **Less Than Significant.** Pursuant to 15604.4 of the CEQA Guidelines, a lead agency may rely on qualitative analysis or performance-based standards to determine the significance of impacts from GHG emissions. As such, the Proposed Project's consistency with AB 32 and SB 32 are discussed in relation to the Air Resources Board's (ARB) Scoping Plan which identifies strategies to reduce California's GHG emissions in support of AB32 which requires the State to reduce its GHG emissions to 1990 levels by 2020. Many of the strategies identified in the Scoping Plan are not applicable at the project level, such as long-term technological improvements to reduce emissions from vehicles. Some measures are applicable and supported by the Proposed Project, such as energy efficiency; while other measures are not directly applicable, the

Proposed Project would not conflict with their implementation. Reduction measures are grouped into 18 action categories, as follows:

- California Cap-and-Trade Program
- California Light-Duty Vehicle GHG Standards
- Energy Efficiency
- Renewables Portfolio Standards
- Low Carbon Fuel Standard
- Regional Transportation-Related GHG Targets
- Vehicle Efficiency Measures
- Goods Movement
- Million Solar Roofs Program
- Medium- and Heavy-Duty Vehicles
- Industrial Emissions
- High Speed Rail
- Green Building Strategy
- High Global Warming Potential Gases
- Recycling and Waste
- Sustainable Forests
- Water
- Agriculture

As concluded by Urban Crossroads, the Proposed Project will not conflict with any of the provisions of the Scoping Plan and in fact the Proposed Project supports seven of the action categories through energy efficiency, water conservation, recycling, and landscaping. As such, the Proposed Project would not conflict with any of the 2017 Scoping Plan elements as any regulations adopted would apply directly or indirectly to the Proposed Project. Furthermore, recent studies show that the State's existing and proposed regulatory framework will allow the State to reduce its GHG emissions level to 40 percent below 1990 levels by 2030. Therefore, the Proposed Project would not conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs. Less than significant impacts are anticipated, and no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
IX. HAZARDS AND WASTE MATERIALS. Would the project*:*				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	( )	( )	(✓)	( )
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	( )	( )	(✓)	( )

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	( )	( )	( )	(✓)
d)	Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	( )	( )	(✓)	( )
e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	( )	( )	(✓)	( )
f)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	( )	( )	( )	(✓)
g)	Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	( )	( )	(✓)	( )

Impact Discussion:

a,b) **Less Than Significant.** The development of the Project will include a truck maintenance facility and a diesel fueling station with two above ground storage tanks for diesel. The business owner and operator would be required to comply with all applicable federal, state, and local regulations including cooperation with the Certified Unified Program Agency (CUPA) with Hazardous Materials Division of the Riverside County Fire Department. Hazardous or toxic materials transported in association with construction and operation of the Proposed Project will include items such as oils, paints, and fuels.

However, the Project Site is adjacent to the southern border of the Banning Municipal Airport. Given the proximity of the Banning Municipal Airport to the Proposed Project a review by the Riverside County Airport Land Use Commission (ALUC) will be required. The Proposed Project is located within zones B2 and D of the ALUC's Land Use Compatibility Plan overlay for the Banning Municipal Airport. Airport Overlay Zone B2 is identified as "Adjacent to Runway" and zone D is identified as "Primary Traffic Patterns and Runway Buffer Zone". The Project Site lies within Compatibility Zones B2 and D, and as encouraged in the Compatibility Plan will adopt the more stringent requirements of B2 zoning as hereby identified:

4.2 Safety
4.2.3 Land Uses of Specific Concern: Certain type of land uses represent special safety concerns irrespective of the number of people associated with those uses. Land uses of particular concern include:

(c) Hazardous Material Storage: Construction of facilities for the manufacture or storage of fuel, explosives, and other hazardous materials within the airport environs is restricted as follows:

(2) Within Compatibility Zones B1 and B2, only the following is permitted:

- Fuel or hazardous substances stored in underground tanks.
- On-airport storage of aviation fuel and other aviation-related flammable materials.
- Aboveground storage of less than 6,000 gallons of nonaviation flammable materials (this limit coincides with a breakpoint used in the Uniform Fire Code to distinguish between different classes of tanks).

Additionally, all materials required during construction and operation will be kept in compliance with State and local regulations. With implementation of Best Management Practices (BMPs) and compliance with all applicable regulations, potential impacts from the use of hazardous materials during construction and operation is considered to be less than significant. The Proposed Project will be reviewed by the Riverside County Airport Land Use Commission, as well as the City Fire Marshal to ensure that no significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials occurs. No significant adverse impacts are identified or anticipated, and no mitigation measures are required.

c) **No Impact.** There are no existing or known proposed schools within 0.25-mile of the Project Site. The nearest school to the Project Site is Banning High School, located approximately 1.3 miles west of the Project Site. Therefore, no impacts are identified or are anticipated, and no mitigation measures are required.

d) **Less Than Significant.** Pursuant to California Government Code Section 65962.5, the California Department of Toxic Substances Control (DTSC) compiles the Cortese List and updates it annually. The Cortese List includes hazardous waste facilities subject to corrective action, land designated as hazardous waste property or border zone property, sites included in the abandoned site assessment program, and qualifying sites pursuant to Section 25356 of the Health and Safety Code. A copy of the most recent Cortese List was retrieved from the DTSC EnviroStor online database on July 18, 2019. The Project Site is not identified on the list. Hart & Hickman prepared a Phase I Environmental Site Assessment (ESA) on March 24, 2018 for the Project Site. In the Phase I ESA, the Banning Municipal Airport (200 S. Hathaway Street) was identified as an area of concern. The Airport is located adjacent to the north/northwest and is topographically upgradient of the Site. The facility was identified on various database listings in the Environmental Data Resources Inc. (EDR) database report. The airport was originally constructed in 1927 and expanded in the mid-1930s. The facility currently utilizes one 10,000-gallon and one 6,000- gallon Underground Storage Tank (USTs) containing aviation fuel. In addition to the USTs, Aboveground Storage Tanks (ASTs) containing aviation fuels have also been reported for the facility. The EDR database report did not indicate that a release had occurred. Due to the historic use of this property and the age of the USTs (circa 1988), there is a low to moderate potential for a release to have occurred. Based upon the distance to the UST and AST systems, the depth to groundwater in the area of the Project Site, and the lack of reported release incidents this does not present a Recognized Environmental Condition (REC) to the Proposed Project. The ESA concluded no evidence of environmental concerns were identified in

connection with the Project Site. Therefore, no significant adverse impacts are identified or anticipated, and no mitigation measures are required.

e) **Less Than Significant.** The Proposed Project is a new 134-door truck terminal with an office building, a truck maintenance building, and a fuel station. On-site uses at buildout will include a 2-story office building attached to the main building with 134 dock doors, an 800 square-foot line-haul building, a 10,520 square-foot shop building with three service bays, truck wash and one office parts bay, two above ground diesel fuel storage tanks, and a guard house. An estimated 113 employees are anticipated.

The Project Site lies within Compatibility Zones B2 and D, and as encouraged in the Compatibility Plan will adopt the more stringent requirements of B2 zoning as hereby identified:

ALUC Table 2A Basic Compatibility Criteria

Compatibility Zone B2 Development Conditions

- Locate structures maximum distance from runway
- Minimum Noise Level Reduction, the outside-to-inside sound level attenuation that the structure provides, of 25 dBA in residences and office buildings

3.1.4. Nonresidential Development: The compatibility of nonresidential development shall be assessed primarily with respect to its usage intensity (the number of people per acre) and the noise-sensitivity of the use. Additional criteria listed in Table 2A shall also apply.

Additionally, the Project Site is within the noise contour lines of 60 db and 65 dB in the Noise Compatibility Contours map in Chapter 3 of the Compatibility Plan.

4.1 Noise

4.1.3. Application of Noise Contours: The locations of CNEL contours are among the factors used to define compatibility zone boundaries and criteria. Because of the inherent variability of flight paths and other factors that influence noise emissions, the depicted contour boundaries are not absolute determinants of the compatibility or incompatibility of a given land use on a specific site or a portion thereof. Noise contours can only quantify noise impacts in a general manner. Except on large parcels or blocks of land (sites large enough to have 3 dB or more of variation in CNELs), they should not be used as site design criteria. (Note, though, that the airport noise contours set forth in this Plan are to be used as the basis for determining compliance with interior noise level criteria as listed in Policy 4.1.6.)

4.1.6. Interior Noise Levels: Land uses for which interior activities may be easily disrupted by noise shall be required to comply with the following interior noise level criteria. (a) The maximum, aircraft-related, interior noise level that shall be considered acceptable for land uses near airports is 45 dB CNEL in: Any habitable room of single- or multi-family residences; Hotels and motels; Hospitals and nursing homes; Churches, meeting halls, theaters, and mortuaries; Office buildings; and Schools, libraries, and museums.

The City of Banning General Plan states that the airport averages 10 to 15 takeoffs daily and primary comprises of private, single-engine fixed-wing aircraft. Noise levels associated with the airport range from 56 dBA to 68 dBA. The current noise contours are generally contained within the airport boundary and extend to lands designated for airport and related industrial uses which are considered less sensitive, such as the proposed use for the Project Site.

Additionally, the Compatibility Plan land use safety compatibility criteria to minimize the risks associated with an off-airport aircraft accident or emergency landing, as follows:

4.2 Safety

4.2.3. Land Uses of Special Concern: Certain types of land uses represent special safety concerns irrespective of the number of people associated with those uses. Land uses of particular concern include:
(b) Multi-story Buildings: In the event of an emergency resulting from an aircraft accident, low-rise buildings can be more readily evacuated than those with more floors. On this basis, the following limitations are established:

(2) Within *Compatibility Zones* B1 and B2, new buildings shall be limited to no more than two occupied floors above ground.

The Proposed Project is to be reviewed by the Riverside County Airport Land Use Commission, to ensure that the Proposed Project will not result in a safety hazard or be within excessive noise contours for people residing or working in the project area. No significant adverse impacts are identified or anticipated, and no mitigation measures are required.

f) **No Impact.** The Project Site does not contain any emergency facilities and does not serve as an emergency evacuation route. During construction and long-term operation, the contractor would be required to maintain adequate emergency access for emergency vehicles as required by the City. The Proposed Project would not interfere with an adopted emergency response or evacuation plan; therefore, no impacts are identified or are anticipated, and no mitigation measures are required.

g) **Less Than Significant**. According to the Banning General Plan: Fire Threat Zone Map, the Proposed Project is located within the City's High Fire Hazard Zone. The Proposed Project would be required to undergo environmental and building review to ensure adequate and appropriate site design and construction methods are employed in order to reduce wildland fire risks. Compliance with these measures would ensure that the Project is consistent with site planning recommendations and fire-resistant construction requirements. Additionally, the approval of site plans by the Fire Marshal, exposure of people or structures to a significant risk of loss, injury, or death involving wildland fires is considered a less than significant impact.

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
X.	**HYDROLOGY AND WATER QUALITY.** Would the project*:*	( )	(✓)	( )	( )
a)	Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?				
b)	Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	( )	( )	( )	(✓)
c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	( )	( )	(✓)	( )
(i)	result in substantial erosion or siltation on- or off-site;	( )	( )	(✓)	( )
(ii)	substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;	( )	( )	(✓)	( )
(iii)	create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or	( )	( )	(✓)	( )
(iv)	impede or redirect flood flows?	( )	( )	(✓)	( )
d)	In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?	( )	( )	(✓)	( )
e)	Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	( )	( )	(✓)	( )

Impact Discussion:

a) **Less Than Significant.** The Proposed Project includes the construction of a truck terminal on a 39.07-acre site. The Proposed Project would disturb more than one acre and therefore would be subject to the National Pollutant Discharge Elimination System (NPDES) permit requirements. The State of California is authorized to administer various aspects of the NPDES. Construction activities covered under the State's General Construction permit include removal of vegetation, grading, excavating, or any other activity that causes the disturbance of one-acre or more. The General Construction permit requires recipients to reduce or eliminate non-storm water discharges into storm water systems, and to develop and implement a SWPPP. The purpose of a SWPPP is

to: 1) identify pollutant sources that may affect the quality of discharges of storm water associated with construction activities; and 2) identify, construct and implement storm water pollution control measures to reduce pollutants in storm water discharges from the construction site during and after construction. The Santa Ana RWQCB has issued an area-wide NPDES Storm Water Permit for the County of Riverside, the Riverside County Flood Control and Water Conservation District, and the incorporated cities of Riverside County. The County then requires implementation of measures for a project to comply with the area-wide permit requirements. A SWPPP is based on the principles of Best Management Practices (BMPs) to control and abate pollutants. The SWPPP must include (BMPs) to prevent project-related pollutants from impacting surface waters. These would include, but are not limited to, street sweeping of paved roads around the site during construction, and the use of hay bales or sand bags to control erosion during the rainy season. BMPs may also include or require:

- The Project Proponent shall avoid applying materials during periods of rainfall and protect freshly applied materials from runoff until dry.
- All waste to be disposed of in accordance with local, state and federal regulations. The Project Proponent shall contract with a local waste hauler or ensure that waste containers are emptied weekly. Waste containers cannot be washed out on-site.
- All equipment and vehicles to be serviced off-site.

In addition to complying with NPDES requirements, the County also requires the preparation of a Water Quality Management Plan (WQMP). In accordance with the County's requirements, Joseph E. Bonadiman & Associates, Inc. prepared a WQMP for the Proposed Project in June 2019. The WQMP has identified various BMPs which shall be implemented by the Proposed Project. Mandatory compliance with the Proposed Project's SWPPP and WQMP, in addition to compliance with NPDES Permit requirements, would ensure that all potential pollutants of concern are minimized or otherwise appropriately treated prior to being discharged from the Project Site. Therefore, implementation of the Proposed Project would not violate any water quality standards or waste discharge requirements. No significant adverse impacts are identified or are anticipated, and no mitigation measures are required.

b) **No Impact.** The City is within the service area of San Gorgonio Pass Water Agency. According to the City of Banning's 2015 Water Management Plan groundwater is City's primary source of water. The groundwater pumped from the Beaumont Storage Unit (Beaumont Basin) Banning Storage Unit, the Banning Bench Storage Unit, the Cabazon Storage Unit, and the Banning Canyon Storage Unit of the San Gorgonio Pass Subbasin portion of the Coachella Valley Groundwater Basin. Based on the Table 5-4: Projected Multiple-Dry Years Supplies and Demands of San Gorgonio Pass Water Agency 2015 Urban Water Management Plan, year 2040 has a projected water supply of approximately 11,600 acre-feet per year (AFY) of groundwater and 2040 City's water demand would be approximately 11,500 AFY. The San Gorgonio Pass Water Agency service area is anticipated to a have 100 AFY surplus for the year 2040. Using Table 3.5 Water Demand Factors of the 2018 Integrated Water Master Plan, the Proposed Project would create an approximate 74.5 AFY demand. The Proposed Project water demand would account for approximately 0.64 percent of the projected 2040 total water demand. Therefore, the groundwater basin would not be substantially depleted by serving the

Proposed Project. There are no groundwater recharge facilities in the vicinity of the Project Site. No significant adverse impacts are identified or are anticipated, and no mitigation measures are required.

c)

i, ii) **Less Than Significant.** A Hydrology & Hydraulics Report was prepared by Joseph E. Bonadiman & Associates, Inc., June 2019 and is available for review at the City offices. The report was prepared to: 1) Identify existing conditions on-site drainage areas and calculation of peak flow rates and runoff volumes; 2) identify developed conditions on-site drainage areas and calculation of peak flow rates and runoff volumes for these areas; and 3) size on-site detention/retention facilities to provide reduction in peak flows and runoff volumes pursuant to City of Banning and Riverside County requirements. The existing on-site project area is generally flat, sloping to the southeast. The site is generally covered with native grass and weeds. The site generally sheet flows to the south east discharging along Westward Avenue. Soil types used in this report were obtained from the Natural Resources Conservation Service (NRCS) via Custom Soil Resource Report for Western Riverside Area, California. Impervious percentages, pervious cover types, and SCS Curve Numbers were obtained from the Riverside Hydrology Manual.

Pursuant to City of Banning Ordinance No. 1415, Section 6, retention of the entire calculated developed conditions 100-year, 3-hour volume of 6.19 af is required. County of Riverside policy is reduction of peak flows for all storm events up to and including the 10-year, 24-hour event. An aboveground infiltration basin has been designed for the Proposed Project. In order to reduce the developed conditions peak 10-year, 24-hour flow of 18.69 cfs to match the existing conditions peak 10-year, 24-hour flow of 10.41cfs, the aboveground infiltration basin has been sized with the total capacity of 8.36 af. This will allow for capture of the 6.19 af while allowing additional volume for storm buffering.

The Proposed Project will provide a retention system sized for retention of the calculated developed conditions 100-year, 3-hour volume per City of Banning requirements and will provide adequate volume to completely retain or mitigate to existing conditions most flows up to and including the 100-year, 3-hour event. The proposed earthen channel will route offsite flows to 6’ wide parkway culvert located along Westward Avenue, near the southwest corner of the site. With the above mitigation measure the development of the Proposed Project will not have a negative impact on downstream properties or facilities. WQMP mitigation for the site is proposed via an aboveground retention basin is proposed as a combination WQMP retention and detention basin to mitigate both WQMP and storm water impacts. Refer to project specific WQMP for additional requirements.

iii) **Less Than Significant**. With adherence to the WQMP, the Proposed Project is not anticipated to create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. Therefore, no significant adverse impacts are identified or are anticipated, and no mitigation measures are required.

iv) **Less Than Significant**. The Hydrology & Hydraulics Report calculates the required design capture volume for stormwater at the Project Site is approximately 6.19 af. The infiltration drainage basins have been designed to capture 100 percent of the runoff and

has been sized with the total capacity of 8.36 af. This will allow for capture of the 6.19 af while allowing additional volume for storm buffering. Additionally, there are no streams or rivers on, or in the vicinity of, the Project Site. With adherence to the City-approved WQMP, the Proposed Project is not anticipated to substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in substantial erosion, siltation, or flooding on- or off-site. No significant adverse impacts are identified or anticipated, and no mitigation measures are required.

d) **Less Than Significant**. According to the Preliminary Hydrology Study and Drainage Analysis, the FEMA Flood Insurance Rate Map (FIRM) Panel No. 06065C0836G (effective date: August 28, 2008), the project site and study watershed lie within an unshaded Zone "X" floodplain. Unshaded Zone "X" is defined as "areas determined to be outside the annual 2% chance floodplain). Tsunamis are large waves generated in open bodies of water by fault displacement of major ground movement. Due to the inland location of the Project Site, tsunamis are not considered to be a risk. A seiche is a surface wave created when an inland body of water is shaken, usually by earthquake activity. The Riverside County General Plan: Safety Element shows that seiches do not pose inundation hazards to the Proposed Project site. Therefore, the risk of release of pollutants of by flood, seiche, or tsunami is considered low. No significant adverse impacts are identified or are anticipated, and no mitigation measures are required.

e) **Less Than Significant**. The Proposed Project will adhere to WQMP BMPs, regional and local water quality control and/or sustainable groundwater management plans. Therefore, no significant impacts are identified or anticipated, and no mitigation measures are required.

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XI.	**LAND USE AND PLANNING.** Would the project:				
a)	Physically divide an established community?	( )	( )	(✓)	()
b)	Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	( )	( )	(✓)	( )

Impact Discussion:

a) **Less Than Significant.** The Project Site is located within the southeastern boundaries of the City of Banning to the south and east of the Banning Municipal Airport. As shown in the City of Banning General Plan with Zoning Overlay, the Project Site is designated as Industrial and is surrounded by similar uses. Surrounding land uses include public facilities to the north and south and industrial uses to the east and west. The intended use of the Project Site is consistent with the allowable uses designated in the City of Banning General Plan. The majority of the Project vicinity does not include residential uses, and the Proposed Project would not

divide an established community. Therefore, no impact is identified or anticipated, and no mitigation measures are required.

b) **Less Than Significant.** The Proposed Project includes the development of a 134-door terminal, a guard house, a line-haul building, a truck maintenance building, a fuel station, and a two-story office building. The Proposed Project is on a 39.1-acre site south of the Banning Municipal Airport. Given the Project Site's proximity to the Banning Municipal Airport, review by the Riverside County Airport Land Use Commission (ALUC) will be required. The Project Site is located within the Banning Municipal Airport overlay zone B2, "Adjacent to Runway" and zone D, "Primary Traffic Patterns and Runway Buffer Zone". According to the Riverside County Airport Land Use Compatibility Plan (Compatibility Plan), which is used by the ALUC when reviewing proposed land use development for compatibility with airport activity, parcels lying within two or more compatibility zones are encouraged to follow the more stringent requirements throughout the whole parcel. The Proposed Project is not anticipated to conflict with the requirements set forth in the Compatibility Plan and final review by the ALUC will ensure all requirements are met. Therefore, no significant adverse impact is identified or anticipated, and no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XII. MINERAL RESOURCES. Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?	( )	( )	(✓)	( )
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	( )	( )	( )	(✓)

Impact Discussion:

a) **Less Than Significant.** According the Chapter 5: Multipurpose Open Space Element of Riverside County 2015 General Plan, the Proposed Project Site is located within Mineral Resource Zone 2(MRZ-2), which is defined as areas where available geologic information indicates that there are significant measured or indicated mineral deposits present. The City and State do not identify the Project Site as containing mineral resources of value. The Proposed Project is not anticipated to result in the loss of availability of a known mineral resource that would be of value to the region and residents of the state. Therefore, potential impacts to recognized mineral resources are considered less than significant.

b) **No Impact.** The Riverside County General Plan Mineral Resource Zones Map shows that the Project Site is located within the MRZ-2 zone. The MRZ-2 zone is defined as an area that contains significant mineral deposits that are present or that there is a high likelihood for them to exist. The General Plan states that the eastern portion of the City is

zoned as MRZ-2 which lies along the alluvial fan of the San Gorgonio River southeast of the Banning Bench, north and south of the I-10 Freeway. The Proposed Project is not located within or adjacent to active mines or any other locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. Additionally, the General Plan shows that the Proposed Project is not designated Industrial-Mineral Resources land use. Therefore, no impact to a locally important mineral resource recovery site is anticipated.

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. NOISE. Would the project result in:					
a)	Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	( )	()	(✓)	( )
b)	Generation of excessive groundborne vibration or groundborne noise levels?	( )	( )	(✓)	( )
c)	For a project located within-the vicinity of a private airstrip or-an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	( )	( )	(✓)	( )

Impact Discussion:

a) **Less Than Significant Impact with Mitigation.** A Noise Impact Analysis was prepared by Urban Crossroads in September 2019 (included as Appendix G) to provide an assessment of potential noise impacts resulting from a proposed truck terminal. The report is summarized herein. Noise can be measured in the form of a decibel (dB), which is a unit for describing the amplitude of sound. The predominant rating scales for noise in the State of California are the Equivalent-Continuous Sound Level (L_{eq}), and the Community Noise Equivalent Level (CNEL), which are both based on the A-weighted decibel (dBA). The L_{eq} is defined as the total sound energy of time-varying noise over a sample period. The CNEL is defined as time-varying noise over a 24-hour period with a weighted factor of 5 dBA applied to the hourly L_{eq} for noise occurring from 7:00 p.m. to 10:00 p.m. (defined as relaxation hours) and 10 dBA applied to events occurring between (10:00 p.m. and 7:00 a.m. defined as sleeping hours). The State of California's Office of Noise Control has established standards and guidelines for acceptable community noise levels based on the CNEL and L_{dn} rating scales. The purpose of these standards and guidelines is to provide a framework for setting local standards for human exposure to noise. A Noise Impact Analysis was prepared by Urban Crossroads in

September 2019, to determine the potential noise impacts and the necessary noise mitigation measures, if any, for the Proposed Project.

Off-Site

Traffic generated by the operation of the Proposed Project would influence noise levels in surrounding off-site areas. To quantify the traffic noise increases on the surrounding off-site areas, the traffic noise levels on seven roadway segments surrounding the Project Site were calculated based on the change in the average daily traffic (ADT) volumes. The study road segments are as follows:

- Hargrave Street-north of I-10 FWY westbound Ramps
- Hargrave Street-south of I-10 FWY eastbound Ramps
- Hargrave Street-north of Lincoln Street
- Hargrave Street-south of Lincoln Street
- Hathaway Street-north of Barbour Street
- Lincoln Street-east of Hargrave Street
- Barbour Street-east of Hargrave Street

A significant off-site traffic noise level impact occurs when the noise levels at existing and future noise-sensitive land uses (e.g. residential, etc.):

- Are less than 60 dBA CNEL and the Project creates a *readily perceptible*5 dBA CNEL or greater Project-related noise level increase; or
- Range from 60 to 65 dBA CNEL and the Project creates a *barely perceptible*3 dBA CNEL or greater Project-related noise level increase; or
- Already exceed 65 dBA CNEL, and the Project creates a community noise level increase of greater than 1.5 dBA CNEL

Existing conditions for the Project Site without the Proposed Project exterior noise levels are expected to range from 50.6 to 65.0 dBA CNEL. The existing conditions for the Project Site with the Proposed Project exterior noise levels are expected to range from 53.6 to 65.0 dBA CNEL. The Proposed Project is anticipated to generate a noise level increase of up to 3.0 dBA CNEL. Opening year with Project conditions plus cumulative ambient growth would range from 54.1 to 65.4 dBA CNEL. The Proposed Project off-site traffic noise level increase would approach 2.6 dBA CNEL. Impacts are considered less than significant.

Construction

Noise generated by the Project construction equipment will include a combination of trucks, power tools, concrete mixers, and portable generators that when combined can reach high levels. Noise levels generated by heavy construction equipment can range from approximately 68 dBA to more than 80 dBA when measured at 50 feet. However, these noise levels diminish with distance from the construction site at a rate of 6 dBA per doubling of distance. For example, a noise level of 80 dBA measured at 50 feet from the noise source to the receiver would be reduced to 74 dBA at 100 feet from the source to the receiver and would be further reduced to 68 dBA at 200 feet from the source to the receiver. Using the reference construction equipment noise levels, calculations of the Project construction noise level impacts at the nearby sensitive receiver locations

(identified in the Noise Analysis) were completed. The construction noise analysis shows that the highest construction noise levels will occur when construction activities take place at the closest point from primary Project construction activity to each of the nearby receiver locations. The results from the analysis show that the highest construction noise levels with the estimated interior noise reduction of the existing residential homes of 25 dBA L_{eq} would range from 24.4 to 48.0 dBA L_{eq} and would satisfy the 55 dBA L_{eq} City of Banning interior construction noise levels.

Operational

Using reference noise levels to represent the potential noise sources within the Project Site, the analysis estimates the Project-related operational noise levels at the nearby noise-sensitive receptor locations. The Project-related operational noise sources are expected to include idling trucks, delivery truck activities, backup alarms, as well as loading and unloading of dry goods, roof-top air conditioning units, and parking lot vehicle movements. As indicated in the Noise Analysis, the Proposed Project will contribute an operational noise level increase during the daytime hours of up to 4.6 dBA L_{50} and during the nighttime hours of up to 2.9 dBA L_{50}. The Project-related operational noise level contributions of up to 4.6 dBA L_{50} on the existing ambient noise environment are shown to satisfy the significance criteria, and the increases at the sensitive receiver locations will be less than significant. On this basis, Project operational stationary-source noise would not result in a substantial temporary/periodic, or permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project, and impacts in these regards will be less than significant. The analysis concluded that the Project-related operational noise levels would satisfy the City of Banning exterior noise level standards. Therefore, no significant adverse impacts are identified or anticipated and no mitigation measures are required.

b) **Less Than Significant.** At distances ranging from 107 to 1,616 feet from project construction activity, construction vibration velocity levels are shown to range from 0.000 to 0.010 in/sec Peak Particle Velocity (PPV) at the nearby sensitive receptor locations, which would remain below the Caltrans 0.3 in/sec PPV building damage threshold for older residential structures. Vibration levels at the site of the closest sensitive receptor are unlikely to be sustained during the entire construction period but would occur only during the times that heavy construction equipment is operating simultaneously adjacent to the Project Site perimeter. Construction at the Project Site would be restricted to daytime hours consistent with City requirements thereby eliminating potential vibration impacts during the sensitive nighttime hours. Therefore, no significant adverse impacts are identified or anticipated and no mitigation measures are required.

c) **Less Than Significant**. The Project Site is located on the northwest corner of Westward Avenue and Scott Street in the City of Banning. The nearest airport to the Project Site is the Banning Municipal Airport which borders the Project Site to the north and west. The Riverside County Airport Land Use Compatibility Plan Policy Document (RC ALUCP) includes the policies for determining the land use compatibility of the Proposed Project since it is located within two miles of an airport runway. Policy 4.1.5 “Noise Exposure for Other Land Uses” of the RC ALUCP requires that non-noise-sensitive land uses, such as industrial land use of the Project Site, must demonstrate compatibility with the acceptable noise levels on Table 2B of the RC ALUCP. Table 2B indicates that clearly compatible industrial land uses experience noise levels below 65 dBA CNEL. For clearly compatible noise levels, the activities associated with the specified land use can be

carried out with essentially no interference from the noise exposure produced from the Proposed Project.

Based on Exhibit BN-5 of the RC ALUCP, the Project Site is mostly located outside of the 65 dBA CNEL noise level contour boundary of the Banning Municipal Airport. Therefore, the Project Site is considered to be an acceptable land use based on the Table 2B noise level compatibility criteria, with noise levels due to aircraft activity of less than 65 dBA CNEL, and no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIV. POPULATION AND HOUSING. Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	( )	( )	(✓)	()
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	( )	( )	( )	(✓)

Impact Discussion:

a) **Less Than Significant.** The Proposed Project involves construction of a truck terminal and does not include new homes. Construction activities at the Project Site would be short-term and would not attract new employees to the area since there is an existing pool of construction labor in the region. The Proposed Project is the development of a 39.1-acre site for a truck terminal that would provide 134 dock doors, an 800 square-foot line-haul building, a 10,520 square-foot shop building with three service bays, truck wash and one office parts bay, two above ground diesel fuel storage tanks, a guard house and surface parking for automobiles, tractor, trailers. The facility, at build-out would require an estimated 113 employees. The Proposed Project is consistent with the City of Banning's General Plan and Development Code and the associated employment is anticipated in the City of Banning's General Plan. Therefore, the Project is anticipated to have a less than significant impact related to direct or indirect creation of population growth.

b) **No Impact.** The Proposed Project Site is currently vacant and there is no existing housing at the Project Site. Development of a truck terminal will not displace substantial numbers of people, necessitating the construction of replacement housing elsewhere. The Proposed truck terminal will not displace any existing housing; therefore, no impacts related to housing displacement are anticipated.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. PUBLIC SERVICES.				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	( )	( )	(✓)	( )
Police protection?	( )	( )	( )	(✓)
Schools?	( )	( )	( )	(✓)
Parks?	( )	( )	( )	(✓)
Other public facilities?	( )	( )	( )	(✓)

Impact Discussion:

Fire Protection

Less Than Significant. The City provides fire protection services through Riverside County Fire Department, which in turn contracts with the California Department of Forestry. The service contract for fire protection includes a Regional Program with other surrounding cities such as Beaumont, Calimesa, and Cabazon, wherein each city has access to and benefits from the services provided by fire stations in other cities. The Final EIR: Section 3 states, that the Regional Fire Protection Program allows Riverside County fire stations to actively support one another regardless of geographic or jurisdictional boundaries. When an emergency is located outside the station's official "jurisdiction." This is the most effective and efficient method of emergency response and allows for shared use of specialized equipment and personnel between neighboring communities.

The nearest fire facility is Fire Station No. 89, located at 172 North Murray, is approximately 2.25 miles to the northwest of the Project Site. The City plans to reach a ratio of 0.70 fire personnel for every 1,000 residents, which would be approximately 58 firefighters to 82,033 residents at the anticipated General Plan buildout. The Project proposes to develop a truck terminal, which is consistent with the City's existing land use designation of the Project Site. Additionally, the Proposed Project will adhere to the Banning Municipal Code 8.16.010. The anticipated uses for the Proposed Project will include storage of hazardous materials associated with diesel trucks. The Proposed Project will be required to comply with state and federal regulations pertaining to hazardous materials. The Proposed Project does not include residential development and will not cause a significant increase in population and therefore will not increase the need for additional fire facilities or impacts to acceptable service ratios, response times, or performance objectives.

In addition, the applicant would be required to pay appropriate development impact fees, property taxes, and utility user tax. As such, the Proposed Project would receive adequate fire protection services and would not result in the need for new or physically altered fire protection facilities. Therefore, no significant adverse impacts are identified or are anticipated, and no mitigation measures are required.

Police Protection

No Impact. The City provides its own police protection services within the City limits. The Banning Police Department plans to reach a ratio of 1.4 sworn officers for every 1,000 residents, which would be approximately 115 officers to 82,033 residents at the anticipated General Plan buildout. The Banning Police Department has a full range of law enforcement and community programs. The City's police station is located at 125 East Ramsey Street, approximately 2.25-miles northwest of the Project Site.

The Project Site will be fully fenced on all four sides. An entry gate, including a guard house, will be installed at easterly terminus of Barbour Street. The Proposed Project is anticipated to require minimal police protection services and would not result in the need for new or physically altered police protection facilities. The Proposed Project does not include residential development and is not anticipated to cause a significant increase in population and will not need for additional police services. The applicant would be required to pay appropriate development impact fees. Therefore, no significant adverse impacts are identified or are anticipated, and no mitigation measures are required.

Schools

No Impact. The Proposed Project would not create a direct demand for public school services, as the subject property would be developed with an industrial warehouse/distribution facility. It is expected that the employment opportunity generated by the future tenant of the facility would be met by local labor. As such, the development would not generate any new school-aged children requiring public education. The Banning Union School District (BUSD) will determine school impact fees. The applicant would be required to pay school impact fees. Therefore, no significant adverse impacts are identified or are anticipated, and no mitigation measures are required.

Parks

No Impact. The Project does not propose any type of residential use or other land use that may generate a population that would increase the use of existing neighborhood and regional parks or other recreational facilities in the vicinity. Accordingly, implementation of the Proposed Project would not result in an increased use or substantial physical deterioration of an existing neighborhood or regional park. The closest City park to the Project Site is Lions Park which is approximately five miles away. The Proposed Project does not include residential development and is not anticipated to cause a significant increase in population and will not need to provide additional park service is anticipated. The Proposed Project will pay parkland associated development impact fees. With payment of impact fees, no impact related to park services or facilities are anticipated.

Other Public Facilities

No Impact. The Proposed Project is not expected to result in a demand for other public facilities/services, such as libraries, community recreation centers, and/or animal shelter. Implementation of the Proposed Project would not adversely affect other public facilities or require the construction of new or modified facilities. The applicant will also pay associated general City facility development impact fees. Therefore, since no additional public facilities are anticipated, there will be no impact to public facilities.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. RECREATION.				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	( )	( )	( )	(✓)
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	( )	( )	( )	(✓)

Impact Discussion:

a) **No Impact.** The Proposed Project involves the development of a truck terminal and will not cause a substantial increase in the local population. No residential use or other land use that may generate a population that would increase the use of existing neighborhood and regional parks or other recreational facilities in the vicinity is proposed. Accordingly, implementation of the Proposed Project would not result in the increased use or substantial physical deterioration of an existing neighborhood or regional park. The closest City park to the Project Site is Lions Park, which is approximately 4.5-miles from the Site and the closest regional park is Bogart Park, Cherry Valley that is approximately 13 miles northwest of the Project Site. Therefore, no increase in the use of existing neighborhood and regional parks or other recreational facilities are anticipated, no impacts are identified or anticipated, and no mitigation measures are required.

b) **No Impact.** The Proposed Project does not include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment. Therefore, no impacts are identified or anticipated, and no mitigation measures are required.

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. TRANSPORTATION. Would the project:					
a)	Conflict with a program plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	( )	(✓)	( )	( )
b)	Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	( )	( )	(✓)	( )
c)	Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	( )	( )	( )	(✓)
d)	Result in inadequate emergency access?	( )	( )	( )	(✓)

Impact Discussion:

a) **Less Than Significant Impact with Mitigation Incorporated.** A Traffic Impact Analysis (TIA) was prepared by Urban Crossroads in August 2019 (included as Appendix H) to provide an assessment of potential traffic impacts resulting from a proposed truck terminal; the TIA is summarized herein. The purpose of the TIA is to evaluate the potential circulation system deficiencies that may result from the development of the Proposed Project and to recommend improvement to achieve acceptable circulation system operational conditions. A Traffic Impact Analysis Scoping Agreement was approved by the City's Public Works Department on July 18, 2019.

The Proposed Project consists of a total of 97,400 square-feet (SF) of truck terminal use to include a 134-door cross-dock, a two-story office building, a line-haul building, a truck maintenance building, and a fuel station for project trucks. The Proposed Project is anticipated to be built and occupied in 2021. The following driveway is assumed to provide access to the Project Site:

- Driveway 1 on Barbour Street – Full access (Passenger Cars and Trucks)

Trip generation for the Proposed Project are based on the anticipated number of employees per day and operational data provided by the Project Proponent. Passenger car equivalent (PCE) factors were applied to the trip generation rates for heavy trucks (large 2-axles, 3-axles, 4+-axles). The Proposed Project is anticipated to generate a net total of approximately 482 PCE daily trips, 92 PCE AM peak hour trips, and 112 PCE PM peak hour trips. For the purposes of the TIA, potential impacts to traffic and circulation were assessed for each of the following conditions:

- Existing (2019) Conditions
- Existing Plus Project Conditions (E+P)
- Opening Year Cumulative (2021) Without Project
- Opening Year Cumulative (2021) With Project

Information for Existing (2019) Conditions is disclosed to represent the baseline traffic conditions as they existed at the time the TIA was prepared. The Existing Plus Project Conditions (E+P) analysis determines circulation system deficiencies that will occur on the existing roadway system in the scenario of the Proposed Project being placed upon Existing conditions. The E+P analysis intends to identify the project-specific traffic impacts associated solely with the development of the Proposed Project based on a comparison of the E+P traffic conditions to Existing (2019) Conditions. The Opening Year Cumulative conditions analysis determines the potential near-term cumulative circulation system deficiencies. The Opening Year Cumulative (2021) traffic conditions analyses determine the potential near-term cumulative circulation system deficiencies. To account for background traffic growth, traffic associated with other known cumulative development projects in conjunction with an ambient growth factor from Existing Conditions of 4.04% are included for Opening Year Cumulative (2021) traffic conditions. A list of cumulative projects that could potentially be constructed and contribute traffic to the study are was obtained from the City of Banning (lead agency). If the planned and funded improvements can provide the target LOS, then the Proposed Project's payment into established fee programs will be considered as cumulative mitigation. Other improvements needed beyond the "funded" improvements (such as localized improvements to non-DIF facilities) are identified as such.

Consistent with the TIA Scoping Agreement, the following study area intersections were analyzed by the TIA:

Table 7
Intersection Analysis Locations

ID	Intersection Location	Jurisdiction
#1	Hargrave St. & I-10 WB Ramps	City of Banning, Caltrans
#2	Hargrave St. & I-10 EB Ramps	City of Banning, Caltrans
#3	Hargrave St. & John St.	City of Banning
#4	Hargrave St. & Lincoln St.	City of Banning
#5	Hargrave St. & Barbour St.	City of Banning
#6	Hathaway St. & Barbour St.	City of Banning
#7	Driveway 1 & Barbour St.	City of Banning

The following study area intersections are anticipated to operate at a deficient LOS during one or both peak hours for projected future traffic conditions. The Proposed Project is anticipated to contribute to these deficiencies by adding to already deficient intersections, resulting in an increase to peak hour delays. Cumulative impacts are deficiencies that would not be directly caused by the Proposed Project. The Proposed Project would, however, contribute traffic to these deficient facilities along with other cumulative development projects, resulting in a cumulatively considerable impact.

- Hargrave St. & I-10 EB Ramps (#2) – LOS F AM peak hour
- Hargrave St. & I-10 EB Ramps (#2) – LOS E PM peak hour

The Project Proponent would be required to make fair share contribution for intersection improvements based on the proportion of the traffic that would be contributed to the study area relative to the total new traffic volume for General Plan build-out conditions.

There are no additional study area intersections anticipated to operate at a deficient LOS during the peak hours for Opening Year Cumulative (2021) Conditions.

Based on the analysis of Project operations, off-site improvements would be required to minimize potentially significant traffic impacts associated with development of the Proposed Project and projected ambient growth and cumulative conditions. Additionally, the Project Proponent shall contribute on a fair share basis for the construction of off-site improvements as identified in Table 7-1: Project Fair Share Calculations for Intersections of the TIA. As such, the following additional mitigation measures are required to ensure potential significant traffic impacts are reduced to a less than significant level:

Mitigation Measure TRANS-1:

Construct the intersection with an all-way stop control (consistent with E+P conditions) at Hargrave Street & I-10 Eastbound Ramps.

Mitigation Measure TRANS-2:

Construct the intersection with an all-way stop control (consistent with E+P conditions) at Hargrave Street & I-10 Westbound Ramps.

Mitigation Measure TRANS-3:

Barbour Street is an east-west oriented roadway bisected by the Project. The Project is to construct Barbour Street at its ultimate full-section width as a 2-lane Collector Highway (66-foot right-of-way) from the western boundary of the Project to the eastern boundary of the Project. Improvements along Barbour Street would be those required by final conditions of approval for the Proposed Project and applicable City of Banning standards.

On-site traffic signing and striping should be implemented in conjunction with detailed construction plans for the Project site.

Sight distance at each project access point should be reviewed with respect to standard Caltrans and City of Banning sight distance standards at the time of preparation of final grading, landscape and street improvement plans.

b) **Less Than Significant.** The TIA did not identify a conflict with the Transportation Uniform Mitigation Fee (TUMF) Program. The Project Site is located on Barbour Street, which is considered a Collector Highway. Furthermore, the Proposed Project is an acceptable use within the Industrial land use land use category. Therefore, no significant adverse impacts are identified or are anticipated, and no mitigation measures are required.

c) **No Impact.** The Proposed Project consists of a total of 97,400 square-feet (SF) of truck terminal use to include a 134-door cross-dock (this includes future expansion), a two-story office building, a line-haul building, a truck maintenance building, and a fuel station for project trucks. The Proposed Project is anticipated to be built and occupied in 2021. The following driveways are required to provide access to the Project Site:

- Barbour Street – Full access (Passenger Cars and Trucks)

Due to the typical wide turning radius of large trucks, the TIA concludes that the following are necessary in order to accommodate the ingress and egress of heavy trucks:

> Barbour Street is an east-west oriented roadway bisected by the Project Site. The Project is to construct Barbour Street at its ultimate full-section width as a 2-lane Collector Highway (66-foot right-of-way) from the western boundary of the Project to the eastern boundary of the Project. Improvements along Barbour Street would be those required by final conditions of approval for the Proposed Project and applicable City of Banning standards.
>
> On-site traffic signing and striping should be implemented in conjunction with detailed construction plans for the Project site. Sight distance at each project access point should be reviewed with respect to standard Caltrans and City of Banning sight distance standards at the time of preparation of final grading, landscape and street improvement plans.

With implementation of design recommendations described above, the Proposed Project would not substantially increase hazards due to a design feature of incompatible uses. Therefore, no significant adverse impacts are identified or are anticipated, and no mitigation measures are required.

d) **No Impact**. During construction and long-term operation, the contractor and tenant would be required to maintain adequate emergency access for emergency vehicles as required by the City of Banning. Therefore, the Proposed Project would not result in inadequate emergency access. No impacts are identified or are anticipated, and no mitigation measures are required.

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XVIII. TRIBAL CULTURAL RESOURCES.				
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21704 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	( )	( )	(✓)	( )

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.				

Impact Discussion:

Conducting consultation early in the CEQA process allows tribal governments, lead agencies, and project proponents to discuss the level of environmental review, identify and address potential adverse impacts to tribal cultural resources, and reduce the potential for delay and conflict in the environmental review process. (See Public Resources Code section 21083.3.2.) Information may also be available from the California Native American Heritage Commission's Sacred Lands File per Public Resources Code section 5097.96 and the California Historical Resources Information System administered by the California Office of Historic Preservation. Public Resources Code section 21082.3(c) also contains provisions specific to confidentiality.

a) TBP

	Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XIX. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?	( )	( )	( )	(✓)
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	( )	( )	(✓)	( )

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
c)	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	( )	( )	( )	(✓)
d)	Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	( )	( )	(✓)	( )
e)	Comply with Federal, State, and local management and reduction statutes and regulations related to solid waste?	( )	( )	(✓)	( )

Impact Discussion:

a) **No Impact.** The Project Site is located within the City's sewer shed draining to the Banning Water Reclamation Facility. The Banning Water Reclamation Facility currently has a wastewater treatment capacity of 3.6 million gallons per day (mgd) and is in the process of expanding capacity. The Proposed Project is consistent with the General Plan Land Use Designation of Industrial for the Project Site, which was anticipated and considered in the expansion of the Banning's Water Reclamation Facility. Therefore, implementation of the Proposed Project would not require construction of new wastewater treatment facilities or expansion of existing facilities beyond those for which the Proposed Project was already anticipated.

As stated by the City of Banning's 2015 Urban Water Management Plan (UWMP), the Project Site is within the water service area of the City's Public Works Department and Water Division. The City's 2015 UWMP estimated the City's water demand based on Southern California Association of Governments (SCAG) population data and General Plan land use designations at the time of the report. The General Plan and zoning designation for the Project Site is Industrial, and as a permitted use within the Industrial zone, any increase in demand for water facilities resulting from the development and operation of the Proposed Project has been accounted for in the City's planning efforts.

Banning Electric Utility provides basic electrical services for all residential and non-residential customers within the Banning. There are no constraints to additional electric services for future development. Southern California Gas Company provides basic residential and business gas services. There are no foreseeable constraints to future developments within the City. The Proposed Project would be provided service by one of the following telecommunications companies; Verizon and Time Warner Cable.

The development of the Proposed Project is not anticipated to cause the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities. Additionally, all water and wastewater connections will be facilitated via payment of applicable development and hook-up fees. Therefore, no significant adverse impacts are identified or anticipated, and no mitigation measures are required.

b) **Less Than Significant.** As stated by the City of Banning's 2015 Urban Water Management Plan (UWMP), the Project Site is within the water service area of the City's Public Works Department and Water Division. According to the City of Banning's 2015 Urban Water Management Plan (UWMP) groundwater is City's primary source of water. The groundwater pumped from the Beaumont Storage Unit (Beaumont Basin) Banning Storage Unit, the Banning Bench Storage Unit, the Cabazon Storage Unit, and the Banning Canyon Storage Unit of the San Gorgonio Pass Subbasin portion of the Coachella Valley Groundwater Basin. Based on the Table 5-4 of the UWMP: Projected Multiple-Dry Years Supplies and Demands of San Gorgonio Pass Water Agency 2015 Urban Water Management Plan, year 2040 has a projected water supply of approximately 11,600 acre-feet per year (AFY) of groundwater and 2040 City's water demand would be approximately 11,500 AFY. The San Gorgonio Pass Water Agency service area is anticipated to a have 100 AFY surplus for the year 2040. Using Table 3.5 Water Demand Factors of the 2018 Integrated Water Master Plan, the Proposed Project would create an approximate 74.5 AFY demand. The Proposed Project water demand would account for approximately 0.64 percent of the projected 2040 total water demand. The Proposed Project would be subject to the four stages of the 2015 Banning UWMP's Water Shortage Contingency Plan in the event of a water shortage. Because the Proposed Project is consistent with the land use assumptions made in the 2015 UWMP, the Project will not result in unaccounted water demand increases, and a less than significant impact to water supplies will occur. No mitigation measures are required.

c) **No Impact.** According to the General Plan, The Project Site is located within the City's sewer shed draining to the Banning Water Reclamation Facility. The Banning Water Reclamation Facility currently has a wastewater treatment capacity of 3.6 mgd and is in the process of expanding capacity to 5.8 mgd. According to the General Plan, the average daily wastewater flows to the facility estimated at 2.3-2.4 mgd with a minimum surplus capacity of approximately 1.2 mgd. The facility therefore has adequate capacity to serve the Proposed Project in addition to existing commitments. Therefore, no significant adverse impacts are identified or anticipated, and no mitigation measures are required.

d) **Less Than Significant.** The nearest landfill to serve the Proposed Project is the Riverside County Lambs Canyon Landfill. During a permit review process in 2007, the landfill's capacity was increased and the life of the facility was extended from 2024 to 2029. The General Plan states the City contracts with Waste Management Inland Empire for solid waste and disposal services. Additionally, with California's adoption of AB 939 (California Waste Management Act) and AB 341 (Mandatory Commercial Recycling), the Proposed Project would be required to incorporate waste recycling and proper management and disposal of waste streams in which would not result in an exceedance of permitted landfill capacities upon implementation. The General Plan and zoning designation for the Project Site is Industrial and the Proposed Project would be developed in accordance with the land use designation. Solid waste generation from the Proposed Project was accounted for General Plan build out and would not result in an exceedance of permitted landfill capacities. Therefore, no significant adverse impacts are identified or anticipated, and no mitigation measures are required.

e) **Less Than Significant.** The Proposed Project's collection and disposal of solid waste would be in compliance with federal, State, and local plans and regulations during construction and operation. According the General Plan, the City has adopted Policy 7: the City shall continue to confer and coordinate with its solid waste service franchisee to

maintain and, if possible, exceed the provisions of AB 939 by expanding recycling programs that divert valuable resources from the waste stream and returning these materials to productive use and Policy 8 : the City shall support, and to the greatest extent practical, shall encourage commercial and industrial businesses to reduce and limit the amount of packaging and potential waste associated with product sale and production. Therefore, no significant adverse impacts are identified or anticipated, and no mitigation measures are required.

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XX.	**Wildfire –** If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:				
a)	Substantially impair an adopted emergency response plan or emergency evacuation plan?	( )	( )	(✓)	( )
b)	Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	( )	( )	(✓)	( )
c)	Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	( )	( )	(✓)	( )
d)	Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	( )	( )	(✓)	( )

Impact Discussion: According to the General Plan, wildfires pose the greatest risk in the northern and southern portions of the City and adjacent areas because they are vegetated with high fire hazard plants such as tall grasses and chaparral; include steep slopes and canyons. They are also subjected to strong seasonal Santa Ana wind conditions that can transport embers up the canyons. The City encourages periodic inspections of existing structures for compliance with fire safety standards and practices. All new development plans must be submitted to the Fire Department for review and comment during the plan check process in order to ensure applicable standards and regulations.

The General Plan's Fire Threat Zone Map is divided into five threat zones: Very High, High, Moderate, and No Fuel. As shown on the General Plan Fire Threat Zone Map, the Project Site is located in a High Fire Hazard Zone. The nearest Fire Station No. 89, located at 172 North Murray, is approximately 2.25 miles to the northwest of the Project Site. In addition to the near fire station, the Final EIR: Section 3 states, that the Regional Fire Protection Program allows Riverside County fire stations to actively support one another regardless of geographic or

jurisdictional boundaries. When an emergency is located outside the station's official "jurisdiction." This is the most effective and efficient method of emergency response and allows for shared use of specialized equipment and personnel between neighboring communities. The Proposed Project would be required to undergo environmental and building review to ensure adequate and appropriate Project Site design and construction methods are employed in order to reduce any wildland fire risks. Compliance with these measures would ensure that the Project is consistent with Site Planning recommendations and fire-resistant construction requirements.

a) **Less Than Significant.** The Project Site is not anticipated to interfere with an established emergency response plan within the City. The Project Site is located in the southeast portion of the City and borders the south side of the Banning Municipal Airport. An Emergency Evacuation Plan for the Proposed Project must be submitted to the Fire Department and Riverside County Airport Land Use Commission for review and comment during the plan check process in order to ensure applicable standards and regulations are met. Therefore, no significant adverse impacts are identified or anticipated, and no mitigation measures are required.

b) **Less Than Significant.** The Project Site is located in the southeast portion of the City and borders the south side of the Banning Municipal Airport, which is open to the Santa Ana winds. According to the General Plan, these winds are capable of reaching up to 100 miles per hour. Potential structural damage due to winds are considered and addressed through adopted City building permit review processes. In this regard, all proposed structures within the General Plan Area are required to be designed and constructed consistent with provisions of the latest edition of the Uniform and California Building Codes. Design and construction of structures consistent with adopted Code requirements is considered to adequately address potential structural damage due to high winds. Potential effects of wind-driven dust and soils erosion in the design and construction of buildings, and appropriate design and are implemented by the City through environmental review processes and compliance with AQMD policies that provide for dust suppression and soils protection during construction activities. In addition to the above requirements, the Proposed Project will be required to adhere to fire codes to support appropriate design and construction methods to prevent or minimize potential wind-caused structural and environmental damage. In an effort to lower potential fire hazards, the City has lowered their wild land vegetation by using it as agricultural land or by lowering the fuel load capabilities and maintaining open spaces sparsely vegetated.

Furthermore, the Fire Marshal will review Site design features to ensure the lowest levels of hazards are associated with the Proposed Project. Pollutant concentrations from a possible wildfire would not be anticipated to expose workers (occupants) to high levels of pollutants from potential wildfires; an Emergency Evacuation Plan for the Proposed Project must be approved by the City. Therefore, no significant adverse impacts are identified or anticipated, and no mitigation measures are required.

c) **Less Than significant.** The Project Site does not require the installation or management of infrastructure that would be prone to higher fire risks or maintenance of hazardous infrastructure. The design of the Proposed Project provides access points available to emergency vehicles at the easterly terminus of Barbour Street. The Proposed Project will be constructed with material in accordance with California Building Code and City-adopted Fire Building Codes. Riverside County Fire Department (RCFD) will review the final design to ensure the mitigation of fire hazards and minimal impacts

to the environment. Proposed development within the City is subject to environmental and building permit review procedures to ensure adequate and appropriate site design and construction methods are employed in order to reduce wildland fire risks. Therefore, no significant adverse impact is identified or anticipated, and no mitigation measures are required.

d) **Less Than Significant.** The Proposed Project is not anticipated to expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes. According to the Final EIR, seismically induced ground shaking is most significant potential geotechnical hazard facing the Banning area. Given the City's proximity of the San Andreas and San Jacinto faults, the urban core of the City has the potential to experience very high and extremely high ground shaking values of about 50 percent of the force gravity, with a 10 percent chance of such a seismic event occurring in 50 years. The California Department of Conservation: Fault Activity Map of California shows that the nearest fault is the San Gorgonio Pass Fault Zone which is approximately one mile north of the Proposed Project Site. The City implements hazard avoidance procedures through adopted Land Use Plans, Planning Policies, and Environmental Review procedures. Where exposure to these hazards cannot be entirely avoided, State and City Building Codes establish engineering and construction criteria designed to mitigate potential impacts associated with unstable soils, landslides, lateral spreading, subsidence, liquefaction, soils collapse, and expansive soils. According to the Flood Insurance Rate Map (FIRM) for the Riverside County, California and Incorporated Areas, the Project Site is Zone X (Area of Minimal Flood Hazard) overlay which includes areas of 0.2% annual chance flood. Therefore, no foreseeable damage is perceived from runoff or post-fire slope instability. No significant adverse impacts are identified or anticipated, and no mitigation measures are required.

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
XXI. MANDATORY FINDINGS OF SIGNIFICANCE					
a)	Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	( )	( )	(✓)	()
b)	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)?	( )	( )	(✓)	()
c)	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	( )	( )	(✓)	( )

Impact Discussion:

a) **Less Than Significant.** In July 2019, a General Biological Assessment was prepared for the Banning Truck Terminal by Natural Resources Assessment, Inc. (NRAI). The assessment was completed under the requirements of the Western Riverside County's Multiple Species Habitat Conservation Plan (MSHCP). The MSHCP is intended to balance the growth of western Riverside County with the need to preserve open space and protect species of plants and animals that are threatened with extinction. The MSHCP requires an assessment of the Project Site for Narrow Endemic Plant Species, presence of burrowing owl habitat, riverine and riparian habitats, and for vernal pools and fairy shrimp habitat. The property was found to provide marginal habitat for the burrowing owl, but suitable active burrows were not observed at the time of the survey. Beechey ground squirrel burrows were observed, but they were in active use by that species. The survey was conducted at a time when burrowing owls should have been observable if present. No signs of burrowing owl were present. However, there is a small likelihood that burrowing owls may use or occupy the property over time, especially since there is a large area of suitable foraging and nesting habitat within the airport property to the north and open space to the south and east.

The Project Site was also found to exist within a Narrow Endemic Plant Species survey area for two sensitive plant species: Yucaipa onion and the many-stemmed dudleya. Neither of these two Narrow Endemic Plant Species were detected during the field

survey and the conditions on the Project Site were found not suitable for either species. Both species have a strong affinity for clay soils and the Project Site consists of loamy fine sands and coarse sandy loam. Furthermore, the Project Site is heavily impacted by non-native, ruderal vegetation and non-native grasses and has been subject to loss of habitat to development and by the alteration of fire regimes (mainly suppression). These species are not expected to be present and no impacts are expected.

The Project Site occurs within a relatively developed and fragmented area of the City of Banning and even though the Project Site shows signs of disturbance, there is enough scattered vegetation on-site to potentially provide suitable habitat for nesting birds. At the time of the survey, the Project Site had suitable nesting habitat for ground nesting bird species such as killdeer.

In general, impacts to burrowing owls and all bird species can be avoided by conducting work outside of the nesting season. However, possible significant adverse impacts have been identified or anticipated and the following mitigation measures are required as a condition of project approval to reduce these impacts to a level below significant. Therefore, possible significant adverse impacts have been identified or are anticipated and Mitigation Measure BIO-1, Mitigation Measure BIO-2, Mitigation Measure BIO-3, Mitigation Measure BIO-4, Mitigation Measure BIO-5, and Mitigation Measure BIO-6 are required as a condition of project approval, in accordance with the recommendations provided by NRAI, to reduce these impacts to a level below significant. The Proposed Project would not have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or a wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, and reduce the number or restrict the range of a rare or endangered plant or animal with implementation of Mitigation Measures BIO-1-6. No additional mitigation is warranted.

In March 2019, McKenna et al. prepared an Historical/Archaeological Resources Survey Report for the Proposed Project. Based on the findings, McKenna has concluded the Project Site yielded no evidence of prehistoric archaeological resources and no evidence of historic archaeological However, the possibility of discovering significant examples of the major periods of California history or prehistory remains. Therefore, possible significant adverse impacts have been identified or anticipated and Mitigation Measure CR-1 through CR-2, listed in Section V are required as a condition of project approval to reduce these impacts to a level below significant; no additional mitigation is warranted.

b) **Less Than Significant.** Cumulative impacts are defined as two or more individual affects that, when considered together, are considerable or that compound or increase other environmental impacts. The cumulative impact from several projects is the change in the environment that results from the incremental impact of the development when added to the impacts of other closely related past, present, and reasonably foreseeable or probable future developments. Cumulative impacts can result from individually minor, but collectively significant, developments taking place over a period. The CEQA Guidelines, Section 15130 (a) and (b), states:

(a) Cumulative impacts shall be discussed when the project's incremental effect is cumulatively considerable.

(b) The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided of the effects attributable to the project. The discussion should be guided by the standards of practicality and reasonableness.

Impacts associated with the Proposed Project would not be considered individually or cumulatively adverse or considerable. Impacts identified in this Initial Study can be reduced to a less than significant impact. Therefore, no significant adverse impacts are identified or are anticipated, and no mitigation measures are required.

c) **Less Than Significant.** The incorporation of design measures, the City of Banning policies, standards, and guidelines and proposed mitigation measures as identified within this Initial Study would ensure that the Proposed Project would have no substantial adverse effects on human beings, either directly or indirectly on an individual or cumulative basis.

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Appendix A

Estes Banning

AIR QUALITY IMPACT ANALYSIS

CITY OF BANNING

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RFG-2	Reformulated Gasoline Regulation
ROG	Reactive Organic Gases
RTP/SCS	Regional Transportation Plan/ Sustainable Communities Strategy
SB	Senate Bill
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SF	Square Feet
SIPs	State Implementation Plans
SO_2	Sulfur Dioxide
SO_4	Sulfates
SO_X	Sulfur Oxides
SP	Specific Plan
SRA	Source Receptor Area
TAC	Toxic Air Contaminant
TAZ	Traffic Analysis Zones
TIA	Traffic Impact Analysis
TOG	Total Organic Gases
U.S.	United States
UFP	Ultra Fine Particles
URBEMIS	Urban Emissions
UTRs	Utility Tractors
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compounds
VPH	Vehicles Per Hour
WB	Westbound

EXECUTIVE SUMMARY

ES.1 SUMMARY OF FINDINGS

The results of this *Estes Banning Air Quality Impact Analysis* (AQIA) are summarized below based on the significance criteria in Section 3 of this report consistent with Appendix G of the California Environmental Quality Act (CEQA) Guidelines (1). Table ES-1 shows the findings of significance for each potential air quality impact under CEQA before and after any required mitigation measures described below.

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
Regional Construction Emissions	3.4	*Less Than Significant*	*n/a*
Localized Construction Emissions	3.6	*Less Than Significant*	*n/a*
Regional Operational Emissions	3.5	*Less Than Significant*	*n/a*
Localized Operational Emissions	3.7	*Less Than Significant*	*n/a*
CO "Hot Spot" Analysis	3.8	*Less Than Significant*	*n/a*
Air Quality Management Plan	3.9	*Less Than Significant*	*n/a*
Sensitive Receptors	3.10	*Less Than Significant*	*n/a*
Odors	3.11	*Less Than Significant*	*n/a*
Cumulative Impacts	3.12	*Less Than Significant*	*n/a*

ES.2 STANDARD REGULATORY REQUIREMENTS/BEST AVAILABLE CONTROL MEASURES

Measures listed below (or equivalent language) recommended to appear on all Project grading plans, construction specifications and bid documents, and the City shall ensure such language is incorporated prior to issuance of any applicable development permits. South Coast Air Quality Management District (SCAQMD) Rules that are currently applicable during construction activity for this Project include but are not limited to Rule 403 (Fugitive Dust) (2) and Rule 1113 (Architectural Coatings) (3). It should be noted that these Best Available Control Measures

(BACMs) are not mitigation as they are standard regulatory requirements. As such, credit for Rule 403 and Rule 1113 have been taken in the analysis.

BACM AQ-1

The contractor shall adhere to applicable measures contained in Table 1 of Rule 403 including, but not limited to (2):

- All clearing, grading, earth-moving, or excavation activities shall cease when winds exceed 25 mph per SCAQMD guidelines in order to limit fugitive dust emissions.
- The contractor shall ensure that all disturbed unpaved roads and disturbed areas within the Project are watered at least three (3) times daily during dry weather. Watering, with complete coverage of disturbed areas, shall occur at least three times a day, preferably in the mid-morning, afternoon, and after work is done for the day.
- The contractor shall ensure that traffic speeds on unpaved roads and Project site areas are limited to 15 miles per hour or less.

BACM AQ-2

The following measure shall be incorporated into Project plans and specifications as implementation of SCAQMD Rule 1113 (3):

- Only "Low-Volatile Organic Compounds (VOC)" paints (no more than 50 gram/liter of VOC) consistent with SCAQMD Rule 1113 shall be used.

ES.3 CONSTRUCTION-SOURCE AND OPERATIONAL-SOURCE MITIGATION MEASURES

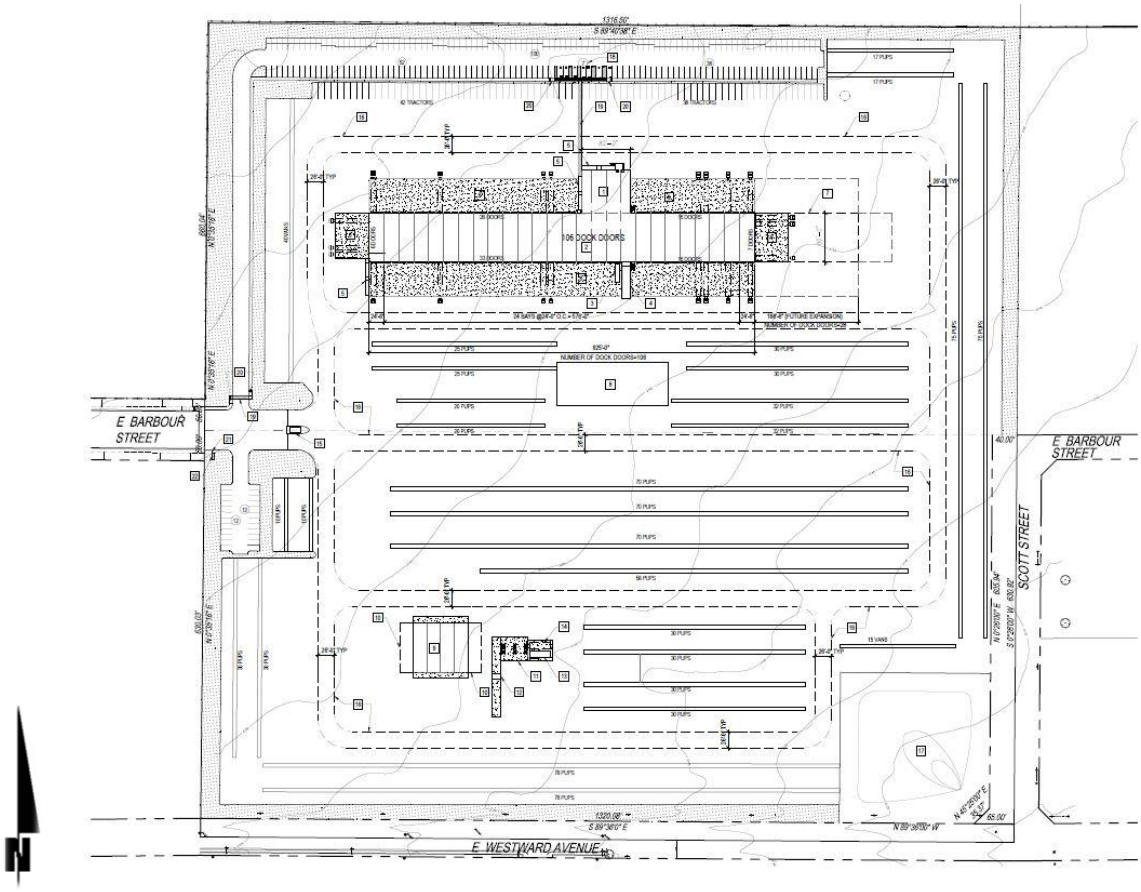
The Project would not exceed any thresholds of significance for construction or operational-source emissions. As such, a less than significant impact would occur for Project-related construction and operational-source emissions and no mitigation would be required.

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EXHIBIT 1-A: LOCATION MAP



EXHIBIT 1-B: SITE PLAN



2 AIR QUALITY SETTING

This section provides an overview of the existing air quality conditions in the Project area and region.

2.1 SOUTH COAST AIR BASIN

The Project site is located in the South Coast Air Basin (SCAB) within the jurisdiction of SCAQMD (6). The SCAQMD was created by the 1977 Lewis-Presley Air Quality Management Act, which merged four county air pollution control bodies into one regional district. Under the Act, the SCAQMD is responsible for bringing air quality in areas under its jurisdiction into conformity with federal and state air quality standards. As previously stated, the Project site is located within the SCAB, a 6,745-square mile subregion of the SCAQMD, which includes portions of Los Angeles, Riverside, and San Bernardino Counties, and all of Orange County.

The SCAB is bounded by the Pacific Ocean to the west and the San Gabriel, San Bernardino, and San Jacinto Mountains to the north and east. The Los Angeles County portion of the Mojave Desert Air Basin is bounded by the San Gabriel Mountains to the south and west, the Los Angeles / Kern County border to the north, and the Los Angeles / San Bernardino County border to the east. The Riverside County portion of the Salton Sea Air Basin is bounded by the San Jacinto Mountains in the west and spans eastward up to the Palo Verde Valley.

2.2 REGIONAL CLIMATE

The regional climate has a substantial influence on air quality in the SCAB. In addition, the temperature, wind, humidity, precipitation, and amount of sunshine influence the air quality.

The annual average temperatures throughout the SCAB vary from the low to middle 60s (degrees Fahrenheit). Due to a decreased marine influence, the eastern portion of the SCAB shows greater variability in average annual minimum and maximum temperatures. January is the coldest month throughout the SCAB, with average minimum temperatures of 47°F in downtown Los Angeles and 36°F in San Bernardino. All portions of the SCAB have recorded maximum temperatures above 100°F.

Although the climate of the SCAB can be characterized as semi-arid, the air near the land surface is quite moist on most days because of the presence of a marine layer. This shallow layer of sea air is an important modifier of SCAB climate. Humidity restricts visibility in the SCAB, and the conversion of sulfur dioxide (SO_2) to sulfates is heightened in air with high relative humidity. The marine layer provides an environment for that conversion process, especially during the spring and summer months. The annual average relative humidity within the SCAB is 71 percent along the coast and 59 percent inland. Since the ocean effect is dominant, periods of heavy early morning fog are frequent and low stratus clouds are a characteristic feature. These effects decrease with distance from the coast.

More than 90 percent of the SCAB's rainfall occurs from November through April. The annual average rainfall varies from approximately nine inches in Riverside to fourteen inches in

downtown Los Angeles. Monthly and yearly rainfall totals are extremely variable. Summer rainfall usually consists of widely scattered thunderstorms near the coast and slightly heavier shower activity in the eastern portion of the SCAB with frequency being higher near the coast.

Due to its generally clear weather, about three-quarters of available sunshine is received in the SCAB. The remaining one-quarter is absorbed by clouds. The ultraviolet portion of this abundant radiation is a key factor in photochemical reactions. On the shortest day of the year there are approximately 10 hours of possible sunshine, and on the longest day of the year there are approximately 14½ hours of possible sunshine.

The importance of wind to air pollution is considerable. The direction and speed of the wind determines the horizontal dispersion and transport of the air pollutants. During the late autumn to early spring rainy season, the SCAB is subjected to wind flows associated with the traveling storms moving through the region from the northwest. This period also brings five to ten periods of strong, dry offshore winds, locally termed "Santa Anas" each year. During the dry season, which coincides with the months of maximum photochemical smog concentrations, the wind flow is bimodal, typified by a daytime onshore sea breeze and a nighttime offshore drainage wind. Summer wind flows are created by the pressure differences between the relatively cold ocean and the unevenly heated and cooled land surfaces that modify the general northwesterly wind circulation over southern California. Nighttime drainage begins with the radiational cooling of the mountain slopes. Heavy, cool air descends the slopes and flows through the mountain passes and canyons as it follows the lowering terrain toward the ocean. Another characteristic wind regime in the SCAB is the "Catalina Eddy," a low level cyclonic (counterclockwise) flow centered over Santa Catalina Island which results in an offshore flow to the southwest. On most spring and summer days, some indication of an eddy is apparent in coastal sections.

In the SCAB, there are two distinct temperature inversion structures that control vertical mixing of air pollution. During the summer, warm high-pressure descending (subsiding) air is undercut by a shallow layer of cool marine air. The boundary between these two layers of air is a persistent marine subsidence/inversion. This boundary prevents vertical mixing which effectively acts as an impervious lid to pollutants over the entire SCAB. The mixing height for the inversion structure is normally situated 1,000 to 1,500 feet above mean sea level.

A second inversion-type forms in conjunction with the drainage of cool air off the surrounding mountains at night followed by the seaward drift of this pool of cool air. The top of this layer forms a sharp boundary with the warmer air aloft and creates nocturnal radiation inversions. These inversions occur primarily in the winter, when nights are longer and onshore flow is weakest. They are typically only a few hundred feet above mean sea level. These inversions effectively trap pollutants, such as NO_X and CO from vehicles, as the pool of cool air drifts seaward. Winter is therefore a period of high levels of primary pollutants along the coastline.

2.3 WIND PATTERNS AND PROJECT LOCATION

The distinctive climate of the Project area and the SCAB is determined by its terrain and geographical location. The SCAB is located in a coastal plain with connecting broad valleys and

low hills, bounded by the Pacific Ocean in the southwest quadrant with high mountains forming the remainder of the perimeter.

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

2.4 CRITERIA POLLUTANTS

Criteria pollutants are pollutants that are regulated through the development of human health based and/or environmentally based criteria for setting permissible levels. Criteria pollutants, their typical sources, and health effects are identified below (7):

TABLE 2-1: CRITERIA POLLUTANTS

Criteria Pollutant	Description	Sources	Health Effects
Ozone (O_3)	O_3 is a highly reactive and unstable gas that is formed when VOCs and NO_X, both byproducts of internal combustion engine exhaust, undergo slow photochemical reactions in the presence of sunlight. O_3 concentrations are generally highest during the summer months when direct sunlight, light wind, and warm temperature conditions are favorable to the formation of this pollutant.	Formed when reactive organic gases (ROG) and NO_X react in the presence of sunlight. ROG sources include any source that burns fuels, (e.g., gasoline, natural gas, wood, oil) solvents, petroleum processing and storage and pesticides.	Individuals exercising outdoors, children, and people with preexisting lung disease, such as asthma and chronic pulmonary lung disease, are considered to be the most susceptible sub-groups for O_3 effects. Short-term exposure (lasting for a few hours) to O_3 at levels typically observed in Southern California can result in breathing pattern changes, reduction of breathing capacity, increased susceptibility to infections, inflammation of the lung tissue, and some immunological changes. Elevated O_3 levels are associated with increased school absences. In recent years, a correlation between elevated ambient O_3 levels and increases in daily hospital admission rates, as well as mortality, has also been reported. An increased risk for asthma has been found in children who participate in multiple outdoor sports and live in communities with high O_3 levels.

Criteria Pollutant	Description	Sources	Health Effects
SO_2	SO_2 is a colorless, extremely irritating gas or liquid. It enters the atmosphere as a pollutant mainly as a result of burning high sulfur-content fuel oils and coal and from chemical processes occurring at chemical plants and refineries. When SO_2 oxidizes in the atmosphere, it forms sulfates (SO_4). Collectively, these pollutants are referred to as sulfur oxides (SO_X).	Coal or oil burning power plants and industries, refineries, diesel engines	A few minutes of exposure to low levels of SO_2 can result in airway constriction in some asthmatics, all of whom are sensitive to its effects. In asthmatics, increase in resistance to air flow, as well as reduction in breathing capacity leading to severe breathing difficulties, are observed after acute exposure to SO_2. In contrast, healthy individuals do not exhibit similar acute responses even after exposure to higher concentrations of SO_2. Animal studies suggest that despite SO_2 being a respiratory irritant, it does not cause substantial lung injury at ambient concentrations. However, very high levels of exposure can cause lung edema (fluid accumulation), lung tissue damage, and sloughing off of cells lining the respiratory tract. Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient SO_2 levels. In these studies, efforts to separate the effects of SO_2 from those of fine particles have not been successful. It is not clear whether the two pollutants act synergistically, or one pollutant alone is the predominant factor.

Criteria Pollutant	Description	Sources	Health Effects
	exposed to photochemical processes. VOCs often have an odor, and some examples include gasoline, alcohol, and the solvents used in paints. Exceptions to the VOC designation include carbon monoxide (CO), CO_2, carbonic acid (H_2CO_3), metallic carbides or carbonates, and ammonium carbonate. VOCs are a criteria pollutant since they are a precursor to O_3, which is a criteria pollutant. The terms VOC and ROG (see below) interchangeably.	of organic chemicals. All of these products can release organic compounds while you are using them, and, to some degree, when they are stored.	
ROG	Similar to VOC, ROGs are also precursors in forming O_3 and consist of compounds containing methane, ethane, propane, butane, and longer chain hydrocarbons, which are typically the result of some type of combustion/decomposition process. Smog is formed when ROG and NO_X react in the presence of sunlight. ROGs are a criteria pollutant since they are a precursor to O_3, which is a criteria pollutant. The terms ROG and VOC (see previous) interchangeably.	Sources similar to VOCs.	Health effects similar to VOCs.
Lead (Pb)	Pb is a heavy metal that is highly persistent in the environment and is considered a criteria pollutant. In the past, the primary source of Pb in the air was emissions from vehicles burning leaded gasoline. The major sources of Pb emissions are ore and metals processing, particularly lead smelters, and piston-engine aircraft operating on leaded aviation gasoline. Other stationary sources include waste incinerators, utilities, and lead-acid battery manufacturers. It should be noted that the Project does not include	Metal smelters, resource recovery, leaded gasoline, deterioration of lead paint.	Fetuses, infants, and children are more sensitive than others to the adverse effects of Pb exposure. Exposure to low levels of Pb can adversely affect the development and function of the central nervous system, leading to learning disorders, distractibility, inability to follow simple commands, and lower intelligence quotient. In adults, increased Pb levels are associated with increased blood pressure.

Criteria Pollutant	Description	Sources	Health Effects
	operational activities such as metal processing or lead acid battery manufacturing. As such, the Project is not anticipated to generate a quantifiable amount of Pb emissions.		Pb poisoning can cause anemia, lethargy, seizures, and death; although it appears that there are no direct effects of Pb on the respiratory system. Pb can be stored in the bone from early age environmental exposure, and elevated blood Pb levels can occur due to breakdown of bone tissue during pregnancy, hyperthyroidism (increased secretion of hormones from the thyroid gland) and osteoporosis (breakdown of bony tissue). Fetuses and breast-fed babies can be exposed to higher levels of Pb because of previous environmental Pb exposure of their mothers.
Odor	Odor means the perception experienced by a person when one or more chemical substances in the air come into contact with the human olfactory nerves (8).	Odors can come from many sources including animals, human activities, industry, natures, and vehicles.	Offensive odors can potentially affect human health in several ways. First, odorant compounds can irritate the eye, nose, and throat, which can reduce respiratory volume. Second, studies have shown that the VOCs that cause odors can stimulate sensory nerves to cause neurochemical changes that might influence health, for instance, by compromising the immune system. Finally, unpleasant odors can trigger memories or attitudes linked to unpleasant odors, causing cognitive and emotional effects such as stress.

2.5 EXISTING AIR QUALITY

Existing air quality is measured at established SCAQMD air quality monitoring stations. Monitored air quality is evaluated in the context of ambient air quality standards. These standards are the levels of air quality that are considered safe, with an adequate margin of safety, to protect the public health and welfare. National Ambient Air Quality Standards (NAAQS) and California Ambient Air Quality Standards (CAAQS) currently in effect are shown in Table 2-2 (9).

The determination of whether a region's air quality is healthful or unhealthful is determined by comparing contaminant levels in ambient air samples to the state and federal standards. At the time of this AQIA, the most recent state and federal standards were updated by the California Air Resources Board (CARB) on May ,4 2016 and are presented in Table 2-2. The air quality in a region is considered to be in attainment by the state if the measured ambient air pollutant levels for O_3, CO (except 8-hour Lake Tahoe), SO_2 (1 and 24 hour), NO_2, PM_{10}, and $PM_{2.5}$ are not to be exceeded. All others are not to be equaled or exceeded. It should be noted that the three-year period is presented for informational purposes and is not the basis for how the State assigns attainment status. Attainment status for a pollutant means that the Air District meets the standards set by the U.S. Environmental Protection Agency (EPA) or the California EPA (CalEPA). Conversely, nonattainment means that an area has monitored air quality that does not meet the NAAQS or CAAQS standards. In order to improve air quality in nonattainment areas, a State Implementation Plan (SIP) is drafted by CARB. The SIP outlines the measures that the state will take to improve air quality. Once nonattainment areas meet the standards and additional redesignation requirements, the EPA will designate the area as a maintenance area (10).

2.6 REGIONAL AIR QUALITY

Air pollution contributes to a wide variety of adverse health effects. The EPA has established NAAQS for six of the most common air pollutants: CO, Pb, O_3, particulate matter (PM_{10} and $PM_{2.5}$), NO_2, and SO_2 which are known as criteria pollutants. The SCAQMD monitors levels of various criteria pollutants at 37 permanent monitoring stations and 5 single-pollutant source Pb air monitoring sites throughout the air district (11). On February 21, 2019, CARB posted the 2018 amendments to the state and national area designations. See Table 2-3 for attainment designations for the SCAB (12). Appendix 2.1 provides geographic representation of the state and federal attainment status for applicable criteria pollutants within the SCAB.

TABLE 2-3: ATTAINMENT STATUS OF CRITERIA POLLUTANTS IN THE SCAB

Criteria Pollutant	State Designation	Federal Designation
O_3 – 1-hour standard	Nonattainment	--
O_3 – 8-hour standard	Nonattainment	Nonattainment
PM_{10}	Nonattainment	Attainment
$PM_{2.5}$	Nonattainment	Nonattainment
CO	Attainment	Unclassifiable/Attainment
NO_2	Attainment	Unclassifiable/Attainment
SO_2	Unclassifiable/Attainment	Unclassifiable/Attainment
Pb[1]	Attainment	Unclassifiable/Attainment

Note: See Appendix 2.1 for a detailed map of State/National Area Designations within the SCAB
"-" = The national 1-hour O_3 standard was revoked effective June 15, 2005.

2.7 LOCAL AIR QUALITY

The Project site is located within the Source Receptor Area (SRA) 29. Within SRA 29, the San Gorgonio monitoring station, located 0.15 miles west of the Project site, is the nearest long-term air quality station for O_3, NO_2, and PM_{10}. Relative to the Project site, the Coachella Valley monitoring station, located 18.06 miles east of the Project site within SRA 30, is the nearest station that monitors CO and $PM_{2.5}$. It should be noted that the Coachella Valley monitoring station was utilized in lieu of the San Gorgonio monitoring station only in instances where data was not available.

The most recent three (3) years of data available is shown on Table 2-4 and identifies the number of days ambient air quality standards were exceeded for the study area, which is considered to be representative of the local air quality at the Project site. Data for O_3, CO, NO_2, PM_{10}, and $PM_{2.5}$ for 2016 through 2018 was obtained from the SCAQMD Air Quality Data Tables (13). Additionally, data for SO_2 has been omitted as attainment is regularly met in the SCAB and few monitoring stations measure SO_2 concentrations.

[1] The Federal nonattainment designation for lead is only applicable towards the Los Angeles County portion of the SCAB.

TABLE 2-4: PROJECT AREA AIR QUALITY MONITORING SUMMARY 2016-2018

POLLUTANT	STANDARD	YEAR		
		2016	2017	2018
O_3				
Maximum Federal 1-Hour Concentration (ppm)		0.128	0.128	0.119
Maximum Federal 8-Hour Concentration (ppm)		0.106	0.105	0.106
Number of Days Exceeding Federal 1-Hour Standard	>0.07 ppm	1	2	0
Number of Days Exceeding State 1-Hour Standard	> 0.09 ppm	26	50	33
Number of Days Exceeding Federal 8-Hour Standard	> 0.070 ppm	52	82	69
Number of Days Exceeding State 8-Hour Standard	> 0.070 ppm	54	82	69
CO				
Maximum Federal 1-Hour Concentration	> 35 ppm	3.1	1.0	1.1
Maximum Federal 8-Hour Concentration	> 20 ppm	1.5	0.5	0.8
NO_2				
Maximum Federal 1-Hour Concentration	> 0.100 ppm	0.047	0.056	0.051
Annual Federal Standard Design Value		0.008	0.008	0.09
PM_{10}				
Maximum Federal 24-Hour Concentration ($\mu g/m^3$)	> 150 $\mu g/m^3$	65	97	39
Annual Federal Arithmetic Mean ($\mu g/m^3$)		24.0	22.4	19.4
Number of Days Exceeding Federal 24-Hour Standard	> 150 $\mu g/m^3$	0	0	0
Number of Days Exceeding State 24-Hour Standard	> 50 $\mu g/m^3$	3	1	0
$PM_{2.5}$				
Maximum Federal 24-Hour Concentration ($\mu g/m^3$)	> 35 $\mu g/m^3$	14.71	14.50	30.20
Annual Federal Arithmetic Mean ($\mu g/m^3$)	> 12 $\mu g/m^3$	5.53	6.05	6.02
Number of Days Exceeding Federal 24-Hour Standard	> 35 $\mu g/m^3$	0	0	0

Source: Data for O_3, CO, NO_2, PM_{10}, and $PM_{2.5}$ was obtained from SCAQMD Air Quality Data Tables.

2.8 REGULATORY BACKGROUND

2.8.1 FEDERAL REGULATIONS

The EPA is responsible for setting and enforcing the NAAQS for O_3, CO, NO_X, SO_2, PM_{10}, and Pb (14). The EPA has jurisdiction over emissions sources that are under the authority of the federal government including aircraft, locomotives, and emissions sources outside state waters (Outer Continental Shelf). The EPA also establishes emission standards for vehicles sold in states other than California. Automobiles sold in California must meet the stricter emission requirements of the CARB.

The Federal Clean Air Act (CAA) was first enacted in 1955 and has been amended numerous times in subsequent years (1963, 1965, 1967, 1970, 1977, and 1990). The CAA establishes the federal air quality standards, the NAAQS, and specifies future dates for achieving compliance (15). The

CAA also mandates that states submit and implement SIPs for local areas not meeting these standards. These plans must include pollution control measures that demonstrate how the standards will be met.

The 1990 amendments to the CAA that identify specific emission reduction goals for areas not meeting the NAAQS require a demonstration of reasonable further progress toward attainment and incorporate additional sanctions for failure to attain or to meet interim milestones. The sections of the CAA most directly applicable to the development of the Project site include Title I (Non-Attainment Provisions) and Title II (Mobile Source Provisions) (16) (17). Title I provisions were established with the goal of attaining the NAAQS for the following criteria pollutants O_3, NO_2, SO_2, PM_{10}, CO, $PM_{2.5}$, and Pb. The NAAQS were amended in July 1997 to include an additional standard for O_3 and to adopt a NAAQS for $PM_{2.5}$. Table 2-3 (previously presented) provides the NAAQS within the SCAB.

Mobile source emissions are regulated in accordance with Title II provisions. These provisions require the use of cleaner burning gasoline and other cleaner burning fuels such as methanol and natural gas. Automobile manufacturers are also required to reduce tailpipe emissions of hydrocarbons and NO_X. NO_X is a collective term that includes all forms of nitrogen oxides (NO, NO_2, NO_3) which are emitted as byproducts of the combustion process.

2.8.2 CALIFORNIA REGULATIONS

California Air Resource Board. The CARB, which became part of the CalEPA in 1991, is responsible for ensuring implementation of the California Clean Air Act (AB 2595), responding to the federal CAA, and for regulating emissions from consumer products and motor vehicles. AB 2595 mandates achievement of the maximum degree of emissions reductions possible from vehicular and other mobile sources in order to attain the state ambient air quality standards by the earliest practical date. The CARB established the CAAQS for all pollutants for which the federal government has NAAQS and, in addition, establishes standards for sulfates, visibility, hydrogen sulfide, and vinyl chloride. However, at this time, hydrogen sulfide and vinyl chloride are not measured at any monitoring stations in the SCAB because they are not considered to be a regional air quality problem. Generally, the CAAQS are more stringent than the NAAQS (18) (14).

Local air quality management districts, such as the SCAQMD, regulate air emissions from stationary sources such as commercial and industrial facilities. All air pollution control districts have been formally designated as attainment or non-attainment for each CAAQS.

Serious non-attainment areas are required to prepare air quality management plans that include specified emission reduction strategies in an effort to meet clean air goals. These plans are required to include:

- Application of Best Available Retrofit Control Technology to existing sources;
- Developing control programs for area sources (e.g., architectural coatings and solvents) and indirect sources (e.g. motor vehicle use generated by residential and commercial development);
- A District permitting system designed to allow no net increase in emissions from any new or modified permitted sources of emissions;

- Implementing reasonably available transportation control measures and assuring a substantial reduction in growth rate of vehicle trips and miles traveled;
- Significant use of low emissions vehicles by fleet operators;
- Sufficient control strategies to achieve a five percent or more annual reduction in emissions or 15 percent or more in a period of three years for ROGs, NO_X, CO and PM_{10}. However, air basins may use alternative emission reduction strategy that achieves a reduction of less than five percent per year under certain circumstances.

Title 24 Energy Efficiency Standards and California Green Building Standards. California Code of Regulations (CCR) Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. CCR, Title 24, Part 11: California Green Building Standards Code (CALGreen) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on January 1, 2011, and is administered by the California Building Standards Commission. CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2019 CALGreen that will be effective January 1, 2020. Local jurisdictions are permitted to adopt more stringent requirements, as state law provides methods for local enhancements. CALGreen recognizes that many jurisdictions have developed existing construction and demolition ordinances and defers to them as the ruling guidance provided, they establish a minimum 65 percent diversion requirement. The code also provides exemptions for areas not served by construction and demolition recycling infrastructure. The State Building Code provides the minimum standard that buildings must meet in order to be certified for occupancy, which is generally enforced by the local building official.

Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases greenhouse gas (GHG) emissions. The 2019 version of Title 24 was adopted by the California Energy Commission (CEC) and will become effective on January 1, 2020. It should be noted that the analysis herein assumes compliance with the 2019 Title 24 Standards because the Project will be constructed after January 1, 2020.

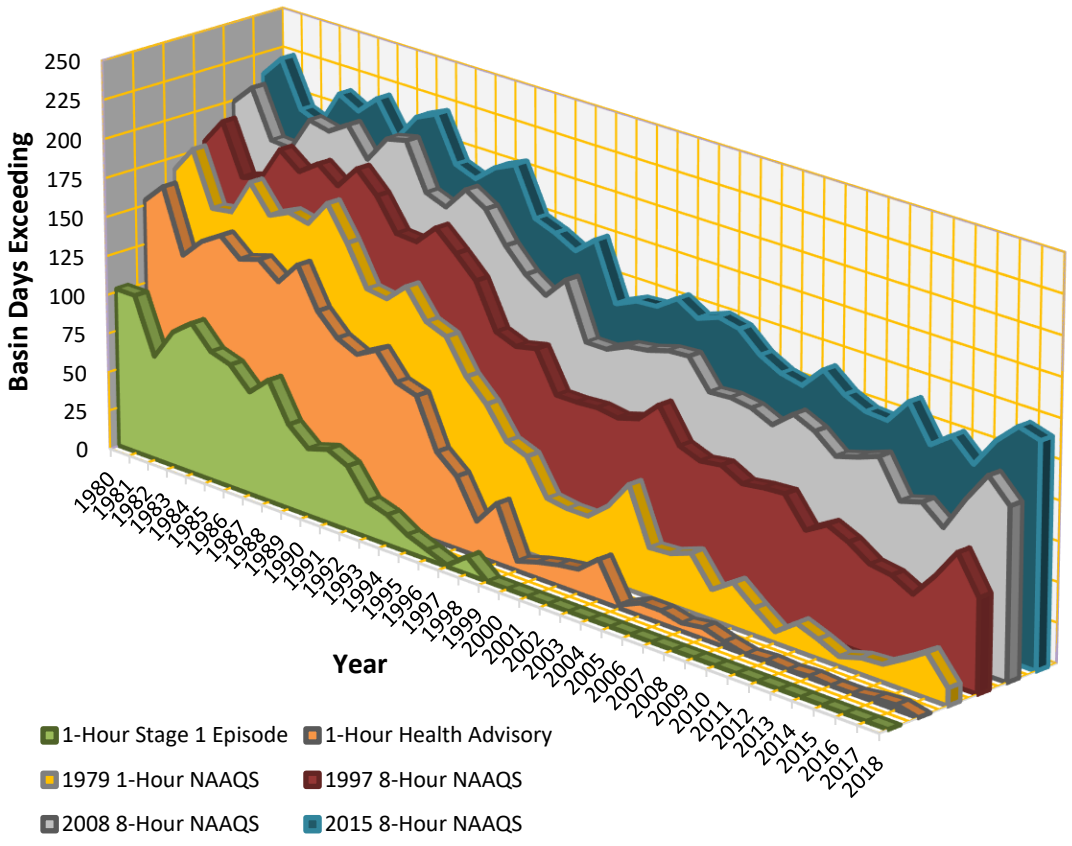
The 2019 Title 24 standards will result in less energy use, thereby reducing air pollutant emissions associated with energy consumption in the SCAB and across the State of California. For example, the 2019 Title 24 standards will require solar photovoltaic systems for new homes, establish requirements for newly constructed healthcare facilities, encourage demand responsive technologies for residential buildings, and update indoor and outdoor lighting requirements for nonresidential buildings. The CEC anticipates that single-family homes built with the 2019 standards will use approximately 7 percent less energy compared to the residential homes built under the 2016 standards. Additionally, after implementation of solar photovoltaic systems, homes built under the 2019 standards will use about 53 percent less energy than homes built under the 2016 standards. Nonresidential buildings (such as the proposed Project) will use approximately 30 percent less energy due to lighting upgrade requirements (19).

Because the Project will be constructed after January 1,2019, the 2019 CALGreen standards are applicable to the Project and require, among other items (20):

- Short-term bicycle parking. If the new project or an additional alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5 percent of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5 percent of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility (5.106.4.1.2).
- Designated parking. In new projects or additions to alterations that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table 5.106.5.2 (5.106.5.2).
- Construction waste management. Recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1. 5.405.1.2, or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent (5.408.1).
- Excavated soil and land clearing debris. 100 percent of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. For a phased project, such material may be stockpiled on site until the storage site is developed (5.408.3).
- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive (5.410.1).
- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:
    - Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush (5.303.3.1)
    - Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush (5.303.3.2.1). The effective flush volume of floor-mounted or other urinals shall not exceed 0.5 gallons per flush (5.303.3.2.2).
    - Showerheads. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute and 80 psi (5.303.3.3.1). When a shower is served by more than one showerhead, the combine flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi (5.303.3.3.2).
    - Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of note more than 0.5 gallons per minute at 60 psi (5.303.3.4.1). Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi (5.303.3.4.2). Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute (5.303.3.4.3). Metering faucets shall not deliver more than 0.20 gallons per cycle (5.303.3.4.4). Metering faucets for wash fountains shall have a maximum flow rate not more than 0.20 gallons per cycle (5.303.3.4.5).

Emissions of O_3, NO_X, VOC, and CO have been decreasing in the SCAB since 1975 and are projected to continue to decrease through 2020 (23). These decreases result primarily from motor vehicle controls and reductions in evaporative emissions. Although vehicle miles traveled (VMT) in the SCAB continue to increase, NO_X and VOC levels are decreasing because of the mandated controls on motor vehicles and the replacement of older polluting vehicles with lower-emitting vehicles. NO_X emissions from electric utilities have also decreased due to use of cleaner fuels and renewable energy. O_3 contour maps show that the number of days exceeding the 8-hour NAAQS has decreased between 1997 and 2007. In the 2007 period, there was an overall decrease in exceedance days compared with the 1997 period. However, as shown on Table 2-5, O_3 levels have increased in the past two years due to higher temperatures and stagnant weather conditions. Notwithstanding, O_3 levels in the SCAB have decreased substantially over the last 30 years with the current maximum measured concentrations being approximately one-third of concentrations within the late 70's (24).

TABLE 2-5: SCAB O_3 TREND

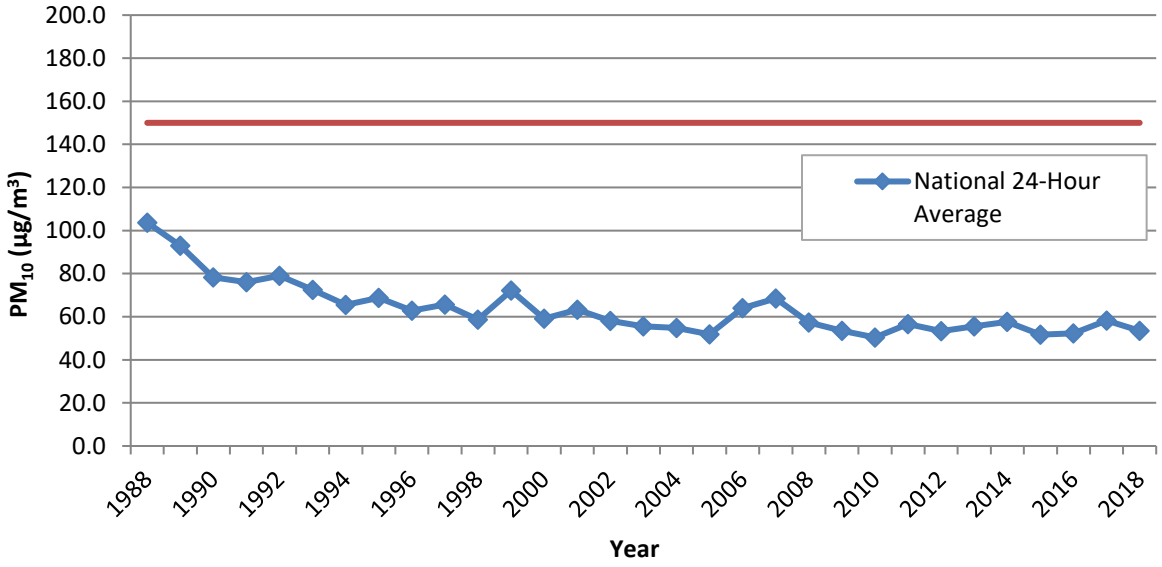


Source: SCAQMD

The overall trends of PM_{10} and $PM_{2.5}$ levels in the air (not emissions) show an overall improvement since 1975. Direct emissions of PM_{10} have remained somewhat constant in the SCAB and direct emissions of $PM_{2.5}$ have decreased slightly since 1975. Area wide sources (fugitive dust from roads, dust from construction and demolition, and other sources) contribute the greatest amount of direct particulate matter emissions.

As with other pollutants, the most recent PM_{10} statistics show an overall improvement as illustrated in Tables 2-6 and 2-7. During the period for which data are available, the 24-hour national annual average concentration for PM_{10} decreased by approximately 48 percent, from 103.7 µg/m³ in 1988 to 53.5 µg/m³ in 2018 (25). Although the values are below the federal standard, it should be noted that there are days within the year where the concentrations will exceed the threshold. The 24-hour state annual average for emissions for PM_{10}, have decreased by approximately 53 percent since 1988 (25). Although data in the late 1990's show some variability, this is probably due to the advances in meteorological science rather than a change in emissions. Similar to the ambient concentrations, the calculated number of days above the 24-hour PM_{10} standards has also shown an overall drop.

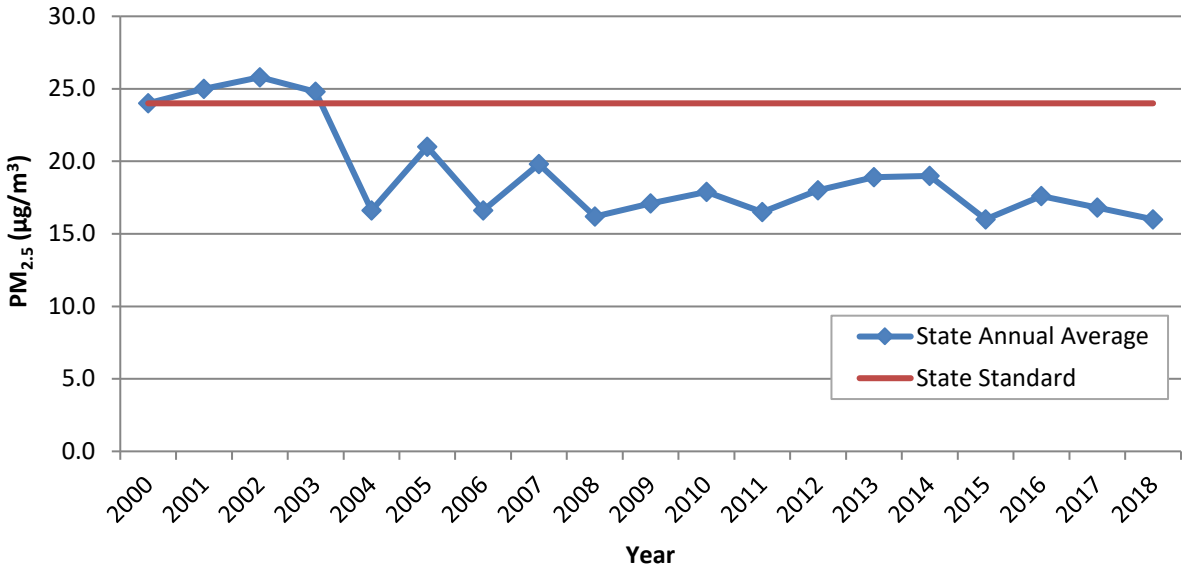
TABLE 2-6: SCAB AVERAGE 24-HOUR CONCENTRATION PM_{10} TREND (BASED ON FEDERAL STANDARD)[1]



Source: CARB

[1] Some year have been omitted from the table as insufficient data (or no) data has been reported. Years with reported value of "0" have also been omitted.

TABLE 2-9: SCAB ANNUAL AVERAGE CONCENTRATION $PM_{2.5}$ TREND (BASED ON STATE STANDARD)[1]



Source: CARB

[1] Some year have been omitted from the table as insufficient data (or no) data has been reported. Years with reported value of "0" have also been omitted.

While the 2012 AQMP PM_{10} attainment demonstration and the 2015 associated supplemental SIP submission indicated that attainment of the 24-hour standard was predicted to occur by the end of 2015, it could not anticipate the effect of the ongoing drought on the measured $PM_{2.5}$.

The 2006 to 2010 base period used for the 2012 attainment demonstration had near-normal rainfall. While the trend of $PM_{2.5}$- equivalent emission reductions continued through 2015, the severe drought conditions contributed to the $PM_{2.5}$ increases observed after 2012. As a result of the disrupted progress toward attainment of the federal 24-hour $PM_{2.5}$ standard, SCAQMD submitted a request and the EPA approved, in January 2016, a "bump up" to the nonattainment classification from "moderate" to "serious," with a new attainment deadline as soon as practicable, but not beyond December 31, 2019.

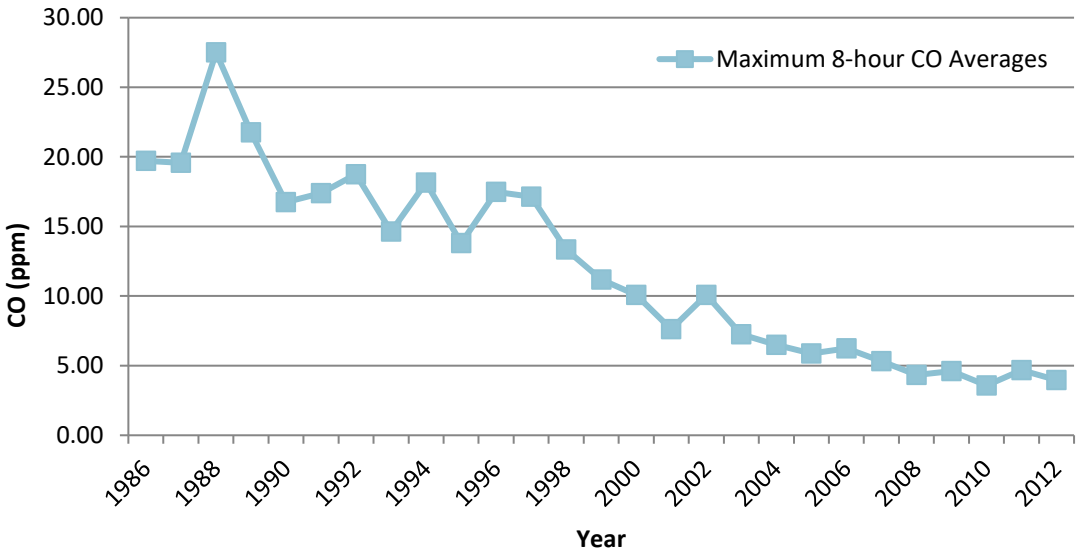
In March 2017, the SCAQMD released the Final 2016 AQMP. The 2016 AQMP continues to evaluate current integrated strategies and control measures to meet the NAAQS, as well as, explore new and innovative methods to reach its goals. Some of these approaches include utilizing incentive programs, recognizing existing co-benefit programs from other sectors, and developing a strategy with fair-share reductions at the federal, state, and local levels (26). Similar to the 2012 AQMP, the 2016 AQMP incorporates scientific and technological information and planning assumptions, including the 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) and updated emission inventory methodologies for various source categories (21).

The most recent CO concentrations in the SCAB are shown in Table 2-10 (25). CO concentrations in the SCAB have decreased markedly — a total decrease of more about 80 percent in the peak

8-hour concentration since 1986. It should be noted 2012 is the most recent year where 8-hour CO averages and related statistics are available in the SCAB. The number of exceedance days has also declined. The entire SCAB is now designated as attainment for both the state and national CO standards. Ongoing reductions from motor vehicle control programs should continue the downward trend in ambient CO concentrations.

Part of the control process of the SCAQMD's duty to greatly improve the air quality in the SCAB is the uniform CEQA review procedures required by SCAQMD's CEQA Handbook (27). The single threshold of significance used to assess Project direct and cumulative impacts has in fact "worked" as evidenced by the track record of the air quality in the SCAB dramatically improving over the course of the past decades. As stated by the SCAQMD, the District's thresholds of significance are based on factual and scientific data and are therefore appropriate thresholds of significance to use for this Project.

TABLE 2-10: SCAB 24-HOUR AVERAGE CONCENTRATION CO TREND[1]



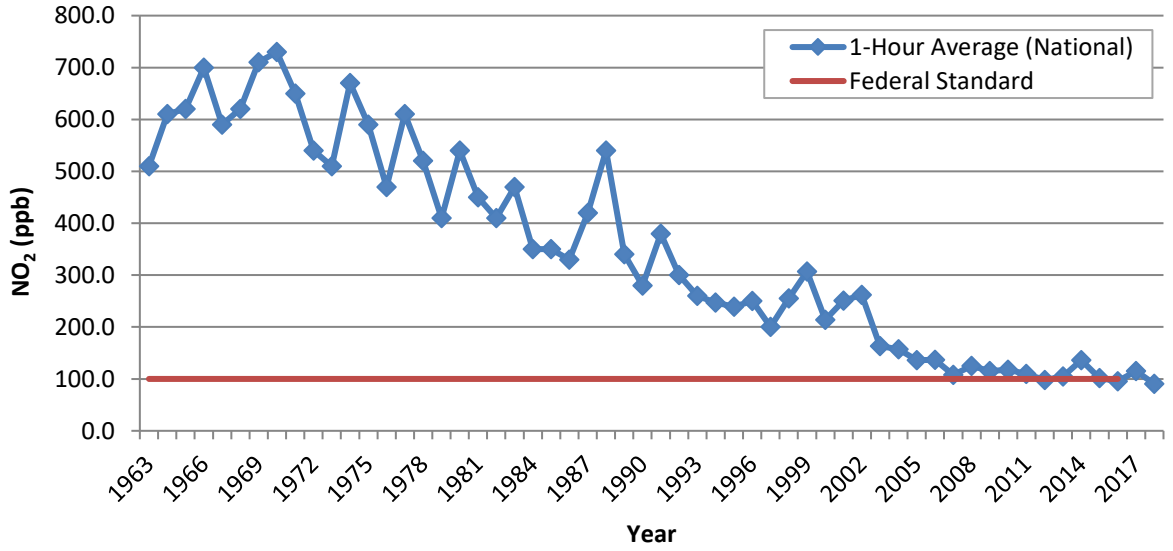
Source: CARB

[1] The most recent year where 8-hour concentration data is available is 2012.

The most recent NO_2 data for the SCAB is shown in Tables 2-11 and 2-12 (25). Over the last 50 years, NO_2 values have decreased significantly; the peak 1-hour national and state averages for 2018 is approximately 82 percent lower than what it was during 1963. The SCAB attained the State 1-hour NO_2 standard in 1994, bringing the entire state into attainment. A new state annual average standard of 0.030 parts per million was adopted by the ARB in February 2007 (28). The new standard is just barely exceeded in the SCAQMD. NO_2 is formed from NO_X emissions, which also contribute to O_3. As a result, the majority of the future emission control measures will be implemented as part of the overall O_3 control strategy. Many of these control measures will target mobile sources, which account for more than three-quarters of California's NO_X emissions.

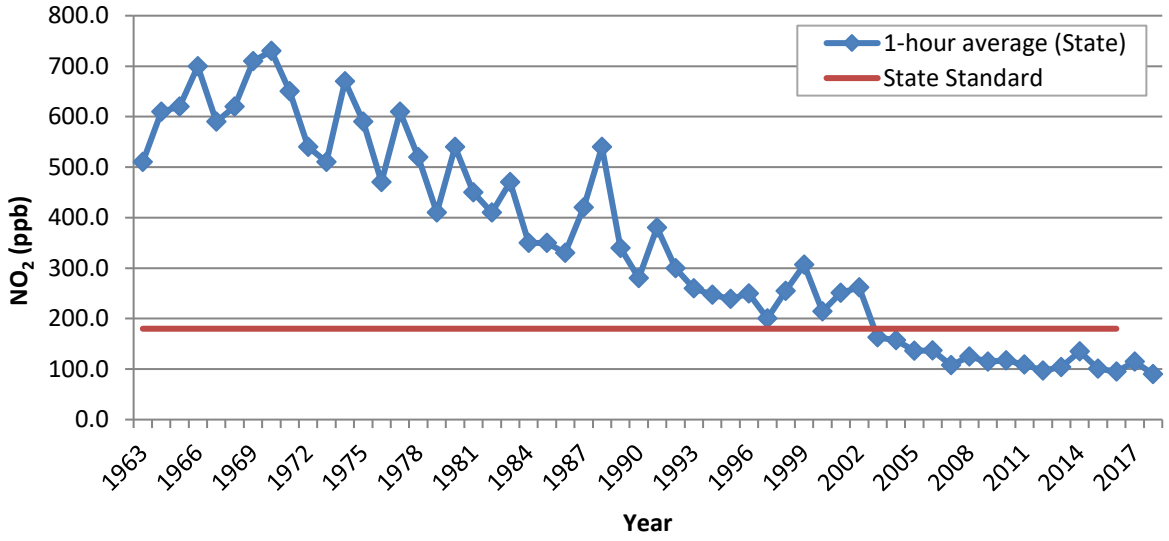
These measures are expected to bring the SCAQMD into attainment of the state annual average standard.

TABLE 2-11: SCAB 1-HOUR AVERAGE CONCENTRATION NO_2 TREND (BASED ON FEDERAL STANDARD)



Source: CARB

TABLE 2-12: SCAB 1-HOUR AVERAGE CONCENTRATION NO_2 TREND (BASED ON STATE STANDARD)



Source: CARB

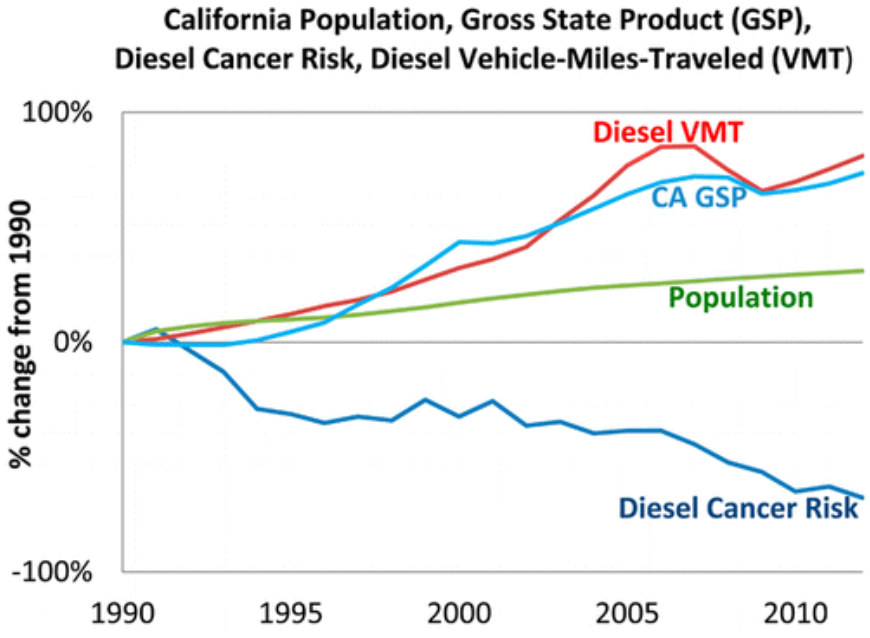
The American Lung Association website includes data collected from state air quality monitors that are used to compile an annual State of the Air Report. The latest State of the Air Report compiled for the SCAB was in 2018 (29). As noted in this report, air quality in the SCAB has significantly improved in terms of both pollution levels and high pollution days over the past three decades. The area's average number of high O_3 days dropped from 230 days in the initial 2000

Mobile Source TACs

CARB introduced two programs that aimed at reducing mobile emissions for light and medium duty vehicles through vehicle emissions controls and cleaner fuel. In California, light-duty vehicles sold after 1996 are equipped with California's second-generation On-Board Diagnostic (OBD-II) system. The OBD-II system monitors virtually every component that can affect the emission performance of the vehicle to ensure that the vehicle remains as clean as possible over its entire life and assists repair technicians in diagnosing and fixing problems with the computerized engine controls. If a problem is detected, the OBD-II system illuminates a warning lamp on the vehicle instrument panel to alert the driver. This warning lamp typically contains the phrase Check Engine or Service Engine Soon. The system will also store important information about the detected malfunction so that a repair technician can accurately find and fix the problem. ARB has recently developed similar OBD requirements for heavy-duty vehicles over 14,000 lbs. CARB's phase II Reformulated Gasoline Regulation (RFG-2), adopted in 1996, also led to a reduction of mobile source emissions. Through such regulations, benzene levels declined 88% from 1990-2012. 1,3-Butadiene concentrations also declined 85% from 1990-2012 as a result of the use of reformulated gasoline and motor vehicle regulations (30).

In 2000, CARB's Diesel Risk Reduction Plan (DRRP) recommended the replacement and retrofit of diesel-fueled engines and the use of ultra-low-sulfur (<15ppm) diesel fuel. As a result of these measures, DPM concentrations have declined 68% since 2000, even though the state's population increased 31% and the amount of diesel vehicles miles traveled increased 81%, as shown on Exhibit 2-B. With the implementation of these diesel-related control regulations, ARB expects a DPM decline of 71% for 2000-2020.

EXHIBIT 2-B: DIESEL PARTICULATE MATTER AND DIESEL VEHICLE MILES TREND



Source: CARB

DIESEL REGULATIONS

The CARB and the Ports of Los Angeles and Long Beach (POLA and POLB) have adopted several iterations of regulations for diesel trucks that are aimed at reducing DPM. More specifically, the CARB Drayage Truck Regulation (31), the CARB statewide On-road Truck and Bus Regulation (32), and the Ports of Los Angeles and Long Beach "Clean Truck Program" (CTP) require accelerated implementation of "clean trucks" into the statewide truck fleet (33). In other words, older more polluting trucks will be replaced with newer, cleaner trucks as a function of these regulatory requirements.

Moreover, the average statewide DPM emissions for Heavy Duty Trucks (HDT), in terms of grams of DPM generated per mile traveled, will dramatically be reduced due to the aforementioned regulatory requirements.

Diesel emissions identified in this analysis would therefore overstate future DPM emissions since not all the regulatory requirements are reflected in the modeling.

CANCER RISK TRENDS

Based on information available from CARB, overall cancer risk throughout the SCAB has had a declining trend since 1990. In 1998, following an exhaustive 10-year scientific assessment process, CARB identified particulate matter from diesel-fueled engines as a toxic air contaminant. The SCAQMD initiated a comprehensive urban toxic air pollution study called the Multiple Air Toxics Exposure Study (MATES). DPM accounts for more than 70 percent of the cancer risk.

In 2008 the SCAQMD prepared an update to the MATES-II study, referred to as MATES-III. MATES-III estimates the average excess cancer risk level from exposure to TACs is an approximately 17% decrease in comparison to the MATES-II study.

In 2015, the SCAQMD published an in-depth analysis of the toxic air contaminants and the resulting health risks for all of Southern California. The *Multiple Air Toxics Exposure Study in the SCAB, MATES IV,"* which shows that cancer risk has decreased less than 50% since MATES III (2005) (34).

MATES-IV study represents the baseline health risk for a cumulative analysis. MATES-IV calculated cancer risks based on monitoring data collected at ten fixed sites within the SCAB. None of the fixed monitoring sites are within the local area of the Project site. However, MATES-IV has extrapolated the excess cancer risk levels throughout the SCAB by modeling the specific grids. MATES-IV modeling predicted an excess cancer risk of 439.68 in one million[3] for the geographic grid containing the Project site. DPM is included in this cancer risk along with all other TAC sources. DPM accounts for 68% of the total risk shown in MATES-IV. Cumulative Project generated TACs are limited to DPM.

[3] The cancer risk is determined by locating the quadrant in which the Project site is located within. The Project is located within two (2) different quadrants. For purposes of analysis, the quadrant with the higher risk has been used in this report.

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3.3 CALIFORNIA EMISSIONS ESTIMATOR MODEL™ EMPLOYED TO ANALYZE AIR QUALITY

Land uses such as the Project affect air quality through construction-source and operational-source emissions.

On October 17, 2017, the SCAQMD in conjunction with the California Air Pollution Control Officers Association (CAPCOA) and other California air districts, released the latest version of the California Emissions Estimator Model™ (CalEEMod) v2016.3.2. The purpose of this model is to calculate construction-source and operational-source criteria pollutant (VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$) and GHG emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation measures (37). Accordingly, the latest version of CalEEMod has been used for this Project to determine construction and operational air quality emissions. Output from the model runs for both construction and operational activity are provided in Appendices 3.1 through 3.3.

3.3.1 EMISSION FACTORS MODEL

On August 19, 2019, the EPA approved the 2017 version of the Emission Factor model (EMFAC) web database for use in State Implementation Plan and transportation conformity analyses. EMFAC2017 is a mathematical model that was developed to calculate emission rates, fuel consumption, VMT from motor vehicles that operate on highways, freeways, and local roads in California and is commonly used by the CARB to project changes in future emissions from on-road mobile sources (38). This AQIA utilizes summer, winter, and annual EMFAC2017 emission factors in order to derive vehicle emissions associated with Project operational activities, which vary by season.

3.3.2 LAND USES MODELED IN CALEEMOD

The Project is located on 39.10-net acres. As per information provided by the Project applicant, the Project is proposed to consist of 97,400 square feet (sf) of truck terminal use to include a 134 door cross-dock (this includes future expansion), a two-story office building, a line-haul building, a truck maintenance building, and a fuel station for project trucks. It should be noted that CalEEMod does not provide an extensive selection of land use subtype categories, land uses that most closely fit the Project will be utilized. For purposes of analysis, the following land uses were modeled (39):

- 97.400 thousand square feet (TSF)/2.24 acres of Unrefrigerated Warehouse – No Rail[4]
- 1,605.796 TSF/36.86 acres Other Asphalt Surfaces[5]

[4] The User's Guide defines Unrefrigerated Warehouse – No Rail uses as warehouse uses that do not have refrigeration and no rail spur. For purposes of analysis, this category is used to model the proposed Project's 97,400 sf/2.24 acre of truck terminal use.

[5] For purposes of analysis, the remaining 1,605,796 sf/36.86 acres will be modeled as Other Asphalt Surfaces. These surfaces are defined as an asphalt area not used as a parking lot.

3.4 CONSTRUCTION EMISSIONS

Construction activities associated with the Project will result in emissions of VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$. Construction related emissions are expected from the following construction activities:

- Rough Grading
- Site Preparation
- Fine Grading
- Building Construction
- Paving
- Architectural Coating

Grading Activities

Dust is typically a major concern during grading activities. Because such emissions are not amenable to collection and discharge through a controlled source, they are called "fugitive emissions". Fugitive dust emissions rates vary as a function of many parameters (soil silt, soil moisture, wind speed, area disturbed, number of vehicles, depth of disturbance or excavation, etc.). CalEEMod was utilized to calculate fugitive dust emissions resulting from this phase of activity. Based on information provided by the Project applicant, the Project will require 157,593 cubic yards of cut and 157,593 cubic yards of fill resulting in a balanced site.

Construction Worker Vehicle Trips

Construction emissions for construction worker vehicles traveling to and from the Project site, as well as vendor trips (construction materials delivered to the Project site) were estimated based on information from CalEEMod defaults.

3.4.1 CONSTRUCTION DURATION

Construction is expected to commence in June 2020 and will last through March 2021. The construction schedule utilized in the analysis, shown in Table 3-2, represents a "worst-case" analysis scenario should construction occur any time after the respective dates since emission factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent.[6] The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per *CEQA Guidelines*. The duration of construction activity was based on the 2021 opening year.

[6] As shown in the CalEEMod User's Guide Version 2016.3.2, Section 4.3 "Offroad Equipment" as the analysis year increases, emission factors for the same equipment pieces decrease due to the natural turnover of older equipment being replaced by newer less polluting equipment and new regulatory requirements.

TABLE 3-2: CONSTRUCTION DURATION

Phase Name	Start Date	End Date	Days
Rough Grading	06/04/2020	07/29/2020	40
Site Preparation	07/30/2020	09/30/2020	45
Fine Grading	10/01/2020	10/28/2020	20
Building Construction	10/29/2020	03/24/2021	105
Paving	01/07/2021	03/24/2021	55
Architectural Coating	01/07/2021	03/24/2021	55

Source: Construction activity based upon information provided by the Project applicant and a 2021 Opening Year.

3.4.2 CONSTRUCTION EQUIPMENT

Site specific construction fleet may vary due to specific project needs at the time of construction. The associated construction equipment was generally based on CalEEMod 2016.3.2 defaults, and the Project applicant has confirmed that the equipment list is reasonable for the Project's construction. A detailed summary of construction equipment by phase is provided in Table 3-3.

TABLE 3-3: CONSTRUCTION EQUIPMENT ASSUMPTIONS (1 OF 2)

Activity	Equipment	Amount	Hours Per Day
Rough Grading	Crawler Tractors	2	8
	Excavators	2	8
	Graders	1	8
	Rubber Tired Dozers	1	8
	Scrapers	2	8
Site Preparation	Crawler Tractors	4	8
	Rubber Tired Dozers	3	8
Fine Grading	Crawler Tractors	2	8
	Excavators	2	8
	Graders	1	8
	Rubber Tired Dozers	1	8
	Scrapers	2	8
Building Construction	Cranes	1	8
	Crawler Tractors	3	8
	Forklifts	3	8
	Generator Sets	1	8
	Welders	1	8

TABLE 3-3: CONSTRUCTION EQUIPMENT ASSUMPTIONS (2 OF 2)

Activity	Equipment	Amount	Hours Per Day
Paving	Pavers	2	8
	Paving Equipment	2	8
	Rollers	2	8
Architectural Coating	Air Compressors	1	8

In order to account for fugitive dust emissions associated with Site Preparation and Grading activities, Crawler Tractors were used in lieu of Tractors/Loaders/Backhoes.

3.4.3 CONSTRUCTION EMISSIONS SUMMARY

Impacts without Mitigation

CalEEMod calculates maximum daily emissions for summer and winter periods. The estimated maximum daily construction emissions without mitigation are summarized on Table 3-4. Detailed construction model outputs are presented in Appendix 3.1. Under the assumed scenarios, emissions resulting from the Project construction will not exceed criteria pollutant thresholds established by the SCAQMD for emissions of any criteria pollutant.

TABLE 3-4: OVERALL CONSTRUCTION EMISSIONS SUMMARY (WITHOUT MITIGATION)

Year	Emissions (lbs/day)					
	VOC	NO_X	CO	SO_X	PM_{10}	$PM_{2.5}$
Summer						
2020	7.78	67.54	52.71	0.20	11.63	6.65
2021	23.48	77.08	72.15	0.24	13.93	5.33
Winter						
2020	7.75	67.46	48.10	0.18	11.63	6.65
2021	23.44	76.96	66.7	0.22	13.93	5.33
Maximum Daily Emissions	**23.48**	**77.08**	**72.15**	**0.24**	**13.93**	**6.65**
SCAQMD Regional Threshold	75	100	550	150	150	55
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

Source: CalEEMod construction-source (unmitigated) emissions are presented in Appendix 3.1.

3.5 OPERATIONAL EMISSIONS

Operational activities associated with the proposed Project will result in emissions of VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$. Operational emissions would be expected from the following primary sources:

- Area Source Emissions
- Energy Source Emissions
- Mobile Source Emissions

3.5.1 AREA SOURCE EMISSIONS

Architectural Coatings

Over a period of time the building that is part of this Project will be subject to emissions resulting from the evaporation of solvents contained in paints, varnishes, primers, and other surface coatings as part of Project maintenance. The emissions associated with architectural coatings were calculated using CalEEMod.

Consumer Products

Consumer products include, but are not limited to detergents, cleaning compounds, polishes, personal care products, and lawn and garden products. Many of these products contain organic compounds which when released in the atmosphere can react to form O_3 and other photochemically reactive pollutants. The emissions associated with use of consumer products were calculated based on defaults provided within CalEEMod.

Landscape Maintenance Equipment

Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shedders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Project. The emissions associated with landscape maintenance equipment were calculated based on assumptions provided in CalEEMod.

3.5.2 ENERGY SOURCE EMISSIONS

Combustion Emissions Associated with Natural Gas and Electricity

Electricity and natural gas are used by almost every project. Criteria pollutant emissions are emitted through the generation of electricity and consumption of natural gas. However, because electrical generating facilities for the Project area are located either outside the region (state) or offset through the use of pollution credits (RECLAIM) for generation within the SCAB, criteria pollutant emissions from offsite generation of electricity is generally excluded from the evaluation of significance and only natural gas use is considered. The emissions associated with natural gas use were calculated using CalEEMod.

3.5.5 OPERATIONAL EMISSIONS SUMMARY

Impacts without Mitigation

As previously stated, CalEEMod utilizes summer and winter EMFAC2017 emission factors in order to derive vehicle emissions associated with Project operational activities, which vary by season. As such, operational activities for summer and winter scenarios are presented in Table 3-5. Detailed construction model outputs are presented in Appendices 3.2 and 3.3. As indicated, Project operation-source emissions would not exceed the SCAQMD regional thresholds of significance for any criteria pollutants. Therefore, a less than significant impact is expected, and no mitigation measures are required.

TABLE 3-5: SUMMARY OF PEAK OPERATIONAL EMISSIONS

Operational Activities – Summer Scenario	**Emissions (lbs/day)**					
	VOC	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Area Source	2.88	1.60e-03	0.17	1.00e-05	6.20e-04	6.20e-04
Energy Source	4.12e-03	0.04	0.03	2.20e-04	2.84e-03	2.84e-03
Mobile Source (Passenger Cars)	0.66	0.56	9.56	0.03	2.86	0.77
Mobile Source (Trucks)	0.67	26.68	4.50	0.10	3.54	1.24
Total Maximum Daily Emissions	**4.22**	**27.28**	**14.27**	**0.13**	**6.40**	**2.02**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**
Operational Activities – Winter Scenario	**Emissions (lbs/day)**					
	VOC	**NO_X**	**CO**	**SO_X**	**PM_{10}**	**$PM_{2.5}$**
Area Source	2.88	1.60e-03	0.17	1.00e-05	6.20e-04	6.20e-04
Energy Source	4.12e-03	0.04	0.03	2.20e-04	2.84e-03	2.84e-03
Mobile Source (Passenger Cars)	0.58	0.58	7.74	0.02	2.86	0.77
Mobile Source (Trucks)	0.65	27.85	4.27	0.10	3.54	1.24
Total Maximum Daily Emissions	**4.12**	**28.47**	**12.21**	**0.12**	**6.40**	**2.01**
SCAQMD Regional Threshold	55	55	550	150	150	55
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**	**NO**	**NO**

Source: CalEEMod operational-source emissions are presented in Appendices 3.2 and 3.3.

3.6 LOCALIZED SIGNIFICANCE - CONSTRUCTION ACTIVITY

BACKGROUND ON LOCALIZED SIGNIFICANCE THRESHOLD (LST) DEVELOPMENT

The analysis makes use of methodology included in the SCAQMD *Final Localized Significance Threshold Methodology* (LST Methodology) (41). The SCAQMD has established that impacts to air quality are significant if there is a potential to contribute or cause localized exceedances of the NAAQS and CAAQS. Collectively, these are referred to as Localized Significance Thresholds (LSTs).

The SCAQMD established LSTs in response to the SCAQMD Governing Board's Environmental Justice Initiative I-4[9]. LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable federal or state ambient air quality standard at the nearest residence or sensitive receptor. The SCAQMD states that lead agencies can use the LSTs as another indicator of significance in its air quality impact analyses.

LSTs were developed in response to environmental justice and health concerns raised by the public regarding exposure of individuals to criteria pollutants in local communities. To address the issue of localized significance, the SCAQMD adopted LSTs that show whether a project would cause or contribute to localized air quality impacts and thereby cause or contribute to potential localized adverse health effects. The analysis makes use of methodology included in the *LST Methodology* (42).

APPLICABILITY OF LSTS FOR THE PROJECT

For this Project, the appropriate SRA for the LST analysis is San Gorgonio Pass (SRA 29). LSTs apply to CO, NO_2, PM_{10}, and $PM_{2.5}$. The SCAQMD produced look-up tables for projects less than or equal to 5 acres in size.

In order to determine the appropriate methodology for determining localized impacts that could occur as a result of Project-related construction, the following process is undertaken:

- CalEEMod is utilized to determine the maximum daily on-site emissions that will occur during construction activity.
- The SCAQMD's Fact Sheet for Applying CalEEMod to Localized Significance Thresholds (43) is used to determine the maximum site acreage that is actively disturbed based on the construction equipment fleet and equipment hours as estimated in CalEEMod.
- If the total acreage disturbed is less than or equal to five acres per day, then the SCAQMD's screening look-up tables are utilized to determine if a project has the potential to result in a significant impact. The look-up tables establish a maximum daily emissions threshold in pounds per day that can be compared to CalEEMod outputs.
- If the total acreage disturbed is greater than five acres per day, then LST impacts are appropriately evaluated through dispersion modeling.

[9] The purpose of SCAQMD's Environmental Justice program is to ensure that everyone has the right to equal protection from air pollution and fair access to the decision-making process that works to improve the quality of air within their communities. Further, the SCAQMD defines Environmental Justice as "…equitable environmental policymaking and enforcement to protect the health of all residents, regardless of age, culture, ethnicity, gender, race, socioeconomic status, or geographic location, from the health effects of air pollution."

EMISSIONS CONSIDERED

SCAQMD's Methodology clearly states that "off-site mobile emissions from the Project should not be included in the emissions compared to LSTs (41)." Therefore, for purposes of the construction LST analysis, only emissions included in the CalEEMod "on-site" emissions outputs were considered.

MAXIMUM DAILY DISTURBED-ACREAGE

The "acres disturbed" for analytical purposes are based on specific equipment type for each subcategory of construction activity and the estimated maximum area a given piece of equipment can pass over in an 8-hour workday (as shown on Table 3-6). The equipment-specific disturbance rates were obtained from the CalEEMod user's guide, *Appendix A: Calculation Details for CalEEMod* (October 2017). It should be noted that the disturbed area per day is representative of a piece of equipment making multiple passes over the same land area. In other words, one Rubber Tired Dozer can make multiple passes over the same land area totaling 0.5 acres in a given 8-hour day. Based on Table 3-6, the proposed Project's construction activities could actively disturb approximately 4.0 acres per day during rough grading activities, 3.5 acres per day during site preparation activities, and 4.0 acres per day for fine grading activities.

TABLE 3-6: MAXIMUM DAILY DISTURBED-ACREAGE

Construction Phase	Equipment Type	Equipment Quantity	Acres graded per 8-hour day	Operating Hours per Day	Acres graded per day
Rough Grading	Crawler Tractors	2	0.5	8	1.0
	Graders	1	0.5	8	0.5
	Rubber Tired Dozers	1	0.5	8	0.5
	Scrapers	2	1.0	8	1.0
Total acres disturbed per day during Rough Grading					4.0
Site Preparation	Crawler Tractors	4	0.5	8	2.0
	Rubber Tired Dozers	3	0.5	8	1.5
Total acres disturbed per day during Site Preparation					3.5
Fine Grading	Crawler Tractors	2	0.5	8	1.0
	Graders	1	0.5	8	0.5
	Rubber Tired Dozers	1	0.5	8	0.5
	Scrapers	2	1.0	8	1.0
Total acres disturbed per day during Fine Grading					4.0

Sensitive Receptors

As previously stated, LSTs represent the maximum emissions from a project that will not cause or contribute to an exceedance of the most stringent applicable NAAQS and CAAQS at the nearest

This AQIA analyzes localized construction and operational emissions impacts at the nearest sensitive receptors. The nearest receptor where an individual can stay for a 24-hour period is represented by location R1, located 87 feet/27 meters southwest of the Project site boundary. The 27-meter distance will be used to evaluate construction and operational air quality impacts for emissions of PM_{10} and $PM_{2.5}$. For evaluation of localized NO_2 and CO impacts, the nearest receptor location where an individual can remain onsite for an 8-hour period is represented by location R2, located 701 feet/214 meters southwest of the Project site. As a conservative measure, the 27-meter distance used to evaluate PM_{10} and $PM_{2.5}$ will also be utilized to determine impacts of NO_2 and CO.

LOCALIZED THRESHOLDS FOR CONSTRUCTION ACTIVITY

Since the total acreage disturbed is less than five acres per day for the site preparation phase and the grading phase, the SCAQMD's screening look-up tables are utilized in determining impacts. It should be noted that since the look-up tables identifies thresholds at only 1 acre, 2 acres, and 5 acres, linear regression has been utilized, consistent with SCAQMD guidance, in order to interpolate the threshold values for the other disturbed acreage and distances not identified in the look-up tables.

TABLE 3-7: MAXIMUM DAILY LOCALIZED EMISSIONS THRESHOLDS

Pollutant	Construction	Operations
Localized Thresholds		
NO_X	209 lbs/day (Rough Grading)	238 lbs/day
	195 lbs/day (Site Preparation	
	209 lbs/day (Fine Grading)	
CO	2,446 lbs/day (Rough Grading)	2,878 lbs/day
	2,230 lbs/day (Site Preparation	
	2,446 lbs/day (Fine Grading)	
PM_{10}	20 lbs/day (Rough Grading)	7 lbs/day
	18 lbs/day (Site Preparation	
	20 lbs/day (Fine Grading)	
$PM_{2.5}$	10 lbs/day (Rough Grading)	3 lbs/day
	18 lbs/day (Site Preparation	
	10 lbs/day (Fine Grading)	

Table 3-9 shows the calculated emissions for the Project's operational activities compared with the applicable LSTs. The LST analysis includes on-site sources only; however, CalEEMod outputs do not separate on-site and off-site emissions from mobile sources. In an effort to establish a maximum potential impact scenario for analytic purposes, the emissions shown on Table 3-9 represent all on-site Project-related stationary (area) sources and five percent (5%) of the Project-related mobile sources. Considering that the trip length used in CalEEMod™ for the Project is approximately 16.6 miles for passenger cars and 40 miles for all trucks, 5% of this total would represent an on-site travel distance of approximately 0.83 miles/4,382 feet for passenger cars and 2 miles/10,560 feet for trucks.

It should be noted that the longest on-site distance from the entry to the exit is 0.80 mile for both trucks and passenger cars. As such, the 5% assumption is conservative and would tend to overstate the actual impact because it is not likely that a passenger car would drive 0.83 miles on the site or that a truck would drive 2 miles on the site. Modeling based on these assumptions demonstrates that even within broad encompassing parameters, Project operational-source emissions would not exceed applicable LSTs.

Impacts without Mitigation

As shown on Table 3-9 operational emissions will not exceed the LST thresholds for the nearest sensitive receptor. Therefore, the Project will have a less than significant localized impact during operational activity.

TABLE 3-9: LOCALIZED SIGNIFICANCE SUMMARY OF OPERATIONS (WITHOUT MITIGATION)

Operational Activity	Emissions (lbs/day)			
	NO_X	CO	PM_{10}	$PM_{2.5}$
Maximum Daily Emissions	1.46	0.91	0.32	**0.10**
SCAQMD Localized Threshold	238	2,878	7	3
Threshold Exceeded?	**NO**	**NO**	**NO**	**NO**

3.8 CO "HOT SPOT" ANALYSIS

As discussed below, the Project would not result in potentially adverse CO concentrations or "hot spots." Further, detailed modeling of Project-specific CO "hot spots" is not needed to reach this conclusion.

An adverse CO concentration, known as a "hot spot", would occur if an exceedance of the state one-hour standard of 20 ppm or the eight-hour standard of 9 ppm were to occur. At the time of the 1993 Handbook, the SCAB was designated nonattainment under the CAAQS and NAAQS for CO (44).

It has long been recognized that CO hotspots are caused by vehicular emissions, primarily when idling at congested intersections. In response, vehicle emissions standards have become increasingly stringent in the last twenty years. Currently, the allowable CO emissions standard in California is a maximum of 3.4 grams/mile for passenger cars (there are requirements for certain

Estes Banning (Construction - Unmitigated)

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	97.40	1000sqft	2.24	97,400.00	0
Other Asphalt Surfaces	1,605.80	1000sqft	36.86	1,605,796.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2021
Utility Company	Statewide Average				
CO2 Intensity (lb/MWhr)	1001.57	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Estes Banning (Construction - Unmitigated) - Riverside-South Coast County, Summer

Project Characteristics - Electricty will be provided to the Project by Banning Electric Utility (BEU). CalEEMod does not provided Intensity Factors for BEU, as such, the Statewide Average will be used.

Land Use - Total Project Area is 36.86 acres. Truck Terminal is 97,400 sf. Remaning area will be modeled as 1,605,796 sf of Other Apshalt Surfaces.

Construction Phase - Based on the Summary Schedule provided by the Project applicant.

Off-road Equipment - Hours are based on an 8-hour workday.

Off-road Equipment - Crawler Tractors used in lieu of Tractor/Loader/Backhoes.

Off-road Equipment - Crawler Tractors used in lieu of Tractor/Loader/Backhoes.

Off-road Equipment -

Off-road Equipment - Crawler Tractors used in lieu of Tractor/Loader/Backhoes.

Off-road Equipment - Crawler Tractors used in lieu of Tractor/Loader/Backhoes.

Grading - For purposes of analysis, total acres graded per day is based on the equipment specific grading rates (CalEEMod Appendix A) and the equipment list.

Architectural Coating - Rule 1113

Vehicle Trips - Construction Run Only.

Energy Use - Construction Run Only.

Water And Wastewater - Construction Run Only.

Solid Waste - Construction Run Only.

Construction Off-road Equipment Mitigation - Rule 403

Vehicle Emission Factors - EMFAC2017

Vehicle Emission Factors - EMFAC2017

Vehicle Emission Factors - EMFAC2017

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblConstructionPhase	NumDays	75.00	40.00
tblConstructionPhase	NumDays	30.00	45.00
tblConstructionPhase	NumDays	75.00	20.00

Estes Banning (Construction - Unmitigated) - Riverside-South Coast County, Summer

tblConstructionPhase	NumDays	740.00	105.00
tblEnergyUse	LightingElect	1.17	0.00
tblEnergyUse	NT24E	0.82	0.00
tblEnergyUse	NT24NG	0.03	0.00
tblEnergyUse	T24E	0.37	0.00
tblEnergyUse	T24NG	2.00	0.00
tblGrading	AcresOfGrading	140.00	160.00
tblGrading	AcresOfGrading	70.00	80.00
tblGrading	AcresOfGrading	90.00	157.50
tblLandUse	LandUseSquareFeet	1,605,800.00	1,605,796.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblSolidWaste	SolidWasteGenerationRate	91.56	0.00
tblVehicleEF	HHD	1.43	0.03
tblVehicleEF	HHD	0.03	0.02
tblVehicleEF	HHD	0.10	0.00
tblVehicleEF	HHD	3.28	7.55
tblVehicleEF	HHD	0.46	0.36
tblVehicleEF	HHD	1.46	2.9270e-003
tblVehicleEF	HHD	6,485.38	1,409.07
tblVehicleEF	HHD	1,461.92	1,350.00
tblVehicleEF	HHD	4.62	0.03

tblVehicleEF	HHD	0.07	0.07
tblVehicleEF	HHD	1.8400e-004	5.5600e-004
tblVehicleEF	HHD	0.04	1.0000e-006
tblVehicleEF	HHD	0.06	0.01
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	6.9000e-005	0.00
tblVehicleEF	HHD	1.6300e-004	8.0000e-006
tblVehicleEF	HHD	2.9560e-003	1.1800e-004
tblVehicleEF	HHD	0.92	0.69
tblVehicleEF	HHD	9.2000e-005	4.0000e-006
tblVehicleEF	HHD	0.11	0.09
tblVehicleEF	HHD	1.8400e-004	5.5600e-004
tblVehicleEF	HHD	0.05	1.0000e-006
tblVehicleEF	HHD	1.54	0.03
tblVehicleEF	HHD	0.03	3.2330e-003
tblVehicleEF	HHD	0.10	0.00
tblVehicleEF	HHD	4.51	7.76
tblVehicleEF	HHD	0.45	0.32
tblVehicleEF	HHD	1.47	2.9120e-003
tblVehicleEF	HHD	5,957.03	1,414.57
tblVehicleEF	HHD	1,461.92	1,340.32
tblVehicleEF	HHD	4.62	0.03
tblVehicleEF	HHD	25.25	7.65
tblVehicleEF	HHD	2.67	3.02
tblVehicleEF	HHD	0.02	0.01
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04

tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.13	0.15
tblVehicleEF	LDT2	0.05	0.07
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.51
tblVehicleEF	LDT2	0.11	0.38
tblVehicleEF	LHD1	5.4460e-003	4.8820e-003
tblVehicleEF	LHD1	0.01	5.3310e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	0.96	0.72
tblVehicleEF	LHD1	2.41	0.96
tblVehicleEF	LHD1	9.26	9.44
tblVehicleEF	LHD1	607.95	639.95
tblVehicleEF	LHD1	30.36	10.54
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	2.21	1.60
tblVehicleEF	LHD1	9.7200e-004	9.7000e-004
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.7100e-004	2.3300e-004
tblVehicleEF	LHD1	9.3000e-004	9.2800e-004
tblVehicleEF	LHD1	2.5390e-003	2.5010e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.0100e-004	2.1400e-004
tblVehicleEF	LHD1	3.8710e-003	3.1780e-003
tblVehicleEF	LHD1	0.10	0.08

tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	0.96	0.72
tblVehicleEF	LHD1	2.41	0.96
tblVehicleEF	LHD1	9.26	9.44
tblVehicleEF	LHD1	607.95	639.95
tblVehicleEF	LHD1	30.36	10.54
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	2.18	1.59
tblVehicleEF	LHD1	9.7200e-004	9.7000e-004
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.7100e-004	2.3300e-004
tblVehicleEF	LHD1	9.3000e-004	9.2800e-004
tblVehicleEF	LHD1	2.5390e-003	2.5010e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.0100e-004	2.1400e-004
tblVehicleEF	LHD1	3.4570e-003	2.8250e-003
tblVehicleEF	LHD1	0.11	0.09
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.7350e-003	1.4150e-003
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.33	0.53
tblVehicleEF	LHD1	0.26	0.08
tblVehicleEF	LHD1	9.3000e-005	9.1000e-005
tblVehicleEF	LHD1	5.9620e-003	6.2250e-003
tblVehicleEF	LHD1	3.4900e-004	1.0400e-004
tblVehicleEF	LHD1	3.4570e-003	2.8250e-003

tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.8700e-004	1.1400e-004
tblVehicleEF	LHD2	1.2780e-003	1.3770e-003
tblVehicleEF	LHD2	2.6970e-003	2.7110e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5600e-004	1.0500e-004
tblVehicleEF	LHD2	2.8320e-003	3.1830e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.4720e-003	1.6130e-003
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.4100e-004	1.4200e-004
tblVehicleEF	LHD2	5.8740e-003	6.1560e-003
tblVehicleEF	LHD2	2.5600e-004	7.2000e-005
tblVehicleEF	LHD2	2.8320e-003	3.1830e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.4720e-003	1.6130e-003
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	3.6660e-003	3.1700e-003
tblVehicleEF	LHD2	4.5170e-003	3.8490e-003
tblVehicleEF	LHD2	8.3600e-003	9.0930e-003

tblVehicleEF	MCY	0.92	0.90
tblVehicleEF	MCY	2.65	2.65
tblVehicleEF	MCY	0.57	1.87
tblVehicleEF	MCY	2.26	1.99
tblVehicleEF	MCY	0.42	0.32
tblVehicleEF	MCY	0.14	0.22
tblVehicleEF	MCY	20.23	20.27
tblVehicleEF	MCY	9.11	8.00
tblVehicleEF	MCY	165.74	209.26
tblVehicleEF	MCY	46.23	59.19
tblVehicleEF	MCY	0.98	0.98
tblVehicleEF	MCY	1.7750e-003	1.7570e-003
tblVehicleEF	MCY	3.4010e-003	2.8660e-003
tblVehicleEF	MCY	1.6600e-003	1.6440e-003
tblVehicleEF	MCY	3.2060e-003	2.7000e-003
tblVehicleEF	MCY	3.35	3.28
tblVehicleEF	MCY	1.24	1.23
tblVehicleEF	MCY	2.10	2.05
tblVehicleEF	MCY	2.13	2.13
tblVehicleEF	MCY	0.57	1.86
tblVehicleEF	MCY	1.86	1.63
tblVehicleEF	MCY	2.0490e-003	2.0710e-003
tblVehicleEF	MCY	6.6500e-004	5.8600e-004
tblVehicleEF	MCY	3.35	3.28
tblVehicleEF	MCY	1.24	1.23
tblVehicleEF	MCY	2.10	2.05
tblVehicleEF	MCY	2.62	2.63

tblVehicleEF	MCY	0.57	1.86
tblVehicleEF	MCY	2.02	1.77
tblVehicleEF	MCY	0.42	0.32
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	19.04	19.14
tblVehicleEF	MCY	9.62	8.49
tblVehicleEF	MCY	165.74	207.52
tblVehicleEF	MCY	46.23	60.64
tblVehicleEF	MCY	1.12	1.12
tblVehicleEF	MCY	1.7750e-003	1.7570e-003
tblVehicleEF	MCY	3.4010e-003	2.8660e-003
tblVehicleEF	MCY	1.6600e-003	1.6440e-003
tblVehicleEF	MCY	3.2060e-003	2.7000e-003
tblVehicleEF	MCY	1.60	1.59
tblVehicleEF	MCY	1.05	1.04
tblVehicleEF	MCY	0.74	0.73
tblVehicleEF	MCY	2.15	2.15
tblVehicleEF	MCY	0.65	2.12
tblVehicleEF	MCY	2.08	1.83
tblVehicleEF	MCY	2.0310e-003	2.0540e-003
tblVehicleEF	MCY	6.8100e-004	6.0000e-004
tblVehicleEF	MCY	1.60	1.59
tblVehicleEF	MCY	1.05	1.04
tblVehicleEF	MCY	0.74	0.73
tblVehicleEF	MCY	2.64	2.65
tblVehicleEF	MCY	0.65	2.12
tblVehicleEF	MCY	2.27	1.99

tblVehicleEF	MDV	0.01	5.7580e-003
tblVehicleEF	MDV	0.02	0.09
tblVehicleEF	MDV	1.42	1.20
tblVehicleEF	MDV	3.18	3.27
tblVehicleEF	MDV	488.89	421.49
tblVehicleEF	MDV	110.15	88.73
tblVehicleEF	MDV	0.17	0.12
tblVehicleEF	MDV	1.7110e-003	1.5730e-003
tblVehicleEF	MDV	2.4630e-003	2.0550e-003
tblVehicleEF	MDV	1.5780e-003	1.4510e-003
tblVehicleEF	MDV	2.2660e-003	1.8910e-003
tblVehicleEF	MDV	0.11	0.13
tblVehicleEF	MDV	0.20	0.17
tblVehicleEF	MDV	0.09	0.11
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.25	0.45
tblVehicleEF	MDV	4.9000e-003	4.1680e-003
tblVehicleEF	MDV	1.1570e-003	8.7800e-004
tblVehicleEF	MDV	0.11	0.13
tblVehicleEF	MDV	0.20	0.17
tblVehicleEF	MDV	0.09	0.11
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.27	0.49
tblVehicleEF	MDV	0.01	6.5120e-003
tblVehicleEF	MDV	0.02	0.08

tblVehicleEF	MDV	1.73	1.46
tblVehicleEF	MDV	2.81	2.88
tblVehicleEF	MDV	530.71	447.07
tblVehicleEF	MDV	110.15	87.92
tblVehicleEF	MDV	0.16	0.11
tblVehicleEF	MDV	1.7110e-003	1.5730e-003
tblVehicleEF	MDV	2.4630e-003	2.0550e-003
tblVehicleEF	MDV	1.5780e-003	1.4510e-003
tblVehicleEF	MDV	2.2660e-003	1.8910e-003
tblVehicleEF	MDV	0.22	0.26
tblVehicleEF	MDV	0.23	0.20
tblVehicleEF	MDV	0.17	0.21
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.21	0.39
tblVehicleEF	MDV	5.3230e-003	4.4210e-003
tblVehicleEF	MDV	1.1510e-003	8.7000e-004
tblVehicleEF	MDV	0.22	0.26
tblVehicleEF	MDV	0.23	0.20
tblVehicleEF	MDV	0.17	0.21
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.23	0.43
tblVehicleEF	MDV	0.01	5.5370e-003
tblVehicleEF	MDV	0.02	0.09
tblVehicleEF	MDV	1.33	1.12
tblVehicleEF	MDV	3.24	3.34

tblVehicleEF	MH	1.55	4.18
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	1.0860e-003	0.00
tblVehicleEF	MH	3.2460e-003	4.0000e-003
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	9.9800e-004	0.00
tblVehicleEF	MH	2.87	0.00
tblVehicleEF	MH	0.10	0.00
tblVehicleEF	MH	1.06	0.00
tblVehicleEF	MH	0.10	0.07
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.34	0.00
tblVehicleEF	MH	9.9470e-003	8.9030e-003
tblVehicleEF	MH	6.7400e-004	0.00
tblVehicleEF	MH	2.87	0.00
tblVehicleEF	MH	0.10	0.00
tblVehicleEF	MH	1.06	0.00
tblVehicleEF	MH	0.13	0.08
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.37	0.00
tblVehicleEF	MH	0.03	3.3370e-003
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	2.70	0.34
tblVehicleEF	MH	6.02	0.00
tblVehicleEF	MH	1,002.10	941.76
tblVehicleEF	MH	57.67	0.00

tblVehicleEF	MH	1.65	4.38
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	1.0860e-003	0.00
tblVehicleEF	MH	3.2460e-003	4.0000e-003
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	9.9800e-004	0.00
tblVehicleEF	MH	1.58	0.00
tblVehicleEF	MH	0.10	0.00
tblVehicleEF	MH	0.53	0.00
tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.35	0.00
tblVehicleEF	MH	9.9460e-003	8.9030e-003
tblVehicleEF	MH	6.8200e-004	0.00
tblVehicleEF	MH	1.58	0.00
tblVehicleEF	MH	0.10	0.00
tblVehicleEF	MH	0.53	0.00
tblVehicleEF	MH	0.13	0.08
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.39	0.00
tblVehicleEF	MHD	0.02	3.1500e-003
tblVehicleEF	MHD	3.7220e-003	5.9790e-003
tblVehicleEF	MHD	0.06	8.4870e-003
tblVehicleEF	MHD	0.35	0.34
tblVehicleEF	MHD	0.28	0.57
tblVehicleEF	MHD	6.06	1.01

tblVehicleEF	MHD	151.96	74.93
tblVehicleEF	MHD	1,066.63	1,001.03
tblVehicleEF	MHD	55.49	8.18
tblVehicleEF	MHD	0.65	0.69
tblVehicleEF	MHD	0.99	2.37
tblVehicleEF	MHD	1.0680e-003	2.4180e-003
tblVehicleEF	MHD	6.4490e-003	0.08
tblVehicleEF	MHD	7.8800e-004	9.6000e-005
tblVehicleEF	MHD	1.0220e-003	2.3130e-003
tblVehicleEF	MHD	6.1670e-003	0.08
tblVehicleEF	MHD	7.2400e-004	8.8000e-005
tblVehicleEF	MHD	1.7450e-003	7.1900e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	8.5800e-004	3.5500e-004
tblVehicleEF	MHD	0.03	0.11
tblVehicleEF	MHD	0.02	0.10
tblVehicleEF	MHD	0.37	0.05
tblVehicleEF	MHD	1.4610e-003	7.1000e-004
tblVehicleEF	MHD	0.01	9.5290e-003
tblVehicleEF	MHD	6.6100e-004	8.1000e-005
tblVehicleEF	MHD	1.7450e-003	7.1900e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	8.5800e-004	3.5500e-004
tblVehicleEF	MHD	0.04	0.12
tblVehicleEF	MHD	0.02	0.10

tblVehicleEF	MHD	0.40	0.05
tblVehicleEF	MHD	0.02	2.9880e-003
tblVehicleEF	MHD	3.7740e-003	6.0080e-003
tblVehicleEF	MHD	0.05	8.2030e-003
tblVehicleEF	MHD	0.26	0.28
tblVehicleEF	MHD	0.28	0.57
tblVehicleEF	MHD	5.78	0.96
tblVehicleEF	MHD	160.96	76.44
tblVehicleEF	MHD	1,066.63	1,001.04
tblVehicleEF	MHD	55.49	8.10
tblVehicleEF	MHD	0.67	0.70
tblVehicleEF	MHD	0.93	2.23
tblVehicleEF	MHD	9.0000e-004	2.0410e-003
tblVehicleEF	MHD	6.4490e-003	0.08
tblVehicleEF	MHD	7.8800e-004	9.6000e-005
tblVehicleEF	MHD	8.6100e-004	1.9530e-003
tblVehicleEF	MHD	6.1670e-003	0.08
tblVehicleEF	MHD	7.2400e-004	8.8000e-005
tblVehicleEF	MHD	3.3760e-003	1.3770e-003
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	1.6840e-003	7.0100e-004
tblVehicleEF	MHD	0.03	0.11
tblVehicleEF	MHD	0.02	0.11
tblVehicleEF	MHD	0.36	0.04
tblVehicleEF	MHD	1.5460e-003	7.2500e-004
tblVehicleEF	MHD	0.01	9.5290e-003

tblVehicleEF	MHD	6.5600e-004	8.0000e-005
tblVehicleEF	MHD	3.3760e-003	1.3770e-003
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	1.6840e-003	7.0100e-004
tblVehicleEF	MHD	0.04	0.12
tblVehicleEF	MHD	0.02	0.11
tblVehicleEF	MHD	0.39	0.05
tblVehicleEF	MHD	0.02	3.3820e-003
tblVehicleEF	MHD	3.6890e-003	5.9600e-003
tblVehicleEF	MHD	0.06	8.5610e-003
tblVehicleEF	MHD	0.49	0.43
tblVehicleEF	MHD	0.27	0.57
tblVehicleEF	MHD	6.14	1.02
tblVehicleEF	MHD	139.53	72.84
tblVehicleEF	MHD	1,066.63	1,001.03
tblVehicleEF	MHD	55.49	8.20
tblVehicleEF	MHD	0.62	0.67
tblVehicleEF	MHD	0.98	2.35
tblVehicleEF	MHD	1.2990e-003	2.9380e-003
tblVehicleEF	MHD	6.4490e-003	0.08
tblVehicleEF	MHD	7.8800e-004	9.6000e-005
tblVehicleEF	MHD	1.2430e-003	2.8110e-003
tblVehicleEF	MHD	6.1670e-003	0.08
tblVehicleEF	MHD	7.2400e-004	8.8000e-005
tblVehicleEF	MHD	1.3320e-003	5.6300e-004
tblVehicleEF	MHD	0.05	0.02

tblVehicleEF	OBUS	5.76	2.41
tblVehicleEF	OBUS	78.48	73.81
tblVehicleEF	OBUS	1,098.07	1,407.25
tblVehicleEF	OBUS	70.10	20.57
tblVehicleEF	OBUS	0.36	0.45
tblVehicleEF	OBUS	1.04	1.59
tblVehicleEF	OBUS	1.0200e-004	1.5000e-003
tblVehicleEF	OBUS	6.0450e-003	0.04
tblVehicleEF	OBUS	8.2300e-004	1.9000e-004
tblVehicleEF	OBUS	9.8000e-005	1.4350e-003
tblVehicleEF	OBUS	5.7680e-003	0.04
tblVehicleEF	OBUS	7.5700e-004	1.7400e-004
tblVehicleEF	OBUS	4.0690e-003	4.7330e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	1.7890e-003	2.1320e-003
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.05	0.26
tblVehicleEF	OBUS	0.37	0.12
tblVehicleEF	OBUS	7.6100e-004	7.0400e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.0200e-004	2.0400e-004
tblVehicleEF	OBUS	4.0690e-003	4.7330e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	1.7890e-003	2.1320e-003
tblVehicleEF	OBUS	0.05	0.11

tblVehicleEF	OBUS	0.05	0.26
tblVehicleEF	OBUS	0.40	0.13
tblVehicleEF	OBUS	0.01	8.9200e-003
tblVehicleEF	OBUS	8.0660e-003	8.4690e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.28	0.53
tblVehicleEF	OBUS	0.54	0.92
tblVehicleEF	OBUS	6.22	2.60
tblVehicleEF	OBUS	70.30	72.56
tblVehicleEF	OBUS	1,098.07	1,407.21
tblVehicleEF	OBUS	70.10	20.90
tblVehicleEF	OBUS	0.34	0.44
tblVehicleEF	OBUS	1.11	1.68
tblVehicleEF	OBUS	1.4700e-004	2.1560e-003
tblVehicleEF	OBUS	6.0450e-003	0.04
tblVehicleEF	OBUS	8.2300e-004	1.9000e-004
tblVehicleEF	OBUS	1.4100e-004	2.0620e-003
tblVehicleEF	OBUS	5.7680e-003	0.04
tblVehicleEF	OBUS	7.5700e-004	1.7400e-004
tblVehicleEF	OBUS	1.8870e-003	2.3830e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	8.5400e-004	1.0620e-003
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.05	0.27
tblVehicleEF	OBUS	0.39	0.13
tblVehicleEF	OBUS	6.8300e-004	6.9200e-004

tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.6100e-004	6.1000e-005
tblVehicleEF	SBUS	4.1680e-003	1.1480e-003
tblVehicleEF	SBUS	0.03	8.8290e-003
tblVehicleEF	SBUS	1.35	0.52
tblVehicleEF	SBUS	2.1000e-003	6.0300e-004
tblVehicleEF	SBUS	0.13	0.11
tblVehicleEF	SBUS	0.02	0.06
tblVehicleEF	SBUS	0.41	0.05
tblVehicleEF	UBUS	1.51	3.35
tblVehicleEF	UBUS	0.09	0.02
tblVehicleEF	UBUS	8.45	26.05
tblVehicleEF	UBUS	15.26	1.50
tblVehicleEF	UBUS	1,822.40	1,617.71
tblVehicleEF	UBUS	153.45	18.08
tblVehicleEF	UBUS	4.95	0.32
tblVehicleEF	UBUS	0.50	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.06	2.9340e-003
tblVehicleEF	UBUS	1.4200e-003	1.6100e-004
tblVehicleEF	UBUS	0.21	0.04
tblVehicleEF	UBUS	3.0000e-003	5.4780e-003
tblVehicleEF	UBUS	0.05	2.7920e-003
tblVehicleEF	UBUS	1.3060e-003	1.4800e-004
tblVehicleEF	UBUS	9.7430e-003	1.6370e-003
tblVehicleEF	UBUS	0.11	9.7740e-003
tblVehicleEF	UBUS	4.7860e-003	7.1300e-004

tblVehicleEF	UBUS	1.3060e-003	1.4800e-004
tblVehicleEF	UBUS	8.9770e-003	1.7200e-003
tblVehicleEF	UBUS	0.13	0.01
tblVehicleEF	UBUS	4.3820e-003	7.5400e-004
tblVehicleEF	UBUS	0.52	0.05
tblVehicleEF	UBUS	0.03	0.05
tblVehicleEF	UBUS	1.18	0.07
tblVehicleEF	UBUS	9.9960e-003	4.8690e-003
tblVehicleEF	UBUS	1.8130e-003	1.7900e-004
tblVehicleEF	UBUS	8.9770e-003	1.7200e-003
tblVehicleEF	UBUS	0.13	0.01
tblVehicleEF	UBUS	4.3820e-003	7.5400e-004
tblVehicleEF	UBUS	2.08	3.43
tblVehicleEF	UBUS	0.03	0.05
tblVehicleEF	UBUS	1.29	0.08
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TTP	41.00	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TTP	59.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	0.00
tblVehicleTrips	ST_TR	1.68	0.00

tblVehicleTrips	SU_TR	1.68	0.00
tblVehicleTrips	WD_TR	1.68	0.00
tblWater	IndoorWaterUseRate	22,523,750.00	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	7.7793	67.5356	52.7102	0.1950	21.9792	2.7887	24.7680	10.3848	2.5656	12.9505	0.0000	19,674.3674	19,674.3674	2.2454	0.0000	19,722.0189
2021	23.4751	77.0971	72.1541	0.2354	11.5446	2.3861	13.9307	3.1023	2.2264	5.3287	0.0000	23,615.8835	23,615.8835	2.6276	0.0000	23,681.5722
Maximum	**23.4751**	**77.0971**	**72.1541**	**0.2354**	**21.9792**	**2.7887**	**24.7680**	**10.3848**	**2.5656**	**12.9505**	**0.0000**	**23,615.8835**	**23,615.8835**	**2.6276**	**0.0000**	**23,681.5722**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	7.7793	67.5356	52.7102	0.1950	9.7786	2.7887	11.6276	4.0826	2.5656	6.6483	0.0000	19,674.3674	19,674.3674	2.2454	0.0000	19,722.0189
2021	23.4751	77.0971	72.1541	0.2354	11.5446	2.3861	13.9307	3.1023	2.2264	5.3287	0.0000	23,615.8835	23,615.8835	2.6276	0.0000	23,681.5722
Maximum	**23.4751**	**77.0971**	**72.1541**	**0.2354**	**11.5446**	**2.7887**	**13.9307**	**4.0826**	**2.5656**	**6.6483**	**0.0000**	**23,615.8835**	**23,615.8835**	**2.6276**	**0.0000**	**23,681.5722**

	ROG	NOx	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**	**36.39**	**0.00**	**33.96**	**46.73**	**0.00**	**34.48**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.8833	1.6000e-003	0.1746	1.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004		0.3728	0.3728	9.9000e-004		0.3975
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**2.8833**	**1.6000e-003**	**0.1746**	**1.0000e-005**	**0.0000**	**6.2000e-004**	**6.2000e-004**	**0.0000**	**6.2000e-004**	**6.2000e-004**		**0.3728**	**0.3728**	**9.9000e-004**	**0.0000**	**0.3975**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.8833	1.6000e-003	0.1746	1.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004		0.3728	0.3728	9.9000e-004		0.3975
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**2.8833**	**1.6000e-003**	**0.1746**	**1.0000e-005**	**0.0000**	**6.2000e-004**	**6.2000e-004**	**0.0000**	**6.2000e-004**	**6.2000e-004**		**0.3728**	**0.3728**	**9.9000e-004**	**0.0000**	**0.3975**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Rough Grading	Grading	6/4/2020	7/29/2020	5	40	
2	Site Preparation	Site Preparation	7/30/2020	9/30/2020	5	45	
3	Fine Grading	Grading	10/1/2020	10/28/2020	5	20	
4	Building Construction	Building Construction	10/29/2020	3/24/2021	5	105	
5	Paving	Paving	1/7/2021	3/24/2021	5	55	
6	Architectural Coating	Architectural Coating	1/7/2021	3/24/2021	5	55	

Acres of Grading (Site Preparation Phase): 157.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 36.86

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 146,100; Non-Residential Outdoor: 48,700; Striped Parking Area: 96,348 (Architectural Coating – sqft)

OffRoad Equipment

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
Rough Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	715.00	279.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	143.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Rough Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					10.2641	0.0000	10.2641	3.7683	0.0000	3.7683			0.0000			0.0000
Off-Road	5.1888	60.8826	32.3988	0.0715		2.4690	2.4690		2.2714	2.2714		6,925.1051	6,925.1051	2.2397		6,981.0981
Total	**5.1888**	**60.8826**	**32.3988**	**0.0715**	**10.2641**	**2.4690**	**12.7331**	**3.7683**	**2.2714**	**6.0397**		**6,925.1051**	**6,925.1051**	**2.2397**		**6,981.0981**

3.2 Rough Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1018	0.0602	0.8064	2.2100e-003	0.2236	1.3500e-003	0.2249	0.0593	1.2500e-003	0.0605		220.3189	220.3189	5.6500e-003		220.4601
Total	**0.1018**	**0.0602**	**0.8064**	**2.2100e-003**	**0.2236**	**1.3500e-003**	**0.2249**	**0.0593**	**1.2500e-003**	**0.0605**		**220.3189**	**220.3189**	**5.6500e-003**		**220.4601**

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					4.0030	0.0000	4.0030	1.4696	0.0000	1.4696			0.0000			0.0000
Off-Road	5.1888	60.8826	32.3988	0.0715		2.4690	2.4690		2.2714	2.2714	0.0000	6,925.1051	6,925.1051	2.2397		6,981.0981
Total	**5.1888**	**60.8826**	**32.3988**	**0.0715**	**4.0030**	**2.4690**	**6.4720**	**1.4696**	**2.2714**	**3.7411**	**0.0000**	**6,925.1051**	**6,925.1051**	**2.2397**		**6,981.0981**

3.3 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0916	0.0542	0.7258	1.9900e-003	0.2012	1.2200e-003	0.2024	0.0534	1.1200e-003	0.0545		198.2870	198.2870	5.0800e-003		198.4141
Total	**0.0916**	**0.0542**	**0.7258**	**1.9900e-003**	**0.2012**	**1.2200e-003**	**0.2024**	**0.0534**	**1.1200e-003**	**0.0545**		**198.2870**	**198.2870**	**5.0800e-003**		**198.4141**

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					8.4934	0.0000	8.4934	4.0293	0.0000	4.0293			0.0000			0.0000
Off-Road	5.5539	63.7874	22.3947	0.0570		2.7875	2.7875		2.5645	2.5645	0.0000	5,523.5812	5,523.5812	1.7864		5,568.2421
Total	**5.5539**	**63.7874**	**22.3947**	**0.0570**	**8.4934**	**2.7875**	**11.2809**	**4.0293**	**2.5645**	**6.5938**	**0.0000**	**5,523.5812**	**5,523.5812**	**1.7864**		**5,568.2421**

3.3 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0916	0.0542	0.7258	1.9900e-003	0.2012	1.2200e-003	0.2024	0.0534	1.1200e-003	0.0545		198.2870	198.2870	5.0800e-003		198.4141
Total	**0.0916**	**0.0542**	**0.7258**	**1.9900e-003**	**0.2012**	**1.2200e-003**	**0.2024**	**0.0534**	**1.1200e-003**	**0.0545**		**198.2870**	**198.2870**	**5.0800e-003**		**198.4141**

3.4 Fine Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					10.2641	0.0000	10.2641	3.7683	0.0000	3.7683			0.0000			0.0000
Off-Road	5.1888	60.8826	32.3988	0.0715		2.4690	2.4690		2.2714	2.2714		6,925.1051	6,925.1051	2.2397		6,981.0981
Total	**5.1888**	**60.8826**	**32.3988**	**0.0715**	**10.2641**	**2.4690**	**12.7331**	**3.7683**	**2.2714**	**6.0397**		**6,925.1051**	**6,925.1051**	**2.2397**		**6,981.0981**

3.4 Fine Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1018	0.0602	0.8064	2.2100e-003	0.2236	1.3500e-003	0.2249	0.0593	1.2500e-003	0.0605		220.3189	220.3189	5.6500e-003		220.4601
Total	**0.1018**	**0.0602**	**0.8064**	**2.2100e-003**	**0.2236**	**1.3500e-003**	**0.2249**	**0.0593**	**1.2500e-003**	**0.0605**		**220.3189**	**220.3189**	**5.6500e-003**		**220.4601**

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					4.0030	0.0000	4.0030	1.4696	0.0000	1.4696			0.0000			0.0000
Off-Road	5.1888	60.8826	32.3988	0.0715		2.4690	2.4690		2.2714	2.2714	0.0000	6,925.1051	6,925.1051	2.2397		6,981.0981
Total	**5.1888**	**60.8826**	**32.3988**	**0.0715**	**4.0030**	**2.4690**	**6.4720**	**1.4696**	**2.2714**	**3.7411**	**0.0000**	**6,925.1051**	**6,925.1051**	**2.2397**		**6,981.0981**

3.4 Fine Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.1018	0.0602	0.8064	2.2100e-003	0.2236	1.3500e-003	0.2249	0.0593	1.2500e-003	0.0605		220.3189	220.3189	5.6500e-003		220.4601
Total	**0.1018**	**0.0602**	**0.8064**	**2.2100e-003**	**0.2236**	**1.3500e-003**	**0.2249**	**0.0593**	**1.2500e-003**	**0.0605**		**220.3189**	**220.3189**	**5.6500e-003**		**220.4601**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.3632	36.6770	18.6286	0.0430		1.6373	1.6373		1.5290	1.5290		4,114.5597	4,114.5597	1.1279		4,142.7566
Total	**3.3632**	**36.6770**	**18.6286**	**0.0430**		**1.6373**	**1.6373**		**1.5290**	**1.5290**		**4,114.5597**	**4,114.5597**	**1.1279**		**4,142.7566**

3.5 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7776	28.7068	5.2517	0.0729	1.7866	0.1633	1.9499	0.5144	0.1562	0.6706		7,683.4068	7,683.4068	0.5763		7,697.8140
Worker	3.6385	2.1518	28.8299	0.0791	7.9920	0.0484	8.0404	2.1195	0.0446	2.1641		7,876.4010	7,876.4010	0.2019		7,881.4482
Total	**4.4161**	**30.8586**	**34.0816**	**0.1520**	**9.7786**	**0.2117**	**9.9903**	**2.6339**	**0.2008**	**2.8347**		**15,559.8077**	**15,559.8077**	**0.7782**		**15,579.2623**

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	3.3632	36.6770	18.6286	0.0430		1.6373	1.6373		1.5290	1.5290	0.0000	4,114.5597	4,114.5597	1.1279		4,142.7566
Total	**3.3632**	**36.6770**	**18.6286**	**0.0430**		**1.6373**	**1.6373**		**1.5290**	**1.5290**	**0.0000**	**4,114.5597**	**4,114.5597**	**1.1279**		**4,142.7566**

3.5 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.7776	28.7068	5.2517	0.0729	1.7866	0.1633	1.9499	0.5144	0.1562	0.6706		7,683.4068	7,683.4068	0.5763		7,697.8140
Worker	3.6385	2.1518	28.8299	0.0791	7.9920	0.0484	8.0404	2.1195	0.0446	2.1641		7,876.4010	7,876.4010	0.2019		7,881.4482
Total	**4.4161**	**30.8586**	**34.0816**	**0.1520**	**9.7786**	**0.2117**	**9.9903**	**2.6339**	**0.2008**	**2.8347**		**15,559.8077**	**15,559.8077**	**0.7782**		**15,579.2623**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1137	33.9659	18.1952	0.0430		1.4763	1.4763		1.3775	1.3775		4,114.4297	4,114.4297	1.1209		4,142.4520
Total	**3.1137**	**33.9659**	**18.1952**	**0.0430**		**1.4763**	**1.4763**		**1.3775**	**1.3775**		**4,114.4297**	**4,114.4297**	**1.1209**		**4,142.4520**

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.6513	25.8184	4.6065	0.0723	1.7865	0.0491	1.8357	0.5144	0.0470	0.5614		7,623.7035	7,623.7035	0.5454		7,637.3386
Worker	3.3898	1.9311	26.4344	0.0764	7.9920	0.0471	8.0391	2.1195	0.0434	2.1629		7,612.9690	7,612.9690	0.1815		7,617.5071
Total	**4.0411**	**27.7496**	**31.0408**	**0.1487**	**9.7785**	**0.0962**	**9.8748**	**2.6339**	**0.0903**	**2.7242**		**15,236.6725**	**15,236.6725**	**0.7269**		**15,254.8457**

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	3.1137	33.9659	18.1952	0.0430		1.4763	1.4763		1.3775	1.3775	0.0000	4,114.4297	4,114.4297	1.1209		4,142.4520
Total	**3.1137**	**33.9659**	**18.1952**	**0.0430**		**1.4763**	**1.4763**		**1.3775**	**1.3775**	**0.0000**	**4,114.4297**	**4,114.4297**	**1.1209**		**4,142.4520**

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.6513	25.8184	4.6065	0.0723	1.7865	0.0491	1.8357	0.5144	0.0470	0.5614		7,623.7035	7,623.7035	0.5454		7,637.3386
Worker	3.3898	1.9311	26.4344	0.0764	7.9920	0.0471	8.0391	2.1195	0.0434	2.1629		7,612.9690	7,612.9690	0.1815		7,617.5071
Total	**4.0411**	**27.7496**	**31.0408**	**0.1487**	**9.7785**	**0.0962**	**9.8748**	**2.6339**	**0.0903**	**2.7242**		**15,236.6725**	**15,236.6725**	**0.7269**		**15,254.8457**

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	1.7559					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**3.0114**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**		**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

3.6 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0711	0.0405	0.5546	1.6000e-003	0.1677	9.9000e-004	0.1687	0.0445	9.1000e-004	0.0454		159.7126	159.7126	3.8100e-003		159.8078
Total	**0.0711**	**0.0405**	**0.5546**	**1.6000e-003**	**0.1677**	**9.9000e-004**	**0.1687**	**0.0445**	**9.1000e-004**	**0.0454**		**159.7126**	**159.7126**	**3.8100e-003**		**159.8078**

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	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	1.7559					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**3.0114**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**	**0.0000**	**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

3.6 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0711	0.0405	0.5546	1.6000e-003	0.1677	9.9000e-004	0.1687	0.0445	9.1000e-004	0.0454		159.7126	159.7126	3.8100e-003		159.8078
Total	**0.0711**	**0.0405**	**0.5546**	**1.6000e-003**	**0.1677**	**9.9000e-004**	**0.1687**	**0.0445**	**9.1000e-004**	**0.0454**		**159.7126**	**159.7126**	**3.8100e-003**		**159.8078**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	12.2679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2919	2.0358	2.4234	3.9600e-003		0.1255	0.1255		0.1255	0.1255		375.2641	375.2641	0.0258		375.9079
Total	**12.5598**	**2.0358**	**2.4234**	**3.9600e-003**		**0.1255**	**0.1255**		**0.1255**	**0.1255**		**375.2641**	**375.2641**	**0.0258**		**375.9079**

3.7 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.6780	0.3862	5.2869	0.0153	1.5984	9.4200e-003	1.6078	0.4239	8.6700e-003	0.4326		1,522.5938	1,522.5938	0.0363		1,523.5014
Total	**0.6780**	**0.3862**	**5.2869**	**0.0153**	**1.5984**	**9.4200e-003**	**1.6078**	**0.4239**	**8.6700e-003**	**0.4326**		**1,522.5938**	**1,522.5938**	**0.0363**		**1,523.5014**

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	12.2679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2919	2.0358	2.4234	3.9600e-003		0.1255	0.1255		0.1255	0.1255	0.0000	375.2641	375.2641	0.0258		375.9079
Total	**12.5598**	**2.0358**	**2.4234**	**3.9600e-003**		**0.1255**	**0.1255**		**0.1255**	**0.1255**	**0.0000**	**375.2641**	**375.2641**	**0.0258**		**375.9079**

3.7 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.6780	0.3862	5.2869	0.0153	1.5984	9.4200e-003	1.6078	0.4239	8.6700e-003	0.4326		1,522.5938	1,522.5938	0.0363		1,523.5014
Total	**0.6780**	**0.3862**	**5.2869**	**0.0153**	**1.5984**	**9.4200e-003**	**1.6078**	**0.4239**	**8.6700e-003**	**0.4326**		**1,522.5938**	**1,522.5938**	**0.0363**		**1,523.5014**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	0.00	0.00	0.00	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
Other Asphalt Surfaces	0.542116	0.037578	0.185203	0.118503	0.016241	0.005141	0.017392	0.068695	0.001383	0.001183	0.004582	0.000945	0.001038
Unrefrigerated Warehouse-No Rail	0.542116	0.037578	0.185203	0.118503	0.016241	0.005141	0.017392	0.068695	0.001383	0.001183	0.004582	0.000945	0.001038

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	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					
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
Unrefrigerated Warehouse-No Rail	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					
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
Unrefrigerated Warehouse-No Rail	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	2.8833	1.6000e-003	0.1746	1.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004		0.3728	0.3728	9.9000e-004		0.3975
Unmitigated	2.8833	1.6000e-003	0.1746	1.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004		0.3728	0.3728	9.9000e-004		0.3975

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	0.3697					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.4973					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0163	1.6000e-003	0.1746	1.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004		0.3728	0.3728	9.9000e-004		0.3975
Total	**2.8833**	**1.6000e-003**	**0.1746**	**1.0000e-005**		**6.2000e-004**	**6.2000e-004**		**6.2000e-004**	**6.2000e-004**		**0.3728**	**0.3728**	**9.9000e-004**		**0.3975**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3697					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.4973					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0163	1.6000e-003	0.1746	1.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004		0.3728	0.3728	9.9000e-004		0.3975
Total	**2.8833**	**1.6000e-003**	**0.1746**	**1.0000e-005**		**6.2000e-004**	**6.2000e-004**		**6.2000e-004**	**6.2000e-004**		**0.3728**	**0.3728**	**9.9000e-004**		**0.3975**

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

Estes Banning (Construction - Unmitigated) - Riverside-South Coast County, Winter

Project Characteristics - Electricty will be provided to the Project by Banning Electric Utility (BEU). CalEEMod does not provided Intensity Factors for BEU, as such, the Statewide Average will be used.

Land Use - Total Project Area is 36.86 acres. Truck Terminal is 97,400 sf. Remaning area will be modeled as 1,605,796 sf of Other Apshalt Surfaces.

Construction Phase - Based on the Summary Schedule provided by the Project applicant.

Off-road Equipment - Hours are based on an 8-hour workday.

Off-road Equipment - Crawler Tractors used in lieu of Tractor/Loader/Backhoes.

Off-road Equipment - Crawler Tractors used in lieu of Tractor/Loader/Backhoes.

Off-road Equipment -

Off-road Equipment - Crawler Tractors used in lieu of Tractor/Loader/Backhoes.

Off-road Equipment - Crawler Tractors used in lieu of Tractor/Loader/Backhoes.

Grading - For purposes of analysis, total acres graded per day is based on the equipment specific grading rates (CalEEMod Appendix A) and the equipment list.

Architectural Coating - Rule 1113

Vehicle Trips - Construction Run Only.

Energy Use - Construction Run Only.

Water And Wastewater - Construction Run Only.

Solid Waste - Construction Run Only.

Construction Off-road Equipment Mitigation - Rule 403

Vehicle Emission Factors - EMFAC2017

Vehicle Emission Factors - EMFAC2017

Vehicle Emission Factors - EMFAC2017

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblConstructionPhase	NumDays	75.00	40.00
tblConstructionPhase	NumDays	30.00	45.00
tblConstructionPhase	NumDays	75.00	20.00

Estes Banning (Construction - Unmitigated) - Riverside-South Coast County, Winter

tblConstructionPhase	NumDays	740.00	105.00
tblEnergyUse	LightingElect	1.17	0.00
tblEnergyUse	NT24E	0.82	0.00
tblEnergyUse	NT24NG	0.03	0.00
tblEnergyUse	T24E	0.37	0.00
tblEnergyUse	T24NG	2.00	0.00
tblGrading	AcresOfGrading	140.00	160.00
tblGrading	AcresOfGrading	70.00	80.00
tblGrading	AcresOfGrading	90.00	157.50
tblLandUse	LandUseSquareFeet	1,605,800.00	1,605,796.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblSolidWaste	SolidWasteGenerationRate	91.56	0.00
tblVehicleEF	HHD	1.43	0.03
tblVehicleEF	HHD	0.03	0.02
tblVehicleEF	HHD	0.10	0.00
tblVehicleEF	HHD	3.28	7.55
tblVehicleEF	HHD	0.46	0.36
tblVehicleEF	HHD	1.46	2.9270e-003
tblVehicleEF	HHD	6,485.38	1,409.07
tblVehicleEF	HHD	1,461.92	1,350.00
tblVehicleEF	HHD	4.62	0.03

tblVehicleEF	LDT1	2.3290e-003	2.1110e-003
tblVehicleEF	LDT1	3.4000e-003	2.7140e-003
tblVehicleEF	LDT1	0.21	0.23
tblVehicleEF	LDT1	0.35	0.27
tblVehicleEF	LDT1	0.14	0.15
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.20	0.87
tblVehicleEF	LDT1	0.24	0.44
tblVehicleEF	LDT1	3.1780e-003	3.1370e-003
tblVehicleEF	LDT1	7.8300e-004	6.5900e-004
tblVehicleEF	LDT1	0.21	0.23
tblVehicleEF	LDT1	0.35	0.27
tblVehicleEF	LDT1	0.14	0.15
tblVehicleEF	LDT1	0.04	0.05
tblVehicleEF	LDT1	0.20	0.87
tblVehicleEF	LDT1	0.26	0.48
tblVehicleEF	LDT1	0.01	9.0560e-003
tblVehicleEF	LDT1	0.02	0.08
tblVehicleEF	LDT1	1.76	1.96
tblVehicleEF	LDT1	2.99	2.15
tblVehicleEF	LDT1	343.19	341.79
tblVehicleEF	LDT1	72.28	66.01
tblVehicleEF	LDT1	0.13	0.13
tblVehicleEF	LDT1	2.5300e-003	2.2930e-003
tblVehicleEF	LDT1	3.6970e-003	2.9510e-003
tblVehicleEF	LDT1	2.3290e-003	2.1110e-003
tblVehicleEF	LDT1	3.4000e-003	2.7140e-003

tblVehicleEF	LDT1	0.41	0.44
tblVehicleEF	LDT1	0.43	0.34
tblVehicleEF	LDT1	0.27	0.29
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.20	0.88
tblVehicleEF	LDT1	0.21	0.38
tblVehicleEF	LDT1	3.4550e-003	3.3820e-003
tblVehicleEF	LDT1	7.7500e-004	6.5300e-004
tblVehicleEF	LDT1	0.41	0.44
tblVehicleEF	LDT1	0.43	0.34
tblVehicleEF	LDT1	0.27	0.29
tblVehicleEF	LDT1	0.05	0.06
tblVehicleEF	LDT1	0.20	0.88
tblVehicleEF	LDT1	0.23	0.42
tblVehicleEF	LDT1	0.01	7.7080e-003
tblVehicleEF	LDT1	0.02	0.09
tblVehicleEF	LDT1	1.37	1.51
tblVehicleEF	LDT1	3.46	2.48
tblVehicleEF	LDT1	307.88	309.49
tblVehicleEF	LDT1	72.28	66.77
tblVehicleEF	LDT1	0.14	0.14
tblVehicleEF	LDT1	2.5300e-003	2.2930e-003
tblVehicleEF	LDT1	3.6970e-003	2.9510e-003
tblVehicleEF	LDT1	2.3290e-003	2.1110e-003
tblVehicleEF	LDT1	3.4000e-003	2.7140e-003
tblVehicleEF	LDT1	0.18	0.19
tblVehicleEF	LDT1	0.39	0.30

tblVehicleEF	LDT1	0.12	0.13
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.23	1.01
tblVehicleEF	LDT1	0.25	0.45
tblVehicleEF	LDT1	3.0960e-003	3.0630e-003
tblVehicleEF	LDT1	7.8400e-004	6.6100e-004
tblVehicleEF	LDT1	0.18	0.19
tblVehicleEF	LDT1	0.39	0.30
tblVehicleEF	LDT1	0.12	0.13
tblVehicleEF	LDT1	0.04	0.05
tblVehicleEF	LDT1	0.23	1.01
tblVehicleEF	LDT1	0.27	0.50
tblVehicleEF	LDT2	5.6080e-003	4.2470e-003
tblVehicleEF	LDT2	7.2840e-003	0.07
tblVehicleEF	LDT2	0.76	0.98
tblVehicleEF	LDT2	1.53	2.73
tblVehicleEF	LDT2	355.02	338.79
tblVehicleEF	LDT2	81.24	71.51
tblVehicleEF	LDT2	0.08	0.09
tblVehicleEF	LDT2	1.6030e-003	1.4980e-003
tblVehicleEF	LDT2	2.3320e-003	1.9580e-003
tblVehicleEF	LDT2	1.4740e-003	1.3790e-003
tblVehicleEF	LDT2	2.1450e-003	1.8010e-003
tblVehicleEF	LDT2	0.07	0.11
tblVehicleEF	LDT2	0.12	0.14
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.01	0.02

tblVehicleEF	LDT2	0.06	0.44
tblVehicleEF	LDT2	0.10	0.33
tblVehicleEF	LDT2	3.5560e-003	3.3520e-003
tblVehicleEF	LDT2	8.3800e-004	7.0800e-004
tblVehicleEF	LDT2	0.07	0.11
tblVehicleEF	LDT2	0.12	0.14
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.06	0.44
tblVehicleEF	LDT2	0.11	0.37
tblVehicleEF	LDT2	6.3630e-003	4.8280e-003
tblVehicleEF	LDT2	6.3270e-003	0.06
tblVehicleEF	LDT2	0.93	1.20
tblVehicleEF	LDT2	1.35	2.42
tblVehicleEF	LDT2	386.34	362.86
tblVehicleEF	LDT2	81.24	70.86
tblVehicleEF	LDT2	0.07	0.08
tblVehicleEF	LDT2	1.6030e-003	1.4980e-003
tblVehicleEF	LDT2	2.3320e-003	1.9580e-003
tblVehicleEF	LDT2	1.4740e-003	1.3790e-003
tblVehicleEF	LDT2	2.1450e-003	1.8010e-003
tblVehicleEF	LDT2	0.14	0.22
tblVehicleEF	LDT2	0.14	0.17
tblVehicleEF	LDT2	0.10	0.17
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.44
tblVehicleEF	LDT2	0.09	0.29

tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.9010e-003	1.5570e-003
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.31	0.50
tblVehicleEF	LHD1	0.26	0.08
tblVehicleEF	LHD1	9.3000e-005	9.1000e-005
tblVehicleEF	LHD1	5.9620e-003	6.2250e-003
tblVehicleEF	LHD1	3.4900e-004	1.0400e-004
tblVehicleEF	LHD1	3.8710e-003	3.1780e-003
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.9010e-003	1.5570e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.31	0.50
tblVehicleEF	LHD1	0.28	0.08
tblVehicleEF	LHD1	5.4460e-003	4.8940e-003
tblVehicleEF	LHD1	0.01	5.4200e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	0.97	0.73
tblVehicleEF	LHD1	2.29	0.92
tblVehicleEF	LHD1	9.26	9.44
tblVehicleEF	LHD1	607.95	639.97
tblVehicleEF	LHD1	30.36	10.46
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	2.08	1.51
tblVehicleEF	LHD1	9.7200e-004	9.7000e-004

tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.7100e-004	2.3300e-004
tblVehicleEF	LHD1	9.3000e-004	9.2800e-004
tblVehicleEF	LHD1	2.5390e-003	2.5010e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.0100e-004	2.1400e-004
tblVehicleEF	LHD1	7.2450e-003	5.9530e-003
tblVehicleEF	LHD1	0.12	0.09
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	3.6380e-003	2.9980e-003
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.32	0.50
tblVehicleEF	LHD1	0.25	0.07
tblVehicleEF	LHD1	9.3000e-005	9.1000e-005
tblVehicleEF	LHD1	5.9620e-003	6.2250e-003
tblVehicleEF	LHD1	3.4700e-004	1.0300e-004
tblVehicleEF	LHD1	7.2450e-003	5.9530e-003
tblVehicleEF	LHD1	0.12	0.09
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	3.6380e-003	2.9980e-003
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.32	0.50
tblVehicleEF	LHD1	0.27	0.08
tblVehicleEF	LHD1	5.4460e-003	4.8810e-003
tblVehicleEF	LHD1	0.01	5.3180e-003
tblVehicleEF	LHD1	0.02	0.02

tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	0.96	0.72
tblVehicleEF	LHD1	2.41	0.96
tblVehicleEF	LHD1	9.26	9.44
tblVehicleEF	LHD1	607.95	639.95
tblVehicleEF	LHD1	30.36	10.54
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	2.18	1.59
tblVehicleEF	LHD1	9.7200e-004	9.7000e-004
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.7100e-004	2.3300e-004
tblVehicleEF	LHD1	9.3000e-004	9.2800e-004
tblVehicleEF	LHD1	2.5390e-003	2.5010e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.0100e-004	2.1400e-004
tblVehicleEF	LHD1	3.4570e-003	2.8250e-003
tblVehicleEF	LHD1	0.11	0.09
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.7350e-003	1.4150e-003
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.33	0.53
tblVehicleEF	LHD1	0.26	0.08
tblVehicleEF	LHD1	9.3000e-005	9.1000e-005
tblVehicleEF	LHD1	5.9620e-003	6.2250e-003
tblVehicleEF	LHD1	3.4900e-004	1.0400e-004
tblVehicleEF	LHD1	3.4570e-003	2.8250e-003

tblVehicleEF	LHD1	0.11	0.09
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.7350e-003	1.4150e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.33	0.53
tblVehicleEF	LHD1	0.28	0.08
tblVehicleEF	LHD2	3.6660e-003	3.1720e-003
tblVehicleEF	LHD2	4.5290e-003	3.8570e-003
tblVehicleEF	LHD2	8.3110e-003	9.0280e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.50	0.53
tblVehicleEF	LHD2	1.15	0.56
tblVehicleEF	LHD2	14.48	14.86
tblVehicleEF	LHD2	604.20	638.83
tblVehicleEF	LHD2	23.56	7.29
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.71	1.77
tblVehicleEF	LHD2	1.3360e-003	1.4390e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.8700e-004	1.1400e-004
tblVehicleEF	LHD2	1.2780e-003	1.3770e-003
tblVehicleEF	LHD2	2.6970e-003	2.7110e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5600e-004	1.0500e-004
tblVehicleEF	LHD2	1.4980e-003	1.6870e-003
tblVehicleEF	LHD2	0.04	0.04

tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	7.7800e-004	8.4200e-004
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.4100e-004	1.4200e-004
tblVehicleEF	LHD2	5.8740e-003	6.1550e-003
tblVehicleEF	LHD2	2.5700e-004	7.2000e-005
tblVehicleEF	LHD2	1.4980e-003	1.6870e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	7.7800e-004	8.4200e-004
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	3.6660e-003	3.1790e-003
tblVehicleEF	LHD2	4.5800e-003	3.8860e-003
tblVehicleEF	LHD2	8.0210e-003	8.7250e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.51	0.53
tblVehicleEF	LHD2	1.10	0.53
tblVehicleEF	LHD2	14.48	14.86
tblVehicleEF	LHD2	604.20	638.83
tblVehicleEF	LHD2	23.56	7.25
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.62	1.67
tblVehicleEF	LHD2	1.3360e-003	1.4390e-003

tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.8700e-004	1.1400e-004
tblVehicleEF	LHD2	1.2780e-003	1.3770e-003
tblVehicleEF	LHD2	2.6970e-003	2.7110e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5600e-004	1.0500e-004
tblVehicleEF	LHD2	2.8320e-003	3.1830e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.4720e-003	1.6130e-003
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.4100e-004	1.4200e-004
tblVehicleEF	LHD2	5.8740e-003	6.1560e-003
tblVehicleEF	LHD2	2.5600e-004	7.2000e-005
tblVehicleEF	LHD2	2.8320e-003	3.1830e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.4720e-003	1.6130e-003
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	3.6660e-003	3.1700e-003
tblVehicleEF	LHD2	4.5170e-003	3.8490e-003
tblVehicleEF	LHD2	8.3600e-003	9.0930e-003

tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.50	0.53
tblVehicleEF	LHD2	1.16	0.56
tblVehicleEF	LHD2	14.48	14.86
tblVehicleEF	LHD2	604.20	638.83
tblVehicleEF	LHD2	23.56	7.30
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.70	1.75
tblVehicleEF	LHD2	1.3360e-003	1.4390e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.8700e-004	1.1400e-004
tblVehicleEF	LHD2	1.2780e-003	1.3770e-003
tblVehicleEF	LHD2	2.6970e-003	2.7110e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5600e-004	1.0500e-004
tblVehicleEF	LHD2	1.1910e-003	1.3290e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	6.6000e-004	7.0100e-004
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.4100e-004	1.4200e-004
tblVehicleEF	LHD2	5.8740e-003	6.1550e-003
tblVehicleEF	LHD2	2.5700e-004	7.2000e-005
tblVehicleEF	LHD2	1.1910e-003	1.3290e-003

tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	6.6000e-004	7.0100e-004
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	MCY	0.42	0.32
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	19.52	19.61
tblVehicleEF	MCY	9.67	8.55
tblVehicleEF	MCY	165.74	208.30
tblVehicleEF	MCY	46.23	60.73
tblVehicleEF	MCY	1.13	1.13
tblVehicleEF	MCY	1.7750e-003	1.7570e-003
tblVehicleEF	MCY	3.4010e-003	2.8660e-003
tblVehicleEF	MCY	1.6600e-003	1.6440e-003
tblVehicleEF	MCY	3.2060e-003	2.7000e-003
tblVehicleEF	MCY	1.69	1.66
tblVehicleEF	MCY	0.85	0.84
tblVehicleEF	MCY	0.92	0.90
tblVehicleEF	MCY	2.15	2.16
tblVehicleEF	MCY	0.57	1.87
tblVehicleEF	MCY	2.08	1.83
tblVehicleEF	MCY	2.0380e-003	2.0610e-003
tblVehicleEF	MCY	6.8100e-004	6.0100e-004
tblVehicleEF	MCY	1.69	1.66
tblVehicleEF	MCY	0.85	0.84

tblVehicleEF	MDV	0.01	5.7580e-003
tblVehicleEF	MDV	0.02	0.09
tblVehicleEF	MDV	1.42	1.20
tblVehicleEF	MDV	3.18	3.27
tblVehicleEF	MDV	488.89	421.49
tblVehicleEF	MDV	110.15	88.73
tblVehicleEF	MDV	0.17	0.12
tblVehicleEF	MDV	1.7110e-003	1.5730e-003
tblVehicleEF	MDV	2.4630e-003	2.0550e-003
tblVehicleEF	MDV	1.5780e-003	1.4510e-003
tblVehicleEF	MDV	2.2660e-003	1.8910e-003
tblVehicleEF	MDV	0.11	0.13
tblVehicleEF	MDV	0.20	0.17
tblVehicleEF	MDV	0.09	0.11
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.25	0.45
tblVehicleEF	MDV	4.9000e-003	4.1680e-003
tblVehicleEF	MDV	1.1570e-003	8.7800e-004
tblVehicleEF	MDV	0.11	0.13
tblVehicleEF	MDV	0.20	0.17
tblVehicleEF	MDV	0.09	0.11
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.27	0.49
tblVehicleEF	MDV	0.01	6.5120e-003
tblVehicleEF	MDV	0.02	0.08

tblVehicleEF	MDV	1.73	1.46
tblVehicleEF	MDV	2.81	2.88
tblVehicleEF	MDV	530.71	447.07
tblVehicleEF	MDV	110.15	87.92
tblVehicleEF	MDV	0.16	0.11
tblVehicleEF	MDV	1.7110e-003	1.5730e-003
tblVehicleEF	MDV	2.4630e-003	2.0550e-003
tblVehicleEF	MDV	1.5780e-003	1.4510e-003
tblVehicleEF	MDV	2.2660e-003	1.8910e-003
tblVehicleEF	MDV	0.22	0.26
tblVehicleEF	MDV	0.23	0.20
tblVehicleEF	MDV	0.17	0.21
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.21	0.39
tblVehicleEF	MDV	5.3230e-003	4.4210e-003
tblVehicleEF	MDV	1.1510e-003	8.7000e-004
tblVehicleEF	MDV	0.22	0.26
tblVehicleEF	MDV	0.23	0.20
tblVehicleEF	MDV	0.17	0.21
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.23	0.43
tblVehicleEF	MDV	0.01	5.5370e-003
tblVehicleEF	MDV	0.02	0.09
tblVehicleEF	MDV	1.33	1.12
tblVehicleEF	MDV	3.24	3.34

tblVehicleEF	MDV	476.42	413.84
tblVehicleEF	MDV	110.15	88.88
tblVehicleEF	MDV	0.16	0.12
tblVehicleEF	MDV	1.7110e-003	1.5730e-003
tblVehicleEF	MDV	2.4630e-003	2.0550e-003
tblVehicleEF	MDV	1.5780e-003	1.4510e-003
tblVehicleEF	MDV	2.2660e-003	1.8910e-003
tblVehicleEF	MDV	0.09	0.10
tblVehicleEF	MDV	0.21	0.18
tblVehicleEF	MDV	0.08	0.10
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.13	0.57
tblVehicleEF	MDV	0.25	0.46
tblVehicleEF	MDV	4.7750e-003	4.0920e-003
tblVehicleEF	MDV	1.1590e-003	8.8000e-004
tblVehicleEF	MDV	0.09	0.10
tblVehicleEF	MDV	0.21	0.18
tblVehicleEF	MDV	0.08	0.10
tblVehicleEF	MDV	0.05	0.03
tblVehicleEF	MDV	0.13	0.57
tblVehicleEF	MDV	0.28	0.50
tblVehicleEF	MH	0.03	3.3370e-003
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	2.70	0.34
tblVehicleEF	MH	5.98	0.00
tblVehicleEF	MH	1,002.10	941.76
tblVehicleEF	MH	57.67	0.00

tblVehicleEF	MH	1.67	4.43
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	1.0860e-003	0.00
tblVehicleEF	MH	3.2460e-003	4.0000e-003
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	9.9800e-004	0.00
tblVehicleEF	MH	1.56	0.00
tblVehicleEF	MH	0.08	0.00
tblVehicleEF	MH	0.54	0.00
tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.35	0.00
tblVehicleEF	MH	9.9460e-003	8.9030e-003
tblVehicleEF	MH	6.8100e-004	0.00
tblVehicleEF	MH	1.56	0.00
tblVehicleEF	MH	0.08	0.00
tblVehicleEF	MH	0.54	0.00
tblVehicleEF	MH	0.13	0.08
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.39	0.00
tblVehicleEF	MH	0.03	3.3370e-003
tblVehicleEF	MH	0.02	0.00
tblVehicleEF	MH	2.78	0.34
tblVehicleEF	MH	5.56	0.00
tblVehicleEF	MH	1,002.10	941.76
tblVehicleEF	MH	57.67	0.00

tblVehicleEF	MH	1.55	4.18
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	1.0860e-003	0.00
tblVehicleEF	MH	3.2460e-003	4.0000e-003
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	9.9800e-004	0.00
tblVehicleEF	MH	2.87	0.00
tblVehicleEF	MH	0.10	0.00
tblVehicleEF	MH	1.06	0.00
tblVehicleEF	MH	0.10	0.07
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.34	0.00
tblVehicleEF	MH	9.9470e-003	8.9030e-003
tblVehicleEF	MH	6.7400e-004	0.00
tblVehicleEF	MH	2.87	0.00
tblVehicleEF	MH	0.10	0.00
tblVehicleEF	MH	1.06	0.00
tblVehicleEF	MH	0.13	0.08
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.37	0.00
tblVehicleEF	MH	0.03	3.3370e-003
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	2.70	0.34
tblVehicleEF	MH	6.02	0.00
tblVehicleEF	MH	1,002.10	941.76
tblVehicleEF	MH	57.67	0.00

tblVehicleEF	MH	1.65	4.38
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	1.0860e-003	0.00
tblVehicleEF	MH	3.2460e-003	4.0000e-003
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	9.9800e-004	0.00
tblVehicleEF	MH	1.58	0.00
tblVehicleEF	MH	0.10	0.00
tblVehicleEF	MH	0.53	0.00
tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.35	0.00
tblVehicleEF	MH	9.9460e-003	8.9030e-003
tblVehicleEF	MH	6.8200e-004	0.00
tblVehicleEF	MH	1.58	0.00
tblVehicleEF	MH	0.10	0.00
tblVehicleEF	MH	0.53	0.00
tblVehicleEF	MH	0.13	0.08
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.39	0.00
tblVehicleEF	MHD	0.02	3.1500e-003
tblVehicleEF	MHD	3.7220e-003	5.9790e-003
tblVehicleEF	MHD	0.06	8.4870e-003
tblVehicleEF	MHD	0.35	0.34
tblVehicleEF	MHD	0.28	0.57
tblVehicleEF	MHD	6.06	1.01

tblVehicleEF	OBUS	5.76	2.41
tblVehicleEF	OBUS	78.48	73.81
tblVehicleEF	OBUS	1,098.07	1,407.25
tblVehicleEF	OBUS	70.10	20.57
tblVehicleEF	OBUS	0.36	0.45
tblVehicleEF	OBUS	1.04	1.59
tblVehicleEF	OBUS	1.0200e-004	1.5000e-003
tblVehicleEF	OBUS	6.0450e-003	0.04
tblVehicleEF	OBUS	8.2300e-004	1.9000e-004
tblVehicleEF	OBUS	9.8000e-005	1.4350e-003
tblVehicleEF	OBUS	5.7680e-003	0.04
tblVehicleEF	OBUS	7.5700e-004	1.7400e-004
tblVehicleEF	OBUS	4.0690e-003	4.7330e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	1.7890e-003	2.1320e-003
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.05	0.26
tblVehicleEF	OBUS	0.37	0.12
tblVehicleEF	OBUS	7.6100e-004	7.0400e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.0200e-004	2.0400e-004
tblVehicleEF	OBUS	4.0690e-003	4.7330e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	1.7890e-003	2.1320e-003
tblVehicleEF	OBUS	0.05	0.11

tblVehicleEF	OBUS	0.05	0.26
tblVehicleEF	OBUS	0.40	0.13
tblVehicleEF	OBUS	0.01	8.9200e-003
tblVehicleEF	OBUS	8.0660e-003	8.4690e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.28	0.53
tblVehicleEF	OBUS	0.54	0.92
tblVehicleEF	OBUS	6.22	2.60
tblVehicleEF	OBUS	70.30	72.56
tblVehicleEF	OBUS	1,098.07	1,407.21
tblVehicleEF	OBUS	70.10	20.90
tblVehicleEF	OBUS	0.34	0.44
tblVehicleEF	OBUS	1.11	1.68
tblVehicleEF	OBUS	1.4700e-004	2.1560e-003
tblVehicleEF	OBUS	6.0450e-003	0.04
tblVehicleEF	OBUS	8.2300e-004	1.9000e-004
tblVehicleEF	OBUS	1.4100e-004	2.0620e-003
tblVehicleEF	OBUS	5.7680e-003	0.04
tblVehicleEF	OBUS	7.5700e-004	1.7400e-004
tblVehicleEF	OBUS	1.8870e-003	2.3830e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	8.5400e-004	1.0620e-003
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.05	0.27
tblVehicleEF	OBUS	0.39	0.13
tblVehicleEF	OBUS	6.8300e-004	6.9200e-004

tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.1000e-004	2.0700e-004
tblVehicleEF	OBUS	1.8870e-003	2.3830e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	8.5400e-004	1.0620e-003
tblVehicleEF	OBUS	0.05	0.11
tblVehicleEF	OBUS	0.05	0.27
tblVehicleEF	OBUS	0.42	0.14
tblVehicleEF	SBUS	0.84	0.08
tblVehicleEF	SBUS	0.01	6.6110e-003
tblVehicleEF	SBUS	0.06	6.9670e-003
tblVehicleEF	SBUS	7.83	3.03
tblVehicleEF	SBUS	0.64	0.53
tblVehicleEF	SBUS	6.66	0.94
tblVehicleEF	SBUS	1,146.29	366.87
tblVehicleEF	SBUS	1,103.40	1,115.27
tblVehicleEF	SBUS	53.92	6.06
tblVehicleEF	SBUS	10.00	3.57
tblVehicleEF	SBUS	4.65	4.82
tblVehicleEF	SBUS	0.01	4.0660e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.5700e-004	4.0000e-005
tblVehicleEF	SBUS	0.01	3.8900e-003
tblVehicleEF	SBUS	2.6950e-003	2.6510e-003
tblVehicleEF	SBUS	0.02	0.03

tblVehicleEF	SBUS	4.2000e-004	3.6000e-005
tblVehicleEF	SBUS	4.6830e-003	1.3080e-003
tblVehicleEF	SBUS	0.03	8.6250e-003
tblVehicleEF	SBUS	0.94	0.36
tblVehicleEF	SBUS	2.1770e-003	6.2500e-004
tblVehicleEF	SBUS	0.11	0.10
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	0.37	0.04
tblVehicleEF	SBUS	0.01	3.5040e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.5500e-004	6.0000e-005
tblVehicleEF	SBUS	4.6830e-003	1.3080e-003
tblVehicleEF	SBUS	0.03	8.6250e-003
tblVehicleEF	SBUS	1.35	0.52
tblVehicleEF	SBUS	2.1770e-003	6.2500e-004
tblVehicleEF	SBUS	0.13	0.11
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	0.40	0.04
tblVehicleEF	SBUS	0.84	0.08
tblVehicleEF	SBUS	0.01	6.6860e-003
tblVehicleEF	SBUS	0.05	5.8380e-003
tblVehicleEF	SBUS	7.71	2.99
tblVehicleEF	SBUS	0.65	0.54
tblVehicleEF	SBUS	4.83	0.68
tblVehicleEF	SBUS	1,198.60	377.09
tblVehicleEF	SBUS	1,103.40	1,115.28
tblVehicleEF	SBUS	53.92	5.63

tblVehicleEF	SBUS	10.32	3.66
tblVehicleEF	SBUS	4.37	4.53
tblVehicleEF	SBUS	9.1190e-003	3.4340e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.5700e-004	4.0000e-005
tblVehicleEF	SBUS	8.7240e-003	3.2850e-003
tblVehicleEF	SBUS	2.6950e-003	2.6510e-003
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	4.2000e-004	3.6000e-005
tblVehicleEF	SBUS	8.4640e-003	2.3620e-003
tblVehicleEF	SBUS	0.03	9.1440e-003
tblVehicleEF	SBUS	0.93	0.36
tblVehicleEF	SBUS	4.0830e-003	1.1650e-003
tblVehicleEF	SBUS	0.11	0.10
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.31	0.03
tblVehicleEF	SBUS	0.01	3.6000e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.2400e-004	5.6000e-005
tblVehicleEF	SBUS	8.4640e-003	2.3620e-003
tblVehicleEF	SBUS	0.03	9.1440e-003
tblVehicleEF	SBUS	1.35	0.52
tblVehicleEF	SBUS	4.0830e-003	1.1650e-003
tblVehicleEF	SBUS	0.13	0.11
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.34	0.04

tblVehicleEF	SBUS	0.84	0.08
tblVehicleEF	SBUS	0.01	6.6040e-003
tblVehicleEF	SBUS	0.07	7.2110e-003
tblVehicleEF	SBUS	8.00	3.09
tblVehicleEF	SBUS	0.63	0.53
tblVehicleEF	SBUS	7.02	0.98
tblVehicleEF	SBUS	1,074.07	352.76
tblVehicleEF	SBUS	1,103.40	1,115.26
tblVehicleEF	SBUS	53.92	6.14
tblVehicleEF	SBUS	9.56	3.44
tblVehicleEF	SBUS	4.60	4.78
tblVehicleEF	SBUS	0.01	4.9380e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.5700e-004	4.0000e-005
tblVehicleEF	SBUS	0.01	4.7240e-003
tblVehicleEF	SBUS	2.6950e-003	2.6510e-003
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	4.2000e-004	3.6000e-005
tblVehicleEF	SBUS	4.1680e-003	1.1480e-003
tblVehicleEF	SBUS	0.03	8.8290e-003
tblVehicleEF	SBUS	0.94	0.36
tblVehicleEF	SBUS	2.1000e-003	6.0300e-004
tblVehicleEF	SBUS	0.11	0.10
tblVehicleEF	SBUS	0.02	0.06
tblVehicleEF	SBUS	0.38	0.04
tblVehicleEF	SBUS	0.01	3.3710e-003

tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.6100e-004	6.1000e-005
tblVehicleEF	SBUS	4.1680e-003	1.1480e-003
tblVehicleEF	SBUS	0.03	8.8290e-003
tblVehicleEF	SBUS	1.35	0.52
tblVehicleEF	SBUS	2.1000e-003	6.0300e-004
tblVehicleEF	SBUS	0.13	0.11
tblVehicleEF	SBUS	0.02	0.06
tblVehicleEF	SBUS	0.41	0.05
tblVehicleEF	UBUS	1.51	3.35
tblVehicleEF	UBUS	0.09	0.02
tblVehicleEF	UBUS	8.45	26.05
tblVehicleEF	UBUS	15.26	1.50
tblVehicleEF	UBUS	1,822.40	1,617.71
tblVehicleEF	UBUS	153.45	18.08
tblVehicleEF	UBUS	4.95	0.32
tblVehicleEF	UBUS	0.50	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.06	2.9340e-003
tblVehicleEF	UBUS	1.4200e-003	1.6100e-004
tblVehicleEF	UBUS	0.21	0.04
tblVehicleEF	UBUS	3.0000e-003	5.4780e-003
tblVehicleEF	UBUS	0.05	2.7920e-003
tblVehicleEF	UBUS	1.3060e-003	1.4800e-004
tblVehicleEF	UBUS	9.7430e-003	1.6370e-003
tblVehicleEF	UBUS	0.11	9.7740e-003
tblVehicleEF	UBUS	4.7860e-003	7.1300e-004

tblVehicleEF	UBUS	0.52	0.05
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.17	0.07
tblVehicleEF	UBUS	9.9960e-003	4.8690e-003
tblVehicleEF	UBUS	1.8100e-003	1.7900e-004
tblVehicleEF	UBUS	9.7430e-003	1.6370e-003
tblVehicleEF	UBUS	0.11	9.7740e-003
tblVehicleEF	UBUS	4.7860e-003	7.1300e-004
tblVehicleEF	UBUS	2.08	3.43
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.28	0.08
tblVehicleEF	UBUS	1.52	3.35
tblVehicleEF	UBUS	0.08	0.02
tblVehicleEF	UBUS	8.53	26.06
tblVehicleEF	UBUS	13.06	1.28
tblVehicleEF	UBUS	1,822.40	1,617.72
tblVehicleEF	UBUS	153.45	17.70
tblVehicleEF	UBUS	4.62	0.31
tblVehicleEF	UBUS	0.50	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.06	2.9340e-003
tblVehicleEF	UBUS	1.4200e-003	1.6100e-004
tblVehicleEF	UBUS	0.21	0.04
tblVehicleEF	UBUS	3.0000e-003	5.4780e-003
tblVehicleEF	UBUS	0.05	2.7920e-003
tblVehicleEF	UBUS	1.3060e-003	1.4800e-004
tblVehicleEF	UBUS	0.02	2.9250e-003

tblVehicleEF	UBUS	0.14	0.01
tblVehicleEF	UBUS	9.6600e-003	1.4550e-003
tblVehicleEF	UBUS	0.53	0.05
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.06	0.07
tblVehicleEF	UBUS	9.9970e-003	4.8690e-003
tblVehicleEF	UBUS	1.7720e-003	1.7500e-004
tblVehicleEF	UBUS	0.02	2.9250e-003
tblVehicleEF	UBUS	0.14	0.01
tblVehicleEF	UBUS	9.6600e-003	1.4550e-003
tblVehicleEF	UBUS	2.09	3.43
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.17	0.07
tblVehicleEF	UBUS	1.51	3.35
tblVehicleEF	UBUS	0.09	0.02
tblVehicleEF	UBUS	8.44	26.05
tblVehicleEF	UBUS	15.44	1.49
tblVehicleEF	UBUS	1,822.40	1,617.71
tblVehicleEF	UBUS	153.45	18.06
tblVehicleEF	UBUS	4.92	0.31
tblVehicleEF	UBUS	0.50	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.06	2.9340e-003
tblVehicleEF	UBUS	1.4200e-003	1.6100e-004
tblVehicleEF	UBUS	0.21	0.04
tblVehicleEF	UBUS	3.0000e-003	5.4780e-003
tblVehicleEF	UBUS	0.05	2.7920e-003

tblVehicleEF	UBUS	1.3060e-003	1.4800e-004
tblVehicleEF	UBUS	8.9770e-003	1.7200e-003
tblVehicleEF	UBUS	0.13	0.01
tblVehicleEF	UBUS	4.3820e-003	7.5400e-004
tblVehicleEF	UBUS	0.52	0.05
tblVehicleEF	UBUS	0.03	0.05
tblVehicleEF	UBUS	1.18	0.07
tblVehicleEF	UBUS	9.9960e-003	4.8690e-003
tblVehicleEF	UBUS	1.8130e-003	1.7900e-004
tblVehicleEF	UBUS	8.9770e-003	1.7200e-003
tblVehicleEF	UBUS	0.13	0.01
tblVehicleEF	UBUS	4.3820e-003	7.5400e-004
tblVehicleEF	UBUS	2.08	3.43
tblVehicleEF	UBUS	0.03	0.05
tblVehicleEF	UBUS	1.29	0.08
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TTP	41.00	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TTP	59.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	0.00
tblVehicleTrips	ST_TR	1.68	0.00

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.8833	1.6000e-003	0.1746	1.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004		0.3728	0.3728	9.9000e-004		0.3975
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**2.8833**	**1.6000e-003**	**0.1746**	**1.0000e-005**	**0.0000**	**6.2000e-004**	**6.2000e-004**	**0.0000**	**6.2000e-004**	**6.2000e-004**		**0.3728**	**0.3728**	**9.9000e-004**	**0.0000**	**0.3975**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.8833	1.6000e-003	0.1746	1.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004		0.3728	0.3728	9.9000e-004		0.3975
Energy	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Total	**2.8833**	**1.6000e-003**	**0.1746**	**1.0000e-005**	**0.0000**	**6.2000e-004**	**6.2000e-004**	**0.0000**	**6.2000e-004**	**6.2000e-004**		**0.3728**	**0.3728**	**9.9000e-004**	**0.0000**	**0.3975**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Rough Grading	Grading	6/4/2020	7/29/2020	5	40	
2	Site Preparation	Site Preparation	7/30/2020	9/30/2020	5	45	
3	Fine Grading	Grading	10/1/2020	10/28/2020	5	20	
4	Building Construction	Building Construction	10/29/2020	3/24/2021	5	105	
5	Paving	Paving	1/7/2021	3/24/2021	5	55	
6	Architectural Coating	Architectural Coating	1/7/2021	3/24/2021	5	55	

Acres of Grading (Site Preparation Phase): 157.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 36.86

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 146,100; Non-Residential Outdoor: 48,700; Striped Parking Area: 96,348 (Architectural Coating – sqft)

OffRoad Equipment

Estes Banning (Construction - Unmitigated) - Riverside-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Rough Grading	Crawler Tractors	2	8.00	212	0.43
Rough Grading	Excavators	2	8.00	158	0.38
Rough Grading	Graders	1	8.00	187	0.41
Rough Grading	Rubber Tired Dozers	1	8.00	247	0.40
Rough Grading	Scrapers	2	8.00	367	0.48
Rough Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Crawler Tractors	4	8.00	212	0.43
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Fine Grading	Crawler Tractors	2	8.00	212	0.43
Fine Grading	Excavators	2	8.00	158	0.38
Fine Grading	Graders	1	8.00	187	0.41
Fine Grading	Rubber Tired Dozers	1	8.00	247	0.40
Fine Grading	Scrapers	2	8.00	367	0.48
Fine Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Crawler Tractors	3	8.00	212	0.43
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	8.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Rough Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	715.00	279.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	143.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Rough Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					10.2641	0.0000	10.2641	3.7683	0.0000	3.7683			0.0000			0.0000
Off-Road	5.1888	60.8826	32.3988	0.0715		2.4690	2.4690		2.2714	2.2714		6,925.1051	6,925.1051	2.2397		6,981.0981
Total	**5.1888**	**60.8826**	**32.3988**	**0.0715**	**10.2641**	**2.4690**	**12.7331**	**3.7683**	**2.2714**	**6.0397**		**6,925.1051**	**6,925.1051**	**2.2397**		**6,981.0981**

3.2 Rough Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0997	0.0623	0.6524	1.9800e-003	0.2236	1.3500e-003	0.2249	0.0593	1.2500e-003	0.0605		197.6472	197.6472	4.9100e-003		197.7699
Total	**0.0997**	**0.0623**	**0.6524**	**1.9800e-003**	**0.2236**	**1.3500e-003**	**0.2249**	**0.0593**	**1.2500e-003**	**0.0605**		**197.6472**	**197.6472**	**4.9100e-003**		**197.7699**

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					4.0030	0.0000	4.0030	1.4696	0.0000	1.4696			0.0000			0.0000
Off-Road	5.1888	60.8826	32.3988	0.0715		2.4690	2.4690		2.2714	2.2714	0.0000	6,925.1051	6,925.1051	2.2397		6,981.0981
Total	**5.1888**	**60.8826**	**32.3988**	**0.0715**	**4.0030**	**2.4690**	**6.4720**	**1.4696**	**2.2714**	**3.7411**	**0.0000**	**6,925.1051**	**6,925.1051**	**2.2397**		**6,981.0981**

3.2 Rough Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0997	0.0623	0.6524	1.9800e-003	0.2236	1.3500e-003	0.2249	0.0593	1.2500e-003	0.0605		197.6472	197.6472	4.9100e-003		197.7699
Total	**0.0997**	**0.0623**	**0.6524**	**1.9800e-003**	**0.2236**	**1.3500e-003**	**0.2249**	**0.0593**	**1.2500e-003**	**0.0605**		**197.6472**	**197.6472**	**4.9100e-003**		**197.7699**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					21.7780	0.0000	21.7780	10.3315	0.0000	10.3315			0.0000			0.0000
Off-Road	5.5539	63.7874	22.3947	0.0570		2.7875	2.7875		2.5645	2.5645		5,523.5812	5,523.5812	1.7864		5,568.2421
Total	**5.5539**	**63.7874**	**22.3947**	**0.0570**	**21.7780**	**2.7875**	**24.5655**	**10.3315**	**2.5645**	**12.8960**		**5,523.5812**	**5,523.5812**	**1.7864**		**5,568.2421**

3.3 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0897	0.0560	0.5871	1.7900e-003	0.2012	1.2200e-003	0.2024	0.0534	1.1200e-003	0.0545		177.8824	177.8824	4.4200e-003		177.9929
Total	**0.0897**	**0.0560**	**0.5871**	**1.7900e-003**	**0.2012**	**1.2200e-003**	**0.2024**	**0.0534**	**1.1200e-003**	**0.0545**		**177.8824**	**177.8824**	**4.4200e-003**		**177.9929**

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					8.4934	0.0000	8.4934	4.0293	0.0000	4.0293			0.0000			0.0000
Off-Road	5.5539	63.7874	22.3947	0.0570		2.7875	2.7875		2.5645	2.5645	0.0000	5,523.5812	5,523.5812	1.7864		5,568.2421
Total	**5.5539**	**63.7874**	**22.3947**	**0.0570**	**8.4934**	**2.7875**	**11.2809**	**4.0293**	**2.5645**	**6.5938**	**0.0000**	**5,523.5812**	**5,523.5812**	**1.7864**		**5,568.2421**

3.3 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0897	0.0560	0.5871	1.7900e-003	0.2012	1.2200e-003	0.2024	0.0534	1.1200e-003	0.0545		177.8824	177.8824	4.4200e-003		177.9929
Total	**0.0897**	**0.0560**	**0.5871**	**1.7900e-003**	**0.2012**	**1.2200e-003**	**0.2024**	**0.0534**	**1.1200e-003**	**0.0545**		**177.8824**	**177.8824**	**4.4200e-003**		**177.9929**

3.4 Fine Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					10.2641	0.0000	10.2641	3.7683	0.0000	3.7683			0.0000			0.0000
Off-Road	5.1888	60.8826	32.3988	0.0715		2.4690	2.4690		2.2714	2.2714		6,925.1051	6,925.1051	2.2397		6,981.0981
Total	**5.1888**	**60.8826**	**32.3988**	**0.0715**	**10.2641**	**2.4690**	**12.7331**	**3.7683**	**2.2714**	**6.0397**		**6,925.1051**	**6,925.1051**	**2.2397**		**6,981.0981**

3.4 Fine Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0997	0.0623	0.6524	1.9800e-003	0.2236	1.3500e-003	0.2249	0.0593	1.2500e-003	0.0605		197.6472	197.6472	4.9100e-003		197.7699
Total	**0.0997**	**0.0623**	**0.6524**	**1.9800e-003**	**0.2236**	**1.3500e-003**	**0.2249**	**0.0593**	**1.2500e-003**	**0.0605**		**197.6472**	**197.6472**	**4.9100e-003**		**197.7699**

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					4.0030	0.0000	4.0030	1.4696	0.0000	1.4696			0.0000			0.0000
Off-Road	5.1888	60.8826	32.3988	0.0715		2.4690	2.4690		2.2714	2.2714	0.0000	6,925.1051	6,925.1051	2.2397		6,981.0981
Total	**5.1888**	**60.8826**	**32.3988**	**0.0715**	**4.0030**	**2.4690**	**6.4720**	**1.4696**	**2.2714**	**3.7411**	**0.0000**	**6,925.1051**	**6,925.1051**	**2.2397**		**6,981.0981**

3.5 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.8203	28.5565	6.1492	0.0702	1.7866	0.1652	1.9518	0.5144	0.1580	0.6724		7,394.6931	7,394.6931	0.6413		7,410.7252
Worker	3.5632	2.2261	23.3214	0.0709	7.9920	0.0484	8.0404	2.1195	0.0446	2.1641		7,065.8859	7,065.8859	0.1755		7,070.2735
Total	**4.3835**	**30.7825**	**29.4706**	**0.1411**	**9.7786**	**0.2136**	**9.9922**	**2.6339**	**0.2026**	**2.8365**		**14,460.5790**	**14,460.5790**	**0.8168**		**14,480.9987**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	3.1137	33.9659	18.1952	0.0430		1.4763	1.4763		1.3775	1.3775		4,114.4297	4,114.4297	1.1209		4,142.4520
Total	**3.1137**	**33.9659**	**18.1952**	**0.0430**		**1.4763**	**1.4763**		**1.3775**	**1.3775**		**4,114.4297**	**4,114.4297**	**1.1209**		**4,142.4520**

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.6918	25.5961	5.4492	0.0696	1.7865	0.0506	1.8371	0.5144	0.0484	0.5628		7,336.9528	7,336.9528	0.6077		7,352.1456
Worker	3.3266	1.9971	21.3377	0.0685	7.9920	0.0471	8.0391	2.1195	0.0434	2.1629		6,829.6339	6,829.6339	0.1578		6,833.5794
Total	**4.0183**	**27.5932**	**26.7869**	**0.1381**	**9.7785**	**0.0977**	**9.8762**	**2.6339**	**0.0917**	**2.7256**		**14,166.5867**	**14,166.5867**	**0.7655**		**14,185.7250**

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	3.1137	33.9659	18.1952	0.0430		1.4763	1.4763		1.3775	1.3775	0.0000	4,114.4297	4,114.4297	1.1209		4,142.4520
Total	**3.1137**	**33.9659**	**18.1952**	**0.0430**		**1.4763**	**1.4763**		**1.3775**	**1.3775**	**0.0000**	**4,114.4297**	**4,114.4297**	**1.1209**		**4,142.4520**

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.6918	25.5961	5.4492	0.0696	1.7865	0.0506	1.8371	0.5144	0.0484	0.5628		7,336.9528	7,336.9528	0.6077		7,352.1456
Worker	3.3266	1.9971	21.3377	0.0685	7.9920	0.0471	8.0391	2.1195	0.0434	2.1629		6,829.6339	6,829.6339	0.1578		6,833.5794
Total	**4.0183**	**27.5932**	**26.7869**	**0.1381**	**9.7785**	**0.0977**	**9.8762**	**2.6339**	**0.0917**	**2.7256**		**14,166.5867**	**14,166.5867**	**0.7655**		**14,185.7250**

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235		2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	1.7559					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**3.0114**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**		**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

3.6 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0698	0.0419	0.4476	1.4400e-003	0.1677	9.9000e-004	0.1687	0.0445	9.1000e-004	0.0454		143.2790	143.2790	3.3100e-003		143.3618
Total	**0.0698**	**0.0419**	**0.4476**	**1.4400e-003**	**0.1677**	**9.9000e-004**	**0.1687**	**0.0445**	**9.1000e-004**	**0.0454**		**143.2790**	**143.2790**	**3.3100e-003**		**143.3618**

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	1.2556	12.9191	14.6532	0.0228		0.6777	0.6777		0.6235	0.6235	0.0000	2,207.2109	2,207.2109	0.7139		2,225.0573
Paving	1.7559					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**3.0114**	**12.9191**	**14.6532**	**0.0228**		**0.6777**	**0.6777**		**0.6235**	**0.6235**	**0.0000**	**2,207.2109**	**2,207.2109**	**0.7139**		**2,225.0573**

3.6 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.0698	0.0419	0.4476	1.4400e-003	0.1677	9.9000e-004	0.1687	0.0445	9.1000e-004	0.0454		143.2790	143.2790	3.3100e-003		143.3618
Total	**0.0698**	**0.0419**	**0.4476**	**1.4400e-003**	**0.1677**	**9.9000e-004**	**0.1687**	**0.0445**	**9.1000e-004**	**0.0454**		**143.2790**	**143.2790**	**3.3100e-003**		**143.3618**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	12.2679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2919	2.0358	2.4234	3.9600e-003		0.1255	0.1255		0.1255	0.1255		375.2641	375.2641	0.0258		375.9079
Total	**12.5598**	**2.0358**	**2.4234**	**3.9600e-003**		**0.1255**	**0.1255**		**0.1255**	**0.1255**		**375.2641**	**375.2641**	**0.0258**		**375.9079**

3.7 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.6653	0.3994	4.2676	0.0137	1.5984	9.4200e-003	1.6078	0.4239	8.6700e-003	0.4326		1,365.9268	1,365.9268	0.0316		1,366.7159
Total	**0.6653**	**0.3994**	**4.2676**	**0.0137**	**1.5984**	**9.4200e-003**	**1.6078**	**0.4239**	**8.6700e-003**	**0.4326**		**1,365.9268**	**1,365.9268**	**0.0316**		**1,366.7159**

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	12.2679					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2919	2.0358	2.4234	3.9600e-003		0.1255	0.1255		0.1255	0.1255	0.0000	375.2641	375.2641	0.0258		375.9079
Total	**12.5598**	**2.0358**	**2.4234**	**3.9600e-003**		**0.1255**	**0.1255**		**0.1255**	**0.1255**	**0.0000**	**375.2641**	**375.2641**	**0.0258**		**375.9079**

3.7 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000	0.0000		0.0000
Worker	0.6653	0.3994	4.2676	0.0137	1.5984	9.4200e-003	1.6078	0.4239	8.6700e-003	0.4326		1,365.9268	1,365.9268	0.0316		1,366.7159
Total	**0.6653**	**0.3994**	**4.2676**	**0.0137**	**1.5984**	**9.4200e-003**	**1.6078**	**0.4239**	**8.6700e-003**	**0.4326**		**1,365.9268**	**1,365.9268**	**0.0316**		**1,366.7159**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.0000	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					
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
Unrefrigerated Warehouse-No Rail	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					
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
Unrefrigerated Warehouse-No Rail	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	2.8833	1.6000e-003	0.1746	1.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004		0.3728	0.3728	9.9000e-004		0.3975
Unmitigated	2.8833	1.6000e-003	0.1746	1.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004		0.3728	0.3728	9.9000e-004		0.3975

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	0.3697					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.4973					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0163	1.6000e-003	0.1746	1.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004		0.3728	0.3728	9.9000e-004		0.3975
Total	**2.8833**	**1.6000e-003**	**0.1746**	**1.0000e-005**		**6.2000e-004**	**6.2000e-004**		**6.2000e-004**	**6.2000e-004**		**0.3728**	**0.3728**	**9.9000e-004**		**0.3975**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3697					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.4973					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0163	1.6000e-003	0.1746	1.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004		0.3728	0.3728	9.9000e-004		0.3975
Total	**2.8833**	**1.6000e-003**	**0.1746**	**1.0000e-005**		**6.2000e-004**	**6.2000e-004**		**6.2000e-004**	**6.2000e-004**		**0.3728**	**0.3728**	**9.9000e-004**		**0.3975**

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

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APPENDIX 3.2:

CALEEMOD OPERATIONAL (PASSENGER CARS) EMISSIONS MODEL OUTPUTS

Estes Banning (Operations - Passenger Cars)

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	97.40	1000sqft	2.24	97,400.00	0
Other Asphalt Surfaces	1,605.80	1000sqft	36.86	1,605,796.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2021
Utility Company	Statewide Average				
CO2 Intensity (lb/MWhr)	1001.57	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Estes Banning (Operations - Passenger Cars) - Riverside-South Coast County, Summer

Project Characteristics - Electricty will be provided to the Project by Banning Electric Utility (BEU). CalEEMod does not provided Intensity Factors for BEU, as such, the Statewide Average will be used.

Land Use - Total Project Area is 36.86 acres. Truck Terminal is 97,400 sf. Remaning area will be modeled as 1,605,796 sf of Other Apshalt Surfaces.

Construction Phase - Operations Run Only.

Off-road Equipment - Operations Run Only.

Trips and VMT - Operations Run Only.

Vehicle Trips - Trip Rates based on information provided in the TIA prepared by Urban Crossroads.

Energy Use - The project will design building shells and building components to meet 2019 Title 24 Standards which expects 30% less energy for nonresidential uses.

Water And Wastewater - The project includes the construction and operation of a 660 square foot automated truck wash. Water usage based on the assumption that 50% of incoming trucks will be washed and 30 gallons of water will be used per truck.

Fleet Mix - Fleet Mix is based on a proportional split utilizing the default CalEEMod percentages assigned to LDA, LDT1, LDT2, and MDV vehicles types.

Vehicle Emission Factors - EMFAC2017

Vehicle Emission Factors - EMFAC2017

Vehicle Emission Factors - EMFAC2017

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	1.17	0.82
tblEnergyUse	T24E	0.37	0.26
tblEnergyUse	T24NG	2.00	1.40
tblFleetMix	HHD	0.07	0.00
tblFleetMix	LDA	0.54	0.61
tblFleetMix	LDT1	0.04	0.04
tblFleetMix	LDT2	0.19	0.21
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.1410e-003	0.00
tblFleetMix	MCY	4.5820e-003	0.00
tblFleetMix	MDV	0.12	0.13
tblFleetMix	MH	1.0380e-003	0.00

tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	1.3830e-003	0.00
tblFleetMix	SBUS	9.4500e-004	0.00
tblFleetMix	UBUS	1.1830e-003	0.00
tblLandUse	LandUseSquareFeet	1,605,800.00	1,605,796.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblVehicleEF	HHD	1.43	0.03
tblVehicleEF	HHD	0.03	0.02
tblVehicleEF	HHD	0.10	0.00
tblVehicleEF	HHD	3.28	7.55
tblVehicleEF	HHD	0.46	0.36
tblVehicleEF	HHD	1.46	2.9270e-003
tblVehicleEF	HHD	6,485.38	1,409.07
tblVehicleEF	HHD	1,461.92	1,350.00
tblVehicleEF	HHD	4.62	0.03
tblVehicleEF	HHD	26.41	7.34
tblVehicleEF	HHD	2.69	3.05
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	3.8000e-005	0.00
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8680e-003	8.8980e-003

tblVehicleEF	HHD	0.11	0.09
tblVehicleEF	HHD	1.8400e-004	5.5600e-004
tblVehicleEF	HHD	0.05	1.0000e-006
tblVehicleEF	HHD	1.54	0.03
tblVehicleEF	HHD	0.03	3.2330e-003
tblVehicleEF	HHD	0.10	0.00
tblVehicleEF	HHD	4.51	7.76
tblVehicleEF	HHD	0.45	0.32
tblVehicleEF	HHD	1.47	2.9120e-003
tblVehicleEF	HHD	5,957.03	1,414.57
tblVehicleEF	HHD	1,461.92	1,340.32
tblVehicleEF	HHD	4.62	0.03
tblVehicleEF	HHD	25.25	7.65
tblVehicleEF	HHD	2.67	3.02
tblVehicleEF	HHD	0.02	0.01
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	3.8000e-005	0.00
tblVehicleEF	HHD	0.02	0.01
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8680e-003	8.8710e-003
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	3.5000e-005	0.00
tblVehicleEF	HHD	6.7000e-005	4.0000e-006
tblVehicleEF	HHD	2.7490e-003	1.2100e-004
tblVehicleEF	HHD	0.91	0.54

tblVehicleEF	HHD	4.1000e-005	2.0000e-006
tblVehicleEF	HHD	0.07	0.07
tblVehicleEF	HHD	1.9200e-004	5.6500e-004
tblVehicleEF	HHD	0.05	1.0000e-006
tblVehicleEF	HHD	0.06	0.01
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	7.1000e-005	0.00
tblVehicleEF	HHD	6.7000e-005	4.0000e-006
tblVehicleEF	HHD	2.7490e-003	1.2100e-004
tblVehicleEF	HHD	1.05	0.62
tblVehicleEF	HHD	4.1000e-005	2.0000e-006
tblVehicleEF	HHD	0.11	0.08
tblVehicleEF	HHD	1.9200e-004	5.6500e-004
tblVehicleEF	HHD	0.05	1.0000e-006
tblVehicleEF	LDA	4.0430e-003	2.4680e-003
tblVehicleEF	LDA	5.4670e-003	0.05
tblVehicleEF	LDA	0.58	0.66
tblVehicleEF	LDA	1.16	2.12
tblVehicleEF	LDA	255.91	265.87
tblVehicleEF	LDA	58.81	54.73
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	1.6140e-003	1.4470e-003
tblVehicleEF	LDA	2.2650e-003	1.9190e-003
tblVehicleEF	LDA	1.4880e-003	1.3330e-003
tblVehicleEF	LDA	2.0830e-003	1.7640e-003
tblVehicleEF	LDA	0.05	0.07
tblVehicleEF	LDA	0.10	0.10

tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.01	9.5180e-003
tblVehicleEF	LDA	0.04	0.21
tblVehicleEF	LDA	0.07	0.23
tblVehicleEF	LDA	2.5630e-003	2.6300e-003
tblVehicleEF	LDA	6.0800e-004	5.4200e-004
tblVehicleEF	LDA	0.05	0.07
tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.21
tblVehicleEF	LDA	0.08	0.25
tblVehicleEF	LDA	4.5900e-003	2.8100e-003
tblVehicleEF	LDA	4.7470e-003	0.05
tblVehicleEF	LDA	0.71	0.81
tblVehicleEF	LDA	1.02	1.87
tblVehicleEF	LDA	278.73	289.14
tblVehicleEF	LDA	58.81	54.24
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	1.6140e-003	1.4470e-003
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tblVehicleEF	LDA	1.4880e-003	1.3330e-003
tblVehicleEF	LDA	2.0830e-003	1.7640e-003
tblVehicleEF	LDA	0.10	0.14
tblVehicleEF	LDA	0.12	0.12
tblVehicleEF	LDA	0.07	0.10
tblVehicleEF	LDA	0.01	0.01

tblVehicleEF	LDA	0.04	0.21
tblVehicleEF	LDA	0.06	0.20
tblVehicleEF	LDA	2.7930e-003	2.8600e-003
tblVehicleEF	LDA	6.0500e-004	5.3700e-004
tblVehicleEF	LDA	0.10	0.14
tblVehicleEF	LDA	0.12	0.12
tblVehicleEF	LDA	0.07	0.10
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.04	0.21
tblVehicleEF	LDA	0.07	0.22
tblVehicleEF	LDA	3.8980e-003	2.3810e-003
tblVehicleEF	LDA	5.6140e-003	0.05
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tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	1.6140e-003	1.4470e-003
tblVehicleEF	LDA	2.2650e-003	1.9190e-003
tblVehicleEF	LDA	1.4880e-003	1.3330e-003
tblVehicleEF	LDA	2.0830e-003	1.7640e-003
tblVehicleEF	LDA	0.04	0.06
tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	9.8140e-003	9.1880e-003
tblVehicleEF	LDA	0.04	0.24
tblVehicleEF	LDA	0.08	0.23

tblVehicleEF	LDA	2.4990e-003	2.5670e-003
tblVehicleEF	LDA	6.0800e-004	5.4200e-004
tblVehicleEF	LDA	0.04	0.06
tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.24
tblVehicleEF	LDA	0.08	0.26
tblVehicleEF	LDT1	0.01	8.0140e-003
tblVehicleEF	LDT1	0.02	0.09
tblVehicleEF	LDT1	1.46	1.62
tblVehicleEF	LDT1	3.40	2.43
tblVehicleEF	LDT1	315.98	317.00
tblVehicleEF	LDT1	72.28	66.64
tblVehicleEF	LDT1	0.14	0.14
tblVehicleEF	LDT1	2.5300e-003	2.2930e-003
tblVehicleEF	LDT1	3.6970e-003	2.9510e-003
tblVehicleEF	LDT1	2.3290e-003	2.1110e-003
tblVehicleEF	LDT1	3.4000e-003	2.7140e-003
tblVehicleEF	LDT1	0.21	0.23
tblVehicleEF	LDT1	0.35	0.27
tblVehicleEF	LDT1	0.14	0.15
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.20	0.87
tblVehicleEF	LDT1	0.24	0.44
tblVehicleEF	LDT1	3.1780e-003	3.1370e-003
tblVehicleEF	LDT1	7.8300e-004	6.5900e-004

tblVehicleEF	LDT1	0.21	0.23
tblVehicleEF	LDT1	0.35	0.27
tblVehicleEF	LDT1	0.14	0.15
tblVehicleEF	LDT1	0.04	0.05
tblVehicleEF	LDT1	0.20	0.87
tblVehicleEF	LDT1	0.26	0.48
tblVehicleEF	LDT1	0.01	9.0560e-003
tblVehicleEF	LDT1	0.02	0.08
tblVehicleEF	LDT1	1.76	1.96
tblVehicleEF	LDT1	2.99	2.15
tblVehicleEF	LDT1	343.19	341.79
tblVehicleEF	LDT1	72.28	66.01
tblVehicleEF	LDT1	0.13	0.13
tblVehicleEF	LDT1	2.5300e-003	2.2930e-003
tblVehicleEF	LDT1	3.6970e-003	2.9510e-003
tblVehicleEF	LDT1	2.3290e-003	2.1110e-003
tblVehicleEF	LDT1	3.4000e-003	2.7140e-003
tblVehicleEF	LDT1	0.41	0.44
tblVehicleEF	LDT1	0.43	0.34
tblVehicleEF	LDT1	0.27	0.29
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.20	0.88
tblVehicleEF	LDT1	0.21	0.38
tblVehicleEF	LDT1	3.4550e-003	3.3820e-003
tblVehicleEF	LDT1	7.7500e-004	6.5300e-004
tblVehicleEF	LDT1	0.41	0.44
tblVehicleEF	LDT1	0.43	0.34

tblVehicleEF	LDT2	6.3630e-003	4.8280e-003
tblVehicleEF	LDT2	6.3270e-003	0.06
tblVehicleEF	LDT2	0.93	1.20
tblVehicleEF	LDT2	1.35	2.42
tblVehicleEF	LDT2	386.34	362.86
tblVehicleEF	LDT2	81.24	70.86
tblVehicleEF	LDT2	0.07	0.08
tblVehicleEF	LDT2	1.6030e-003	1.4980e-003
tblVehicleEF	LDT2	2.3320e-003	1.9580e-003
tblVehicleEF	LDT2	1.4740e-003	1.3790e-003
tblVehicleEF	LDT2	2.1450e-003	1.8010e-003
tblVehicleEF	LDT2	0.14	0.22
tblVehicleEF	LDT2	0.14	0.17
tblVehicleEF	LDT2	0.10	0.17
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.44
tblVehicleEF	LDT2	0.09	0.29
tblVehicleEF	LDT2	3.8710e-003	3.5900e-003
tblVehicleEF	LDT2	8.3500e-004	7.0100e-004
tblVehicleEF	LDT2	0.14	0.22
tblVehicleEF	LDT2	0.14	0.17
tblVehicleEF	LDT2	0.10	0.17
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.06	0.44
tblVehicleEF	LDT2	0.09	0.32
tblVehicleEF	LDT2	5.3900e-003	4.0760e-003
tblVehicleEF	LDT2	7.4940e-003	0.07

tblVehicleEF	LDT2	0.71	0.91
tblVehicleEF	LDT2	1.57	2.80
tblVehicleEF	LDT2	345.65	331.49
tblVehicleEF	LDT2	81.24	71.65
tblVehicleEF	LDT2	0.08	0.09
tblVehicleEF	LDT2	1.6030e-003	1.4980e-003
tblVehicleEF	LDT2	2.3320e-003	1.9580e-003
tblVehicleEF	LDT2	1.4740e-003	1.3790e-003
tblVehicleEF	LDT2	2.1450e-003	1.8010e-003
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.13	0.15
tblVehicleEF	LDT2	0.05	0.07
tblVehicleEF	LDT2	0.01	0.02
tblVehicleEF	LDT2	0.07	0.51
tblVehicleEF	LDT2	0.10	0.34
tblVehicleEF	LDT2	3.4620e-003	3.2800e-003
tblVehicleEF	LDT2	8.3900e-004	7.0900e-004
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.13	0.15
tblVehicleEF	LDT2	0.05	0.07
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.51
tblVehicleEF	LDT2	0.11	0.38
tblVehicleEF	LHD1	5.4460e-003	4.8820e-003
tblVehicleEF	LHD1	0.01	5.3310e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	0.17

tblVehicleEF	LHD1	3.6380e-003	2.9980e-003
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.32	0.50
tblVehicleEF	LHD1	0.25	0.07
tblVehicleEF	LHD1	9.3000e-005	9.1000e-005
tblVehicleEF	LHD1	5.9620e-003	6.2250e-003
tblVehicleEF	LHD1	3.4700e-004	1.0300e-004
tblVehicleEF	LHD1	7.2450e-003	5.9530e-003
tblVehicleEF	LHD1	0.12	0.09
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	3.6380e-003	2.9980e-003
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.32	0.50
tblVehicleEF	LHD1	0.27	0.08
tblVehicleEF	LHD1	5.4460e-003	4.8810e-003
tblVehicleEF	LHD1	0.01	5.3180e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	0.96	0.72
tblVehicleEF	LHD1	2.41	0.96
tblVehicleEF	LHD1	9.26	9.44
tblVehicleEF	LHD1	607.95	639.95
tblVehicleEF	LHD1	30.36	10.54
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	2.18	1.59
tblVehicleEF	LHD1	9.7200e-004	9.7000e-004
tblVehicleEF	LHD1	0.01	0.01

tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.7100e-004	2.3300e-004
tblVehicleEF	LHD1	9.3000e-004	9.2800e-004
tblVehicleEF	LHD1	2.5390e-003	2.5010e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.0100e-004	2.1400e-004
tblVehicleEF	LHD1	3.4570e-003	2.8250e-003
tblVehicleEF	LHD1	0.11	0.09
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.7350e-003	1.4150e-003
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.33	0.53
tblVehicleEF	LHD1	0.26	0.08
tblVehicleEF	LHD1	9.3000e-005	9.1000e-005
tblVehicleEF	LHD1	5.9620e-003	6.2250e-003
tblVehicleEF	LHD1	3.4900e-004	1.0400e-004
tblVehicleEF	LHD1	3.4570e-003	2.8250e-003
tblVehicleEF	LHD1	0.11	0.09
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.7350e-003	1.4150e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.33	0.53
tblVehicleEF	LHD1	0.28	0.08
tblVehicleEF	LHD2	3.6660e-003	3.1720e-003
tblVehicleEF	LHD2	4.5290e-003	3.8570e-003
tblVehicleEF	LHD2	8.3110e-003	9.0280e-003
tblVehicleEF	LHD2	0.12	0.13

tblVehicleEF	LHD2	0.50	0.53
tblVehicleEF	LHD2	1.15	0.56
tblVehicleEF	LHD2	14.48	14.86
tblVehicleEF	LHD2	604.20	638.83
tblVehicleEF	LHD2	23.56	7.29
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.71	1.77
tblVehicleEF	LHD2	1.3360e-003	1.4390e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.8700e-004	1.1400e-004
tblVehicleEF	LHD2	1.2780e-003	1.3770e-003
tblVehicleEF	LHD2	2.6970e-003	2.7110e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5600e-004	1.0500e-004
tblVehicleEF	LHD2	1.4980e-003	1.6870e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	7.7800e-004	8.4200e-004
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.4100e-004	1.4200e-004
tblVehicleEF	LHD2	5.8740e-003	6.1550e-003
tblVehicleEF	LHD2	2.5700e-004	7.2000e-005
tblVehicleEF	LHD2	1.4980e-003	1.6870e-003
tblVehicleEF	LHD2	0.04	0.04

tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	7.7800e-004	8.4200e-004
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	3.6660e-003	3.1790e-003
tblVehicleEF	LHD2	4.5800e-003	3.8860e-003
tblVehicleEF	LHD2	8.0210e-003	8.7250e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.51	0.53
tblVehicleEF	LHD2	1.10	0.53
tblVehicleEF	LHD2	14.48	14.86
tblVehicleEF	LHD2	604.20	638.83
tblVehicleEF	LHD2	23.56	7.25
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.62	1.67
tblVehicleEF	LHD2	1.3360e-003	1.4390e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.8700e-004	1.1400e-004
tblVehicleEF	LHD2	1.2780e-003	1.3770e-003
tblVehicleEF	LHD2	2.6970e-003	2.7110e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5600e-004	1.0500e-004
tblVehicleEF	LHD2	2.8320e-003	3.1830e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.01	0.02

tblVehicleEF	LHD2	1.4720e-003	1.6130e-003
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.4100e-004	1.4200e-004
tblVehicleEF	LHD2	5.8740e-003	6.1560e-003
tblVehicleEF	LHD2	2.5600e-004	7.2000e-005
tblVehicleEF	LHD2	2.8320e-003	3.1830e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.4720e-003	1.6130e-003
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	3.6660e-003	3.1700e-003
tblVehicleEF	LHD2	4.5170e-003	3.8490e-003
tblVehicleEF	LHD2	8.3600e-003	9.0930e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.50	0.53
tblVehicleEF	LHD2	1.16	0.56
tblVehicleEF	LHD2	14.48	14.86
tblVehicleEF	LHD2	604.20	638.83
tblVehicleEF	LHD2	23.56	7.30
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.70	1.75
tblVehicleEF	LHD2	1.3360e-003	1.4390e-003
tblVehicleEF	LHD2	0.01	0.01

tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.8700e-004	1.1400e-004
tblVehicleEF	LHD2	1.2780e-003	1.3770e-003
tblVehicleEF	LHD2	2.6970e-003	2.7110e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5600e-004	1.0500e-004
tblVehicleEF	LHD2	1.1910e-003	1.3290e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	6.6000e-004	7.0100e-004
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.4100e-004	1.4200e-004
tblVehicleEF	LHD2	5.8740e-003	6.1550e-003
tblVehicleEF	LHD2	2.5700e-004	7.2000e-005
tblVehicleEF	LHD2	1.1910e-003	1.3290e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	6.6000e-004	7.0100e-004
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	MCY	0.42	0.32
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	19.52	19.61
tblVehicleEF	MCY	9.67	8.55

tblVehicleEF	MCY	165.74	208.30
tblVehicleEF	MCY	46.23	60.73
tblVehicleEF	MCY	1.13	1.13
tblVehicleEF	MCY	1.7750e-003	1.7570e-003
tblVehicleEF	MCY	3.4010e-003	2.8660e-003
tblVehicleEF	MCY	1.6600e-003	1.6440e-003
tblVehicleEF	MCY	3.2060e-003	2.7000e-003
tblVehicleEF	MCY	1.69	1.66
tblVehicleEF	MCY	0.85	0.84
tblVehicleEF	MCY	0.92	0.90
tblVehicleEF	MCY	2.15	2.16
tblVehicleEF	MCY	0.57	1.87
tblVehicleEF	MCY	2.08	1.83
tblVehicleEF	MCY	2.0380e-003	2.0610e-003
tblVehicleEF	MCY	6.8100e-004	6.0100e-004
tblVehicleEF	MCY	1.69	1.66
tblVehicleEF	MCY	0.85	0.84
tblVehicleEF	MCY	0.92	0.90
tblVehicleEF	MCY	2.65	2.65
tblVehicleEF	MCY	0.57	1.87
tblVehicleEF	MCY	2.26	1.99
tblVehicleEF	MCY	0.42	0.32
tblVehicleEF	MCY	0.14	0.22
tblVehicleEF	MCY	20.23	20.27
tblVehicleEF	MCY	9.11	8.00
tblVehicleEF	MCY	165.74	209.26
tblVehicleEF	MCY	46.23	59.19

tblVehicleEF	MCY	0.98	0.98
tblVehicleEF	MCY	1.7750e-003	1.7570e-003
tblVehicleEF	MCY	3.4010e-003	2.8660e-003
tblVehicleEF	MCY	1.6600e-003	1.6440e-003
tblVehicleEF	MCY	3.2060e-003	2.7000e-003
tblVehicleEF	MCY	3.35	3.28
tblVehicleEF	MCY	1.24	1.23
tblVehicleEF	MCY	2.10	2.05
tblVehicleEF	MCY	2.13	2.13
tblVehicleEF	MCY	0.57	1.86
tblVehicleEF	MCY	1.86	1.63
tblVehicleEF	MCY	2.0490e-003	2.0710e-003
tblVehicleEF	MCY	6.6500e-004	5.8600e-004
tblVehicleEF	MCY	3.35	3.28
tblVehicleEF	MCY	1.24	1.23
tblVehicleEF	MCY	2.10	2.05
tblVehicleEF	MCY	2.62	2.63
tblVehicleEF	MCY	0.57	1.86
tblVehicleEF	MCY	2.02	1.77
tblVehicleEF	MCY	0.42	0.32
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	19.04	19.14
tblVehicleEF	MCY	9.62	8.49
tblVehicleEF	MCY	165.74	207.52
tblVehicleEF	MCY	46.23	60.64
tblVehicleEF	MCY	1.12	1.12
tblVehicleEF	MCY	1.7750e-003	1.7570e-003

tblVehicleEF	MCY	3.4010e-003	2.8660e-003
tblVehicleEF	MCY	1.6600e-003	1.6440e-003
tblVehicleEF	MCY	3.2060e-003	2.7000e-003
tblVehicleEF	MCY	1.60	1.59
tblVehicleEF	MCY	1.05	1.04
tblVehicleEF	MCY	0.74	0.73
tblVehicleEF	MCY	2.15	2.15
tblVehicleEF	MCY	0.65	2.12
tblVehicleEF	MCY	2.08	1.83
tblVehicleEF	MCY	2.0310e-003	2.0540e-003
tblVehicleEF	MCY	6.8100e-004	6.0000e-004
tblVehicleEF	MCY	1.60	1.59
tblVehicleEF	MCY	1.05	1.04
tblVehicleEF	MCY	0.74	0.73
tblVehicleEF	MCY	2.64	2.65
tblVehicleEF	MCY	0.65	2.12
tblVehicleEF	MCY	2.27	1.99
tblVehicleEF	MDV	0.01	5.7580e-003
tblVehicleEF	MDV	0.02	0.09
tblVehicleEF	MDV	1.42	1.20
tblVehicleEF	MDV	3.18	3.27
tblVehicleEF	MDV	488.89	421.49
tblVehicleEF	MDV	110.15	88.73
tblVehicleEF	MDV	0.17	0.12
tblVehicleEF	MDV	1.7110e-003	1.5730e-003
tblVehicleEF	MDV	2.4630e-003	2.0550e-003
tblVehicleEF	MDV	1.5780e-003	1.4510e-003

tblVehicleEF	MDV	2.2660e-003	1.8910e-003
tblVehicleEF	MDV	0.11	0.13
tblVehicleEF	MDV	0.20	0.17
tblVehicleEF	MDV	0.09	0.11
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.25	0.45
tblVehicleEF	MDV	4.9000e-003	4.1680e-003
tblVehicleEF	MDV	1.1570e-003	8.7800e-004
tblVehicleEF	MDV	0.11	0.13
tblVehicleEF	MDV	0.20	0.17
tblVehicleEF	MDV	0.09	0.11
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.27	0.49
tblVehicleEF	MDV	0.01	6.5120e-003
tblVehicleEF	MDV	0.02	0.08
tblVehicleEF	MDV	1.73	1.46
tblVehicleEF	MDV	2.81	2.88
tblVehicleEF	MDV	530.71	447.07
tblVehicleEF	MDV	110.15	87.92
tblVehicleEF	MDV	0.16	0.11
tblVehicleEF	MDV	1.7110e-003	1.5730e-003
tblVehicleEF	MDV	2.4630e-003	2.0550e-003
tblVehicleEF	MDV	1.5780e-003	1.4510e-003
tblVehicleEF	MDV	2.2660e-003	1.8910e-003
tblVehicleEF	MDV	0.22	0.26

tblVehicleEF	MDV	0.23	0.20
tblVehicleEF	MDV	0.17	0.21
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.21	0.39
tblVehicleEF	MDV	5.3230e-003	4.4210e-003
tblVehicleEF	MDV	1.1510e-003	8.7000e-004
tblVehicleEF	MDV	0.22	0.26
tblVehicleEF	MDV	0.23	0.20
tblVehicleEF	MDV	0.17	0.21
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.23	0.43
tblVehicleEF	MDV	0.01	5.5370e-003
tblVehicleEF	MDV	0.02	0.09
tblVehicleEF	MDV	1.33	1.12
tblVehicleEF	MDV	3.24	3.34
tblVehicleEF	MDV	476.42	413.84
tblVehicleEF	MDV	110.15	88.88
tblVehicleEF	MDV	0.16	0.12
tblVehicleEF	MDV	1.7110e-003	1.5730e-003
tblVehicleEF	MDV	2.4630e-003	2.0550e-003
tblVehicleEF	MDV	1.5780e-003	1.4510e-003
tblVehicleEF	MDV	2.2660e-003	1.8910e-003
tblVehicleEF	MDV	0.09	0.10
tblVehicleEF	MDV	0.21	0.18
tblVehicleEF	MDV	0.08	0.10

tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.13	0.57
tblVehicleEF	MDV	0.25	0.46
tblVehicleEF	MDV	4.7750e-003	4.0920e-003
tblVehicleEF	MDV	1.1590e-003	8.8000e-004
tblVehicleEF	MDV	0.09	0.10
tblVehicleEF	MDV	0.21	0.18
tblVehicleEF	MDV	0.08	0.10
tblVehicleEF	MDV	0.05	0.03
tblVehicleEF	MDV	0.13	0.57
tblVehicleEF	MDV	0.28	0.50
tblVehicleEF	MH	0.03	3.3370e-003
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	2.70	0.34
tblVehicleEF	MH	5.98	0.00
tblVehicleEF	MH	1,002.10	941.76
tblVehicleEF	MH	57.67	0.00
tblVehicleEF	MH	1.67	4.43
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	1.0860e-003	0.00
tblVehicleEF	MH	3.2460e-003	4.0000e-003
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	9.9800e-004	0.00
tblVehicleEF	MH	1.56	0.00
tblVehicleEF	MH	0.08	0.00
tblVehicleEF	MH	0.54	0.00

tblVehicleEF	MHD	0.06	8.5610e-003
tblVehicleEF	MHD	0.49	0.43
tblVehicleEF	MHD	0.27	0.57
tblVehicleEF	MHD	6.14	1.02
tblVehicleEF	MHD	139.53	72.84
tblVehicleEF	MHD	1,066.63	1,001.03
tblVehicleEF	MHD	55.49	8.20
tblVehicleEF	MHD	0.62	0.67
tblVehicleEF	MHD	0.98	2.35
tblVehicleEF	MHD	1.2990e-003	2.9380e-003
tblVehicleEF	MHD	6.4490e-003	0.08
tblVehicleEF	MHD	7.8800e-004	9.6000e-005
tblVehicleEF	MHD	1.2430e-003	2.8110e-003
tblVehicleEF	MHD	6.1670e-003	0.08
tblVehicleEF	MHD	7.2400e-004	8.8000e-005
tblVehicleEF	MHD	1.3320e-003	5.6300e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	6.7900e-004	2.8800e-004
tblVehicleEF	MHD	0.03	0.11
tblVehicleEF	MHD	0.02	0.11
tblVehicleEF	MHD	0.37	0.05
tblVehicleEF	MHD	1.3440e-003	6.9100e-004
tblVehicleEF	MHD	0.01	9.5290e-003
tblVehicleEF	MHD	6.6300e-004	8.1000e-005
tblVehicleEF	MHD	1.3320e-003	5.6300e-004
tblVehicleEF	MHD	0.05	0.02

tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	6.7900e-004	2.8800e-004
tblVehicleEF	MHD	0.04	0.12
tblVehicleEF	MHD	0.02	0.11
tblVehicleEF	MHD	0.41	0.05
tblVehicleEF	OBUS	0.01	8.9240e-003
tblVehicleEF	OBUS	8.0950e-003	8.5070e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.27	0.50
tblVehicleEF	OBUS	0.54	0.93
tblVehicleEF	OBUS	6.17	2.58
tblVehicleEF	OBUS	75.04	73.28
tblVehicleEF	OBUS	1,098.07	1,407.22
tblVehicleEF	OBUS	70.10	20.86
tblVehicleEF	OBUS	0.35	0.44
tblVehicleEF	OBUS	1.12	1.70
tblVehicleEF	OBUS	1.2100e-004	1.7750e-003
tblVehicleEF	OBUS	6.0450e-003	0.04
tblVehicleEF	OBUS	8.2300e-004	1.9000e-004
tblVehicleEF	OBUS	1.1600e-004	1.6990e-003
tblVehicleEF	OBUS	5.7680e-003	0.04
tblVehicleEF	OBUS	7.5700e-004	1.7400e-004
tblVehicleEF	OBUS	2.1800e-003	2.5990e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	9.3000e-004	1.1120e-003
tblVehicleEF	OBUS	0.04	0.09

tblVehicleEF	OBUS	0.05	0.26
tblVehicleEF	OBUS	0.39	0.12
tblVehicleEF	OBUS	7.2800e-004	6.9900e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.0900e-004	2.0600e-004
tblVehicleEF	OBUS	2.1800e-003	2.5990e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	9.3000e-004	1.1120e-003
tblVehicleEF	OBUS	0.05	0.11
tblVehicleEF	OBUS	0.05	0.26
tblVehicleEF	OBUS	0.42	0.14
tblVehicleEF	OBUS	0.01	8.9470e-003
tblVehicleEF	OBUS	8.2540e-003	8.6370e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.26	0.48
tblVehicleEF	OBUS	0.55	0.94
tblVehicleEF	OBUS	5.76	2.41
tblVehicleEF	OBUS	78.48	73.81
tblVehicleEF	OBUS	1,098.07	1,407.25
tblVehicleEF	OBUS	70.10	20.57
tblVehicleEF	OBUS	0.36	0.45
tblVehicleEF	OBUS	1.04	1.59
tblVehicleEF	OBUS	1.0200e-004	1.5000e-003
tblVehicleEF	OBUS	6.0450e-003	0.04
tblVehicleEF	OBUS	8.2300e-004	1.9000e-004
tblVehicleEF	OBUS	9.8000e-005	1.4350e-003

tblVehicleEF	OBUS	5.7680e-003	0.04
tblVehicleEF	OBUS	7.5700e-004	1.7400e-004
tblVehicleEF	OBUS	4.0690e-003	4.7330e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	1.7890e-003	2.1320e-003
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.05	0.26
tblVehicleEF	OBUS	0.37	0.12
tblVehicleEF	OBUS	7.6100e-004	7.0400e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.0200e-004	2.0400e-004
tblVehicleEF	OBUS	4.0690e-003	4.7330e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	1.7890e-003	2.1320e-003
tblVehicleEF	OBUS	0.05	0.11
tblVehicleEF	OBUS	0.05	0.26
tblVehicleEF	OBUS	0.40	0.13
tblVehicleEF	OBUS	0.01	8.9200e-003
tblVehicleEF	OBUS	8.0660e-003	8.4690e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.28	0.53
tblVehicleEF	OBUS	0.54	0.92
tblVehicleEF	OBUS	6.22	2.60
tblVehicleEF	OBUS	70.30	72.56
tblVehicleEF	OBUS	1,098.07	1,407.21

tblVehicleEF	OBUS	70.10	20.90
tblVehicleEF	OBUS	0.34	0.44
tblVehicleEF	OBUS	1.11	1.68
tblVehicleEF	OBUS	1.4700e-004	2.1560e-003
tblVehicleEF	OBUS	6.0450e-003	0.04
tblVehicleEF	OBUS	8.2300e-004	1.9000e-004
tblVehicleEF	OBUS	1.4100e-004	2.0620e-003
tblVehicleEF	OBUS	5.7680e-003	0.04
tblVehicleEF	OBUS	7.5700e-004	1.7400e-004
tblVehicleEF	OBUS	1.8870e-003	2.3830e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	8.5400e-004	1.0620e-003
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.05	0.27
tblVehicleEF	OBUS	0.39	0.13
tblVehicleEF	OBUS	6.8300e-004	6.9200e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.1000e-004	2.0700e-004
tblVehicleEF	OBUS	1.8870e-003	2.3830e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	8.5400e-004	1.0620e-003
tblVehicleEF	OBUS	0.05	0.11
tblVehicleEF	OBUS	0.05	0.27
tblVehicleEF	OBUS	0.42	0.14
tblVehicleEF	SBUS	0.84	0.08

tblVehicleEF	SBUS	0.01	6.6110e-003
tblVehicleEF	SBUS	0.06	6.9670e-003
tblVehicleEF	SBUS	7.83	3.03
tblVehicleEF	SBUS	0.64	0.53
tblVehicleEF	SBUS	6.66	0.94
tblVehicleEF	SBUS	1,146.29	366.87
tblVehicleEF	SBUS	1,103.40	1,115.27
tblVehicleEF	SBUS	53.92	6.06
tblVehicleEF	SBUS	10.00	3.57
tblVehicleEF	SBUS	4.65	4.82
tblVehicleEF	SBUS	0.01	4.0660e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.5700e-004	4.0000e-005
tblVehicleEF	SBUS	0.01	3.8900e-003
tblVehicleEF	SBUS	2.6950e-003	2.6510e-003
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	4.2000e-004	3.6000e-005
tblVehicleEF	SBUS	4.6830e-003	1.3080e-003
tblVehicleEF	SBUS	0.03	8.6250e-003
tblVehicleEF	SBUS	0.94	0.36
tblVehicleEF	SBUS	2.1770e-003	6.2500e-004
tblVehicleEF	SBUS	0.11	0.10
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	0.37	0.04
tblVehicleEF	SBUS	0.01	3.5040e-003
tblVehicleEF	SBUS	0.01	0.01

tblVehicleEF	SBUS	6.5500e-004	6.0000e-005
tblVehicleEF	SBUS	4.6830e-003	1.3080e-003
tblVehicleEF	SBUS	0.03	8.6250e-003
tblVehicleEF	SBUS	1.35	0.52
tblVehicleEF	SBUS	2.1770e-003	6.2500e-004
tblVehicleEF	SBUS	0.13	0.11
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	0.40	0.04
tblVehicleEF	SBUS	0.84	0.08
tblVehicleEF	SBUS	0.01	6.6860e-003
tblVehicleEF	SBUS	0.05	5.8380e-003
tblVehicleEF	SBUS	7.71	2.99
tblVehicleEF	SBUS	0.65	0.54
tblVehicleEF	SBUS	4.83	0.68
tblVehicleEF	SBUS	1,198.60	377.09
tblVehicleEF	SBUS	1,103.40	1,115.28
tblVehicleEF	SBUS	53.92	5.63
tblVehicleEF	SBUS	10.32	3.66
tblVehicleEF	SBUS	4.37	4.53
tblVehicleEF	SBUS	9.1190e-003	3.4340e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.5700e-004	4.0000e-005
tblVehicleEF	SBUS	8.7240e-003	3.2850e-003
tblVehicleEF	SBUS	2.6950e-003	2.6510e-003
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	4.2000e-004	3.6000e-005

tblVehicleEF	SBUS	8.4640e-003	2.3620e-003
tblVehicleEF	SBUS	0.03	9.1440e-003
tblVehicleEF	SBUS	0.93	0.36
tblVehicleEF	SBUS	4.0830e-003	1.1650e-003
tblVehicleEF	SBUS	0.11	0.10
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.31	0.03
tblVehicleEF	SBUS	0.01	3.6000e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.2400e-004	5.6000e-005
tblVehicleEF	SBUS	8.4640e-003	2.3620e-003
tblVehicleEF	SBUS	0.03	9.1440e-003
tblVehicleEF	SBUS	1.35	0.52
tblVehicleEF	SBUS	4.0830e-003	1.1650e-003
tblVehicleEF	SBUS	0.13	0.11
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.34	0.04
tblVehicleEF	SBUS	0.84	0.08
tblVehicleEF	SBUS	0.01	6.6040e-003
tblVehicleEF	SBUS	0.07	7.2110e-003
tblVehicleEF	SBUS	8.00	3.09
tblVehicleEF	SBUS	0.63	0.53
tblVehicleEF	SBUS	7.02	0.98
tblVehicleEF	SBUS	1,074.07	352.76
tblVehicleEF	SBUS	1,103.40	1,115.26
tblVehicleEF	SBUS	53.92	6.14
tblVehicleEF	SBUS	9.56	3.44

tblVehicleEF	SBUS	4.60	4.78
tblVehicleEF	SBUS	0.01	4.9380e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.5700e-004	4.0000e-005
tblVehicleEF	SBUS	0.01	4.7240e-003
tblVehicleEF	SBUS	2.6950e-003	2.6510e-003
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	4.2000e-004	3.6000e-005
tblVehicleEF	SBUS	4.1680e-003	1.1480e-003
tblVehicleEF	SBUS	0.03	8.8290e-003
tblVehicleEF	SBUS	0.94	0.36
tblVehicleEF	SBUS	2.1000e-003	6.0300e-004
tblVehicleEF	SBUS	0.11	0.10
tblVehicleEF	SBUS	0.02	0.06
tblVehicleEF	SBUS	0.38	0.04
tblVehicleEF	SBUS	0.01	3.3710e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.6100e-004	6.1000e-005
tblVehicleEF	SBUS	4.1680e-003	1.1480e-003
tblVehicleEF	SBUS	0.03	8.8290e-003
tblVehicleEF	SBUS	1.35	0.52
tblVehicleEF	SBUS	2.1000e-003	6.0300e-004
tblVehicleEF	SBUS	0.13	0.11
tblVehicleEF	SBUS	0.02	0.06
tblVehicleEF	SBUS	0.41	0.05
tblVehicleEF	UBUS	1.51	3.35

tblVehicleEF	UBUS	0.09	0.02
tblVehicleEF	UBUS	8.45	26.05
tblVehicleEF	UBUS	15.26	1.50
tblVehicleEF	UBUS	1,822.40	1,617.71
tblVehicleEF	UBUS	153.45	18.08
tblVehicleEF	UBUS	4.95	0.32
tblVehicleEF	UBUS	0.50	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.06	2.9340e-003
tblVehicleEF	UBUS	1.4200e-003	1.6100e-004
tblVehicleEF	UBUS	0.21	0.04
tblVehicleEF	UBUS	3.0000e-003	5.4780e-003
tblVehicleEF	UBUS	0.05	2.7920e-003
tblVehicleEF	UBUS	1.3060e-003	1.4800e-004
tblVehicleEF	UBUS	9.7430e-003	1.6370e-003
tblVehicleEF	UBUS	0.11	9.7740e-003
tblVehicleEF	UBUS	4.7860e-003	7.1300e-004
tblVehicleEF	UBUS	0.52	0.05
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.17	0.07
tblVehicleEF	UBUS	9.9960e-003	4.8690e-003
tblVehicleEF	UBUS	1.8100e-003	1.7900e-004
tblVehicleEF	UBUS	9.7430e-003	1.6370e-003
tblVehicleEF	UBUS	0.11	9.7740e-003
tblVehicleEF	UBUS	4.7860e-003	7.1300e-004
tblVehicleEF	UBUS	2.08	3.43
tblVehicleEF	UBUS	0.02	0.05

tblVehicleEF	UBUS	0.13	0.01
tblVehicleEF	UBUS	4.3820e-003	7.5400e-004
tblVehicleEF	UBUS	2.08	3.43
tblVehicleEF	UBUS	0.03	0.05
tblVehicleEF	UBUS	1.29	0.08
tblVehicleTrips	CNW_TTP	41.00	0.00
tblVehicleTrips	CW_TTP	59.00	100.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	1.68	2.32
tblVehicleTrips	SU_TR	1.68	2.32
tblVehicleTrips	WD_TR	1.68	2.32
tblWater	IndoorWaterUseRate	22,523,750.00	22,770,125.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	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**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/4/2020	8/12/2020	5	50	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 36.86

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	158	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2020

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

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

3.2 Demolition - 2020

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	0.0000	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 Construction Off-Site

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6569	0.5630	9.5563	0.0271	2.8497	0.0135	2.8632	0.7554	0.0124	0.7679		2,742.7892	2,742.7892	0.0604		2,744.2992
Unmitigated	0.6569	0.5630	9.5563	0.0271	2.8497	0.0135	2.8632	0.7554	0.0124	0.7679		2,742.7892	2,742.7892	0.0604		2,744.2992

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	225.97	225.97	225.97	1,365,389	1,365,389
Total	225.97	225.97	225.97	1,365,389	1,365,389

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
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	6.90	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.542116	0.037578	0.185203	0.118503	0.016241	0.005141	0.017392	0.068695	0.001383	0.001183	0.004582	0.000945	0.001038
Unrefrigerated Warehouse-No Rail	0.614000	0.043000	0.210000	0.133000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	4.1200e-003	0.0374	0.0314	2.2000e-004		2.8400e-003	2.8400e-003		2.8400e-003	2.8400e-003		44.8935	44.8935	8.6000e-004	8.2000e-004	45.1603
NaturalGas Unmitigated	4.1200e-003	0.0374	0.0314	2.2000e-004		2.8400e-003	2.8400e-003		2.8400e-003	2.8400e-003		44.8935	44.8935	8.6000e-004	8.2000e-004	45.1603

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					
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
Unrefrigerated Warehouse-No Rail	381.595	4.1200e-003	0.0374	0.0314	2.2000e-004		2.8400e-003	2.8400e-003		2.8400e-003	2.8400e-003		44.8935	44.8935	8.6000e-004	8.2000e-004	45.1603
Total		**4.1200e-003**	**0.0374**	**0.0314**	**2.2000e-004**		**2.8400e-003**	**2.8400e-003**		**2.8400e-003**	**2.8400e-003**		**44.8935**	**44.8935**	**8.6000e-004**	**8.2000e-004**	**45.1603**

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					
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
Unrefrigerated Warehouse-No Rail	0.381595	4.1200e-003	0.0374	0.0314	2.2000e-004		2.8400e-003	2.8400e-003		2.8400e-003	2.8400e-003		44.8935	44.8935	8.6000e-004	8.2000e-004	45.1603
Total		**4.1200e-003**	**0.0374**	**0.0314**	**2.2000e-004**		**2.8400e-003**	**2.8400e-003**		**2.8400e-003**	**2.8400e-003**		**44.8935**	**44.8935**	**8.6000e-004**	**8.2000e-004**	**45.1603**

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	2.8833	1.6000e-003	0.1746	1.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004		0.3728	0.3728	9.9000e-004		0.3975
Unmitigated	2.8833	1.6000e-003	0.1746	1.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004		0.3728	0.3728	9.9000e-004		0.3975

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	0.3697					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.4973					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0163	1.6000e-003	0.1746	1.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004		0.3728	0.3728	9.9000e-004		0.3975
Total	**2.8833**	**1.6000e-003**	**0.1746**	**1.0000e-005**		**6.2000e-004**	**6.2000e-004**		**6.2000e-004**	**6.2000e-004**		**0.3728**	**0.3728**	**9.9000e-004**		**0.3975**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3697					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.4973					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0163	1.6000e-003	0.1746	1.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004		0.3728	0.3728	9.9000e-004		0.3975
Total	**2.8833**	**1.6000e-003**	**0.1746**	**1.0000e-005**		**6.2000e-004**	**6.2000e-004**		**6.2000e-004**	**6.2000e-004**		**0.3728**	**0.3728**	**9.9000e-004**		**0.3975**

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

Estes Banning (Operations - Passenger Cars)

Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	97.40	1000sqft	2.24	97,400.00	0
Other Asphalt Surfaces	1,605.80	1000sqft	36.86	1,605,796.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2021
Utility Company	Statewide Average				
CO2 Intensity (lb/MWhr)	1001.57	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Estes Banning (Operations - Passenger Cars) - Riverside-South Coast County, Winter

Project Characteristics - Electricty will be provided to the Project by Banning Electric Utility (BEU). CalEEMod does not provided Intensity Factors for BEU, as such, the Statewide Average will be used.

Land Use - Total Project Area is 36.86 acres. Truck Terminal is 97,400 sf. Remaning area will be modeled as 1,605,796 sf of Other Apshalt Surfaces.

Construction Phase - Operations Run Only.

Off-road Equipment - Operations Run Only.

Trips and VMT - Operations Run Only.

Vehicle Trips - Trip Rates based on information provided in the TIA prepared by Urban Crossroads.

Energy Use - The project will design building shells and building components to meet 2019 Title 24 Standards which expects 30% less energy for nonresidential uses.

Water And Wastewater - The project includes the construction and operation of a 660 square foot automated truck wash. Water usage based on the assumption that 50% of incoming trucks will be washed and 30 gallons of water will be used per truck.

Fleet Mix - Fleet Mix is based on a proportional split utilizing the default CalEEMod percentages assigned to LDA, LDT1, LDT2, and MDV vehicles types.

Vehicle Emission Factors - EMFAC2017

Vehicle Emission Factors - EMFAC2017

Vehicle Emission Factors - EMFAC2017

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	1.17	0.82
tblEnergyUse	T24E	0.37	0.26
tblEnergyUse	T24NG	2.00	1.40
tblFleetMix	HHD	0.07	0.00
tblFleetMix	LDA	0.54	0.61
tblFleetMix	LDT1	0.04	0.04
tblFleetMix	LDT2	0.19	0.21
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.1410e-003	0.00
tblFleetMix	MCY	4.5820e-003	0.00
tblFleetMix	MDV	0.12	0.13
tblFleetMix	MH	1.0380e-003	0.00

tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	1.3830e-003	0.00
tblFleetMix	SBUS	9.4500e-004	0.00
tblFleetMix	UBUS	1.1830e-003	0.00
tblLandUse	LandUseSquareFeet	1,605,800.00	1,605,796.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
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tblVehicleEF	HHD	0.05	1.0000e-006
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tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	7.1000e-005	0.00
tblVehicleEF	HHD	8.4000e-005	4.0000e-006
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tblVehicleEF	HHD	1,461.92	1,350.00

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tblVehicleEF	HHD	0.01	0.01
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tblVehicleEF	HHD	0.05	1.0000e-006
tblVehicleEF	HHD	0.06	0.01
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	7.1000e-005	0.00
tblVehicleEF	HHD	6.7000e-005	4.0000e-006
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tblVehicleEF	LDA	0.04	0.05
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tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.21
tblVehicleEF	LDA	0.08	0.25
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tblVehicleEF	LDA	0.12	0.12
tblVehicleEF	LDA	0.07	0.10
tblVehicleEF	LDA	0.01	0.01

tblVehicleEF	LDA	0.04	0.21
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tblVehicleEF	LDA	0.12	0.12
tblVehicleEF	LDA	0.07	0.10
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.04	0.21
tblVehicleEF	LDA	0.07	0.22
tblVehicleEF	LDA	3.8980e-003	2.3810e-003
tblVehicleEF	LDA	5.6140e-003	0.05
tblVehicleEF	LDA	0.54	0.62
tblVehicleEF	LDA	1.19	2.17
tblVehicleEF	LDA	249.57	259.47
tblVehicleEF	LDA	58.81	54.82
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	1.6140e-003	1.4470e-003
tblVehicleEF	LDA	2.2650e-003	1.9190e-003
tblVehicleEF	LDA	1.4880e-003	1.3330e-003
tblVehicleEF	LDA	2.0830e-003	1.7640e-003
tblVehicleEF	LDA	0.04	0.06
tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	9.8140e-003	9.1880e-003
tblVehicleEF	LDA	0.04	0.24
tblVehicleEF	LDA	0.08	0.23

tblVehicleEF	LDA	2.4990e-003	2.5670e-003
tblVehicleEF	LDA	6.0800e-004	5.4200e-004
tblVehicleEF	LDA	0.04	0.06
tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.24
tblVehicleEF	LDA	0.08	0.26
tblVehicleEF	LDT1	0.01	8.0140e-003
tblVehicleEF	LDT1	0.02	0.09
tblVehicleEF	LDT1	1.46	1.62
tblVehicleEF	LDT1	3.40	2.43
tblVehicleEF	LDT1	315.98	317.00
tblVehicleEF	LDT1	72.28	66.64
tblVehicleEF	LDT1	0.14	0.14
tblVehicleEF	LDT1	2.5300e-003	2.2930e-003
tblVehicleEF	LDT1	3.6970e-003	2.9510e-003
tblVehicleEF	LDT1	2.3290e-003	2.1110e-003
tblVehicleEF	LDT1	3.4000e-003	2.7140e-003
tblVehicleEF	LDT1	0.21	0.23
tblVehicleEF	LDT1	0.35	0.27
tblVehicleEF	LDT1	0.14	0.15
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.20	0.87
tblVehicleEF	LDT1	0.24	0.44
tblVehicleEF	LDT1	3.1780e-003	3.1370e-003
tblVehicleEF	LDT1	7.8300e-004	6.5900e-004

tblVehicleEF	LDT1	0.21	0.23
tblVehicleEF	LDT1	0.35	0.27
tblVehicleEF	LDT1	0.14	0.15
tblVehicleEF	LDT1	0.04	0.05
tblVehicleEF	LDT1	0.20	0.87
tblVehicleEF	LDT1	0.26	0.48
tblVehicleEF	LDT1	0.01	9.0560e-003
tblVehicleEF	LDT1	0.02	0.08
tblVehicleEF	LDT1	1.76	1.96
tblVehicleEF	LDT1	2.99	2.15
tblVehicleEF	LDT1	343.19	341.79
tblVehicleEF	LDT1	72.28	66.01
tblVehicleEF	LDT1	0.13	0.13
tblVehicleEF	LDT1	2.5300e-003	2.2930e-003
tblVehicleEF	LDT1	3.6970e-003	2.9510e-003
tblVehicleEF	LDT1	2.3290e-003	2.1110e-003
tblVehicleEF	LDT1	3.4000e-003	2.7140e-003
tblVehicleEF	LDT1	0.41	0.44
tblVehicleEF	LDT1	0.43	0.34
tblVehicleEF	LDT1	0.27	0.29
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.20	0.88
tblVehicleEF	LDT1	0.21	0.38
tblVehicleEF	LDT1	3.4550e-003	3.3820e-003
tblVehicleEF	LDT1	7.7500e-004	6.5300e-004
tblVehicleEF	LDT1	0.41	0.44
tblVehicleEF	LDT1	0.43	0.34

tblVehicleEF	LDT1	0.27	0.29
tblVehicleEF	LDT1	0.05	0.06
tblVehicleEF	LDT1	0.20	0.88
tblVehicleEF	LDT1	0.23	0.42
tblVehicleEF	LDT1	0.01	7.7080e-003
tblVehicleEF	LDT1	0.02	0.09
tblVehicleEF	LDT1	1.37	1.51
tblVehicleEF	LDT1	3.46	2.48
tblVehicleEF	LDT1	307.88	309.49
tblVehicleEF	LDT1	72.28	66.77
tblVehicleEF	LDT1	0.14	0.14
tblVehicleEF	LDT1	2.5300e-003	2.2930e-003
tblVehicleEF	LDT1	3.6970e-003	2.9510e-003
tblVehicleEF	LDT1	2.3290e-003	2.1110e-003
tblVehicleEF	LDT1	3.4000e-003	2.7140e-003
tblVehicleEF	LDT1	0.18	0.19
tblVehicleEF	LDT1	0.39	0.30
tblVehicleEF	LDT1	0.12	0.13
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.23	1.01
tblVehicleEF	LDT1	0.25	0.45
tblVehicleEF	LDT1	3.0960e-003	3.0630e-003
tblVehicleEF	LDT1	7.8400e-004	6.6100e-004
tblVehicleEF	LDT1	0.18	0.19
tblVehicleEF	LDT1	0.39	0.30
tblVehicleEF	LDT1	0.12	0.13
tblVehicleEF	LDT1	0.04	0.05

tblVehicleEF	LDT1	0.23	1.01
tblVehicleEF	LDT1	0.27	0.50
tblVehicleEF	LDT2	5.6080e-003	4.2470e-003
tblVehicleEF	LDT2	7.2840e-003	0.07
tblVehicleEF	LDT2	0.76	0.98
tblVehicleEF	LDT2	1.53	2.73
tblVehicleEF	LDT2	355.02	338.79
tblVehicleEF	LDT2	81.24	71.51
tblVehicleEF	LDT2	0.08	0.09
tblVehicleEF	LDT2	1.6030e-003	1.4980e-003
tblVehicleEF	LDT2	2.3320e-003	1.9580e-003
tblVehicleEF	LDT2	1.4740e-003	1.3790e-003
tblVehicleEF	LDT2	2.1450e-003	1.8010e-003
tblVehicleEF	LDT2	0.07	0.11
tblVehicleEF	LDT2	0.12	0.14
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.01	0.02
tblVehicleEF	LDT2	0.06	0.44
tblVehicleEF	LDT2	0.10	0.33
tblVehicleEF	LDT2	3.5560e-003	3.3520e-003
tblVehicleEF	LDT2	8.3800e-004	7.0800e-004
tblVehicleEF	LDT2	0.07	0.11
tblVehicleEF	LDT2	0.12	0.14
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.06	0.44
tblVehicleEF	LDT2	0.11	0.37

tblVehicleEF	LDT2	6.3630e-003	4.8280e-003
tblVehicleEF	LDT2	6.3270e-003	0.06
tblVehicleEF	LDT2	0.93	1.20
tblVehicleEF	LDT2	1.35	2.42
tblVehicleEF	LDT2	386.34	362.86
tblVehicleEF	LDT2	81.24	70.86
tblVehicleEF	LDT2	0.07	0.08
tblVehicleEF	LDT2	1.6030e-003	1.4980e-003
tblVehicleEF	LDT2	2.3320e-003	1.9580e-003
tblVehicleEF	LDT2	1.4740e-003	1.3790e-003
tblVehicleEF	LDT2	2.1450e-003	1.8010e-003
tblVehicleEF	LDT2	0.14	0.22
tblVehicleEF	LDT2	0.14	0.17
tblVehicleEF	LDT2	0.10	0.17
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.44
tblVehicleEF	LDT2	0.09	0.29
tblVehicleEF	LDT2	3.8710e-003	3.5900e-003
tblVehicleEF	LDT2	8.3500e-004	7.0100e-004
tblVehicleEF	LDT2	0.14	0.22
tblVehicleEF	LDT2	0.14	0.17
tblVehicleEF	LDT2	0.10	0.17
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.06	0.44
tblVehicleEF	LDT2	0.09	0.32
tblVehicleEF	LDT2	5.3900e-003	4.0760e-003
tblVehicleEF	LDT2	7.4940e-003	0.07

tblVehicleEF	LDT2	0.71	0.91
tblVehicleEF	LDT2	1.57	2.80
tblVehicleEF	LDT2	345.65	331.49
tblVehicleEF	LDT2	81.24	71.65
tblVehicleEF	LDT2	0.08	0.09
tblVehicleEF	LDT2	1.6030e-003	1.4980e-003
tblVehicleEF	LDT2	2.3320e-003	1.9580e-003
tblVehicleEF	LDT2	1.4740e-003	1.3790e-003
tblVehicleEF	LDT2	2.1450e-003	1.8010e-003
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.13	0.15
tblVehicleEF	LDT2	0.05	0.07
tblVehicleEF	LDT2	0.01	0.02
tblVehicleEF	LDT2	0.07	0.51
tblVehicleEF	LDT2	0.10	0.34
tblVehicleEF	LDT2	3.4620e-003	3.2800e-003
tblVehicleEF	LDT2	8.3900e-004	7.0900e-004
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.13	0.15
tblVehicleEF	LDT2	0.05	0.07
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.51
tblVehicleEF	LDT2	0.11	0.38
tblVehicleEF	LHD1	5.4460e-003	4.8820e-003
tblVehicleEF	LHD1	0.01	5.3310e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	0.17

tblVehicleEF	LHD1	0.96	0.72
tblVehicleEF	LHD1	2.41	0.96
tblVehicleEF	LHD1	9.26	9.44
tblVehicleEF	LHD1	607.95	639.95
tblVehicleEF	LHD1	30.36	10.54
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	2.21	1.60
tblVehicleEF	LHD1	9.7200e-004	9.7000e-004
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.7100e-004	2.3300e-004
tblVehicleEF	LHD1	9.3000e-004	9.2800e-004
tblVehicleEF	LHD1	2.5390e-003	2.5010e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.0100e-004	2.1400e-004
tblVehicleEF	LHD1	3.8710e-003	3.1780e-003
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.9010e-003	1.5570e-003
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.31	0.50
tblVehicleEF	LHD1	0.26	0.08
tblVehicleEF	LHD1	9.3000e-005	9.1000e-005
tblVehicleEF	LHD1	5.9620e-003	6.2250e-003
tblVehicleEF	LHD1	3.4900e-004	1.0400e-004
tblVehicleEF	LHD1	3.8710e-003	3.1780e-003
tblVehicleEF	LHD1	0.10	0.08

tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.9010e-003	1.5570e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.31	0.50
tblVehicleEF	LHD1	0.28	0.08
tblVehicleEF	LHD1	5.4460e-003	4.8940e-003
tblVehicleEF	LHD1	0.01	5.4200e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	0.97	0.73
tblVehicleEF	LHD1	2.29	0.92
tblVehicleEF	LHD1	9.26	9.44
tblVehicleEF	LHD1	607.95	639.97
tblVehicleEF	LHD1	30.36	10.46
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	2.08	1.51
tblVehicleEF	LHD1	9.7200e-004	9.7000e-004
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.7100e-004	2.3300e-004
tblVehicleEF	LHD1	9.3000e-004	9.2800e-004
tblVehicleEF	LHD1	2.5390e-003	2.5010e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.0100e-004	2.1400e-004
tblVehicleEF	LHD1	7.2450e-003	5.9530e-003
tblVehicleEF	LHD1	0.12	0.09
tblVehicleEF	LHD1	0.02	0.02

tblVehicleEF	LHD1	3.6380e-003	2.9980e-003
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.32	0.50
tblVehicleEF	LHD1	0.25	0.07
tblVehicleEF	LHD1	9.3000e-005	9.1000e-005
tblVehicleEF	LHD1	5.9620e-003	6.2250e-003
tblVehicleEF	LHD1	3.4700e-004	1.0300e-004
tblVehicleEF	LHD1	7.2450e-003	5.9530e-003
tblVehicleEF	LHD1	0.12	0.09
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	3.6380e-003	2.9980e-003
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.32	0.50
tblVehicleEF	LHD1	0.27	0.08
tblVehicleEF	LHD1	5.4460e-003	4.8810e-003
tblVehicleEF	LHD1	0.01	5.3180e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	0.96	0.72
tblVehicleEF	LHD1	2.41	0.96
tblVehicleEF	LHD1	9.26	9.44
tblVehicleEF	LHD1	607.95	639.95
tblVehicleEF	LHD1	30.36	10.54
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	2.18	1.59
tblVehicleEF	LHD1	9.7200e-004	9.7000e-004
tblVehicleEF	LHD1	0.01	0.01

tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.7100e-004	2.3300e-004
tblVehicleEF	LHD1	9.3000e-004	9.2800e-004
tblVehicleEF	LHD1	2.5390e-003	2.5010e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.0100e-004	2.1400e-004
tblVehicleEF	LHD1	3.4570e-003	2.8250e-003
tblVehicleEF	LHD1	0.11	0.09
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.7350e-003	1.4150e-003
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.33	0.53
tblVehicleEF	LHD1	0.26	0.08
tblVehicleEF	LHD1	9.3000e-005	9.1000e-005
tblVehicleEF	LHD1	5.9620e-003	6.2250e-003
tblVehicleEF	LHD1	3.4900e-004	1.0400e-004
tblVehicleEF	LHD1	3.4570e-003	2.8250e-003
tblVehicleEF	LHD1	0.11	0.09
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.7350e-003	1.4150e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.33	0.53
tblVehicleEF	LHD1	0.28	0.08
tblVehicleEF	LHD2	3.6660e-003	3.1720e-003
tblVehicleEF	LHD2	4.5290e-003	3.8570e-003
tblVehicleEF	LHD2	8.3110e-003	9.0280e-003
tblVehicleEF	LHD2	0.12	0.13

tblVehicleEF	LHD2	0.50	0.53
tblVehicleEF	LHD2	1.15	0.56
tblVehicleEF	LHD2	14.48	14.86
tblVehicleEF	LHD2	604.20	638.83
tblVehicleEF	LHD2	23.56	7.29
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.71	1.77
tblVehicleEF	LHD2	1.3360e-003	1.4390e-003
tblVehicleEF	LHD2	0.01	0.01
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tblVehicleEF	LHD2	3.8700e-004	1.1400e-004
tblVehicleEF	LHD2	1.2780e-003	1.3770e-003
tblVehicleEF	LHD2	2.6970e-003	2.7110e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5600e-004	1.0500e-004
tblVehicleEF	LHD2	1.4980e-003	1.6870e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	7.7800e-004	8.4200e-004
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.4100e-004	1.4200e-004
tblVehicleEF	LHD2	5.8740e-003	6.1550e-003
tblVehicleEF	LHD2	2.5700e-004	7.2000e-005
tblVehicleEF	LHD2	1.4980e-003	1.6870e-003
tblVehicleEF	LHD2	0.04	0.04

tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	7.7800e-004	8.4200e-004
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	3.6660e-003	3.1790e-003
tblVehicleEF	LHD2	4.5800e-003	3.8860e-003
tblVehicleEF	LHD2	8.0210e-003	8.7250e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.51	0.53
tblVehicleEF	LHD2	1.10	0.53
tblVehicleEF	LHD2	14.48	14.86
tblVehicleEF	LHD2	604.20	638.83
tblVehicleEF	LHD2	23.56	7.25
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.62	1.67
tblVehicleEF	LHD2	1.3360e-003	1.4390e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.8700e-004	1.1400e-004
tblVehicleEF	LHD2	1.2780e-003	1.3770e-003
tblVehicleEF	LHD2	2.6970e-003	2.7110e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5600e-004	1.0500e-004
tblVehicleEF	LHD2	2.8320e-003	3.1830e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.01	0.02

tblVehicleEF	LHD2	1.4720e-003	1.6130e-003
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.4100e-004	1.4200e-004
tblVehicleEF	LHD2	5.8740e-003	6.1560e-003
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tblVehicleEF	LHD2	2.8320e-003	3.1830e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.4720e-003	1.6130e-003
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	3.6660e-003	3.1700e-003
tblVehicleEF	LHD2	4.5170e-003	3.8490e-003
tblVehicleEF	LHD2	8.3600e-003	9.0930e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.50	0.53
tblVehicleEF	LHD2	1.16	0.56
tblVehicleEF	LHD2	14.48	14.86
tblVehicleEF	LHD2	604.20	638.83
tblVehicleEF	LHD2	23.56	7.30
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.70	1.75
tblVehicleEF	LHD2	1.3360e-003	1.4390e-003
tblVehicleEF	LHD2	0.01	0.01

tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.8700e-004	1.1400e-004
tblVehicleEF	LHD2	1.2780e-003	1.3770e-003
tblVehicleEF	LHD2	2.6970e-003	2.7110e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5600e-004	1.0500e-004
tblVehicleEF	LHD2	1.1910e-003	1.3290e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	6.6000e-004	7.0100e-004
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.4100e-004	1.4200e-004
tblVehicleEF	LHD2	5.8740e-003	6.1550e-003
tblVehicleEF	LHD2	2.5700e-004	7.2000e-005
tblVehicleEF	LHD2	1.1910e-003	1.3290e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	6.6000e-004	7.0100e-004
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	MCY	0.42	0.32
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	19.52	19.61
tblVehicleEF	MCY	9.67	8.55

tblVehicleEF	MCY	165.74	208.30
tblVehicleEF	MCY	46.23	60.73
tblVehicleEF	MCY	1.13	1.13
tblVehicleEF	MCY	1.7750e-003	1.7570e-003
tblVehicleEF	MCY	3.4010e-003	2.8660e-003
tblVehicleEF	MCY	1.6600e-003	1.6440e-003
tblVehicleEF	MCY	3.2060e-003	2.7000e-003
tblVehicleEF	MCY	1.69	1.66
tblVehicleEF	MCY	0.85	0.84
tblVehicleEF	MCY	0.92	0.90
tblVehicleEF	MCY	2.15	2.16
tblVehicleEF	MCY	0.57	1.87
tblVehicleEF	MCY	2.08	1.83
tblVehicleEF	MCY	2.0380e-003	2.0610e-003
tblVehicleEF	MCY	6.8100e-004	6.0100e-004
tblVehicleEF	MCY	1.69	1.66
tblVehicleEF	MCY	0.85	0.84
tblVehicleEF	MCY	0.92	0.90
tblVehicleEF	MCY	2.65	2.65
tblVehicleEF	MCY	0.57	1.87
tblVehicleEF	MCY	2.26	1.99
tblVehicleEF	MCY	0.42	0.32
tblVehicleEF	MCY	0.14	0.22
tblVehicleEF	MCY	20.23	20.27
tblVehicleEF	MCY	9.11	8.00
tblVehicleEF	MCY	165.74	209.26
tblVehicleEF	MCY	46.23	59.19

tblVehicleEF	MCY	0.98	0.98
tblVehicleEF	MCY	1.7750e-003	1.7570e-003
tblVehicleEF	MCY	3.4010e-003	2.8660e-003
tblVehicleEF	MCY	1.6600e-003	1.6440e-003
tblVehicleEF	MCY	3.2060e-003	2.7000e-003
tblVehicleEF	MCY	3.35	3.28
tblVehicleEF	MCY	1.24	1.23
tblVehicleEF	MCY	2.10	2.05
tblVehicleEF	MCY	2.13	2.13
tblVehicleEF	MCY	0.57	1.86
tblVehicleEF	MCY	1.86	1.63
tblVehicleEF	MCY	2.0490e-003	2.0710e-003
tblVehicleEF	MCY	6.6500e-004	5.8600e-004
tblVehicleEF	MCY	3.35	3.28
tblVehicleEF	MCY	1.24	1.23
tblVehicleEF	MCY	2.10	2.05
tblVehicleEF	MCY	2.62	2.63
tblVehicleEF	MCY	0.57	1.86
tblVehicleEF	MCY	2.02	1.77
tblVehicleEF	MCY	0.42	0.32
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	19.04	19.14
tblVehicleEF	MCY	9.62	8.49
tblVehicleEF	MCY	165.74	207.52
tblVehicleEF	MCY	46.23	60.64
tblVehicleEF	MCY	1.12	1.12
tblVehicleEF	MCY	1.7750e-003	1.7570e-003

tblVehicleEF	MCY	3.4010e-003	2.8660e-003
tblVehicleEF	MCY	1.6600e-003	1.6440e-003
tblVehicleEF	MCY	3.2060e-003	2.7000e-003
tblVehicleEF	MCY	1.60	1.59
tblVehicleEF	MCY	1.05	1.04
tblVehicleEF	MCY	0.74	0.73
tblVehicleEF	MCY	2.15	2.15
tblVehicleEF	MCY	0.65	2.12
tblVehicleEF	MCY	2.08	1.83
tblVehicleEF	MCY	2.0310e-003	2.0540e-003
tblVehicleEF	MCY	6.8100e-004	6.0000e-004
tblVehicleEF	MCY	1.60	1.59
tblVehicleEF	MCY	1.05	1.04
tblVehicleEF	MCY	0.74	0.73
tblVehicleEF	MCY	2.64	2.65
tblVehicleEF	MCY	0.65	2.12
tblVehicleEF	MCY	2.27	1.99
tblVehicleEF	MDV	0.01	5.7580e-003
tblVehicleEF	MDV	0.02	0.09
tblVehicleEF	MDV	1.42	1.20
tblVehicleEF	MDV	3.18	3.27
tblVehicleEF	MDV	488.89	421.49
tblVehicleEF	MDV	110.15	88.73
tblVehicleEF	MDV	0.17	0.12
tblVehicleEF	MDV	1.7110e-003	1.5730e-003
tblVehicleEF	MDV	2.4630e-003	2.0550e-003
tblVehicleEF	MDV	1.5780e-003	1.4510e-003

tblVehicleEF	MDV	2.2660e-003	1.8910e-003
tblVehicleEF	MDV	0.11	0.13
tblVehicleEF	MDV	0.20	0.17
tblVehicleEF	MDV	0.09	0.11
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.25	0.45
tblVehicleEF	MDV	4.9000e-003	4.1680e-003
tblVehicleEF	MDV	1.1570e-003	8.7800e-004
tblVehicleEF	MDV	0.11	0.13
tblVehicleEF	MDV	0.20	0.17
tblVehicleEF	MDV	0.09	0.11
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.27	0.49
tblVehicleEF	MDV	0.01	6.5120e-003
tblVehicleEF	MDV	0.02	0.08
tblVehicleEF	MDV	1.73	1.46
tblVehicleEF	MDV	2.81	2.88
tblVehicleEF	MDV	530.71	447.07
tblVehicleEF	MDV	110.15	87.92
tblVehicleEF	MDV	0.16	0.11
tblVehicleEF	MDV	1.7110e-003	1.5730e-003
tblVehicleEF	MDV	2.4630e-003	2.0550e-003
tblVehicleEF	MDV	1.5780e-003	1.4510e-003
tblVehicleEF	MDV	2.2660e-003	1.8910e-003
tblVehicleEF	MDV	0.22	0.26

tblVehicleEF	MDV	0.23	0.20
tblVehicleEF	MDV	0.17	0.21
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.21	0.39
tblVehicleEF	MDV	5.3230e-003	4.4210e-003
tblVehicleEF	MDV	1.1510e-003	8.7000e-004
tblVehicleEF	MDV	0.22	0.26
tblVehicleEF	MDV	0.23	0.20
tblVehicleEF	MDV	0.17	0.21
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.23	0.43
tblVehicleEF	MDV	0.01	5.5370e-003
tblVehicleEF	MDV	0.02	0.09
tblVehicleEF	MDV	1.33	1.12
tblVehicleEF	MDV	3.24	3.34
tblVehicleEF	MDV	476.42	413.84
tblVehicleEF	MDV	110.15	88.88
tblVehicleEF	MDV	0.16	0.12
tblVehicleEF	MDV	1.7110e-003	1.5730e-003
tblVehicleEF	MDV	2.4630e-003	2.0550e-003
tblVehicleEF	MDV	1.5780e-003	1.4510e-003
tblVehicleEF	MDV	2.2660e-003	1.8910e-003
tblVehicleEF	MDV	0.09	0.10
tblVehicleEF	MDV	0.21	0.18
tblVehicleEF	MDV	0.08	0.10

tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.13	0.57
tblVehicleEF	MDV	0.25	0.46
tblVehicleEF	MDV	4.7750e-003	4.0920e-003
tblVehicleEF	MDV	1.1590e-003	8.8000e-004
tblVehicleEF	MDV	0.09	0.10
tblVehicleEF	MDV	0.21	0.18
tblVehicleEF	MDV	0.08	0.10
tblVehicleEF	MDV	0.05	0.03
tblVehicleEF	MDV	0.13	0.57
tblVehicleEF	MDV	0.28	0.50
tblVehicleEF	MH	0.03	3.3370e-003
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tblVehicleEF	MH	2.70	0.34
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tblVehicleEF	MH	1.67	4.43
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tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	1.0860e-003	0.00
tblVehicleEF	MH	3.2460e-003	4.0000e-003
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	9.9800e-004	0.00
tblVehicleEF	MH	1.56	0.00
tblVehicleEF	MH	0.08	0.00
tblVehicleEF	MH	0.54	0.00

tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.35	0.00
tblVehicleEF	MH	9.9460e-003	8.9030e-003
tblVehicleEF	MH	6.8100e-004	0.00
tblVehicleEF	MH	1.56	0.00
tblVehicleEF	MH	0.08	0.00
tblVehicleEF	MH	0.54	0.00
tblVehicleEF	MH	0.13	0.08
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.39	0.00
tblVehicleEF	MH	0.03	3.3370e-003
tblVehicleEF	MH	0.02	0.00
tblVehicleEF	MH	2.78	0.34
tblVehicleEF	MH	5.56	0.00
tblVehicleEF	MH	1,002.10	941.76
tblVehicleEF	MH	57.67	0.00
tblVehicleEF	MH	1.55	4.18
tblVehicleEF	MH	0.01	0.02
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tblVehicleEF	MH	1.0860e-003	0.00
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tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	9.9800e-004	0.00
tblVehicleEF	MH	2.87	0.00
tblVehicleEF	MH	0.10	0.00
tblVehicleEF	MH	1.06	0.00

tblVehicleEF	MH	0.10	0.07
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.34	0.00
tblVehicleEF	MH	9.9470e-003	8.9030e-003
tblVehicleEF	MH	6.7400e-004	0.00
tblVehicleEF	MH	2.87	0.00
tblVehicleEF	MH	0.10	0.00
tblVehicleEF	MH	1.06	0.00
tblVehicleEF	MH	0.13	0.08
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.37	0.00
tblVehicleEF	MH	0.03	3.3370e-003
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tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	1.0860e-003	0.00
tblVehicleEF	MH	3.2460e-003	4.0000e-003
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tblVehicleEF	MH	0.10	0.00
tblVehicleEF	MH	0.53	0.00

tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.35	0.00
tblVehicleEF	MH	9.9460e-003	8.9030e-003
tblVehicleEF	MH	6.8200e-004	0.00
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tblVehicleEF	MH	0.10	0.00
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tblVehicleEF	MHD	0.99	2.37
tblVehicleEF	MHD	1.0680e-003	2.4180e-003
tblVehicleEF	MHD	6.4490e-003	0.08
tblVehicleEF	MHD	7.8800e-004	9.6000e-005
tblVehicleEF	MHD	1.0220e-003	2.3130e-003
tblVehicleEF	MHD	6.1670e-003	0.08

tblVehicleEF	MHD	7.2400e-004	8.8000e-005
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tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	8.5800e-004	3.5500e-004
tblVehicleEF	MHD	0.03	0.11
tblVehicleEF	MHD	0.02	0.10
tblVehicleEF	MHD	0.37	0.05
tblVehicleEF	MHD	1.4610e-003	7.1000e-004
tblVehicleEF	MHD	0.01	9.5290e-003
tblVehicleEF	MHD	6.6100e-004	8.1000e-005
tblVehicleEF	MHD	1.7450e-003	7.1900e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	8.5800e-004	3.5500e-004
tblVehicleEF	MHD	0.04	0.12
tblVehicleEF	MHD	0.02	0.10
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tblVehicleEF	MHD	0.02	2.9880e-003
tblVehicleEF	MHD	3.7740e-003	6.0080e-003
tblVehicleEF	MHD	0.05	8.2030e-003
tblVehicleEF	MHD	0.26	0.28
tblVehicleEF	MHD	0.28	0.57
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tblVehicleEF	MHD	1,066.63	1,001.04
tblVehicleEF	MHD	55.49	8.10

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tblVehicleEF	MHD	0.93	2.23
tblVehicleEF	MHD	9.0000e-004	2.0410e-003
tblVehicleEF	MHD	6.4490e-003	0.08
tblVehicleEF	MHD	7.8800e-004	9.6000e-005
tblVehicleEF	MHD	8.6100e-004	1.9530e-003
tblVehicleEF	MHD	6.1670e-003	0.08
tblVehicleEF	MHD	7.2400e-004	8.8000e-005
tblVehicleEF	MHD	3.3760e-003	1.3770e-003
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tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	1.6840e-003	7.0100e-004
tblVehicleEF	MHD	0.03	0.11
tblVehicleEF	MHD	0.02	0.11
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tblVehicleEF	MHD	1.5460e-003	7.2500e-004
tblVehicleEF	MHD	0.01	9.5290e-003
tblVehicleEF	MHD	6.5600e-004	8.0000e-005
tblVehicleEF	MHD	3.3760e-003	1.3770e-003
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	1.6840e-003	7.0100e-004
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tblVehicleEF	MHD	0.02	0.11
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tblVehicleEF	MHD	3.6890e-003	5.9600e-003

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tblVehicleEF	MHD	1.2990e-003	2.9380e-003
tblVehicleEF	MHD	6.4490e-003	0.08
tblVehicleEF	MHD	7.8800e-004	9.6000e-005
tblVehicleEF	MHD	1.2430e-003	2.8110e-003
tblVehicleEF	MHD	6.1670e-003	0.08
tblVehicleEF	MHD	7.2400e-004	8.8000e-005
tblVehicleEF	MHD	1.3320e-003	5.6300e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	6.7900e-004	2.8800e-004
tblVehicleEF	MHD	0.03	0.11
tblVehicleEF	MHD	0.02	0.11
tblVehicleEF	MHD	0.37	0.05
tblVehicleEF	MHD	1.3440e-003	6.9100e-004
tblVehicleEF	MHD	0.01	9.5290e-003
tblVehicleEF	MHD	6.6300e-004	8.1000e-005
tblVehicleEF	MHD	1.3320e-003	5.6300e-004
tblVehicleEF	MHD	0.05	0.02

tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	6.7900e-004	2.8800e-004
tblVehicleEF	MHD	0.04	0.12
tblVehicleEF	MHD	0.02	0.11
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tblVehicleEF	OBUS	0.01	8.9240e-003
tblVehicleEF	OBUS	8.0950e-003	8.5070e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.27	0.50
tblVehicleEF	OBUS	0.54	0.93
tblVehicleEF	OBUS	6.17	2.58
tblVehicleEF	OBUS	75.04	73.28
tblVehicleEF	OBUS	1,098.07	1,407.22
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tblVehicleEF	OBUS	6.0450e-003	0.04
tblVehicleEF	OBUS	8.2300e-004	1.9000e-004
tblVehicleEF	OBUS	1.1600e-004	1.6990e-003
tblVehicleEF	OBUS	5.7680e-003	0.04
tblVehicleEF	OBUS	7.5700e-004	1.7400e-004
tblVehicleEF	OBUS	2.1800e-003	2.5990e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	9.3000e-004	1.1120e-003
tblVehicleEF	OBUS	0.04	0.09

tblVehicleEF	OBUS	0.05	0.26
tblVehicleEF	OBUS	0.39	0.12
tblVehicleEF	OBUS	7.2800e-004	6.9900e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.0900e-004	2.0600e-004
tblVehicleEF	OBUS	2.1800e-003	2.5990e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	9.3000e-004	1.1120e-003
tblVehicleEF	OBUS	0.05	0.11
tblVehicleEF	OBUS	0.05	0.26
tblVehicleEF	OBUS	0.42	0.14
tblVehicleEF	OBUS	0.01	8.9470e-003
tblVehicleEF	OBUS	8.2540e-003	8.6370e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.26	0.48
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tblVehicleEF	OBUS	1.04	1.59
tblVehicleEF	OBUS	1.0200e-004	1.5000e-003
tblVehicleEF	OBUS	6.0450e-003	0.04
tblVehicleEF	OBUS	8.2300e-004	1.9000e-004
tblVehicleEF	OBUS	9.8000e-005	1.4350e-003

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tblVehicleEF	OBUS	7.5700e-004	1.7400e-004
tblVehicleEF	OBUS	4.0690e-003	4.7330e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	1.7890e-003	2.1320e-003
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.05	0.26
tblVehicleEF	OBUS	0.37	0.12
tblVehicleEF	OBUS	7.6100e-004	7.0400e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.0200e-004	2.0400e-004
tblVehicleEF	OBUS	4.0690e-003	4.7330e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	1.7890e-003	2.1320e-003
tblVehicleEF	OBUS	0.05	0.11
tblVehicleEF	OBUS	0.05	0.26
tblVehicleEF	OBUS	0.40	0.13
tblVehicleEF	OBUS	0.01	8.9200e-003
tblVehicleEF	OBUS	8.0660e-003	8.4690e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.28	0.53
tblVehicleEF	OBUS	0.54	0.92
tblVehicleEF	OBUS	6.22	2.60
tblVehicleEF	OBUS	70.30	72.56
tblVehicleEF	OBUS	1,098.07	1,407.21

tblVehicleEF	OBUS	70.10	20.90
tblVehicleEF	OBUS	0.34	0.44
tblVehicleEF	OBUS	1.11	1.68
tblVehicleEF	OBUS	1.4700e-004	2.1560e-003
tblVehicleEF	OBUS	6.0450e-003	0.04
tblVehicleEF	OBUS	8.2300e-004	1.9000e-004
tblVehicleEF	OBUS	1.4100e-004	2.0620e-003
tblVehicleEF	OBUS	5.7680e-003	0.04
tblVehicleEF	OBUS	7.5700e-004	1.7400e-004
tblVehicleEF	OBUS	1.8870e-003	2.3830e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	8.5400e-004	1.0620e-003
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.05	0.27
tblVehicleEF	OBUS	0.39	0.13
tblVehicleEF	OBUS	6.8300e-004	6.9200e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.1000e-004	2.0700e-004
tblVehicleEF	OBUS	1.8870e-003	2.3830e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	8.5400e-004	1.0620e-003
tblVehicleEF	OBUS	0.05	0.11
tblVehicleEF	OBUS	0.05	0.27
tblVehicleEF	OBUS	0.42	0.14
tblVehicleEF	SBUS	0.84	0.08

tblVehicleEF	SBUS	0.01	6.6110e-003
tblVehicleEF	SBUS	0.06	6.9670e-003
tblVehicleEF	SBUS	7.83	3.03
tblVehicleEF	SBUS	0.64	0.53
tblVehicleEF	SBUS	6.66	0.94
tblVehicleEF	SBUS	1,146.29	366.87
tblVehicleEF	SBUS	1,103.40	1,115.27
tblVehicleEF	SBUS	53.92	6.06
tblVehicleEF	SBUS	10.00	3.57
tblVehicleEF	SBUS	4.65	4.82
tblVehicleEF	SBUS	0.01	4.0660e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.5700e-004	4.0000e-005
tblVehicleEF	SBUS	0.01	3.8900e-003
tblVehicleEF	SBUS	2.6950e-003	2.6510e-003
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	4.2000e-004	3.6000e-005
tblVehicleEF	SBUS	4.6830e-003	1.3080e-003
tblVehicleEF	SBUS	0.03	8.6250e-003
tblVehicleEF	SBUS	0.94	0.36
tblVehicleEF	SBUS	2.1770e-003	6.2500e-004
tblVehicleEF	SBUS	0.11	0.10
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	0.37	0.04
tblVehicleEF	SBUS	0.01	3.5040e-003
tblVehicleEF	SBUS	0.01	0.01

tblVehicleEF	SBUS	6.5500e-004	6.0000e-005
tblVehicleEF	SBUS	4.6830e-003	1.3080e-003
tblVehicleEF	SBUS	0.03	8.6250e-003
tblVehicleEF	SBUS	1.35	0.52
tblVehicleEF	SBUS	2.1770e-003	6.2500e-004
tblVehicleEF	SBUS	0.13	0.11
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	0.40	0.04
tblVehicleEF	SBUS	0.84	0.08
tblVehicleEF	SBUS	0.01	6.6860e-003
tblVehicleEF	SBUS	0.05	5.8380e-003
tblVehicleEF	SBUS	7.71	2.99
tblVehicleEF	SBUS	0.65	0.54
tblVehicleEF	SBUS	4.83	0.68
tblVehicleEF	SBUS	1,198.60	377.09
tblVehicleEF	SBUS	1,103.40	1,115.28
tblVehicleEF	SBUS	53.92	5.63
tblVehicleEF	SBUS	10.32	3.66
tblVehicleEF	SBUS	4.37	4.53
tblVehicleEF	SBUS	9.1190e-003	3.4340e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.5700e-004	4.0000e-005
tblVehicleEF	SBUS	8.7240e-003	3.2850e-003
tblVehicleEF	SBUS	2.6950e-003	2.6510e-003
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	4.2000e-004	3.6000e-005

tblVehicleEF	SBUS	8.4640e-003	2.3620e-003
tblVehicleEF	SBUS	0.03	9.1440e-003
tblVehicleEF	SBUS	0.93	0.36
tblVehicleEF	SBUS	4.0830e-003	1.1650e-003
tblVehicleEF	SBUS	0.11	0.10
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.31	0.03
tblVehicleEF	SBUS	0.01	3.6000e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.2400e-004	5.6000e-005
tblVehicleEF	SBUS	8.4640e-003	2.3620e-003
tblVehicleEF	SBUS	0.03	9.1440e-003
tblVehicleEF	SBUS	1.35	0.52
tblVehicleEF	SBUS	4.0830e-003	1.1650e-003
tblVehicleEF	SBUS	0.13	0.11
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.34	0.04
tblVehicleEF	SBUS	0.84	0.08
tblVehicleEF	SBUS	0.01	6.6040e-003
tblVehicleEF	SBUS	0.07	7.2110e-003
tblVehicleEF	SBUS	8.00	3.09
tblVehicleEF	SBUS	0.63	0.53
tblVehicleEF	SBUS	7.02	0.98
tblVehicleEF	SBUS	1,074.07	352.76
tblVehicleEF	SBUS	1,103.40	1,115.26
tblVehicleEF	SBUS	53.92	6.14
tblVehicleEF	SBUS	9.56	3.44

tblVehicleEF	SBUS	4.60	4.78
tblVehicleEF	SBUS	0.01	4.9380e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.5700e-004	4.0000e-005
tblVehicleEF	SBUS	0.01	4.7240e-003
tblVehicleEF	SBUS	2.6950e-003	2.6510e-003
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	4.2000e-004	3.6000e-005
tblVehicleEF	SBUS	4.1680e-003	1.1480e-003
tblVehicleEF	SBUS	0.03	8.8290e-003
tblVehicleEF	SBUS	0.94	0.36
tblVehicleEF	SBUS	2.1000e-003	6.0300e-004
tblVehicleEF	SBUS	0.11	0.10
tblVehicleEF	SBUS	0.02	0.06
tblVehicleEF	SBUS	0.38	0.04
tblVehicleEF	SBUS	0.01	3.3710e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.6100e-004	6.1000e-005
tblVehicleEF	SBUS	4.1680e-003	1.1480e-003
tblVehicleEF	SBUS	0.03	8.8290e-003
tblVehicleEF	SBUS	1.35	0.52
tblVehicleEF	SBUS	2.1000e-003	6.0300e-004
tblVehicleEF	SBUS	0.13	0.11
tblVehicleEF	SBUS	0.02	0.06
tblVehicleEF	SBUS	0.41	0.05
tblVehicleEF	UBUS	1.51	3.35

tblVehicleEF	UBUS	0.09	0.02
tblVehicleEF	UBUS	8.45	26.05
tblVehicleEF	UBUS	15.26	1.50
tblVehicleEF	UBUS	1,822.40	1,617.71
tblVehicleEF	UBUS	153.45	18.08
tblVehicleEF	UBUS	4.95	0.32
tblVehicleEF	UBUS	0.50	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.06	2.9340e-003
tblVehicleEF	UBUS	1.4200e-003	1.6100e-004
tblVehicleEF	UBUS	0.21	0.04
tblVehicleEF	UBUS	3.0000e-003	5.4780e-003
tblVehicleEF	UBUS	0.05	2.7920e-003
tblVehicleEF	UBUS	1.3060e-003	1.4800e-004
tblVehicleEF	UBUS	9.7430e-003	1.6370e-003
tblVehicleEF	UBUS	0.11	9.7740e-003
tblVehicleEF	UBUS	4.7860e-003	7.1300e-004
tblVehicleEF	UBUS	0.52	0.05
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.17	0.07
tblVehicleEF	UBUS	9.9960e-003	4.8690e-003
tblVehicleEF	UBUS	1.8100e-003	1.7900e-004
tblVehicleEF	UBUS	9.7430e-003	1.6370e-003
tblVehicleEF	UBUS	0.11	9.7740e-003
tblVehicleEF	UBUS	4.7860e-003	7.1300e-004
tblVehicleEF	UBUS	2.08	3.43
tblVehicleEF	UBUS	0.02	0.05

tblVehicleEF	UBUS	1.28	0.08
tblVehicleEF	UBUS	1.52	3.35
tblVehicleEF	UBUS	0.08	0.02
tblVehicleEF	UBUS	8.53	26.06
tblVehicleEF	UBUS	13.06	1.28
tblVehicleEF	UBUS	1,822.40	1,617.72
tblVehicleEF	UBUS	153.45	17.70
tblVehicleEF	UBUS	4.62	0.31
tblVehicleEF	UBUS	0.50	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.06	2.9340e-003
tblVehicleEF	UBUS	1.4200e-003	1.6100e-004
tblVehicleEF	UBUS	0.21	0.04
tblVehicleEF	UBUS	3.0000e-003	5.4780e-003
tblVehicleEF	UBUS	0.05	2.7920e-003
tblVehicleEF	UBUS	1.3060e-003	1.4800e-004
tblVehicleEF	UBUS	0.02	2.9250e-003
tblVehicleEF	UBUS	0.14	0.01
tblVehicleEF	UBUS	9.6600e-003	1.4550e-003
tblVehicleEF	UBUS	0.53	0.05
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.06	0.07
tblVehicleEF	UBUS	9.9970e-003	4.8690e-003
tblVehicleEF	UBUS	1.7720e-003	1.7500e-004
tblVehicleEF	UBUS	0.02	2.9250e-003
tblVehicleEF	UBUS	0.14	0.01
tblVehicleEF	UBUS	9.6600e-003	1.4550e-003

tblVehicleEF	UBUS	2.09	3.43
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.17	0.07
tblVehicleEF	UBUS	1.51	3.35
tblVehicleEF	UBUS	0.09	0.02
tblVehicleEF	UBUS	8.44	26.05
tblVehicleEF	UBUS	15.44	1.49
tblVehicleEF	UBUS	1,822.40	1,617.71
tblVehicleEF	UBUS	153.45	18.06
tblVehicleEF	UBUS	4.92	0.31
tblVehicleEF	UBUS	0.50	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.06	2.9340e-003
tblVehicleEF	UBUS	1.4200e-003	1.6100e-004
tblVehicleEF	UBUS	0.21	0.04
tblVehicleEF	UBUS	3.0000e-003	5.4780e-003
tblVehicleEF	UBUS	0.05	2.7920e-003
tblVehicleEF	UBUS	1.3060e-003	1.4800e-004
tblVehicleEF	UBUS	8.9770e-003	1.7200e-003
tblVehicleEF	UBUS	0.13	0.01
tblVehicleEF	UBUS	4.3820e-003	7.5400e-004
tblVehicleEF	UBUS	0.52	0.05
tblVehicleEF	UBUS	0.03	0.05
tblVehicleEF	UBUS	1.18	0.07
tblVehicleEF	UBUS	9.9960e-003	4.8690e-003
tblVehicleEF	UBUS	1.8130e-003	1.7900e-004
tblVehicleEF	UBUS	8.9770e-003	1.7200e-003

tblVehicleEF	UBUS	0.13	0.01
tblVehicleEF	UBUS	4.3820e-003	7.5400e-004
tblVehicleEF	UBUS	2.08	3.43
tblVehicleEF	UBUS	0.03	0.05
tblVehicleEF	UBUS	1.29	0.08
tblVehicleTrips	CNW_TTP	41.00	0.00
tblVehicleTrips	CW_TTP	59.00	100.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	1.68	2.32
tblVehicleTrips	SU_TR	1.68	2.32
tblVehicleTrips	WD_TR	1.68	2.32
tblWater	IndoorWaterUseRate	22,523,750.00	22,770,125.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	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**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.8833	1.6000e-003	0.1746	1.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004		0.3728	0.3728	9.9000e-004		0.3975
Energy	4.1200e-003	0.0374	0.0314	2.2000e-004		2.8400e-003	2.8400e-003		2.8400e-003	2.8400e-003		44.8935	44.8935	8.6000e-004	8.2000e-004	45.1603
Mobile	0.5828	0.5828	7.7389	0.0246	2.8497	0.0135	2.8632	0.7554	0.0124	0.7679		2,489.9565	2,489.9565	0.0599		2,491.4534
Total	**3.4703**	**0.6218**	**7.9449**	**0.0249**	**2.8497**	**0.0170**	**2.8667**	**0.7554**	**0.0159**	**0.7713**		**2,535.2227**	**2,535.2227**	**0.0617**	**8.2000e-004**	**2,537.0111**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.8833	1.6000e-003	0.1746	1.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004		0.3728	0.3728	9.9000e-004		0.3975
Energy	4.1200e-003	0.0374	0.0314	2.2000e-004		2.8400e-003	2.8400e-003		2.8400e-003	2.8400e-003		44.8935	44.8935	8.6000e-004	8.2000e-004	45.1603
Mobile	0.5828	0.5828	7.7389	0.0246	2.8497	0.0135	2.8632	0.7554	0.0124	0.7679		2,489.9565	2,489.9565	0.0599		2,491.4534
Total	**3.4703**	**0.6218**	**7.9449**	**0.0249**	**2.8497**	**0.0170**	**2.8667**	**0.7554**	**0.0159**	**0.7713**		**2,535.2227**	**2,535.2227**	**0.0617**	**8.2000e-004**	**2,537.0111**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/4/2020	8/12/2020	5	50	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 36.86

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	158	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2020

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

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

3.2 Demolition - 2020

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	0.0000	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 Construction Off-Site

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.5828	0.5828	7.7389	0.0246	2.8497	0.0135	2.8632	0.7554	0.0124	0.7679		2,489.9565	2,489.9565	0.0599		2,491.4534
Unmitigated	0.5828	0.5828	7.7389	0.0246	2.8497	0.0135	2.8632	0.7554	0.0124	0.7679		2,489.9565	2,489.9565	0.0599		2,491.4534

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	225.97	225.97	225.97	1,365,389	1,365,389
Total	225.97	225.97	225.97	1,365,389	1,365,389

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
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	6.90	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.542116	0.037578	0.185203	0.118503	0.016241	0.005141	0.017392	0.068695	0.001383	0.001183	0.004582	0.000945	0.001038
Unrefrigerated Warehouse-No Rail	0.614000	0.043000	0.210000	0.133000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	4.1200e-003	0.0374	0.0314	2.2000e-004		2.8400e-003	2.8400e-003		2.8400e-003	2.8400e-003		44.8935	44.8935	8.6000e-004	8.2000e-004	45.1603
NaturalGas Unmitigated	4.1200e-003	0.0374	0.0314	2.2000e-004		2.8400e-003	2.8400e-003		2.8400e-003	2.8400e-003		44.8935	44.8935	8.6000e-004	8.2000e-004	45.1603

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					
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
Unrefrigerated Warehouse-No Rail	381.595	4.1200e-003	0.0374	0.0314	2.2000e-004		2.8400e-003	2.8400e-003		2.8400e-003	2.8400e-003		44.8935	44.8935	8.6000e-004	8.2000e-004	45.1603
Total		**4.1200e-003**	**0.0374**	**0.0314**	**2.2000e-004**		**2.8400e-003**	**2.8400e-003**		**2.8400e-003**	**2.8400e-003**		**44.8935**	**44.8935**	**8.6000e-004**	**8.2000e-004**	**45.1603**

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					
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
Unrefrigerated Warehouse-No Rail	0.381595	4.1200e-003	0.0374	0.0314	2.2000e-004		2.8400e-003	2.8400e-003		2.8400e-003	2.8400e-003		44.8935	44.8935	8.6000e-004	8.2000e-004	45.1603
Total		**4.1200e-003**	**0.0374**	**0.0314**	**2.2000e-004**		**2.8400e-003**	**2.8400e-003**		**2.8400e-003**	**2.8400e-003**		**44.8935**	**44.8935**	**8.6000e-004**	**8.2000e-004**	**45.1603**

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	2.8833	1.6000e-003	0.1746	1.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004		0.3728	0.3728	9.9000e-004		0.3975
Unmitigated	2.8833	1.6000e-003	0.1746	1.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004		0.3728	0.3728	9.9000e-004		0.3975

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	0.3697					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.4973					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0163	1.6000e-003	0.1746	1.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004		0.3728	0.3728	9.9000e-004		0.3975
Total	**2.8833**	**1.6000e-003**	**0.1746**	**1.0000e-005**		**6.2000e-004**	**6.2000e-004**		**6.2000e-004**	**6.2000e-004**		**0.3728**	**0.3728**	**9.9000e-004**		**0.3975**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3697					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.4973					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0163	1.6000e-003	0.1746	1.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004		0.3728	0.3728	9.9000e-004		0.3975
Total	**2.8833**	**1.6000e-003**	**0.1746**	**1.0000e-005**		**6.2000e-004**	**6.2000e-004**		**6.2000e-004**	**6.2000e-004**		**0.3728**	**0.3728**	**9.9000e-004**		**0.3975**

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

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APPENDIX 3.3:

CALEEMOD OPERATIONAL (TRUCKS) EMISSIONS MODEL OUTPUTS

Estes Banning (Operations - Trucks)

Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	97.40	1000sqft	2.24	97,400.00	0
Other Asphalt Surfaces	1,605.80	1000sqft	36.86	1,605,796.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2021
Utility Company	Statewide Average				
CO2 Intensity (lb/MWhr)	1001.57	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Estes Banning (Operations - Trucks) - Riverside-South Coast County, Summer

Project Characteristics - Electricty will be provided to the Project by Banning Electric Utility (BEU). CalEEMod does not provided Intensity Factors for BEU, as such, the Statewide Average will be used.

Land Use - Total Project Area is 36.86 acres. Truck Terminal is 97,400 sf. Remaning area will be modeled as 1,605,796 sf of Other Apshalt Surfaces.

Construction Phase - Operations Run Only.

Off-road Equipment - Operations Run Only.

Trips and VMT - Operations Run Only.

Vehicle Trips - Trip Rates based on information provided in the TIA prepared by Urban Crossroads.

Energy Use - The project will design building shells and building components to meet 2019 Title 24 Standards which expects 30% less energy for nonresidential uses.

Water And Wastewater - The project includes the construction and operation of a 660 square foot automated truck wash. Water usage based on the assumption that 50% of incoming trucks will be washed and 30 gallons of water will be used per truck.

Fleet Mix - Fleet Mix is based on the number of trips generated by each truck type (LHDT, MHDT, and HHDT) relative to the total number of truck trips

Vehicle Emission Factors - EMFAC2017

Vehicle Emission Factors - EMFAC2017

Vehicle Emission Factors - EMFAC2017

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	50.00	1.00
tblEnergyUse	LightingElect	1.17	0.82
tblEnergyUse	T24E	0.37	0.26
tblEnergyUse	T24NG	2.00	1.40
tblFleetMix	HHD	0.07	0.90
tblFleetMix	LDA	0.54	0.00
tblFleetMix	LDT1	0.04	0.00
tblFleetMix	LDT2	0.19	0.00
tblFleetMix	LHD1	0.02	0.10
tblFleetMix	LHD2	5.1410e-003	0.00
tblFleetMix	MCY	4.5820e-003	0.00
tblFleetMix	MDV	0.12	0.00

Estes Banning (Operations - Trucks) - Riverside-South Coast County, Summer

tblFleetMix	MH	1.0380e-003	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	1.3830e-003	0.00
tblFleetMix	SBUS	9.4500e-004	0.00
tblFleetMix	UBUS	1.1830e-003	0.00
tblLandUse	LandUseSquareFeet	1,605,800.00	1,605,796.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblVehicleEF	HHD	1.43	0.03
tblVehicleEF	HHD	0.03	0.02
tblVehicleEF	HHD	0.10	0.00
tblVehicleEF	HHD	3.28	7.55
tblVehicleEF	HHD	0.46	0.36
tblVehicleEF	HHD	1.46	2.9270e-003
tblVehicleEF	HHD	6,485.38	1,409.07
tblVehicleEF	HHD	1,461.92	1,350.00
tblVehicleEF	HHD	4.62	0.03
tblVehicleEF	HHD	26.41	7.34
tblVehicleEF	HHD	2.69	3.05
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	3.8000e-005	0.00
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	0.03	0.03

tblVehicleEF	HHD	8.8680e-003	8.8980e-003
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	3.5000e-005	0.00
tblVehicleEF	HHD	8.4000e-005	4.0000e-006
tblVehicleEF	HHD	2.5800e-003	1.0300e-004
tblVehicleEF	HHD	0.85	0.58
tblVehicleEF	HHD	4.8000e-005	2.0000e-006
tblVehicleEF	HHD	0.07	0.07
tblVehicleEF	HHD	1.8000e-004	5.3700e-004
tblVehicleEF	HHD	0.05	1.0000e-006
tblVehicleEF	HHD	0.06	0.01
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	7.1000e-005	0.00
tblVehicleEF	HHD	8.4000e-005	4.0000e-006
tblVehicleEF	HHD	2.5800e-003	1.0300e-004
tblVehicleEF	HHD	0.97	0.66
tblVehicleEF	HHD	4.8000e-005	2.0000e-006
tblVehicleEF	HHD	0.11	0.09
tblVehicleEF	HHD	1.8000e-004	5.3700e-004
tblVehicleEF	HHD	0.05	1.0000e-006
tblVehicleEF	HHD	1.35	0.03
tblVehicleEF	HHD	0.03	0.02
tblVehicleEF	HHD	0.10	0.00
tblVehicleEF	HHD	2.39	7.39
tblVehicleEF	HHD	0.46	0.36
tblVehicleEF	HHD	1.39	2.7700e-003
tblVehicleEF	HHD	6,867.98	1,402.59

tblVehicleEF	HHD	1,461.92	1,350.00
tblVehicleEF	HHD	4.62	0.03
tblVehicleEF	HHD	27.25	7.10
tblVehicleEF	HHD	2.54	2.88
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	3.8000e-005	0.00
tblVehicleEF	HHD	0.01	9.7680e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8680e-003	8.8980e-003
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	3.5000e-005	0.00
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tblVehicleEF	HHD	9.2000e-005	4.0000e-006
tblVehicleEF	HHD	0.07	0.07
tblVehicleEF	HHD	1.8400e-004	5.5600e-004
tblVehicleEF	HHD	0.04	1.0000e-006
tblVehicleEF	HHD	0.06	0.01
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	6.9000e-005	0.00
tblVehicleEF	HHD	1.6300e-004	8.0000e-006
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tblVehicleEF	HHD	9.2000e-005	4.0000e-006
tblVehicleEF	HHD	0.11	0.09
tblVehicleEF	HHD	1.8400e-004	5.5600e-004
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tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	3.8000e-005	0.00
tblVehicleEF	HHD	0.02	0.01
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8680e-003	8.8710e-003
tblVehicleEF	HHD	0.01	0.05
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tblVehicleEF	HHD	6.7000e-005	4.0000e-006
tblVehicleEF	HHD	2.7490e-003	1.2100e-004

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tblVehicleEF	HHD	4.1000e-005	2.0000e-006
tblVehicleEF	HHD	0.07	0.07
tblVehicleEF	HHD	1.9200e-004	5.6500e-004
tblVehicleEF	HHD	0.05	1.0000e-006
tblVehicleEF	HHD	0.06	0.01
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	7.1000e-005	0.00
tblVehicleEF	HHD	6.7000e-005	4.0000e-006
tblVehicleEF	HHD	2.7490e-003	1.2100e-004
tblVehicleEF	HHD	1.05	0.62
tblVehicleEF	HHD	4.1000e-005	2.0000e-006
tblVehicleEF	HHD	0.11	0.08
tblVehicleEF	HHD	1.9200e-004	5.6500e-004
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tblVehicleEF	LDA	2.0830e-003	1.7640e-003
tblVehicleEF	LDA	0.05	0.07

tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.01	9.5180e-003
tblVehicleEF	LDA	0.04	0.21
tblVehicleEF	LDA	0.07	0.23
tblVehicleEF	LDA	2.5630e-003	2.6300e-003
tblVehicleEF	LDA	6.0800e-004	5.4200e-004
tblVehicleEF	LDA	0.05	0.07
tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.21
tblVehicleEF	LDA	0.08	0.25
tblVehicleEF	LDA	4.5900e-003	2.8100e-003
tblVehicleEF	LDA	4.7470e-003	0.05
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tblVehicleEF	LDA	1.6140e-003	1.4470e-003
tblVehicleEF	LDA	2.2650e-003	1.9190e-003
tblVehicleEF	LDA	1.4880e-003	1.3330e-003
tblVehicleEF	LDA	2.0830e-003	1.7640e-003
tblVehicleEF	LDA	0.10	0.14
tblVehicleEF	LDA	0.12	0.12
tblVehicleEF	LDA	0.07	0.10

tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.21
tblVehicleEF	LDA	0.06	0.20
tblVehicleEF	LDA	2.7930e-003	2.8600e-003
tblVehicleEF	LDA	6.0500e-004	5.3700e-004
tblVehicleEF	LDA	0.10	0.14
tblVehicleEF	LDA	0.12	0.12
tblVehicleEF	LDA	0.07	0.10
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.04	0.21
tblVehicleEF	LDA	0.07	0.22
tblVehicleEF	LDA	3.8980e-003	2.3810e-003
tblVehicleEF	LDA	5.6140e-003	0.05
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tblVehicleEF	LDA	249.57	259.47
tblVehicleEF	LDA	58.81	54.82
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	1.6140e-003	1.4470e-003
tblVehicleEF	LDA	2.2650e-003	1.9190e-003
tblVehicleEF	LDA	1.4880e-003	1.3330e-003
tblVehicleEF	LDA	2.0830e-003	1.7640e-003
tblVehicleEF	LDA	0.04	0.06
tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	9.8140e-003	9.1880e-003
tblVehicleEF	LDA	0.04	0.24

tblVehicleEF	LDA	0.08	0.23
tblVehicleEF	LDA	2.4990e-003	2.5670e-003
tblVehicleEF	LDA	6.0800e-004	5.4200e-004
tblVehicleEF	LDA	0.04	0.06
tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.24
tblVehicleEF	LDA	0.08	0.26
tblVehicleEF	LDT1	0.01	8.0140e-003
tblVehicleEF	LDT1	0.02	0.09
tblVehicleEF	LDT1	1.46	1.62
tblVehicleEF	LDT1	3.40	2.43
tblVehicleEF	LDT1	315.98	317.00
tblVehicleEF	LDT1	72.28	66.64
tblVehicleEF	LDT1	0.14	0.14
tblVehicleEF	LDT1	2.5300e-003	2.2930e-003
tblVehicleEF	LDT1	3.6970e-003	2.9510e-003
tblVehicleEF	LDT1	2.3290e-003	2.1110e-003
tblVehicleEF	LDT1	3.4000e-003	2.7140e-003
tblVehicleEF	LDT1	0.21	0.23
tblVehicleEF	LDT1	0.35	0.27
tblVehicleEF	LDT1	0.14	0.15
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.20	0.87
tblVehicleEF	LDT1	0.24	0.44
tblVehicleEF	LDT1	3.1780e-003	3.1370e-003

tblVehicleEF	LDT1	7.8300e-004	6.5900e-004
tblVehicleEF	LDT1	0.21	0.23
tblVehicleEF	LDT1	0.35	0.27
tblVehicleEF	LDT1	0.14	0.15
tblVehicleEF	LDT1	0.04	0.05
tblVehicleEF	LDT1	0.20	0.87
tblVehicleEF	LDT1	0.26	0.48
tblVehicleEF	LDT1	0.01	9.0560e-003
tblVehicleEF	LDT1	0.02	0.08
tblVehicleEF	LDT1	1.76	1.96
tblVehicleEF	LDT1	2.99	2.15
tblVehicleEF	LDT1	343.19	341.79
tblVehicleEF	LDT1	72.28	66.01
tblVehicleEF	LDT1	0.13	0.13
tblVehicleEF	LDT1	2.5300e-003	2.2930e-003
tblVehicleEF	LDT1	3.6970e-003	2.9510e-003
tblVehicleEF	LDT1	2.3290e-003	2.1110e-003
tblVehicleEF	LDT1	3.4000e-003	2.7140e-003
tblVehicleEF	LDT1	0.41	0.44
tblVehicleEF	LDT1	0.43	0.34
tblVehicleEF	LDT1	0.27	0.29
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.20	0.88
tblVehicleEF	LDT1	0.21	0.38
tblVehicleEF	LDT1	3.4550e-003	3.3820e-003
tblVehicleEF	LDT1	7.7500e-004	6.5300e-004
tblVehicleEF	LDT1	0.41	0.44

tblVehicleEF	LDT1	0.43	0.34
tblVehicleEF	LDT1	0.27	0.29
tblVehicleEF	LDT1	0.05	0.06
tblVehicleEF	LDT1	0.20	0.88
tblVehicleEF	LDT1	0.23	0.42
tblVehicleEF	LDT1	0.01	7.7080e-003
tblVehicleEF	LDT1	0.02	0.09
tblVehicleEF	LDT1	1.37	1.51
tblVehicleEF	LDT1	3.46	2.48
tblVehicleEF	LDT1	307.88	309.49
tblVehicleEF	LDT1	72.28	66.77
tblVehicleEF	LDT1	0.14	0.14
tblVehicleEF	LDT1	2.5300e-003	2.2930e-003
tblVehicleEF	LDT1	3.6970e-003	2.9510e-003
tblVehicleEF	LDT1	2.3290e-003	2.1110e-003
tblVehicleEF	LDT1	3.4000e-003	2.7140e-003
tblVehicleEF	LDT1	0.18	0.19
tblVehicleEF	LDT1	0.39	0.30
tblVehicleEF	LDT1	0.12	0.13
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.23	1.01
tblVehicleEF	LDT1	0.25	0.45
tblVehicleEF	LDT1	3.0960e-003	3.0630e-003
tblVehicleEF	LDT1	7.8400e-004	6.6100e-004
tblVehicleEF	LDT1	0.18	0.19
tblVehicleEF	LDT1	0.39	0.30
tblVehicleEF	LDT1	0.12	0.13

tblVehicleEF	LDT1	0.04	0.05
tblVehicleEF	LDT1	0.23	1.01
tblVehicleEF	LDT1	0.27	0.50
tblVehicleEF	LDT2	5.6080e-003	4.2470e-003
tblVehicleEF	LDT2	7.2840e-003	0.07
tblVehicleEF	LDT2	0.76	0.98
tblVehicleEF	LDT2	1.53	2.73
tblVehicleEF	LDT2	355.02	338.79
tblVehicleEF	LDT2	81.24	71.51
tblVehicleEF	LDT2	0.08	0.09
tblVehicleEF	LDT2	1.6030e-003	1.4980e-003
tblVehicleEF	LDT2	2.3320e-003	1.9580e-003
tblVehicleEF	LDT2	1.4740e-003	1.3790e-003
tblVehicleEF	LDT2	2.1450e-003	1.8010e-003
tblVehicleEF	LDT2	0.07	0.11
tblVehicleEF	LDT2	0.12	0.14
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.01	0.02
tblVehicleEF	LDT2	0.06	0.44
tblVehicleEF	LDT2	0.10	0.33
tblVehicleEF	LDT2	3.5560e-003	3.3520e-003
tblVehicleEF	LDT2	8.3800e-004	7.0800e-004
tblVehicleEF	LDT2	0.07	0.11
tblVehicleEF	LDT2	0.12	0.14
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.06	0.44

tblVehicleEF	LDT2	0.11	0.37
tblVehicleEF	LDT2	6.3630e-003	4.8280e-003
tblVehicleEF	LDT2	6.3270e-003	0.06
tblVehicleEF	LDT2	0.93	1.20
tblVehicleEF	LDT2	1.35	2.42
tblVehicleEF	LDT2	386.34	362.86
tblVehicleEF	LDT2	81.24	70.86
tblVehicleEF	LDT2	0.07	0.08
tblVehicleEF	LDT2	1.6030e-003	1.4980e-003
tblVehicleEF	LDT2	2.3320e-003	1.9580e-003
tblVehicleEF	LDT2	1.4740e-003	1.3790e-003
tblVehicleEF	LDT2	2.1450e-003	1.8010e-003
tblVehicleEF	LDT2	0.14	0.22
tblVehicleEF	LDT2	0.14	0.17
tblVehicleEF	LDT2	0.10	0.17
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.44
tblVehicleEF	LDT2	0.09	0.29
tblVehicleEF	LDT2	3.8710e-003	3.5900e-003
tblVehicleEF	LDT2	8.3500e-004	7.0100e-004
tblVehicleEF	LDT2	0.14	0.22
tblVehicleEF	LDT2	0.14	0.17
tblVehicleEF	LDT2	0.10	0.17
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.06	0.44
tblVehicleEF	LDT2	0.09	0.32
tblVehicleEF	LDT2	5.3900e-003	4.0760e-003

tblVehicleEF	LDT2	7.4940e-003	0.07
tblVehicleEF	LDT2	0.71	0.91
tblVehicleEF	LDT2	1.57	2.80
tblVehicleEF	LDT2	345.65	331.49
tblVehicleEF	LDT2	81.24	71.65
tblVehicleEF	LDT2	0.08	0.09
tblVehicleEF	LDT2	1.6030e-003	1.4980e-003
tblVehicleEF	LDT2	2.3320e-003	1.9580e-003
tblVehicleEF	LDT2	1.4740e-003	1.3790e-003
tblVehicleEF	LDT2	2.1450e-003	1.8010e-003
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.13	0.15
tblVehicleEF	LDT2	0.05	0.07
tblVehicleEF	LDT2	0.01	0.02
tblVehicleEF	LDT2	0.07	0.51
tblVehicleEF	LDT2	0.10	0.34
tblVehicleEF	LDT2	3.4620e-003	3.2800e-003
tblVehicleEF	LDT2	8.3900e-004	7.0900e-004
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.13	0.15
tblVehicleEF	LDT2	0.05	0.07
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.51
tblVehicleEF	LDT2	0.11	0.38
tblVehicleEF	LHD1	5.4460e-003	4.8820e-003
tblVehicleEF	LHD1	0.01	5.3310e-003
tblVehicleEF	LHD1	0.02	0.02

tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	0.96	0.72
tblVehicleEF	LHD1	2.41	0.96
tblVehicleEF	LHD1	9.26	9.44
tblVehicleEF	LHD1	607.95	639.95
tblVehicleEF	LHD1	30.36	10.54
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	2.21	1.60
tblVehicleEF	LHD1	9.7200e-004	9.7000e-004
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.7100e-004	2.3300e-004
tblVehicleEF	LHD1	9.3000e-004	9.2800e-004
tblVehicleEF	LHD1	2.5390e-003	2.5010e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.0100e-004	2.1400e-004
tblVehicleEF	LHD1	3.8710e-003	3.1780e-003
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.9010e-003	1.5570e-003
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.31	0.50
tblVehicleEF	LHD1	0.26	0.08
tblVehicleEF	LHD1	9.3000e-005	9.1000e-005
tblVehicleEF	LHD1	5.9620e-003	6.2250e-003
tblVehicleEF	LHD1	3.4900e-004	1.0400e-004
tblVehicleEF	LHD1	3.8710e-003	3.1780e-003

tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.9010e-003	1.5570e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.31	0.50
tblVehicleEF	LHD1	0.28	0.08
tblVehicleEF	LHD1	5.4460e-003	4.8940e-003
tblVehicleEF	LHD1	0.01	5.4200e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	0.97	0.73
tblVehicleEF	LHD1	2.29	0.92
tblVehicleEF	LHD1	9.26	9.44
tblVehicleEF	LHD1	607.95	639.97
tblVehicleEF	LHD1	30.36	10.46
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	2.08	1.51
tblVehicleEF	LHD1	9.7200e-004	9.7000e-004
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.7100e-004	2.3300e-004
tblVehicleEF	LHD1	9.3000e-004	9.2800e-004
tblVehicleEF	LHD1	2.5390e-003	2.5010e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.0100e-004	2.1400e-004
tblVehicleEF	LHD1	7.2450e-003	5.9530e-003
tblVehicleEF	LHD1	0.12	0.09

tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	3.6380e-003	2.9980e-003
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.32	0.50
tblVehicleEF	LHD1	0.25	0.07
tblVehicleEF	LHD1	9.3000e-005	9.1000e-005
tblVehicleEF	LHD1	5.9620e-003	6.2250e-003
tblVehicleEF	LHD1	3.4700e-004	1.0300e-004
tblVehicleEF	LHD1	7.2450e-003	5.9530e-003
tblVehicleEF	LHD1	0.12	0.09
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	3.6380e-003	2.9980e-003
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.32	0.50
tblVehicleEF	LHD1	0.27	0.08
tblVehicleEF	LHD1	5.4460e-003	4.8810e-003
tblVehicleEF	LHD1	0.01	5.3180e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	0.96	0.72
tblVehicleEF	LHD1	2.41	0.96
tblVehicleEF	LHD1	9.26	9.44
tblVehicleEF	LHD1	607.95	639.95
tblVehicleEF	LHD1	30.36	10.54
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	2.18	1.59
tblVehicleEF	LHD1	9.7200e-004	9.7000e-004

tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.7100e-004	2.3300e-004
tblVehicleEF	LHD1	9.3000e-004	9.2800e-004
tblVehicleEF	LHD1	2.5390e-003	2.5010e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.0100e-004	2.1400e-004
tblVehicleEF	LHD1	3.4570e-003	2.8250e-003
tblVehicleEF	LHD1	0.11	0.09
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.7350e-003	1.4150e-003
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.33	0.53
tblVehicleEF	LHD1	0.26	0.08
tblVehicleEF	LHD1	9.3000e-005	9.1000e-005
tblVehicleEF	LHD1	5.9620e-003	6.2250e-003
tblVehicleEF	LHD1	3.4900e-004	1.0400e-004
tblVehicleEF	LHD1	3.4570e-003	2.8250e-003
tblVehicleEF	LHD1	0.11	0.09
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.7350e-003	1.4150e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.33	0.53
tblVehicleEF	LHD1	0.28	0.08
tblVehicleEF	LHD2	3.6660e-003	3.1720e-003
tblVehicleEF	LHD2	4.5290e-003	3.8570e-003
tblVehicleEF	LHD2	8.3110e-003	9.0280e-003

tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.50	0.53
tblVehicleEF	LHD2	1.15	0.56
tblVehicleEF	LHD2	14.48	14.86
tblVehicleEF	LHD2	604.20	638.83
tblVehicleEF	LHD2	23.56	7.29
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.71	1.77
tblVehicleEF	LHD2	1.3360e-003	1.4390e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.8700e-004	1.1400e-004
tblVehicleEF	LHD2	1.2780e-003	1.3770e-003
tblVehicleEF	LHD2	2.6970e-003	2.7110e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5600e-004	1.0500e-004
tblVehicleEF	LHD2	1.4980e-003	1.6870e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	7.7800e-004	8.4200e-004
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.4100e-004	1.4200e-004
tblVehicleEF	LHD2	5.8740e-003	6.1550e-003
tblVehicleEF	LHD2	2.5700e-004	7.2000e-005
tblVehicleEF	LHD2	1.4980e-003	1.6870e-003

tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	7.7800e-004	8.4200e-004
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	3.6660e-003	3.1790e-003
tblVehicleEF	LHD2	4.5800e-003	3.8860e-003
tblVehicleEF	LHD2	8.0210e-003	8.7250e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.51	0.53
tblVehicleEF	LHD2	1.10	0.53
tblVehicleEF	LHD2	14.48	14.86
tblVehicleEF	LHD2	604.20	638.83
tblVehicleEF	LHD2	23.56	7.25
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.62	1.67
tblVehicleEF	LHD2	1.3360e-003	1.4390e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.8700e-004	1.1400e-004
tblVehicleEF	LHD2	1.2780e-003	1.3770e-003
tblVehicleEF	LHD2	2.6970e-003	2.7110e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5600e-004	1.0500e-004
tblVehicleEF	LHD2	2.8320e-003	3.1830e-003
tblVehicleEF	LHD2	0.04	0.05

tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.4720e-003	1.6130e-003
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.4100e-004	1.4200e-004
tblVehicleEF	LHD2	5.8740e-003	6.1560e-003
tblVehicleEF	LHD2	2.5600e-004	7.2000e-005
tblVehicleEF	LHD2	2.8320e-003	3.1830e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.4720e-003	1.6130e-003
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	3.6660e-003	3.1700e-003
tblVehicleEF	LHD2	4.5170e-003	3.8490e-003
tblVehicleEF	LHD2	8.3600e-003	9.0930e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.50	0.53
tblVehicleEF	LHD2	1.16	0.56
tblVehicleEF	LHD2	14.48	14.86
tblVehicleEF	LHD2	604.20	638.83
tblVehicleEF	LHD2	23.56	7.30
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.70	1.75
tblVehicleEF	LHD2	1.3360e-003	1.4390e-003

tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.8700e-004	1.1400e-004
tblVehicleEF	LHD2	1.2780e-003	1.3770e-003
tblVehicleEF	LHD2	2.6970e-003	2.7110e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5600e-004	1.0500e-004
tblVehicleEF	LHD2	1.1910e-003	1.3290e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	6.6000e-004	7.0100e-004
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.4100e-004	1.4200e-004
tblVehicleEF	LHD2	5.8740e-003	6.1550e-003
tblVehicleEF	LHD2	2.5700e-004	7.2000e-005
tblVehicleEF	LHD2	1.1910e-003	1.3290e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	6.6000e-004	7.0100e-004
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	MCY	0.42	0.32
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	19.52	19.61

tblVehicleEF	MCY	9.67	8.55
tblVehicleEF	MCY	165.74	208.30
tblVehicleEF	MCY	46.23	60.73
tblVehicleEF	MCY	1.13	1.13
tblVehicleEF	MCY	1.7750e-003	1.7570e-003
tblVehicleEF	MCY	3.4010e-003	2.8660e-003
tblVehicleEF	MCY	1.6600e-003	1.6440e-003
tblVehicleEF	MCY	3.2060e-003	2.7000e-003
tblVehicleEF	MCY	1.69	1.66
tblVehicleEF	MCY	0.85	0.84
tblVehicleEF	MCY	0.92	0.90
tblVehicleEF	MCY	2.15	2.16
tblVehicleEF	MCY	0.57	1.87
tblVehicleEF	MCY	2.08	1.83
tblVehicleEF	MCY	2.0380e-003	2.0610e-003
tblVehicleEF	MCY	6.8100e-004	6.0100e-004
tblVehicleEF	MCY	1.69	1.66
tblVehicleEF	MCY	0.85	0.84
tblVehicleEF	MCY	0.92	0.90
tblVehicleEF	MCY	2.65	2.65
tblVehicleEF	MCY	0.57	1.87
tblVehicleEF	MCY	2.26	1.99
tblVehicleEF	MCY	0.42	0.32
tblVehicleEF	MCY	0.14	0.22
tblVehicleEF	MCY	20.23	20.27
tblVehicleEF	MCY	9.11	8.00
tblVehicleEF	MCY	165.74	209.26

tblVehicleEF	MCY	46.23	59.19
tblVehicleEF	MCY	0.98	0.98
tblVehicleEF	MCY	1.7750e-003	1.7570e-003
tblVehicleEF	MCY	3.4010e-003	2.8660e-003
tblVehicleEF	MCY	1.6600e-003	1.6440e-003
tblVehicleEF	MCY	3.2060e-003	2.7000e-003
tblVehicleEF	MCY	3.35	3.28
tblVehicleEF	MCY	1.24	1.23
tblVehicleEF	MCY	2.10	2.05
tblVehicleEF	MCY	2.13	2.13
tblVehicleEF	MCY	0.57	1.86
tblVehicleEF	MCY	1.86	1.63
tblVehicleEF	MCY	2.0490e-003	2.0710e-003
tblVehicleEF	MCY	6.6500e-004	5.8600e-004
tblVehicleEF	MCY	3.35	3.28
tblVehicleEF	MCY	1.24	1.23
tblVehicleEF	MCY	2.10	2.05
tblVehicleEF	MCY	2.62	2.63
tblVehicleEF	MCY	0.57	1.86
tblVehicleEF	MCY	2.02	1.77
tblVehicleEF	MCY	0.42	0.32
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	19.04	19.14
tblVehicleEF	MCY	9.62	8.49
tblVehicleEF	MCY	165.74	207.52
tblVehicleEF	MCY	46.23	60.64
tblVehicleEF	MCY	1.12	1.12

tblVehicleEF	MCY	1.7750e-003	1.7570e-003
tblVehicleEF	MCY	3.4010e-003	2.8660e-003
tblVehicleEF	MCY	1.6600e-003	1.6440e-003
tblVehicleEF	MCY	3.2060e-003	2.7000e-003
tblVehicleEF	MCY	1.60	1.59
tblVehicleEF	MCY	1.05	1.04
tblVehicleEF	MCY	0.74	0.73
tblVehicleEF	MCY	2.15	2.15
tblVehicleEF	MCY	0.65	2.12
tblVehicleEF	MCY	2.08	1.83
tblVehicleEF	MCY	2.0310e-003	2.0540e-003
tblVehicleEF	MCY	6.8100e-004	6.0000e-004
tblVehicleEF	MCY	1.60	1.59
tblVehicleEF	MCY	1.05	1.04
tblVehicleEF	MCY	0.74	0.73
tblVehicleEF	MCY	2.64	2.65
tblVehicleEF	MCY	0.65	2.12
tblVehicleEF	MCY	2.27	1.99
tblVehicleEF	MDV	0.01	5.7580e-003
tblVehicleEF	MDV	0.02	0.09
tblVehicleEF	MDV	1.42	1.20
tblVehicleEF	MDV	3.18	3.27
tblVehicleEF	MDV	488.89	421.49
tblVehicleEF	MDV	110.15	88.73
tblVehicleEF	MDV	0.17	0.12
tblVehicleEF	MDV	1.7110e-003	1.5730e-003
tblVehicleEF	MDV	2.4630e-003	2.0550e-003

tblVehicleEF	MDV	1.5780e-003	1.4510e-003
tblVehicleEF	MDV	2.2660e-003	1.8910e-003
tblVehicleEF	MDV	0.11	0.13
tblVehicleEF	MDV	0.20	0.17
tblVehicleEF	MDV	0.09	0.11
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.25	0.45
tblVehicleEF	MDV	4.9000e-003	4.1680e-003
tblVehicleEF	MDV	1.1570e-003	8.7800e-004
tblVehicleEF	MDV	0.11	0.13
tblVehicleEF	MDV	0.20	0.17
tblVehicleEF	MDV	0.09	0.11
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.27	0.49
tblVehicleEF	MDV	0.01	6.5120e-003
tblVehicleEF	MDV	0.02	0.08
tblVehicleEF	MDV	1.73	1.46
tblVehicleEF	MDV	2.81	2.88
tblVehicleEF	MDV	530.71	447.07
tblVehicleEF	MDV	110.15	87.92
tblVehicleEF	MDV	0.16	0.11
tblVehicleEF	MDV	1.7110e-003	1.5730e-003
tblVehicleEF	MDV	2.4630e-003	2.0550e-003
tblVehicleEF	MDV	1.5780e-003	1.4510e-003
tblVehicleEF	MDV	2.2660e-003	1.8910e-003

tblVehicleEF	MDV	0.22	0.26
tblVehicleEF	MDV	0.23	0.20
tblVehicleEF	MDV	0.17	0.21
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.21	0.39
tblVehicleEF	MDV	5.3230e-003	4.4210e-003
tblVehicleEF	MDV	1.1510e-003	8.7000e-004
tblVehicleEF	MDV	0.22	0.26
tblVehicleEF	MDV	0.23	0.20
tblVehicleEF	MDV	0.17	0.21
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.23	0.43
tblVehicleEF	MDV	0.01	5.5370e-003
tblVehicleEF	MDV	0.02	0.09
tblVehicleEF	MDV	1.33	1.12
tblVehicleEF	MDV	3.24	3.34
tblVehicleEF	MDV	476.42	413.84
tblVehicleEF	MDV	110.15	88.88
tblVehicleEF	MDV	0.16	0.12
tblVehicleEF	MDV	1.7110e-003	1.5730e-003
tblVehicleEF	MDV	2.4630e-003	2.0550e-003
tblVehicleEF	MDV	1.5780e-003	1.4510e-003
tblVehicleEF	MDV	2.2660e-003	1.8910e-003
tblVehicleEF	MDV	0.09	0.10
tblVehicleEF	MDV	0.21	0.18

tblVehicleEF	MDV	0.08	0.10
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.13	0.57
tblVehicleEF	MDV	0.25	0.46
tblVehicleEF	MDV	4.7750e-003	4.0920e-003
tblVehicleEF	MDV	1.1590e-003	8.8000e-004
tblVehicleEF	MDV	0.09	0.10
tblVehicleEF	MDV	0.21	0.18
tblVehicleEF	MDV	0.08	0.10
tblVehicleEF	MDV	0.05	0.03
tblVehicleEF	MDV	0.13	0.57
tblVehicleEF	MDV	0.28	0.50
tblVehicleEF	MH	0.03	3.3370e-003
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	2.70	0.34
tblVehicleEF	MH	5.98	0.00
tblVehicleEF	MH	1,002.10	941.76
tblVehicleEF	MH	57.67	0.00
tblVehicleEF	MH	1.67	4.43
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	1.0860e-003	0.00
tblVehicleEF	MH	3.2460e-003	4.0000e-003
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	9.9800e-004	0.00
tblVehicleEF	MH	1.56	0.00
tblVehicleEF	MH	0.08	0.00

tblVehicleEF	MH	0.54	0.00
tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.35	0.00
tblVehicleEF	MH	9.9460e-003	8.9030e-003
tblVehicleEF	MH	6.8100e-004	0.00
tblVehicleEF	MH	1.56	0.00
tblVehicleEF	MH	0.08	0.00
tblVehicleEF	MH	0.54	0.00
tblVehicleEF	MH	0.13	0.08
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.39	0.00
tblVehicleEF	MH	0.03	3.3370e-003
tblVehicleEF	MH	0.02	0.00
tblVehicleEF	MH	2.78	0.34
tblVehicleEF	MH	5.56	0.00
tblVehicleEF	MH	1,002.10	941.76
tblVehicleEF	MH	57.67	0.00
tblVehicleEF	MH	1.55	4.18
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	1.0860e-003	0.00
tblVehicleEF	MH	3.2460e-003	4.0000e-003
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	9.9800e-004	0.00
tblVehicleEF	MH	2.87	0.00
tblVehicleEF	MH	0.10	0.00

tblVehicleEF	MH	1.06	0.00
tblVehicleEF	MH	0.10	0.07
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.34	0.00
tblVehicleEF	MH	9.9470e-003	8.9030e-003
tblVehicleEF	MH	6.7400e-004	0.00
tblVehicleEF	MH	2.87	0.00
tblVehicleEF	MH	0.10	0.00
tblVehicleEF	MH	1.06	0.00
tblVehicleEF	MH	0.13	0.08
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.37	0.00
tblVehicleEF	MH	0.03	3.3370e-003
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	2.70	0.34
tblVehicleEF	MH	6.02	0.00
tblVehicleEF	MH	1,002.10	941.76
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tblVehicleEF	MH	1.65	4.38
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	1.0860e-003	0.00
tblVehicleEF	MH	3.2460e-003	4.0000e-003
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	9.9800e-004	0.00
tblVehicleEF	MH	1.58	0.00
tblVehicleEF	MH	0.10	0.00

tblVehicleEF	MH	0.53	0.00
tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.35	0.00
tblVehicleEF	MH	9.9460e-003	8.9030e-003
tblVehicleEF	MH	6.8200e-004	0.00
tblVehicleEF	MH	1.58	0.00
tblVehicleEF	MH	0.10	0.00
tblVehicleEF	MH	0.53	0.00
tblVehicleEF	MH	0.13	0.08
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.39	0.00
tblVehicleEF	MHD	0.02	3.1500e-003
tblVehicleEF	MHD	3.7220e-003	5.9790e-003
tblVehicleEF	MHD	0.06	8.4870e-003
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tblVehicleEF	MHD	0.28	0.57
tblVehicleEF	MHD	6.06	1.01
tblVehicleEF	MHD	151.96	74.93
tblVehicleEF	MHD	1,066.63	1,001.03
tblVehicleEF	MHD	55.49	8.18
tblVehicleEF	MHD	0.65	0.69
tblVehicleEF	MHD	0.99	2.37
tblVehicleEF	MHD	1.0680e-003	2.4180e-003
tblVehicleEF	MHD	6.4490e-003	0.08
tblVehicleEF	MHD	7.8800e-004	9.6000e-005
tblVehicleEF	MHD	1.0220e-003	2.3130e-003

tblVehicleEF	MHD	6.1670e-003	0.08
tblVehicleEF	MHD	7.2400e-004	8.8000e-005
tblVehicleEF	MHD	1.7450e-003	7.1900e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	8.5800e-004	3.5500e-004
tblVehicleEF	MHD	0.03	0.11
tblVehicleEF	MHD	0.02	0.10
tblVehicleEF	MHD	0.37	0.05
tblVehicleEF	MHD	1.4610e-003	7.1000e-004
tblVehicleEF	MHD	0.01	9.5290e-003
tblVehicleEF	MHD	6.6100e-004	8.1000e-005
tblVehicleEF	MHD	1.7450e-003	7.1900e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	8.5800e-004	3.5500e-004
tblVehicleEF	MHD	0.04	0.12
tblVehicleEF	MHD	0.02	0.10
tblVehicleEF	MHD	0.40	0.05
tblVehicleEF	MHD	0.02	2.9880e-003
tblVehicleEF	MHD	3.7740e-003	6.0080e-003
tblVehicleEF	MHD	0.05	8.2030e-003
tblVehicleEF	MHD	0.26	0.28
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tblVehicleEF	MHD	1,066.63	1,001.04

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tblVehicleEF	MHD	0.93	2.23
tblVehicleEF	MHD	9.0000e-004	2.0410e-003
tblVehicleEF	MHD	6.4490e-003	0.08
tblVehicleEF	MHD	7.8800e-004	9.6000e-005
tblVehicleEF	MHD	8.6100e-004	1.9530e-003
tblVehicleEF	MHD	6.1670e-003	0.08
tblVehicleEF	MHD	7.2400e-004	8.8000e-005
tblVehicleEF	MHD	3.3760e-003	1.3770e-003
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	1.6840e-003	7.0100e-004
tblVehicleEF	MHD	0.03	0.11
tblVehicleEF	MHD	0.02	0.11
tblVehicleEF	MHD	0.36	0.04
tblVehicleEF	MHD	1.5460e-003	7.2500e-004
tblVehicleEF	MHD	0.01	9.5290e-003
tblVehicleEF	MHD	6.5600e-004	8.0000e-005
tblVehicleEF	MHD	3.3760e-003	1.3770e-003
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	1.6840e-003	7.0100e-004
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tblVehicleEF	MHD	0.02	0.11
tblVehicleEF	MHD	0.39	0.05
tblVehicleEF	MHD	0.02	3.3820e-003

tblVehicleEF	MHD	3.6890e-003	5.9600e-003
tblVehicleEF	MHD	0.06	8.5610e-003
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tblVehicleEF	MHD	1.2990e-003	2.9380e-003
tblVehicleEF	MHD	6.4490e-003	0.08
tblVehicleEF	MHD	7.8800e-004	9.6000e-005
tblVehicleEF	MHD	1.2430e-003	2.8110e-003
tblVehicleEF	MHD	6.1670e-003	0.08
tblVehicleEF	MHD	7.2400e-004	8.8000e-005
tblVehicleEF	MHD	1.3320e-003	5.6300e-004
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tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	6.7900e-004	2.8800e-004
tblVehicleEF	MHD	0.03	0.11
tblVehicleEF	MHD	0.02	0.11
tblVehicleEF	MHD	0.37	0.05
tblVehicleEF	MHD	1.3440e-003	6.9100e-004
tblVehicleEF	MHD	0.01	9.5290e-003
tblVehicleEF	MHD	6.6300e-004	8.1000e-005
tblVehicleEF	MHD	1.3320e-003	5.6300e-004

tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	6.7900e-004	2.8800e-004
tblVehicleEF	MHD	0.04	0.12
tblVehicleEF	MHD	0.02	0.11
tblVehicleEF	MHD	0.41	0.05
tblVehicleEF	OBUS	0.01	8.9240e-003
tblVehicleEF	OBUS	8.0950e-003	8.5070e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.27	0.50
tblVehicleEF	OBUS	0.54	0.93
tblVehicleEF	OBUS	6.17	2.58
tblVehicleEF	OBUS	75.04	73.28
tblVehicleEF	OBUS	1,098.07	1,407.22
tblVehicleEF	OBUS	70.10	20.86
tblVehicleEF	OBUS	0.35	0.44
tblVehicleEF	OBUS	1.12	1.70
tblVehicleEF	OBUS	1.2100e-004	1.7750e-003
tblVehicleEF	OBUS	6.0450e-003	0.04
tblVehicleEF	OBUS	8.2300e-004	1.9000e-004
tblVehicleEF	OBUS	1.1600e-004	1.6990e-003
tblVehicleEF	OBUS	5.7680e-003	0.04
tblVehicleEF	OBUS	7.5700e-004	1.7400e-004
tblVehicleEF	OBUS	2.1800e-003	2.5990e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	9.3000e-004	1.1120e-003

tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.05	0.26
tblVehicleEF	OBUS	0.39	0.12
tblVehicleEF	OBUS	7.2800e-004	6.9900e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.0900e-004	2.0600e-004
tblVehicleEF	OBUS	2.1800e-003	2.5990e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	9.3000e-004	1.1120e-003
tblVehicleEF	OBUS	0.05	0.11
tblVehicleEF	OBUS	0.05	0.26
tblVehicleEF	OBUS	0.42	0.14
tblVehicleEF	OBUS	0.01	8.9470e-003
tblVehicleEF	OBUS	8.2540e-003	8.6370e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.26	0.48
tblVehicleEF	OBUS	0.55	0.94
tblVehicleEF	OBUS	5.76	2.41
tblVehicleEF	OBUS	78.48	73.81
tblVehicleEF	OBUS	1,098.07	1,407.25
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tblVehicleEF	OBUS	0.36	0.45
tblVehicleEF	OBUS	1.04	1.59
tblVehicleEF	OBUS	1.0200e-004	1.5000e-003
tblVehicleEF	OBUS	6.0450e-003	0.04
tblVehicleEF	OBUS	8.2300e-004	1.9000e-004

tblVehicleEF	OBUS	9.8000e-005	1.4350e-003
tblVehicleEF	OBUS	5.7680e-003	0.04
tblVehicleEF	OBUS	7.5700e-004	1.7400e-004
tblVehicleEF	OBUS	4.0690e-003	4.7330e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	1.7890e-003	2.1320e-003
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.05	0.26
tblVehicleEF	OBUS	0.37	0.12
tblVehicleEF	OBUS	7.6100e-004	7.0400e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.0200e-004	2.0400e-004
tblVehicleEF	OBUS	4.0690e-003	4.7330e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	1.7890e-003	2.1320e-003
tblVehicleEF	OBUS	0.05	0.11
tblVehicleEF	OBUS	0.05	0.26
tblVehicleEF	OBUS	0.40	0.13
tblVehicleEF	OBUS	0.01	8.9200e-003
tblVehicleEF	OBUS	8.0660e-003	8.4690e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.28	0.53
tblVehicleEF	OBUS	0.54	0.92
tblVehicleEF	OBUS	6.22	2.60
tblVehicleEF	OBUS	70.30	72.56

tblVehicleEF	OBUS	1,098.07	1,407.21
tblVehicleEF	OBUS	70.10	20.90
tblVehicleEF	OBUS	0.34	0.44
tblVehicleEF	OBUS	1.11	1.68
tblVehicleEF	OBUS	1.4700e-004	2.1560e-003
tblVehicleEF	OBUS	6.0450e-003	0.04
tblVehicleEF	OBUS	8.2300e-004	1.9000e-004
tblVehicleEF	OBUS	1.4100e-004	2.0620e-003
tblVehicleEF	OBUS	5.7680e-003	0.04
tblVehicleEF	OBUS	7.5700e-004	1.7400e-004
tblVehicleEF	OBUS	1.8870e-003	2.3830e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	8.5400e-004	1.0620e-003
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.05	0.27
tblVehicleEF	OBUS	0.39	0.13
tblVehicleEF	OBUS	6.8300e-004	6.9200e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.1000e-004	2.0700e-004
tblVehicleEF	OBUS	1.8870e-003	2.3830e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	8.5400e-004	1.0620e-003
tblVehicleEF	OBUS	0.05	0.11
tblVehicleEF	OBUS	0.05	0.27
tblVehicleEF	OBUS	0.42	0.14

tblVehicleEF	SBUS	0.84	0.08
tblVehicleEF	SBUS	0.01	6.6110e-003
tblVehicleEF	SBUS	0.06	6.9670e-003
tblVehicleEF	SBUS	7.83	3.03
tblVehicleEF	SBUS	0.64	0.53
tblVehicleEF	SBUS	6.66	0.94
tblVehicleEF	SBUS	1,146.29	366.87
tblVehicleEF	SBUS	1,103.40	1,115.27
tblVehicleEF	SBUS	53.92	6.06
tblVehicleEF	SBUS	10.00	3.57
tblVehicleEF	SBUS	4.65	4.82
tblVehicleEF	SBUS	0.01	4.0660e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.5700e-004	4.0000e-005
tblVehicleEF	SBUS	0.01	3.8900e-003
tblVehicleEF	SBUS	2.6950e-003	2.6510e-003
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	4.2000e-004	3.6000e-005
tblVehicleEF	SBUS	4.6830e-003	1.3080e-003
tblVehicleEF	SBUS	0.03	8.6250e-003
tblVehicleEF	SBUS	0.94	0.36
tblVehicleEF	SBUS	2.1770e-003	6.2500e-004
tblVehicleEF	SBUS	0.11	0.10
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	0.37	0.04
tblVehicleEF	SBUS	0.01	3.5040e-003

tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.5500e-004	6.0000e-005
tblVehicleEF	SBUS	4.6830e-003	1.3080e-003
tblVehicleEF	SBUS	0.03	8.6250e-003
tblVehicleEF	SBUS	1.35	0.52
tblVehicleEF	SBUS	2.1770e-003	6.2500e-004
tblVehicleEF	SBUS	0.13	0.11
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	0.40	0.04
tblVehicleEF	SBUS	0.84	0.08
tblVehicleEF	SBUS	0.01	6.6860e-003
tblVehicleEF	SBUS	0.05	5.8380e-003
tblVehicleEF	SBUS	7.71	2.99
tblVehicleEF	SBUS	0.65	0.54
tblVehicleEF	SBUS	4.83	0.68
tblVehicleEF	SBUS	1,198.60	377.09
tblVehicleEF	SBUS	1,103.40	1,115.28
tblVehicleEF	SBUS	53.92	5.63
tblVehicleEF	SBUS	10.32	3.66
tblVehicleEF	SBUS	4.37	4.53
tblVehicleEF	SBUS	9.1190e-003	3.4340e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.5700e-004	4.0000e-005
tblVehicleEF	SBUS	8.7240e-003	3.2850e-003
tblVehicleEF	SBUS	2.6950e-003	2.6510e-003
tblVehicleEF	SBUS	0.02	0.03

tblVehicleEF	SBUS	4.2000e-004	3.6000e-005
tblVehicleEF	SBUS	8.4640e-003	2.3620e-003
tblVehicleEF	SBUS	0.03	9.1440e-003
tblVehicleEF	SBUS	0.93	0.36
tblVehicleEF	SBUS	4.0830e-003	1.1650e-003
tblVehicleEF	SBUS	0.11	0.10
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.31	0.03
tblVehicleEF	SBUS	0.01	3.6000e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.2400e-004	5.6000e-005
tblVehicleEF	SBUS	8.4640e-003	2.3620e-003
tblVehicleEF	SBUS	0.03	9.1440e-003
tblVehicleEF	SBUS	1.35	0.52
tblVehicleEF	SBUS	4.0830e-003	1.1650e-003
tblVehicleEF	SBUS	0.13	0.11
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.34	0.04
tblVehicleEF	SBUS	0.84	0.08
tblVehicleEF	SBUS	0.01	6.6040e-003
tblVehicleEF	SBUS	0.07	7.2110e-003
tblVehicleEF	SBUS	8.00	3.09
tblVehicleEF	SBUS	0.63	0.53
tblVehicleEF	SBUS	7.02	0.98
tblVehicleEF	SBUS	1,074.07	352.76
tblVehicleEF	SBUS	1,103.40	1,115.26
tblVehicleEF	SBUS	53.92	6.14

tblVehicleEF	SBUS	9.56	3.44
tblVehicleEF	SBUS	4.60	4.78
tblVehicleEF	SBUS	0.01	4.9380e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.5700e-004	4.0000e-005
tblVehicleEF	SBUS	0.01	4.7240e-003
tblVehicleEF	SBUS	2.6950e-003	2.6510e-003
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	4.2000e-004	3.6000e-005
tblVehicleEF	SBUS	4.1680e-003	1.1480e-003
tblVehicleEF	SBUS	0.03	8.8290e-003
tblVehicleEF	SBUS	0.94	0.36
tblVehicleEF	SBUS	2.1000e-003	6.0300e-004
tblVehicleEF	SBUS	0.11	0.10
tblVehicleEF	SBUS	0.02	0.06
tblVehicleEF	SBUS	0.38	0.04
tblVehicleEF	SBUS	0.01	3.3710e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.6100e-004	6.1000e-005
tblVehicleEF	SBUS	4.1680e-003	1.1480e-003
tblVehicleEF	SBUS	0.03	8.8290e-003
tblVehicleEF	SBUS	1.35	0.52
tblVehicleEF	SBUS	2.1000e-003	6.0300e-004
tblVehicleEF	SBUS	0.13	0.11
tblVehicleEF	SBUS	0.02	0.06
tblVehicleEF	SBUS	0.41	0.05

tblVehicleEF	UBUS	1.51	3.35
tblVehicleEF	UBUS	0.09	0.02
tblVehicleEF	UBUS	8.45	26.05
tblVehicleEF	UBUS	15.26	1.50
tblVehicleEF	UBUS	1,822.40	1,617.71
tblVehicleEF	UBUS	153.45	18.08
tblVehicleEF	UBUS	4.95	0.32
tblVehicleEF	UBUS	0.50	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.06	2.9340e-003
tblVehicleEF	UBUS	1.4200e-003	1.6100e-004
tblVehicleEF	UBUS	0.21	0.04
tblVehicleEF	UBUS	3.0000e-003	5.4780e-003
tblVehicleEF	UBUS	0.05	2.7920e-003
tblVehicleEF	UBUS	1.3060e-003	1.4800e-004
tblVehicleEF	UBUS	9.7430e-003	1.6370e-003
tblVehicleEF	UBUS	0.11	9.7740e-003
tblVehicleEF	UBUS	4.7860e-003	7.1300e-004
tblVehicleEF	UBUS	0.52	0.05
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.17	0.07
tblVehicleEF	UBUS	9.9960e-003	4.8690e-003
tblVehicleEF	UBUS	1.8100e-003	1.7900e-004
tblVehicleEF	UBUS	9.7430e-003	1.6370e-003
tblVehicleEF	UBUS	0.11	9.7740e-003
tblVehicleEF	UBUS	4.7860e-003	7.1300e-004
tblVehicleEF	UBUS	2.08	3.43

tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.28	0.08
tblVehicleEF	UBUS	1.52	3.35
tblVehicleEF	UBUS	0.08	0.02
tblVehicleEF	UBUS	8.53	26.06
tblVehicleEF	UBUS	13.06	1.28
tblVehicleEF	UBUS	1,822.40	1,617.72
tblVehicleEF	UBUS	153.45	17.70
tblVehicleEF	UBUS	4.62	0.31
tblVehicleEF	UBUS	0.50	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.06	2.9340e-003
tblVehicleEF	UBUS	1.4200e-003	1.6100e-004
tblVehicleEF	UBUS	0.21	0.04
tblVehicleEF	UBUS	3.0000e-003	5.4780e-003
tblVehicleEF	UBUS	0.05	2.7920e-003
tblVehicleEF	UBUS	1.3060e-003	1.4800e-004
tblVehicleEF	UBUS	0.02	2.9250e-003
tblVehicleEF	UBUS	0.14	0.01
tblVehicleEF	UBUS	9.6600e-003	1.4550e-003
tblVehicleEF	UBUS	0.53	0.05
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.06	0.07
tblVehicleEF	UBUS	9.9970e-003	4.8690e-003
tblVehicleEF	UBUS	1.7720e-003	1.7500e-004
tblVehicleEF	UBUS	0.02	2.9250e-003
tblVehicleEF	UBUS	0.14	0.01

tblVehicleEF	UBUS	9.6600e-003	1.4550e-003
tblVehicleEF	UBUS	2.09	3.43
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.17	0.07
tblVehicleEF	UBUS	1.51	3.35
tblVehicleEF	UBUS	0.09	0.02
tblVehicleEF	UBUS	8.44	26.05
tblVehicleEF	UBUS	15.44	1.49
tblVehicleEF	UBUS	1,822.40	1,617.71
tblVehicleEF	UBUS	153.45	18.06
tblVehicleEF	UBUS	4.92	0.31
tblVehicleEF	UBUS	0.50	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.06	2.9340e-003
tblVehicleEF	UBUS	1.4200e-003	1.6100e-004
tblVehicleEF	UBUS	0.21	0.04
tblVehicleEF	UBUS	3.0000e-003	5.4780e-003
tblVehicleEF	UBUS	0.05	2.7920e-003
tblVehicleEF	UBUS	1.3060e-003	1.4800e-004
tblVehicleEF	UBUS	8.9770e-003	1.7200e-003
tblVehicleEF	UBUS	0.13	0.01
tblVehicleEF	UBUS	4.3820e-003	7.5400e-004
tblVehicleEF	UBUS	0.52	0.05
tblVehicleEF	UBUS	0.03	0.05
tblVehicleEF	UBUS	1.18	0.07
tblVehicleEF	UBUS	9.9960e-003	4.8690e-003
tblVehicleEF	UBUS	1.8130e-003	1.7900e-004

tblVehicleEF	UBUS	8.9770e-003	1.7200e-003
tblVehicleEF	UBUS	0.13	0.01
tblVehicleEF	UBUS	4.3820e-003	7.5400e-004
tblVehicleEF	UBUS	2.08	3.43
tblVehicleEF	UBUS	0.03	0.05
tblVehicleEF	UBUS	1.29	0.08
tblVehicleTrips	CNW_TTP	41.00	0.00
tblVehicleTrips	CW_TL	16.60	40.00
tblVehicleTrips	CW_TTP	59.00	100.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	1.68	0.92
tblVehicleTrips	SU_TR	1.68	0.92
tblVehicleTrips	WD_TR	1.68	0.92
tblWater	IndoorWaterUseRate	22,523,750.00	22,770,125.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	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**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.8833	1.6000e-003	0.1746	1.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004		0.3728	0.3728	9.9000e-004		0.3975
Energy	4.1200e-003	0.0374	0.0314	2.2000e-004		2.8400e-003	2.8400e-003		2.8400e-003	2.8400e-003		44.8935	44.8935	8.6000e-004	8.2000e-004	45.1603
Mobile	0.6710	26.6773	4.5033	0.0978	3.1386	0.3985	3.5371	0.8625	0.3812	1.2438		10,401.5493	10,401.5493	0.1350		10,404.9246
Total	**3.5584**	**26.7163**	**4.7093**	**0.0980**	**3.1386**	**0.4020**	**3.5406**	**0.8625**	**0.3847**	**1.2472**		**10,446.8155**	**10,446.8155**	**0.1369**	**8.2000e-004**	**10,450.4824**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.8833	1.6000e-003	0.1746	1.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004		0.3728	0.3728	9.9000e-004		0.3975
Energy	4.1200e-003	0.0374	0.0314	2.2000e-004		2.8400e-003	2.8400e-003		2.8400e-003	2.8400e-003		44.8935	44.8935	8.6000e-004	8.2000e-004	45.1603
Mobile	0.6710	26.6773	4.5033	0.0978	3.1386	0.3985	3.5371	0.8625	0.3812	1.2438		10,401.5493	10,401.5493	0.1350		10,404.9246
Total	**3.5584**	**26.7163**	**4.7093**	**0.0980**	**3.1386**	**0.4020**	**3.5406**	**0.8625**	**0.3847**	**1.2472**		**10,446.8155**	**10,446.8155**	**0.1369**	**8.2000e-004**	**10,450.4824**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/4/2020	6/4/2020	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 36.86

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	158	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2020

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

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

3.2 Demolition - 2020

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	0.0000	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 Construction Off-Site

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6710	26.6773	4.5033	0.0978	3.1386	0.3985	3.5371	0.8625	0.3812	1.2438		10,401.5493	10,401.5493	0.1350		10,404.9246
Unmitigated	0.6710	26.6773	4.5033	0.0978	3.1386	0.3985	3.5371	0.8625	0.3812	1.2438		10,401.5493	10,401.5493	0.1350		10,404.9246

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	90.00	90.00	90.00	1,310,365	1,310,365
Total	90.00	90.00	90.00	1,310,365	1,310,365

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
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	40.00	8.40	6.90	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.542116	0.037578	0.185203	0.118503	0.016241	0.005141	0.017392	0.068695	0.001383	0.001183	0.004582	0.000945	0.001038
Unrefrigerated Warehouse-No Rail	0.000000	0.000000	0.000000	0.000000	0.100000	0.000000	0.000000	0.900000	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	4.1200e-003	0.0374	0.0314	2.2000e-004		2.8400e-003	2.8400e-003		2.8400e-003	2.8400e-003		44.8935	44.8935	8.6000e-004	8.2000e-004	45.1603
NaturalGas Unmitigated	4.1200e-003	0.0374	0.0314	2.2000e-004		2.8400e-003	2.8400e-003		2.8400e-003	2.8400e-003		44.8935	44.8935	8.6000e-004	8.2000e-004	45.1603

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					
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
Unrefrigerated Warehouse-No Rail	381.595	4.1200e-003	0.0374	0.0314	2.2000e-004		2.8400e-003	2.8400e-003		2.8400e-003	2.8400e-003		44.8935	44.8935	8.6000e-004	8.2000e-004	45.1603
Total		**4.1200e-003**	**0.0374**	**0.0314**	**2.2000e-004**		**2.8400e-003**	**2.8400e-003**		**2.8400e-003**	**2.8400e-003**		**44.8935**	**44.8935**	**8.6000e-004**	**8.2000e-004**	**45.1603**

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					
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
Unrefrigerated Warehouse-No Rail	0.381595	4.1200e-003	0.0374	0.0314	2.2000e-004		2.8400e-003	2.8400e-003		2.8400e-003	2.8400e-003		44.8935	44.8935	8.6000e-004	8.2000e-004	45.1603
Total		**4.1200e-003**	**0.0374**	**0.0314**	**2.2000e-004**		**2.8400e-003**	**2.8400e-003**		**2.8400e-003**	**2.8400e-003**		**44.8935**	**44.8935**	**8.6000e-004**	**8.2000e-004**	**45.1603**

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	2.8833	1.6000e-003	0.1746	1.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004		0.3728	0.3728	9.9000e-004		0.3975
Unmitigated	2.8833	1.6000e-003	0.1746	1.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004		0.3728	0.3728	9.9000e-004		0.3975

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	0.3697					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.4973					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0163	1.6000e-003	0.1746	1.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004		0.3728	0.3728	9.9000e-004		0.3975
Total	**2.8833**	**1.6000e-003**	**0.1746**	**1.0000e-005**		**6.2000e-004**	**6.2000e-004**		**6.2000e-004**	**6.2000e-004**		**0.3728**	**0.3728**	**9.9000e-004**		**0.3975**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3697					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.4973					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0163	1.6000e-003	0.1746	1.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004		0.3728	0.3728	9.9000e-004		0.3975
Total	**2.8833**	**1.6000e-003**	**0.1746**	**1.0000e-005**		**6.2000e-004**	**6.2000e-004**		**6.2000e-004**	**6.2000e-004**		**0.3728**	**0.3728**	**9.9000e-004**		**0.3975**

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

Estes Banning (Operations - Trucks)

Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	97.40	1000sqft	2.24	97,400.00	0
Other Asphalt Surfaces	1,605.80	1000sqft	36.86	1,605,796.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2021
Utility Company	Statewide Average				
CO2 Intensity (lb/MWhr)	1001.57	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Estes Banning (Operations - Trucks) - Riverside-South Coast County, Winter

Project Characteristics - Electricty will be provided to the Project by Banning Electric Utility (BEU). CalEEMod does not provided Intensity Factors for BEU, as such, the Statewide Average will be used.

Land Use - Total Project Area is 36.86 acres. Truck Terminal is 97,400 sf. Remaning area will be modeled as 1,605,796 sf of Other Apshalt Surfaces.

Construction Phase - Operations Run Only.

Off-road Equipment - Operations Run Only.

Trips and VMT - Operations Run Only.

Vehicle Trips - Trip Rates based on information provided in the TIA prepared by Urban Crossroads.

Energy Use - The project will design building shells and building components to meet 2019 Title 24 Standards which expects 30% less energy for nonresidential uses.

Water And Wastewater - The project includes the construction and operation of a 660 square foot automated truck wash. Water usage based on the assumption that 50% of incoming trucks will be washed and 30 gallons of water will be used per truck.

Fleet Mix - Fleet Mix is based on the number of trips generated by each truck type (LHDT, MHDT, and HHDT) relative to the total number of truck trips

Vehicle Emission Factors - EMFAC2017

Vehicle Emission Factors - EMFAC2017

Vehicle Emission Factors - EMFAC2017

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	50.00	1.00
tblEnergyUse	LightingElect	1.17	0.82
tblEnergyUse	T24E	0.37	0.26
tblEnergyUse	T24NG	2.00	1.40
tblFleetMix	HHD	0.07	0.90
tblFleetMix	LDA	0.54	0.00
tblFleetMix	LDT1	0.04	0.00
tblFleetMix	LDT2	0.19	0.00
tblFleetMix	LHD1	0.02	0.10
tblFleetMix	LHD2	5.1410e-003	0.00
tblFleetMix	MCY	4.5820e-003	0.00
tblFleetMix	MDV	0.12	0.00

Estes Banning (Operations - Trucks) - Riverside-South Coast County, Winter

tblFleetMix	MH	1.0380e-003	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	1.3830e-003	0.00
tblFleetMix	SBUS	9.4500e-004	0.00
tblFleetMix	UBUS	1.1830e-003	0.00
tblLandUse	LandUseSquareFeet	1,605,800.00	1,605,796.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblVehicleEF	HHD	1.43	0.03
tblVehicleEF	HHD	0.03	0.02
tblVehicleEF	HHD	0.10	0.00
tblVehicleEF	HHD	3.28	7.55
tblVehicleEF	HHD	0.46	0.36
tblVehicleEF	HHD	1.46	2.9270e-003
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tblVehicleEF	HHD	1,461.92	1,350.00
tblVehicleEF	HHD	4.62	0.03
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tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	3.8000e-005	0.00
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	0.03	0.03

tblVehicleEF	HHD	8.8680e-003	8.8980e-003
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	3.5000e-005	0.00
tblVehicleEF	HHD	8.4000e-005	4.0000e-006
tblVehicleEF	HHD	2.5800e-003	1.0300e-004
tblVehicleEF	HHD	0.85	0.58
tblVehicleEF	HHD	4.8000e-005	2.0000e-006
tblVehicleEF	HHD	0.07	0.07
tblVehicleEF	HHD	1.8000e-004	5.3700e-004
tblVehicleEF	HHD	0.05	1.0000e-006
tblVehicleEF	HHD	0.06	0.01
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	7.1000e-005	0.00
tblVehicleEF	HHD	8.4000e-005	4.0000e-006
tblVehicleEF	HHD	2.5800e-003	1.0300e-004
tblVehicleEF	HHD	0.97	0.66
tblVehicleEF	HHD	4.8000e-005	2.0000e-006
tblVehicleEF	HHD	0.11	0.09
tblVehicleEF	HHD	1.8000e-004	5.3700e-004
tblVehicleEF	HHD	0.05	1.0000e-006
tblVehicleEF	HHD	1.35	0.03
tblVehicleEF	HHD	0.03	0.02
tblVehicleEF	HHD	0.10	0.00
tblVehicleEF	HHD	2.39	7.39
tblVehicleEF	HHD	0.46	0.36
tblVehicleEF	HHD	1.39	2.7700e-003
tblVehicleEF	HHD	6,867.98	1,402.59

tblVehicleEF	HHD	1,461.92	1,350.00
tblVehicleEF	HHD	4.62	0.03
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tblVehicleEF	HHD	2.54	2.88
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	0.06	0.06
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tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	3.8000e-005	0.00
tblVehicleEF	HHD	0.01	9.7680e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8680e-003	8.8980e-003
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	3.5000e-005	0.00
tblVehicleEF	HHD	1.6300e-004	8.0000e-006
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tblVehicleEF	HHD	9.2000e-005	4.0000e-006
tblVehicleEF	HHD	0.07	0.07
tblVehicleEF	HHD	1.8400e-004	5.5600e-004
tblVehicleEF	HHD	0.04	1.0000e-006
tblVehicleEF	HHD	0.06	0.01
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	6.9000e-005	0.00
tblVehicleEF	HHD	1.6300e-004	8.0000e-006
tblVehicleEF	HHD	2.9560e-003	1.1800e-004
tblVehicleEF	HHD	0.92	0.69

tblVehicleEF	HHD	9.2000e-005	4.0000e-006
tblVehicleEF	HHD	0.11	0.09
tblVehicleEF	HHD	1.8400e-004	5.5600e-004
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tblVehicleEF	HHD	4.51	7.76
tblVehicleEF	HHD	0.45	0.32
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tblVehicleEF	HHD	1,461.92	1,340.32
tblVehicleEF	HHD	4.62	0.03
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tblVehicleEF	HHD	2.67	3.02
tblVehicleEF	HHD	0.02	0.01
tblVehicleEF	HHD	0.06	0.06
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tblVehicleEF	HHD	3.8000e-005	0.00
tblVehicleEF	HHD	0.02	0.01
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8680e-003	8.8710e-003
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tblVehicleEF	HHD	3.5000e-005	0.00
tblVehicleEF	HHD	6.7000e-005	4.0000e-006
tblVehicleEF	HHD	2.7490e-003	1.2100e-004

tblVehicleEF	HHD	0.91	0.54
tblVehicleEF	HHD	4.1000e-005	2.0000e-006
tblVehicleEF	HHD	0.07	0.07
tblVehicleEF	HHD	1.9200e-004	5.6500e-004
tblVehicleEF	HHD	0.05	1.0000e-006
tblVehicleEF	HHD	0.06	0.01
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	7.1000e-005	0.00
tblVehicleEF	HHD	6.7000e-005	4.0000e-006
tblVehicleEF	HHD	2.7490e-003	1.2100e-004
tblVehicleEF	HHD	1.05	0.62
tblVehicleEF	HHD	4.1000e-005	2.0000e-006
tblVehicleEF	HHD	0.11	0.08
tblVehicleEF	HHD	1.9200e-004	5.6500e-004
tblVehicleEF	HHD	0.05	1.0000e-006
tblVehicleEF	LDA	4.0430e-003	2.4680e-003
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tblVehicleEF	LDA	1.16	2.12
tblVehicleEF	LDA	255.91	265.87
tblVehicleEF	LDA	58.81	54.73
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	1.6140e-003	1.4470e-003
tblVehicleEF	LDA	2.2650e-003	1.9190e-003
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tblVehicleEF	LDA	2.0830e-003	1.7640e-003
tblVehicleEF	LDA	0.05	0.07

tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.01	9.5180e-003
tblVehicleEF	LDA	0.04	0.21
tblVehicleEF	LDA	0.07	0.23
tblVehicleEF	LDA	2.5630e-003	2.6300e-003
tblVehicleEF	LDA	6.0800e-004	5.4200e-004
tblVehicleEF	LDA	0.05	0.07
tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.21
tblVehicleEF	LDA	0.08	0.25
tblVehicleEF	LDA	4.5900e-003	2.8100e-003
tblVehicleEF	LDA	4.7470e-003	0.05
tblVehicleEF	LDA	0.71	0.81
tblVehicleEF	LDA	1.02	1.87
tblVehicleEF	LDA	278.73	289.14
tblVehicleEF	LDA	58.81	54.24
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	1.6140e-003	1.4470e-003
tblVehicleEF	LDA	2.2650e-003	1.9190e-003
tblVehicleEF	LDA	1.4880e-003	1.3330e-003
tblVehicleEF	LDA	2.0830e-003	1.7640e-003
tblVehicleEF	LDA	0.10	0.14
tblVehicleEF	LDA	0.12	0.12
tblVehicleEF	LDA	0.07	0.10

tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.21
tblVehicleEF	LDA	0.06	0.20
tblVehicleEF	LDA	2.7930e-003	2.8600e-003
tblVehicleEF	LDA	6.0500e-004	5.3700e-004
tblVehicleEF	LDA	0.10	0.14
tblVehicleEF	LDA	0.12	0.12
tblVehicleEF	LDA	0.07	0.10
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.04	0.21
tblVehicleEF	LDA	0.07	0.22
tblVehicleEF	LDA	3.8980e-003	2.3810e-003
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tblVehicleEF	LDA	58.81	54.82
tblVehicleEF	LDA	0.05	0.04
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tblVehicleEF	LDA	2.2650e-003	1.9190e-003
tblVehicleEF	LDA	1.4880e-003	1.3330e-003
tblVehicleEF	LDA	2.0830e-003	1.7640e-003
tblVehicleEF	LDA	0.04	0.06
tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	9.8140e-003	9.1880e-003
tblVehicleEF	LDA	0.04	0.24

tblVehicleEF	LDA	0.08	0.23
tblVehicleEF	LDA	2.4990e-003	2.5670e-003
tblVehicleEF	LDA	6.0800e-004	5.4200e-004
tblVehicleEF	LDA	0.04	0.06
tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.24
tblVehicleEF	LDA	0.08	0.26
tblVehicleEF	LDT1	0.01	8.0140e-003
tblVehicleEF	LDT1	0.02	0.09
tblVehicleEF	LDT1	1.46	1.62
tblVehicleEF	LDT1	3.40	2.43
tblVehicleEF	LDT1	315.98	317.00
tblVehicleEF	LDT1	72.28	66.64
tblVehicleEF	LDT1	0.14	0.14
tblVehicleEF	LDT1	2.5300e-003	2.2930e-003
tblVehicleEF	LDT1	3.6970e-003	2.9510e-003
tblVehicleEF	LDT1	2.3290e-003	2.1110e-003
tblVehicleEF	LDT1	3.4000e-003	2.7140e-003
tblVehicleEF	LDT1	0.21	0.23
tblVehicleEF	LDT1	0.35	0.27
tblVehicleEF	LDT1	0.14	0.15
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.20	0.87
tblVehicleEF	LDT1	0.24	0.44
tblVehicleEF	LDT1	3.1780e-003	3.1370e-003

tblVehicleEF	LDT1	7.8300e-004	6.5900e-004
tblVehicleEF	LDT1	0.21	0.23
tblVehicleEF	LDT1	0.35	0.27
tblVehicleEF	LDT1	0.14	0.15
tblVehicleEF	LDT1	0.04	0.05
tblVehicleEF	LDT1	0.20	0.87
tblVehicleEF	LDT1	0.26	0.48
tblVehicleEF	LDT1	0.01	9.0560e-003
tblVehicleEF	LDT1	0.02	0.08
tblVehicleEF	LDT1	1.76	1.96
tblVehicleEF	LDT1	2.99	2.15
tblVehicleEF	LDT1	343.19	341.79
tblVehicleEF	LDT1	72.28	66.01
tblVehicleEF	LDT1	0.13	0.13
tblVehicleEF	LDT1	2.5300e-003	2.2930e-003
tblVehicleEF	LDT1	3.6970e-003	2.9510e-003
tblVehicleEF	LDT1	2.3290e-003	2.1110e-003
tblVehicleEF	LDT1	3.4000e-003	2.7140e-003
tblVehicleEF	LDT1	0.41	0.44
tblVehicleEF	LDT1	0.43	0.34
tblVehicleEF	LDT1	0.27	0.29
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.20	0.88
tblVehicleEF	LDT1	0.21	0.38
tblVehicleEF	LDT1	3.4550e-003	3.3820e-003
tblVehicleEF	LDT1	7.7500e-004	6.5300e-004
tblVehicleEF	LDT1	0.41	0.44

tblVehicleEF	LDT1	0.43	0.34
tblVehicleEF	LDT1	0.27	0.29
tblVehicleEF	LDT1	0.05	0.06
tblVehicleEF	LDT1	0.20	0.88
tblVehicleEF	LDT1	0.23	0.42
tblVehicleEF	LDT1	0.01	7.7080e-003
tblVehicleEF	LDT1	0.02	0.09
tblVehicleEF	LDT1	1.37	1.51
tblVehicleEF	LDT1	3.46	2.48
tblVehicleEF	LDT1	307.88	309.49
tblVehicleEF	LDT1	72.28	66.77
tblVehicleEF	LDT1	0.14	0.14
tblVehicleEF	LDT1	2.5300e-003	2.2930e-003
tblVehicleEF	LDT1	3.6970e-003	2.9510e-003
tblVehicleEF	LDT1	2.3290e-003	2.1110e-003
tblVehicleEF	LDT1	3.4000e-003	2.7140e-003
tblVehicleEF	LDT1	0.18	0.19
tblVehicleEF	LDT1	0.39	0.30
tblVehicleEF	LDT1	0.12	0.13
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.23	1.01
tblVehicleEF	LDT1	0.25	0.45
tblVehicleEF	LDT1	3.0960e-003	3.0630e-003
tblVehicleEF	LDT1	7.8400e-004	6.6100e-004
tblVehicleEF	LDT1	0.18	0.19
tblVehicleEF	LDT1	0.39	0.30
tblVehicleEF	LDT1	0.12	0.13

tblVehicleEF	LDT1	0.04	0.05
tblVehicleEF	LDT1	0.23	1.01
tblVehicleEF	LDT1	0.27	0.50
tblVehicleEF	LDT2	5.6080e-003	4.2470e-003
tblVehicleEF	LDT2	7.2840e-003	0.07
tblVehicleEF	LDT2	0.76	0.98
tblVehicleEF	LDT2	1.53	2.73
tblVehicleEF	LDT2	355.02	338.79
tblVehicleEF	LDT2	81.24	71.51
tblVehicleEF	LDT2	0.08	0.09
tblVehicleEF	LDT2	1.6030e-003	1.4980e-003
tblVehicleEF	LDT2	2.3320e-003	1.9580e-003
tblVehicleEF	LDT2	1.4740e-003	1.3790e-003
tblVehicleEF	LDT2	2.1450e-003	1.8010e-003
tblVehicleEF	LDT2	0.07	0.11
tblVehicleEF	LDT2	0.12	0.14
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.01	0.02
tblVehicleEF	LDT2	0.06	0.44
tblVehicleEF	LDT2	0.10	0.33
tblVehicleEF	LDT2	3.5560e-003	3.3520e-003
tblVehicleEF	LDT2	8.3800e-004	7.0800e-004
tblVehicleEF	LDT2	0.07	0.11
tblVehicleEF	LDT2	0.12	0.14
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.06	0.44

tblVehicleEF	LDT2	0.11	0.37
tblVehicleEF	LDT2	6.3630e-003	4.8280e-003
tblVehicleEF	LDT2	6.3270e-003	0.06
tblVehicleEF	LDT2	0.93	1.20
tblVehicleEF	LDT2	1.35	2.42
tblVehicleEF	LDT2	386.34	362.86
tblVehicleEF	LDT2	81.24	70.86
tblVehicleEF	LDT2	0.07	0.08
tblVehicleEF	LDT2	1.6030e-003	1.4980e-003
tblVehicleEF	LDT2	2.3320e-003	1.9580e-003
tblVehicleEF	LDT2	1.4740e-003	1.3790e-003
tblVehicleEF	LDT2	2.1450e-003	1.8010e-003
tblVehicleEF	LDT2	0.14	0.22
tblVehicleEF	LDT2	0.14	0.17
tblVehicleEF	LDT2	0.10	0.17
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.44
tblVehicleEF	LDT2	0.09	0.29
tblVehicleEF	LDT2	3.8710e-003	3.5900e-003
tblVehicleEF	LDT2	8.3500e-004	7.0100e-004
tblVehicleEF	LDT2	0.14	0.22
tblVehicleEF	LDT2	0.14	0.17
tblVehicleEF	LDT2	0.10	0.17
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.06	0.44
tblVehicleEF	LDT2	0.09	0.32
tblVehicleEF	LDT2	5.3900e-003	4.0760e-003

tblVehicleEF	LDT2	7.4940e-003	0.07
tblVehicleEF	LDT2	0.71	0.91
tblVehicleEF	LDT2	1.57	2.80
tblVehicleEF	LDT2	345.65	331.49
tblVehicleEF	LDT2	81.24	71.65
tblVehicleEF	LDT2	0.08	0.09
tblVehicleEF	LDT2	1.6030e-003	1.4980e-003
tblVehicleEF	LDT2	2.3320e-003	1.9580e-003
tblVehicleEF	LDT2	1.4740e-003	1.3790e-003
tblVehicleEF	LDT2	2.1450e-003	1.8010e-003
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.13	0.15
tblVehicleEF	LDT2	0.05	0.07
tblVehicleEF	LDT2	0.01	0.02
tblVehicleEF	LDT2	0.07	0.51
tblVehicleEF	LDT2	0.10	0.34
tblVehicleEF	LDT2	3.4620e-003	3.2800e-003
tblVehicleEF	LDT2	8.3900e-004	7.0900e-004
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.13	0.15
tblVehicleEF	LDT2	0.05	0.07
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.51
tblVehicleEF	LDT2	0.11	0.38
tblVehicleEF	LHD1	5.4460e-003	4.8820e-003
tblVehicleEF	LHD1	0.01	5.3310e-003
tblVehicleEF	LHD1	0.02	0.02

tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	0.96	0.72
tblVehicleEF	LHD1	2.41	0.96
tblVehicleEF	LHD1	9.26	9.44
tblVehicleEF	LHD1	607.95	639.95
tblVehicleEF	LHD1	30.36	10.54
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	2.21	1.60
tblVehicleEF	LHD1	9.7200e-004	9.7000e-004
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.7100e-004	2.3300e-004
tblVehicleEF	LHD1	9.3000e-004	9.2800e-004
tblVehicleEF	LHD1	2.5390e-003	2.5010e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.0100e-004	2.1400e-004
tblVehicleEF	LHD1	3.8710e-003	3.1780e-003
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.9010e-003	1.5570e-003
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.31	0.50
tblVehicleEF	LHD1	0.26	0.08
tblVehicleEF	LHD1	9.3000e-005	9.1000e-005
tblVehicleEF	LHD1	5.9620e-003	6.2250e-003
tblVehicleEF	LHD1	3.4900e-004	1.0400e-004
tblVehicleEF	LHD1	3.8710e-003	3.1780e-003

tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.9010e-003	1.5570e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.31	0.50
tblVehicleEF	LHD1	0.28	0.08
tblVehicleEF	LHD1	5.4460e-003	4.8940e-003
tblVehicleEF	LHD1	0.01	5.4200e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	0.97	0.73
tblVehicleEF	LHD1	2.29	0.92
tblVehicleEF	LHD1	9.26	9.44
tblVehicleEF	LHD1	607.95	639.97
tblVehicleEF	LHD1	30.36	10.46
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	2.08	1.51
tblVehicleEF	LHD1	9.7200e-004	9.7000e-004
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.7100e-004	2.3300e-004
tblVehicleEF	LHD1	9.3000e-004	9.2800e-004
tblVehicleEF	LHD1	2.5390e-003	2.5010e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.0100e-004	2.1400e-004
tblVehicleEF	LHD1	7.2450e-003	5.9530e-003
tblVehicleEF	LHD1	0.12	0.09

tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	3.6380e-003	2.9980e-003
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.32	0.50
tblVehicleEF	LHD1	0.25	0.07
tblVehicleEF	LHD1	9.3000e-005	9.1000e-005
tblVehicleEF	LHD1	5.9620e-003	6.2250e-003
tblVehicleEF	LHD1	3.4700e-004	1.0300e-004
tblVehicleEF	LHD1	7.2450e-003	5.9530e-003
tblVehicleEF	LHD1	0.12	0.09
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	3.6380e-003	2.9980e-003
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.32	0.50
tblVehicleEF	LHD1	0.27	0.08
tblVehicleEF	LHD1	5.4460e-003	4.8810e-003
tblVehicleEF	LHD1	0.01	5.3180e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	0.96	0.72
tblVehicleEF	LHD1	2.41	0.96
tblVehicleEF	LHD1	9.26	9.44
tblVehicleEF	LHD1	607.95	639.95
tblVehicleEF	LHD1	30.36	10.54
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	2.18	1.59
tblVehicleEF	LHD1	9.7200e-004	9.7000e-004

tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.7100e-004	2.3300e-004
tblVehicleEF	LHD1	9.3000e-004	9.2800e-004
tblVehicleEF	LHD1	2.5390e-003	2.5010e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.0100e-004	2.1400e-004
tblVehicleEF	LHD1	3.4570e-003	2.8250e-003
tblVehicleEF	LHD1	0.11	0.09
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.7350e-003	1.4150e-003
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.33	0.53
tblVehicleEF	LHD1	0.26	0.08
tblVehicleEF	LHD1	9.3000e-005	9.1000e-005
tblVehicleEF	LHD1	5.9620e-003	6.2250e-003
tblVehicleEF	LHD1	3.4900e-004	1.0400e-004
tblVehicleEF	LHD1	3.4570e-003	2.8250e-003
tblVehicleEF	LHD1	0.11	0.09
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.7350e-003	1.4150e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.33	0.53
tblVehicleEF	LHD1	0.28	0.08
tblVehicleEF	LHD2	3.6660e-003	3.1720e-003
tblVehicleEF	LHD2	4.5290e-003	3.8570e-003
tblVehicleEF	LHD2	8.3110e-003	9.0280e-003

tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.50	0.53
tblVehicleEF	LHD2	1.15	0.56
tblVehicleEF	LHD2	14.48	14.86
tblVehicleEF	LHD2	604.20	638.83
tblVehicleEF	LHD2	23.56	7.29
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.71	1.77
tblVehicleEF	LHD2	1.3360e-003	1.4390e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.8700e-004	1.1400e-004
tblVehicleEF	LHD2	1.2780e-003	1.3770e-003
tblVehicleEF	LHD2	2.6970e-003	2.7110e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5600e-004	1.0500e-004
tblVehicleEF	LHD2	1.4980e-003	1.6870e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	7.7800e-004	8.4200e-004
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.4100e-004	1.4200e-004
tblVehicleEF	LHD2	5.8740e-003	6.1550e-003
tblVehicleEF	LHD2	2.5700e-004	7.2000e-005
tblVehicleEF	LHD2	1.4980e-003	1.6870e-003

tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	7.7800e-004	8.4200e-004
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	3.6660e-003	3.1790e-003
tblVehicleEF	LHD2	4.5800e-003	3.8860e-003
tblVehicleEF	LHD2	8.0210e-003	8.7250e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.51	0.53
tblVehicleEF	LHD2	1.10	0.53
tblVehicleEF	LHD2	14.48	14.86
tblVehicleEF	LHD2	604.20	638.83
tblVehicleEF	LHD2	23.56	7.25
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.62	1.67
tblVehicleEF	LHD2	1.3360e-003	1.4390e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.8700e-004	1.1400e-004
tblVehicleEF	LHD2	1.2780e-003	1.3770e-003
tblVehicleEF	LHD2	2.6970e-003	2.7110e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5600e-004	1.0500e-004
tblVehicleEF	LHD2	2.8320e-003	3.1830e-003
tblVehicleEF	LHD2	0.04	0.05

tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.4720e-003	1.6130e-003
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.4100e-004	1.4200e-004
tblVehicleEF	LHD2	5.8740e-003	6.1560e-003
tblVehicleEF	LHD2	2.5600e-004	7.2000e-005
tblVehicleEF	LHD2	2.8320e-003	3.1830e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.4720e-003	1.6130e-003
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	3.6660e-003	3.1700e-003
tblVehicleEF	LHD2	4.5170e-003	3.8490e-003
tblVehicleEF	LHD2	8.3600e-003	9.0930e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.50	0.53
tblVehicleEF	LHD2	1.16	0.56
tblVehicleEF	LHD2	14.48	14.86
tblVehicleEF	LHD2	604.20	638.83
tblVehicleEF	LHD2	23.56	7.30
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.70	1.75
tblVehicleEF	LHD2	1.3360e-003	1.4390e-003

tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.8700e-004	1.1400e-004
tblVehicleEF	LHD2	1.2780e-003	1.3770e-003
tblVehicleEF	LHD2	2.6970e-003	2.7110e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5600e-004	1.0500e-004
tblVehicleEF	LHD2	1.1910e-003	1.3290e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	6.6000e-004	7.0100e-004
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.4100e-004	1.4200e-004
tblVehicleEF	LHD2	5.8740e-003	6.1550e-003
tblVehicleEF	LHD2	2.5700e-004	7.2000e-005
tblVehicleEF	LHD2	1.1910e-003	1.3290e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	6.6000e-004	7.0100e-004
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	MCY	0.42	0.32
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	19.52	19.61

tblVehicleEF	MCY	9.67	8.55
tblVehicleEF	MCY	165.74	208.30
tblVehicleEF	MCY	46.23	60.73
tblVehicleEF	MCY	1.13	1.13
tblVehicleEF	MCY	1.7750e-003	1.7570e-003
tblVehicleEF	MCY	3.4010e-003	2.8660e-003
tblVehicleEF	MCY	1.6600e-003	1.6440e-003
tblVehicleEF	MCY	3.2060e-003	2.7000e-003
tblVehicleEF	MCY	1.69	1.66
tblVehicleEF	MCY	0.85	0.84
tblVehicleEF	MCY	0.92	0.90
tblVehicleEF	MCY	2.15	2.16
tblVehicleEF	MCY	0.57	1.87
tblVehicleEF	MCY	2.08	1.83
tblVehicleEF	MCY	2.0380e-003	2.0610e-003
tblVehicleEF	MCY	6.8100e-004	6.0100e-004
tblVehicleEF	MCY	1.69	1.66
tblVehicleEF	MCY	0.85	0.84
tblVehicleEF	MCY	0.92	0.90
tblVehicleEF	MCY	2.65	2.65
tblVehicleEF	MCY	0.57	1.87
tblVehicleEF	MCY	2.26	1.99
tblVehicleEF	MCY	0.42	0.32
tblVehicleEF	MCY	0.14	0.22
tblVehicleEF	MCY	20.23	20.27
tblVehicleEF	MCY	9.11	8.00
tblVehicleEF	MCY	165.74	209.26

tblVehicleEF	MCY	46.23	59.19
tblVehicleEF	MCY	0.98	0.98
tblVehicleEF	MCY	1.7750e-003	1.7570e-003
tblVehicleEF	MCY	3.4010e-003	2.8660e-003
tblVehicleEF	MCY	1.6600e-003	1.6440e-003
tblVehicleEF	MCY	3.2060e-003	2.7000e-003
tblVehicleEF	MCY	3.35	3.28
tblVehicleEF	MCY	1.24	1.23
tblVehicleEF	MCY	2.10	2.05
tblVehicleEF	MCY	2.13	2.13
tblVehicleEF	MCY	0.57	1.86
tblVehicleEF	MCY	1.86	1.63
tblVehicleEF	MCY	2.0490e-003	2.0710e-003
tblVehicleEF	MCY	6.6500e-004	5.8600e-004
tblVehicleEF	MCY	3.35	3.28
tblVehicleEF	MCY	1.24	1.23
tblVehicleEF	MCY	2.10	2.05
tblVehicleEF	MCY	2.62	2.63
tblVehicleEF	MCY	0.57	1.86
tblVehicleEF	MCY	2.02	1.77
tblVehicleEF	MCY	0.42	0.32
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	19.04	19.14
tblVehicleEF	MCY	9.62	8.49
tblVehicleEF	MCY	165.74	207.52
tblVehicleEF	MCY	46.23	60.64
tblVehicleEF	MCY	1.12	1.12

tblVehicleEF	MCY	1.7750e-003	1.7570e-003
tblVehicleEF	MCY	3.4010e-003	2.8660e-003
tblVehicleEF	MCY	1.6600e-003	1.6440e-003
tblVehicleEF	MCY	3.2060e-003	2.7000e-003
tblVehicleEF	MCY	1.60	1.59
tblVehicleEF	MCY	1.05	1.04
tblVehicleEF	MCY	0.74	0.73
tblVehicleEF	MCY	2.15	2.15
tblVehicleEF	MCY	0.65	2.12
tblVehicleEF	MCY	2.08	1.83
tblVehicleEF	MCY	2.0310e-003	2.0540e-003
tblVehicleEF	MCY	6.8100e-004	6.0000e-004
tblVehicleEF	MCY	1.60	1.59
tblVehicleEF	MCY	1.05	1.04
tblVehicleEF	MCY	0.74	0.73
tblVehicleEF	MCY	2.64	2.65
tblVehicleEF	MCY	0.65	2.12
tblVehicleEF	MCY	2.27	1.99
tblVehicleEF	MDV	0.01	5.7580e-003
tblVehicleEF	MDV	0.02	0.09
tblVehicleEF	MDV	1.42	1.20
tblVehicleEF	MDV	3.18	3.27
tblVehicleEF	MDV	488.89	421.49
tblVehicleEF	MDV	110.15	88.73
tblVehicleEF	MDV	0.17	0.12
tblVehicleEF	MDV	1.7110e-003	1.5730e-003
tblVehicleEF	MDV	2.4630e-003	2.0550e-003

tblVehicleEF	MDV	1.5780e-003	1.4510e-003
tblVehicleEF	MDV	2.2660e-003	1.8910e-003
tblVehicleEF	MDV	0.11	0.13
tblVehicleEF	MDV	0.20	0.17
tblVehicleEF	MDV	0.09	0.11
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.25	0.45
tblVehicleEF	MDV	4.9000e-003	4.1680e-003
tblVehicleEF	MDV	1.1570e-003	8.7800e-004
tblVehicleEF	MDV	0.11	0.13
tblVehicleEF	MDV	0.20	0.17
tblVehicleEF	MDV	0.09	0.11
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.27	0.49
tblVehicleEF	MDV	0.01	6.5120e-003
tblVehicleEF	MDV	0.02	0.08
tblVehicleEF	MDV	1.73	1.46
tblVehicleEF	MDV	2.81	2.88
tblVehicleEF	MDV	530.71	447.07
tblVehicleEF	MDV	110.15	87.92
tblVehicleEF	MDV	0.16	0.11
tblVehicleEF	MDV	1.7110e-003	1.5730e-003
tblVehicleEF	MDV	2.4630e-003	2.0550e-003
tblVehicleEF	MDV	1.5780e-003	1.4510e-003
tblVehicleEF	MDV	2.2660e-003	1.8910e-003

tblVehicleEF	MDV	0.22	0.26
tblVehicleEF	MDV	0.23	0.20
tblVehicleEF	MDV	0.17	0.21
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.21	0.39
tblVehicleEF	MDV	5.3230e-003	4.4210e-003
tblVehicleEF	MDV	1.1510e-003	8.7000e-004
tblVehicleEF	MDV	0.22	0.26
tblVehicleEF	MDV	0.23	0.20
tblVehicleEF	MDV	0.17	0.21
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.23	0.43
tblVehicleEF	MDV	0.01	5.5370e-003
tblVehicleEF	MDV	0.02	0.09
tblVehicleEF	MDV	1.33	1.12
tblVehicleEF	MDV	3.24	3.34
tblVehicleEF	MDV	476.42	413.84
tblVehicleEF	MDV	110.15	88.88
tblVehicleEF	MDV	0.16	0.12
tblVehicleEF	MDV	1.7110e-003	1.5730e-003
tblVehicleEF	MDV	2.4630e-003	2.0550e-003
tblVehicleEF	MDV	1.5780e-003	1.4510e-003
tblVehicleEF	MDV	2.2660e-003	1.8910e-003
tblVehicleEF	MDV	0.09	0.10
tblVehicleEF	MDV	0.21	0.18

tblVehicleEF	MDV	0.08	0.10
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.13	0.57
tblVehicleEF	MDV	0.25	0.46
tblVehicleEF	MDV	4.7750e-003	4.0920e-003
tblVehicleEF	MDV	1.1590e-003	8.8000e-004
tblVehicleEF	MDV	0.09	0.10
tblVehicleEF	MDV	0.21	0.18
tblVehicleEF	MDV	0.08	0.10
tblVehicleEF	MDV	0.05	0.03
tblVehicleEF	MDV	0.13	0.57
tblVehicleEF	MDV	0.28	0.50
tblVehicleEF	MH	0.03	3.3370e-003
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	2.70	0.34
tblVehicleEF	MH	5.98	0.00
tblVehicleEF	MH	1,002.10	941.76
tblVehicleEF	MH	57.67	0.00
tblVehicleEF	MH	1.67	4.43
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	1.0860e-003	0.00
tblVehicleEF	MH	3.2460e-003	4.0000e-003
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	9.9800e-004	0.00
tblVehicleEF	MH	1.56	0.00
tblVehicleEF	MH	0.08	0.00

tblVehicleEF	MH	0.54	0.00
tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.35	0.00
tblVehicleEF	MH	9.9460e-003	8.9030e-003
tblVehicleEF	MH	6.8100e-004	0.00
tblVehicleEF	MH	1.56	0.00
tblVehicleEF	MH	0.08	0.00
tblVehicleEF	MH	0.54	0.00
tblVehicleEF	MH	0.13	0.08
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.39	0.00
tblVehicleEF	MH	0.03	3.3370e-003
tblVehicleEF	MH	0.02	0.00
tblVehicleEF	MH	2.78	0.34
tblVehicleEF	MH	5.56	0.00
tblVehicleEF	MH	1,002.10	941.76
tblVehicleEF	MH	57.67	0.00
tblVehicleEF	MH	1.55	4.18
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	1.0860e-003	0.00
tblVehicleEF	MH	3.2460e-003	4.0000e-003
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	9.9800e-004	0.00
tblVehicleEF	MH	2.87	0.00
tblVehicleEF	MH	0.10	0.00

tblVehicleEF	MH	1.06	0.00
tblVehicleEF	MH	0.10	0.07
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.34	0.00
tblVehicleEF	MH	9.9470e-003	8.9030e-003
tblVehicleEF	MH	6.7400e-004	0.00
tblVehicleEF	MH	2.87	0.00
tblVehicleEF	MH	0.10	0.00
tblVehicleEF	MH	1.06	0.00
tblVehicleEF	MH	0.13	0.08
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.37	0.00
tblVehicleEF	MH	0.03	3.3370e-003
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	2.70	0.34
tblVehicleEF	MH	6.02	0.00
tblVehicleEF	MH	1,002.10	941.76
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tblVehicleEF	MH	1.65	4.38
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	1.0860e-003	0.00
tblVehicleEF	MH	3.2460e-003	4.0000e-003
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	9.9800e-004	0.00
tblVehicleEF	MH	1.58	0.00
tblVehicleEF	MH	0.10	0.00

tblVehicleEF	MH	0.53	0.00
tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.35	0.00
tblVehicleEF	MH	9.9460e-003	8.9030e-003
tblVehicleEF	MH	6.8200e-004	0.00
tblVehicleEF	MH	1.58	0.00
tblVehicleEF	MH	0.10	0.00
tblVehicleEF	MH	0.53	0.00
tblVehicleEF	MH	0.13	0.08
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.39	0.00
tblVehicleEF	MHD	0.02	3.1500e-003
tblVehicleEF	MHD	3.7220e-003	5.9790e-003
tblVehicleEF	MHD	0.06	8.4870e-003
tblVehicleEF	MHD	0.35	0.34
tblVehicleEF	MHD	0.28	0.57
tblVehicleEF	MHD	6.06	1.01
tblVehicleEF	MHD	151.96	74.93
tblVehicleEF	MHD	1,066.63	1,001.03
tblVehicleEF	MHD	55.49	8.18
tblVehicleEF	MHD	0.65	0.69
tblVehicleEF	MHD	0.99	2.37
tblVehicleEF	MHD	1.0680e-003	2.4180e-003
tblVehicleEF	MHD	6.4490e-003	0.08
tblVehicleEF	MHD	7.8800e-004	9.6000e-005
tblVehicleEF	MHD	1.0220e-003	2.3130e-003

tblVehicleEF	MHD	6.1670e-003	0.08
tblVehicleEF	MHD	7.2400e-004	8.8000e-005
tblVehicleEF	MHD	1.7450e-003	7.1900e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	8.5800e-004	3.5500e-004
tblVehicleEF	MHD	0.03	0.11
tblVehicleEF	MHD	0.02	0.10
tblVehicleEF	MHD	0.37	0.05
tblVehicleEF	MHD	1.4610e-003	7.1000e-004
tblVehicleEF	MHD	0.01	9.5290e-003
tblVehicleEF	MHD	6.6100e-004	8.1000e-005
tblVehicleEF	MHD	1.7450e-003	7.1900e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	8.5800e-004	3.5500e-004
tblVehicleEF	MHD	0.04	0.12
tblVehicleEF	MHD	0.02	0.10
tblVehicleEF	MHD	0.40	0.05
tblVehicleEF	MHD	0.02	2.9880e-003
tblVehicleEF	MHD	3.7740e-003	6.0080e-003
tblVehicleEF	MHD	0.05	8.2030e-003
tblVehicleEF	MHD	0.26	0.28
tblVehicleEF	MHD	0.28	0.57
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tblVehicleEF	MHD	1,066.63	1,001.04

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tblVehicleEF	MHD	9.0000e-004	2.0410e-003
tblVehicleEF	MHD	6.4490e-003	0.08
tblVehicleEF	MHD	7.8800e-004	9.6000e-005
tblVehicleEF	MHD	8.6100e-004	1.9530e-003
tblVehicleEF	MHD	6.1670e-003	0.08
tblVehicleEF	MHD	7.2400e-004	8.8000e-005
tblVehicleEF	MHD	3.3760e-003	1.3770e-003
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	1.6840e-003	7.0100e-004
tblVehicleEF	MHD	0.03	0.11
tblVehicleEF	MHD	0.02	0.11
tblVehicleEF	MHD	0.36	0.04
tblVehicleEF	MHD	1.5460e-003	7.2500e-004
tblVehicleEF	MHD	0.01	9.5290e-003
tblVehicleEF	MHD	6.5600e-004	8.0000e-005
tblVehicleEF	MHD	3.3760e-003	1.3770e-003
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	1.6840e-003	7.0100e-004
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tblVehicleEF	MHD	0.02	0.11
tblVehicleEF	MHD	0.39	0.05
tblVehicleEF	MHD	0.02	3.3820e-003

tblVehicleEF	MHD	3.6890e-003	5.9600e-003
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tblVehicleEF	MHD	0.98	2.35
tblVehicleEF	MHD	1.2990e-003	2.9380e-003
tblVehicleEF	MHD	6.4490e-003	0.08
tblVehicleEF	MHD	7.8800e-004	9.6000e-005
tblVehicleEF	MHD	1.2430e-003	2.8110e-003
tblVehicleEF	MHD	6.1670e-003	0.08
tblVehicleEF	MHD	7.2400e-004	8.8000e-005
tblVehicleEF	MHD	1.3320e-003	5.6300e-004
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tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	6.7900e-004	2.8800e-004
tblVehicleEF	MHD	0.03	0.11
tblVehicleEF	MHD	0.02	0.11
tblVehicleEF	MHD	0.37	0.05
tblVehicleEF	MHD	1.3440e-003	6.9100e-004
tblVehicleEF	MHD	0.01	9.5290e-003
tblVehicleEF	MHD	6.6300e-004	8.1000e-005
tblVehicleEF	MHD	1.3320e-003	5.6300e-004

tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	6.7900e-004	2.8800e-004
tblVehicleEF	MHD	0.04	0.12
tblVehicleEF	MHD	0.02	0.11
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tblVehicleEF	OBUS	0.01	8.9240e-003
tblVehicleEF	OBUS	8.0950e-003	8.5070e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.27	0.50
tblVehicleEF	OBUS	0.54	0.93
tblVehicleEF	OBUS	6.17	2.58
tblVehicleEF	OBUS	75.04	73.28
tblVehicleEF	OBUS	1,098.07	1,407.22
tblVehicleEF	OBUS	70.10	20.86
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tblVehicleEF	OBUS	1.12	1.70
tblVehicleEF	OBUS	1.2100e-004	1.7750e-003
tblVehicleEF	OBUS	6.0450e-003	0.04
tblVehicleEF	OBUS	8.2300e-004	1.9000e-004
tblVehicleEF	OBUS	1.1600e-004	1.6990e-003
tblVehicleEF	OBUS	5.7680e-003	0.04
tblVehicleEF	OBUS	7.5700e-004	1.7400e-004
tblVehicleEF	OBUS	2.1800e-003	2.5990e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	9.3000e-004	1.1120e-003

tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.05	0.26
tblVehicleEF	OBUS	0.39	0.12
tblVehicleEF	OBUS	7.2800e-004	6.9900e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.0900e-004	2.0600e-004
tblVehicleEF	OBUS	2.1800e-003	2.5990e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	9.3000e-004	1.1120e-003
tblVehicleEF	OBUS	0.05	0.11
tblVehicleEF	OBUS	0.05	0.26
tblVehicleEF	OBUS	0.42	0.14
tblVehicleEF	OBUS	0.01	8.9470e-003
tblVehicleEF	OBUS	8.2540e-003	8.6370e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.26	0.48
tblVehicleEF	OBUS	0.55	0.94
tblVehicleEF	OBUS	5.76	2.41
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tblVehicleEF	OBUS	1,098.07	1,407.25
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tblVehicleEF	OBUS	1.04	1.59
tblVehicleEF	OBUS	1.0200e-004	1.5000e-003
tblVehicleEF	OBUS	6.0450e-003	0.04
tblVehicleEF	OBUS	8.2300e-004	1.9000e-004

tblVehicleEF	OBUS	9.8000e-005	1.4350e-003
tblVehicleEF	OBUS	5.7680e-003	0.04
tblVehicleEF	OBUS	7.5700e-004	1.7400e-004
tblVehicleEF	OBUS	4.0690e-003	4.7330e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	1.7890e-003	2.1320e-003
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.05	0.26
tblVehicleEF	OBUS	0.37	0.12
tblVehicleEF	OBUS	7.6100e-004	7.0400e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.0200e-004	2.0400e-004
tblVehicleEF	OBUS	4.0690e-003	4.7330e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	1.7890e-003	2.1320e-003
tblVehicleEF	OBUS	0.05	0.11
tblVehicleEF	OBUS	0.05	0.26
tblVehicleEF	OBUS	0.40	0.13
tblVehicleEF	OBUS	0.01	8.9200e-003
tblVehicleEF	OBUS	8.0660e-003	8.4690e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.28	0.53
tblVehicleEF	OBUS	0.54	0.92
tblVehicleEF	OBUS	6.22	2.60
tblVehicleEF	OBUS	70.30	72.56

tblVehicleEF	OBUS	1,098.07	1,407.21
tblVehicleEF	OBUS	70.10	20.90
tblVehicleEF	OBUS	0.34	0.44
tblVehicleEF	OBUS	1.11	1.68
tblVehicleEF	OBUS	1.4700e-004	2.1560e-003
tblVehicleEF	OBUS	6.0450e-003	0.04
tblVehicleEF	OBUS	8.2300e-004	1.9000e-004
tblVehicleEF	OBUS	1.4100e-004	2.0620e-003
tblVehicleEF	OBUS	5.7680e-003	0.04
tblVehicleEF	OBUS	7.5700e-004	1.7400e-004
tblVehicleEF	OBUS	1.8870e-003	2.3830e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	8.5400e-004	1.0620e-003
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.05	0.27
tblVehicleEF	OBUS	0.39	0.13
tblVehicleEF	OBUS	6.8300e-004	6.9200e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.1000e-004	2.0700e-004
tblVehicleEF	OBUS	1.8870e-003	2.3830e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	8.5400e-004	1.0620e-003
tblVehicleEF	OBUS	0.05	0.11
tblVehicleEF	OBUS	0.05	0.27
tblVehicleEF	OBUS	0.42	0.14

tblVehicleEF	SBUS	0.84	0.08
tblVehicleEF	SBUS	0.01	6.6110e-003
tblVehicleEF	SBUS	0.06	6.9670e-003
tblVehicleEF	SBUS	7.83	3.03
tblVehicleEF	SBUS	0.64	0.53
tblVehicleEF	SBUS	6.66	0.94
tblVehicleEF	SBUS	1,146.29	366.87
tblVehicleEF	SBUS	1,103.40	1,115.27
tblVehicleEF	SBUS	53.92	6.06
tblVehicleEF	SBUS	10.00	3.57
tblVehicleEF	SBUS	4.65	4.82
tblVehicleEF	SBUS	0.01	4.0660e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.5700e-004	4.0000e-005
tblVehicleEF	SBUS	0.01	3.8900e-003
tblVehicleEF	SBUS	2.6950e-003	2.6510e-003
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	4.2000e-004	3.6000e-005
tblVehicleEF	SBUS	4.6830e-003	1.3080e-003
tblVehicleEF	SBUS	0.03	8.6250e-003
tblVehicleEF	SBUS	0.94	0.36
tblVehicleEF	SBUS	2.1770e-003	6.2500e-004
tblVehicleEF	SBUS	0.11	0.10
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	0.37	0.04
tblVehicleEF	SBUS	0.01	3.5040e-003

tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.5500e-004	6.0000e-005
tblVehicleEF	SBUS	4.6830e-003	1.3080e-003
tblVehicleEF	SBUS	0.03	8.6250e-003
tblVehicleEF	SBUS	1.35	0.52
tblVehicleEF	SBUS	2.1770e-003	6.2500e-004
tblVehicleEF	SBUS	0.13	0.11
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	0.40	0.04
tblVehicleEF	SBUS	0.84	0.08
tblVehicleEF	SBUS	0.01	6.6860e-003
tblVehicleEF	SBUS	0.05	5.8380e-003
tblVehicleEF	SBUS	7.71	2.99
tblVehicleEF	SBUS	0.65	0.54
tblVehicleEF	SBUS	4.83	0.68
tblVehicleEF	SBUS	1,198.60	377.09
tblVehicleEF	SBUS	1,103.40	1,115.28
tblVehicleEF	SBUS	53.92	5.63
tblVehicleEF	SBUS	10.32	3.66
tblVehicleEF	SBUS	4.37	4.53
tblVehicleEF	SBUS	9.1190e-003	3.4340e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.5700e-004	4.0000e-005
tblVehicleEF	SBUS	8.7240e-003	3.2850e-003
tblVehicleEF	SBUS	2.6950e-003	2.6510e-003
tblVehicleEF	SBUS	0.02	0.03

tblVehicleEF	SBUS	4.2000e-004	3.6000e-005
tblVehicleEF	SBUS	8.4640e-003	2.3620e-003
tblVehicleEF	SBUS	0.03	9.1440e-003
tblVehicleEF	SBUS	0.93	0.36
tblVehicleEF	SBUS	4.0830e-003	1.1650e-003
tblVehicleEF	SBUS	0.11	0.10
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.31	0.03
tblVehicleEF	SBUS	0.01	3.6000e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.2400e-004	5.6000e-005
tblVehicleEF	SBUS	8.4640e-003	2.3620e-003
tblVehicleEF	SBUS	0.03	9.1440e-003
tblVehicleEF	SBUS	1.35	0.52
tblVehicleEF	SBUS	4.0830e-003	1.1650e-003
tblVehicleEF	SBUS	0.13	0.11
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.34	0.04
tblVehicleEF	SBUS	0.84	0.08
tblVehicleEF	SBUS	0.01	6.6040e-003
tblVehicleEF	SBUS	0.07	7.2110e-003
tblVehicleEF	SBUS	8.00	3.09
tblVehicleEF	SBUS	0.63	0.53
tblVehicleEF	SBUS	7.02	0.98
tblVehicleEF	SBUS	1,074.07	352.76
tblVehicleEF	SBUS	1,103.40	1,115.26
tblVehicleEF	SBUS	53.92	6.14

tblVehicleEF	SBUS	9.56	3.44
tblVehicleEF	SBUS	4.60	4.78
tblVehicleEF	SBUS	0.01	4.9380e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.5700e-004	4.0000e-005
tblVehicleEF	SBUS	0.01	4.7240e-003
tblVehicleEF	SBUS	2.6950e-003	2.6510e-003
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	4.2000e-004	3.6000e-005
tblVehicleEF	SBUS	4.1680e-003	1.1480e-003
tblVehicleEF	SBUS	0.03	8.8290e-003
tblVehicleEF	SBUS	0.94	0.36
tblVehicleEF	SBUS	2.1000e-003	6.0300e-004
tblVehicleEF	SBUS	0.11	0.10
tblVehicleEF	SBUS	0.02	0.06
tblVehicleEF	SBUS	0.38	0.04
tblVehicleEF	SBUS	0.01	3.3710e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.6100e-004	6.1000e-005
tblVehicleEF	SBUS	4.1680e-003	1.1480e-003
tblVehicleEF	SBUS	0.03	8.8290e-003
tblVehicleEF	SBUS	1.35	0.52
tblVehicleEF	SBUS	2.1000e-003	6.0300e-004
tblVehicleEF	SBUS	0.13	0.11
tblVehicleEF	SBUS	0.02	0.06
tblVehicleEF	SBUS	0.41	0.05

tblVehicleEF	UBUS	1.51	3.35
tblVehicleEF	UBUS	0.09	0.02
tblVehicleEF	UBUS	8.45	26.05
tblVehicleEF	UBUS	15.26	1.50
tblVehicleEF	UBUS	1,822.40	1,617.71
tblVehicleEF	UBUS	153.45	18.08
tblVehicleEF	UBUS	4.95	0.32
tblVehicleEF	UBUS	0.50	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.06	2.9340e-003
tblVehicleEF	UBUS	1.4200e-003	1.6100e-004
tblVehicleEF	UBUS	0.21	0.04
tblVehicleEF	UBUS	3.0000e-003	5.4780e-003
tblVehicleEF	UBUS	0.05	2.7920e-003
tblVehicleEF	UBUS	1.3060e-003	1.4800e-004
tblVehicleEF	UBUS	9.7430e-003	1.6370e-003
tblVehicleEF	UBUS	0.11	9.7740e-003
tblVehicleEF	UBUS	4.7860e-003	7.1300e-004
tblVehicleEF	UBUS	0.52	0.05
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.17	0.07
tblVehicleEF	UBUS	9.9960e-003	4.8690e-003
tblVehicleEF	UBUS	1.8100e-003	1.7900e-004
tblVehicleEF	UBUS	9.7430e-003	1.6370e-003
tblVehicleEF	UBUS	0.11	9.7740e-003
tblVehicleEF	UBUS	4.7860e-003	7.1300e-004
tblVehicleEF	UBUS	2.08	3.43

tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.28	0.08
tblVehicleEF	UBUS	1.52	3.35
tblVehicleEF	UBUS	0.08	0.02
tblVehicleEF	UBUS	8.53	26.06
tblVehicleEF	UBUS	13.06	1.28
tblVehicleEF	UBUS	1,822.40	1,617.72
tblVehicleEF	UBUS	153.45	17.70
tblVehicleEF	UBUS	4.62	0.31
tblVehicleEF	UBUS	0.50	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.06	2.9340e-003
tblVehicleEF	UBUS	1.4200e-003	1.6100e-004
tblVehicleEF	UBUS	0.21	0.04
tblVehicleEF	UBUS	3.0000e-003	5.4780e-003
tblVehicleEF	UBUS	0.05	2.7920e-003
tblVehicleEF	UBUS	1.3060e-003	1.4800e-004
tblVehicleEF	UBUS	0.02	2.9250e-003
tblVehicleEF	UBUS	0.14	0.01
tblVehicleEF	UBUS	9.6600e-003	1.4550e-003
tblVehicleEF	UBUS	0.53	0.05
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.06	0.07
tblVehicleEF	UBUS	9.9970e-003	4.8690e-003
tblVehicleEF	UBUS	1.7720e-003	1.7500e-004
tblVehicleEF	UBUS	0.02	2.9250e-003
tblVehicleEF	UBUS	0.14	0.01

tblVehicleEF	UBUS	9.6600e-003	1.4550e-003
tblVehicleEF	UBUS	2.09	3.43
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.17	0.07
tblVehicleEF	UBUS	1.51	3.35
tblVehicleEF	UBUS	0.09	0.02
tblVehicleEF	UBUS	8.44	26.05
tblVehicleEF	UBUS	15.44	1.49
tblVehicleEF	UBUS	1,822.40	1,617.71
tblVehicleEF	UBUS	153.45	18.06
tblVehicleEF	UBUS	4.92	0.31
tblVehicleEF	UBUS	0.50	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.06	2.9340e-003
tblVehicleEF	UBUS	1.4200e-003	1.6100e-004
tblVehicleEF	UBUS	0.21	0.04
tblVehicleEF	UBUS	3.0000e-003	5.4780e-003
tblVehicleEF	UBUS	0.05	2.7920e-003
tblVehicleEF	UBUS	1.3060e-003	1.4800e-004
tblVehicleEF	UBUS	8.9770e-003	1.7200e-003
tblVehicleEF	UBUS	0.13	0.01
tblVehicleEF	UBUS	4.3820e-003	7.5400e-004
tblVehicleEF	UBUS	0.52	0.05
tblVehicleEF	UBUS	0.03	0.05
tblVehicleEF	UBUS	1.18	0.07
tblVehicleEF	UBUS	9.9960e-003	4.8690e-003
tblVehicleEF	UBUS	1.8130e-003	1.7900e-004

tblVehicleEF	UBUS	8.9770e-003	1.7200e-003
tblVehicleEF	UBUS	0.13	0.01
tblVehicleEF	UBUS	4.3820e-003	7.5400e-004
tblVehicleEF	UBUS	2.08	3.43
tblVehicleEF	UBUS	0.03	0.05
tblVehicleEF	UBUS	1.29	0.08
tblVehicleTrips	CNW_TTP	41.00	0.00
tblVehicleTrips	CW_TL	16.60	40.00
tblVehicleTrips	CW_TTP	59.00	100.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	1.68	0.92
tblVehicleTrips	SU_TR	1.68	0.92
tblVehicleTrips	WD_TR	1.68	0.92
tblWater	IndoorWaterUseRate	22,523,750.00	22,770,125.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	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**

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.8833	1.6000e-003	0.1746	1.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004		0.3728	0.3728	9.9000e-004		0.3975
Energy	4.1200e-003	0.0374	0.0314	2.2000e-004		2.8400e-003	2.8400e-003		2.8400e-003	2.8400e-003		44.8935	44.8935	8.6000e-004	8.2000e-004	45.1603
Mobile	0.6542	27.8511	4.2696	0.0978	3.1365	0.3986	3.5351	0.8618	0.3813	1.2431		10,334.5298	10,334.5298	0.0322		10,335.3354
Total	**3.5416**	**27.8901**	**4.4756**	**0.0980**	**3.1365**	**0.4020**	**3.5386**	**0.8618**	**0.3848**	**1.2466**		**10,379.7961**	**10,379.7961**	**0.0341**	**8.2000e-004**	**10,380.8932**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	2.8833	1.6000e-003	0.1746	1.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004		0.3728	0.3728	9.9000e-004		0.3975
Energy	4.1200e-003	0.0374	0.0314	2.2000e-004		2.8400e-003	2.8400e-003		2.8400e-003	2.8400e-003		44.8935	44.8935	8.6000e-004	8.2000e-004	45.1603
Mobile	0.6542	27.8511	4.2696	0.0978	3.1365	0.3986	3.5351	0.8618	0.3813	1.2431		10,334.5298	10,334.5298	0.0322		10,335.3354
Total	**3.5416**	**27.8901**	**4.4756**	**0.0980**	**3.1365**	**0.4020**	**3.5386**	**0.8618**	**0.3848**	**1.2466**		**10,379.7961**	**10,379.7961**	**0.0341**	**8.2000e-004**	**10,380.8932**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/4/2020	6/4/2020	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 36.86

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	158	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2020

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

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

3.2 Demolition - 2020

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	0.0000	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 Construction Off-Site

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

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.6542	27.8511	4.2696	0.0978	3.1365	0.3986	3.5351	0.8618	0.3813	1.2431		10,334.5298	10,334.5298	0.0322		10,335.3354
Unmitigated	0.6542	27.8511	4.2696	0.0978	3.1365	0.3986	3.5351	0.8618	0.3813	1.2431		10,334.5298	10,334.5298	0.0322		10,335.3354

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	90.00	90.00	90.00	1,310,365	1,310,365
Total	90.00	90.00	90.00	1,310,365	1,310,365

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
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	40.00	8.40	6.90	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.542116	0.037578	0.185203	0.118503	0.016241	0.005141	0.017392	0.068695	0.001383	0.001183	0.004582	0.000945	0.001038
Unrefrigerated Warehouse-No Rail	0.000000	0.000000	0.000000	0.000000	0.100000	0.000000	0.000000	0.900000	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	4.1200e-003	0.0374	0.0314	2.2000e-004		2.8400e-003	2.8400e-003		2.8400e-003	2.8400e-003		44.8935	44.8935	8.6000e-004	8.2000e-004	45.1603
NaturalGas Unmitigated	4.1200e-003	0.0374	0.0314	2.2000e-004		2.8400e-003	2.8400e-003		2.8400e-003	2.8400e-003		44.8935	44.8935	8.6000e-004	8.2000e-004	45.1603

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					
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
Unrefrigerated Warehouse-No Rail	381.595	4.1200e-003	0.0374	0.0314	2.2000e-004		2.8400e-003	2.8400e-003		2.8400e-003	2.8400e-003		44.8935	44.8935	8.6000e-004	8.2000e-004	45.1603
Total		**4.1200e-003**	**0.0374**	**0.0314**	**2.2000e-004**		**2.8400e-003**	**2.8400e-003**		**2.8400e-003**	**2.8400e-003**		**44.8935**	**44.8935**	**8.6000e-004**	**8.2000e-004**	**45.1603**

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					
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
Unrefrigerated Warehouse-No Rail	0.381595	4.1200e-003	0.0374	0.0314	2.2000e-004		2.8400e-003	2.8400e-003		2.8400e-003	2.8400e-003		44.8935	44.8935	8.6000e-004	8.2000e-004	45.1603
Total		**4.1200e-003**	**0.0374**	**0.0314**	**2.2000e-004**		**2.8400e-003**	**2.8400e-003**		**2.8400e-003**	**2.8400e-003**		**44.8935**	**44.8935**	**8.6000e-004**	**8.2000e-004**	**45.1603**

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	2.8833	1.6000e-003	0.1746	1.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004		0.3728	0.3728	9.9000e-004		0.3975
Unmitigated	2.8833	1.6000e-003	0.1746	1.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004		0.3728	0.3728	9.9000e-004		0.3975

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	0.3697					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.4973					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0163	1.6000e-003	0.1746	1.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004		0.3728	0.3728	9.9000e-004		0.3975
Total	**2.8833**	**1.6000e-003**	**0.1746**	**1.0000e-005**		**6.2000e-004**	**6.2000e-004**		**6.2000e-004**	**6.2000e-004**		**0.3728**	**0.3728**	**9.9000e-004**		**0.3975**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.3697					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	2.4973					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	0.0163	1.6000e-003	0.1746	1.0000e-005		6.2000e-004	6.2000e-004		6.2000e-004	6.2000e-004		0.3728	0.3728	9.9000e-004		0.3975
Total	**2.8833**	**1.6000e-003**	**0.1746**	**1.0000e-005**		**6.2000e-004**	**6.2000e-004**		**6.2000e-004**	**6.2000e-004**		**0.3728**	**0.3728**	**9.9000e-004**		**0.3975**

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

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APPENDIX 3.4:

EMFAC2017 OUTPUTS

EMFAC2017 Derived CalEEMod Annual Emission Rates: Year 2021[1,2]

Season	Pollutant	LDA	LDT1	LDT2	MDV	LHDT1	LHDT2	MHDT	HHDT	OBUS	UBUS	MCY	SBUS	MH
Annual	CH4_IDLEX	0	0	0	0	0.0048817	0.003171878	0.00314956	0.028025082	0.0089241	0	0	0.0775364	0
Annual	CH4_RUNEX	0.0024679	0.0080137	0.0042469	0.0057582	0.0053307	0.00385685	0.005979459	0.017512358	0.0085068	3.3499927	0.3189586	0.006611	0.0033366
Annual	CH4_STREX	0.0514349	0.0864427	0.0721015	0.0901226	0.0155417	0.00902796	0.008486959	1.50966E-07	0.0241173	0.0189454	0.2419601	0.0069668	0
Annual	CO_IDLEX	0	0	0	0	0.1715443	0.133002634	0.344301802	7.554755782	0.4983972	0	0	3.0314681	0
Annual	CO_RUNEX	0.6607706	1.6174892	0.9809246	1.2008452	0.7233436	0.527547956	0.567530032	0.360830925	0.9268618	26.053818	19.614979	0.5278349	0.3389262
Annual	CO_STREX	2.1231898	2.4262418	2.7332893	3.2694856	0.9612367	0.557999679	1.005578025	0.002927257	2.5764261	1.5036633	8.5534027	0.935991	0
Annual	CO2_NBIO_IDLEX	0	0	0	0	9.4389441	14.85812264	74.92942657	1409.071939	73.2813	0	0	366.87062	0
Annual	CO2_NBIO_RUNEX	265.87247	317.00231	338.79394	421.49284	639.94809	638.8286233	1001.029746	1350.003042	1407.2197	1617.7136	208.29751	1115.2653	941.75894
Annual	CO2_NBIO_STREX	54.732988	66.641424	71.50512	88.726879	10.536933	7.29205499	8.176871766	0.025645885	20.859105	18.079918	60.732649	6.0622481	0
Annual	NOX_IDLEX	0	0	0	0	0.0839942	0.12326671	0.687040104	7.340848513	0.4448801	0	0	3.5677378	0
Annual	NOX_RUNEX	0.0397214	0.1439049	0.0890651	0.1204502	1.6040949	1.771993189	2.371331761	3.049249417	1.6964151	0.3156396	1.1278435	4.815332	4.4260188
Annual	NOX_STREX[3]	0.1881326	0.3057199	0.3075781	0.3916808	0.3098001	0.190995667	1.157977191	1.987942919	0.5901894	0.1827289	0.2611474	0.6951168	0
Annual	PM10_IDLEX	0	0	0	0	0.0009698	0.001439396	0.002417777	0.010735771	0.0017754	0	0	0.0040656	0
Annual	PM10_PMBW	0.03675	0.03675	0.03675	0.03675	0.07644	0.089180026	0.130340037	0.061044808	0.13034	0.0878825	0.01176	0.7448002	0.13034
Annual	PM10_PMTW	0.008	0.008	0.008	0.008	0.0100045	0.010844691	0.012000003	0.035591932	0.012	0.0219127	0.004	0.0106038	0.016
Annual	PM10_RUNEX	0.001447	0.0022935	0.0014983	0.0015727	0.0110719	0.014058285	0.081902383	0.054300292	0.0388422	0.0029342	0.0017573	0.0289399	0.1440902
Annual	PM10_STREX	0.001919	0.0029511	0.0019584	0.0020549	0.0002325	0.00011436	9.60687E-05	4.78955E-07	0.0001895	0.0001614	0.0028664	3.969E-05	0
Annual	PM25_IDLEX	0	0	0	0	0.0009278	0.001377128	0.002313185	0.010271347	0.0016986	0	0	0.0038897	0
Annual	PM25_PMBW	0.01575	0.01575	0.01575	0.01575	0.03276	0.038220011	0.055860016	0.026162061	0.05586	0.0376639	0.00504	0.3192001	0.05586
Annual	PM25_PMTW	0.002	0.002	0.002	0.002	0.0025011	0.002711173	0.003000001	0.008897983	0.003	0.0054782	0.001	0.0026509	0.004
Annual	PM25_RUNEX	0.0013331	0.002111	0.0013791	0.0014511	0.0105729	0.013440271	0.078355878	0.051951277	0.0371485	0.0027923	0.0016442	0.0276784	0.1378569
Annual	PM25_STREX	0.0017645	0.0027136	0.0018008	0.0018907	0.0002138	0.00010515	8.83317E-05	4.40381E-07	0.0001743	0.0001484	0.0026999	3.649E-05	0
Annual	ROG_DIURN	0.0709615	0.2279058	0.1115534	0.1328241	0.0031777	0.001686647	0.000719125	3.88846E-06	0.0025989	0.0016373	1.6562081	0.0013084	0
Annual	ROG_HTSK	0.10305	0.2749462	0.141202	0.1703815	0.0801093	0.04271725	0.020519462	0.000102787	0.0237258	0.0097745	0.8409595	0.0086252	0
Annual	ROG_IDLEX	0	0	0	0	0.0208492	0.01614729	0.020404549	0.578945413	0.0541252	0	0	0.3592209	0
Annual	ROG_RESTL	0.0538996	0.152895	0.0893091	0.1117212	0.001557	0.000842264	0.000355368	2.04116E-06	0.0011123	0.0007132	0.9014079	0.0006249	0
Annual	ROG_RUNEX	0.0095181	0.0353936	0.0172993	0.0255161	0.0610474	0.061254748	0.105165502	0.070102456	0.085283	0.0536982	2.1573849	0.0955117	0.0718344
Annual	ROG_RUNLS	0.2124948	0.8718373	0.4423822	0.4988996	0.4976668	0.24843085	0.103094312	0.000537301	0.2580837	0.0467565	1.8670626	0.0531627	0
Annual	ROG_STREX	0.2274477	0.4409655	0.3337808	0.4453538	0.0770784	0.044248995	0.045754898	7.74755E-07	0.12495	0.0737709	1.8284645	0.0401038	0
Annual	SO2_IDLEX	0	0	0	0	9.124E-05	0.000141875	0.000710428	0.013279669	0.000699	0	0	0.0035039	0
Annual	SO2_RUNEX	0.0026302	0.0031369	0.0033519	0.0041675	0.006225	0.00615548	0.009529146	0.012662863	0.013687	0.0048688	0.0020613	0.0106759	0.008903
Annual	SO2_STREX	0.0005416	0.0006595	0.0007076	0.000878	0.0001043	7.21608E-05	8.09168E-05	2.53787E-07	0.0002064	0.0001789	0.000601	5.999E-05	0
Annual	TOG_DIURN	0.0709615	0.2279058	0.1115534	0.1328241	0.0031777	0.001686647	0.000719125	3.88846E-06	0.0025989	0.0016373	1.6562081	0.0013084	0
Annual	TOG_HTSK	0.10305	0.2749462	0.141202	0.1703815	0.0801093	0.04271725	0.020519462	0.000102787	0.0237258	0.0097745	0.8409595	0.0086252	0
Annual	TOG_IDLEX	0	0	0	0	0.0291719	0.021706067	0.026541318	0.660227184	0.0709457	0	0	0.5173855	0
Annual	TOG_RESTL	0.0538996	0.152895	0.0893091	0.1117212	0.001557	0.000842264	0.000355368	2.04116E-06	0.0011123	0.0007132	0.9014079	0.0006249	0
Annual	TOG_RUNEX	0.0138377	0.0515808	0.025197	0.03609	0.0743573	0.071514189	0.121900381	0.094181826	0.105849	3.4254029	2.6533125	0.1131323	0.0817787
Annual	TOG_RUNLS	0.2124948	0.8718373	0.4423822	0.4988996	0.4976668	0.24843085	0.103094312	0.000537301	0.2580837	0.0467565	1.8670626	0.0531627	0
Annual	TOG_STREX	0.2490251	0.4827987	0.3654467	0.4875656	0.0843911	0.04844708	0.050095854	8.48259E-07	0.1368045	0.0807698	1.9896031	0.0439086	0
Summer	CH4_IDLEX	0	0	0	0	0.0048943	0.003179398	0.002988132	0.029267582	0.008947	0	0	0.0776239	0
Summer	CH4_RUNEX	0.0028102	0.0090557	0.0048283	0.0065116	0.0054195	0.003886277	0.006008402	0.017512845	0.0086371	3.3500273	0.3167895	0.0066861	0.0033366
Summer	CH4_STREX	0.0452848	0.0756767	0.0634946	0.079235	0.0149963	0.008724699	0.008203165	1.44785E-07	0.0230917	0.0172223	0.2167882	0.0058384	0
Summer	CO_IDLEX	0	0	0	0	0.1715443	0.133002634	0.283248392	7.394529068	0.4770626	0	0	2.9913957	0
Summer	CO_RUNEX	0.8095887	1.9589316	1.199991	1.4565661	0.7336795	0.53078633	0.571044996	0.360990515	0.9423481	26.055433	20.271718	0.5359658	0.3389262
Summer	CO_STREX	1.8735032	2.1462811	2.4181512	2.8823192	0.9160369	0.533118914	0.958793231	0.002769899	2.4081525	1.2787351	8.000177	0.6769998	0
Summer	CO2_NBIO_IDLEX	0	0	0	0	9.4389441	14.85812264	76.43648013	1402.585729	73.806182	0	0	377.08981	0
Summer	CO2_NBIO_RUNEX	289.13788	341.78981	362.86398	447.07104	639.96646	638.8343162	1001.035914	1350.003309	1407.2469	1617.7166	209.25596	1115.2798	941.75894
Summer	CO2_NBIO_STREX	54.240717	66.007334	70.864914	87.923788	10.455453	7.247216262	8.097078623	0.02539636	20.57343	17.70055	59.192684	5.6297242	0
Summer	NOX_IDLEX	0	0	0	0	0.0839942	0.12326671	0.696369233	7.102104354	0.4452295	0	0	3.6596149	0
Summer	NOX_RUNEX	0.0370269	0.1337085	0.0834295	0.1123006	1.5099261	1.672640909	2.234535358	2.878739583	1.5861138	0.3092297	0.9796707	4.5295242	4.176671
Summer	NOX_STREX[3]	0.1810222	0.2943185	0.2969376	0.3769864	0.2989911	0.184713864	1.155237738	1.987922245	0.5808405	0.1737617	0.2471217	0.690535	0
Summer	PM10_IDLEX	0	0	0	0	0.0009698	0.001439396	0.002040822	0.010209832	0.0015001	0	0	0.003434	0
Summer	PM10_PMBW	0.03675	0.03675	0.03675	0.03675	0.07644	0.089180026	0.130340037	0.061044808	0.13034	0.0878825	0.01176	0.7448002	0.13034
Summer	PM10_PMTW	0.008	0.008	0.008	0.008	0.0100045	0.010844691	0.012000003	0.035591932	0.012	0.0219127	0.004	0.0106038	0.016
Summer	PM10_RUNEX	0.001447	0.0022935	0.0014983	0.0015727	0.0110719	0.014058285	0.081902383	0.054300292	0.0388422	0.0029342	0.0017573	0.0289399	0.1440902
Summer	PM10_STREX	0.001919	0.0029511	0.0019584	0.0020549	0.0002325	0.00011436	9.60687E-05	4.78955E-07	0.0001895	0.0001614	0.0028664	3.969E-05	0
Summer	PM25_IDLEX	0	0	0	0	0.0009278	0.001377128	0.001952537	0.009768159	0.0014352	0	0	0.0032854	0
Summer	PM25_PMBW	0.01575	0.01575	0.01575	0.01575	0.03276	0.038220011	0.055860016	0.026162061	0.05586	0.0376639	0.00504	0.3192001	0.05586
Summer	PM25_PMTW	0.002	0.002	0.002	0.002	0.0025011	0.002711173	0.003000001	0.008897983	0.003	0.0054782	0.001	0.0026509	0.004
Summer	PM25_RUNEX	0.0013331	0.002111	0.0013791	0.0014511	0.0105729	0.013440271	0.078355878	0.051951277	0.0371485	0.0027923	0.0016442	0.0276784	0.1378569
Summer	PM25_STREX	0.0017645	0.0027136	0.0018008	0.0018907	0.0002138	0.00010515	8.83317E-05	4.40381E-07	0.0001743	0.0001484	0.0026999	3.649E-05	0
Summer	ROG_DIURN	0.137536	0.4434368	0.2165836	0.2567996	0.0059534	0.003183337	0.001376531	7.88812E-06	0.0047328	0.0029254	3.2774295	0.0023624	0
Summer	ROG_HTSK	0.1212164	0.3404269	0.1671912	0.1969378	0.0944687	0.051107885	0.024778962	0.000118453	0.0262292	0.011705	1.2342664	0.0091436	0
Summer	ROG_IDLEX	0	0	0	0	0.0208492	0.01614729	0.019550437	0.604825315	0.05414	0	0	0.3587863	0
Summer	ROG_RESTL	0.1018073	0.2943259	0.166327	0.2058512	0.0029976	0.001613042	0.000700753	4.21702E-06	0.0021323	0.001455	2.0451252	0.0011653	0
Summer	ROG_RUNEX	0.010761	0.0399861	0.0196003	0.0285498	0.0615085	0.061384554	0.10530363	0.070105668	0.0859015	0.0537965	2.1335495	0.095879	0.0718344
Summer	ROG_RUNLS	0.2122531	0.8752207	0.4439328	0.5004052	0.5029376	0.251952182	0.105360765	0.000555876	0.2593192	0.0452861	1.8628508	0.0490392	0
Summer	ROG_STREX	0.1986978	0.3842606	0.2918661	0.3889196	0.0741484	0.042639957	0.044075897	7.4502E-07	0.1193048	0.0669665	1.6289296	0.0335486	0
Summer	SO2_IDLEX	0	0	0	0	9.124E-05	0.000141875	0.000724773	0.013218475	0.000704	0	0	0.0036004	0
Summer	SO2_RUNEX	0.0028604	0.0033822	0.0035901	0.0044206	0.0062252	0.006155536	0.009529207	0.012662865	0.0136873	0.0048688	0.0020708	0.010676	0.008903
Summer	SO2_STREX	0.0005368	0.0006532	0.0007013	0.0008701	0.0001035	7.17171E-05	8.01272E-05	2.51318E-07	0.0002036	0.0001752	0.0005858	5.571E-05	0
Summer	TOG_DIURN	0.137536	0.4434368	0.2165836	0.2567996	0.0059534	0.003183337	0.001376531	7.88812E-06	0.0047328	0.0029254	3.2774295	0.0023624	0
Summer	TOG_HTSK	0.1212164	0.3404269	0.1671912	0.1969378	0.0944687	0.051107885	0.024778962	0.000118453	0.0262292	0.011705	1.2342664	0.0091436	0
Summer	TOG_IDLEX	0	0	0	0	0.0291719	0.021706067	0.025370251	0.689730027	0.0709625	0	0	0.5168907	0
Summer	TOG_RESTL	0.1018073	0.2943259	0.166327	0.2058512	0.0029976	0.001613042	0.000700753	4.21702E-06	0.0021323	0.001455	2.0451252	0.0011653	0
Summer	TOG_RUNEX	0.0156493	0.0582714	0.02855	0.0405174	0.07503	0.071703602	0.122101937	0.094186513	0.1067517	3.4255463	2.6255922	0.1136682	0.0817787
Summer	TOG_RUNLS	0.2122531	0.8752207	0.4439328	0.5004052	0.5029376	0.251952182	0.105360765	0.000555876	0.2593192	0.0452861	1.8628508	0.0490392	0
Summer	TOG_STREX	0.2175478	0.4207143	0.3195555	0.4257816	0.0811832	0.046685386	0.04825756	8.15703E-07	0.1306237	0.0733198	1.7725315	0.0367315	0

Winter	CH4_IDLEX	0	0	0	0	0.0048811	0.00317031	0.003381722	0.025228032	0.0089201	0	0	0.0775394	0
Winter	CH4_RUNEX	0.0023814	0.007708	0.0040761	0.0055367	0.0053184	0.003848875	0.005959861	0.003232688	0.0084688	3.3499957	0.3182082	0.0066036	0.0033366
Winter	CH4_STREX	0.0526493	0.088744	0.074077	0.0923982	0.0155664	0.009093446	0.008560718	1.51684E-07	0.0242904	0.0188577	0.2425357	0.0072109	0
Winter	CO_IDLEX	0	0	0	0	0.1715443	0.133002634	0.429382205	7.756122349	0.5278592	0	0	3.0868062	0
Winter	CO_RUNEX	0.6198191	1.5141815	0.9146277	1.1225458	0.7219481	0.526656248	0.565245032	0.320407657	0.9227247	26.05396	19.135571	0.5273069	0.3389262
Winter	CO_STREX	2.1658884	2.4841853	2.8021442	3.3410887	0.9632652	0.563047222	1.018642479	0.002911678	2.6028825	1.491325	8.4887644	0.9807025	0
Winter	CO2_NBIO_IDLEX	0	0	0	0	9.4389441	14.85812264	72.84369844	1414.571988	72.556463	0	0	352.75841	0
Winter	CO2_NBIO_RUNEX	259.46754	309.48741	331.49217	413.84023	639.94558	638.8270537	1001.025731	1340.32292	1407.2124	1617.7139	207.51768	1115.2644	941.75894
Winter	CO2_NBIO_STREX	54.820223	66.77205	71.645988	88.87887	10.540527	7.301210775	8.199176884	0.025621202	20.903802	18.059132	60.638256	6.1376482	0
Winter	NOX_IDLEX	0	0	0	0	0.0839942	0.12326671	0.674156402	7.64970751	0.4443975	0	0	3.4408599	0
Winter	NOX_RUNEX	0.0382367	0.1395305	0.0862178	0.1165071	1.5854252	1.75413213	2.348928423	3.020777526	1.684904	0.3142026	1.1206265	4.7774211	4.3807012
Winter	NOX_STREX[3]	0.1884477	0.3066245	0.3085042	0.3924958	0.308695	0.191593617	1.158503587	1.987941183	0.5898865	0.1811328	0.261731	0.6959657	0
Winter	PM10_IDLEX	0	0	0	0	0.0009698	0.001439396	0.002938334	0.011416509	0.0021556	0	0	0.0049379	0
Winter	PM10_PMBW	0.03675	0.03675	0.03675	0.03675	0.07644	0.089180026	0.130340037	0.060862657	0.13034	0.0878825	0.01176	0.7448002	0.13034
Winter	PM10_PMTW	0.008	0.008	0.008	0.008	0.0100045	0.010844691	0.012000003	0.035485721	0.012	0.0219127	0.004	0.0106038	0.016
Winter	PM10_RUNEX	0.001447	0.0022935	0.0014983	0.0015727	0.0110719	0.014058285	0.081902383	0.054282899	0.0388422	0.0029342	0.0017573	0.0289399	0.1440902
Winter	PM10_STREX	0.001919	0.0029511	0.0019584	0.0020549	0.0002325	0.00011436	9.60687E-05	4.78955E-07	0.0001895	0.0001614	0.0028664	3.969E-05	0
Winter	PM25_IDLEX	0	0	0	0	0.0009278	0.001377128	0.002811223	0.010922636	0.0020624	0	0	0.0047243	0
Winter	PM25_PMBW	0.01575	0.01575	0.01575	0.01575	0.03276	0.038220011	0.055860016	0.026083996	0.05586	0.0376639	0.00504	0.3192001	0.05586
Winter	PM25_PMTW	0.002	0.002	0.002	0.002	0.0025011	0.002711173	0.003000001	0.00887143	0.003	0.0054782	0.001	0.0026509	0.004
Winter	PM25_RUNEX	0.0013331	0.002111	0.0013791	0.0014511	0.0105729	0.013440271	0.078355878	0.051934636	0.0371485	0.0027923	0.0016442	0.0276784	0.1378569
Winter	PM25_STREX	0.0017645	0.0027136	0.0018008	0.0018907	0.0002138	0.00010515	8.83317E-05	4.40381E-07	0.0001743	0.0001484	0.0026999	3.649E-05	0
Winter	ROG_DIURN	0.0575855	0.1922037	0.0879547	0.104066	0.0028253	0.001328755	0.000562608	3.84032E-06	0.0023832	0.0017197	1.5870396	0.0011476	0
Winter	ROG_HTSK	0.1098539	0.3036326	0.1506629	0.1802055	0.090976	0.046544016	0.021526123	0.00012145	0.0250943	0.0111926	1.0360126	0.0088293	0
Winter	ROG_IDLEX	0	0	0	0	0.0208492	0.01614729	0.021595838	0.543152606	0.0541049	0	0	0.3598211	0
Winter	ROG_RESTL	0.0454037	0.1280078	0.0748932	0.0953197	0.0014146	0.000700507	0.000287901	2.13248E-06	0.0010621	0.000754	0.7337523	0.0006032	0
Winter	ROG_RUNEX	0.0091883	0.0340143	0.0166024	0.0245582	0.0609781	0.061218527	0.105074288	0.069280131	0.0851064	0.0537077	2.1519258	0.0954855	0.0718344
Winter	ROG_RUNLS	0.2382144	1.0088513	0.5066292	0.5680498	0.5332963	0.266504162	0.111093974	0.000565077	0.274238	0.0549047	2.1198495	0.0646936	0
Winter	ROG_STREX	0.2332732	0.4525194	0.3432333	0.4568216	0.0771912	0.044593111	0.04623067	7.78033E-07	0.1257727	0.0734048	1.8308597	0.0414531	0
Winter	SO2_IDLEX	0	0	0	0	9.124E-05	0.000141875	0.000690573	0.013364175	0.0006922	0	0	0.0033706	0
Winter	SO2_RUNEX	0.0025668	0.0030626	0.0032797	0.0040918	0.006225	0.006155465	0.009529106	0.012662862	0.013687	0.0048688	0.0020536	0.0106759	0.008903
Winter	SO2_STREX	0.0005425	0.0006608	0.000709	0.0008795	0.0001043	7.22514E-05	8.11375E-05	2.53543E-07	0.0002069	0.0001787	0.0006001	6.074E-05	0
Winter	TOG_DIURN	0.0575855	0.1922037	0.0879547	0.104066	0.0028253	0.001328755	0.000562608	3.84032E-06	0.0023832	0.0017197	1.5870396	0.0011476	0
Winter	TOG_HTSK	0.1098539	0.3036326	0.1506629	0.1802055	0.090976	0.046544016	0.021526123	0.00012145	0.0250943	0.0111926	1.0360126	0.0088293	0
Winter	TOG_IDLEX	0	0	0	0	0.0291719	0.021706067	0.028175725	0.618337897	0.0709225	0	0	0.5180688	0
Winter	TOG_RESTL	0.0454037	0.1280078	0.0748932	0.0953197	0.0014146	0.000700507	0.000287901	2.13248E-06	0.0010621	0.000754	0.7337523	0.0006032	0
Winter	TOG_RUNEX	0.0133572	0.0495718	0.0241816	0.0347133	0.0742561	0.071461335	0.121767281	0.078903864	0.1055914	3.4254167	2.6466033	0.1130941	0.0817787
Winter	TOG_RUNLS	0.2382144	1.0088513	0.5066292	0.5680498	0.5332963	0.266504162	0.111093974	0.000565077	0.274238	0.0549047	2.1198495	0.0646936	0
Winter	TOG_STREX	0.2554034	0.4954488	0.375796	0.5001219	0.0845147	0.048823844	0.050616765	8.51848E-07	0.1377052	0.080369	1.9922304	0.0453859	0

1 Source: California Air Resources Board. EMFAC2017 Web Database. https://www.arb.ca.gov/emfac/2017/; 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 using the EMFAC2017 Web Database for the Los Angeles (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.

Appendix B

NATURAL RESOURCES ASSESSMENT, INC.

General Biological Assessment
Banning Truck Terminal
Banning, California

Prepared for:

Lilburn Corporation
1905 Business Center Drive
San Bernardino, CA 92408

Prepared by:

Natural Resources Assessment, Inc.
3415 Valencia Hill Drive
Riverside, California 92507

July 11, 2019

Project Number: LIL19-102

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www.naturalresourcesassessment.com

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Appendices

Appendix A - Plant and Animal Species Observed

Appendix B - Definitions of Species Status Classification

Appendix C - Plants to be Avoided in Areas Adjacent to Wildlands

CERTIFICATION

I hereby certify that the statements furnished below and in the attached exhibits present data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Karen Kirtland
Natural Resources Assessment, Inc.

July 11, 2019
Date

1.0 Introduction

Natural Resources Assessment, Inc. (NRAI) was contracted by Lilburn Corporation to provide biological services for a proposed 134-door truck terminal for vehicle storage and parking facility in Banning, Riverside County (Assessor's Parcel Number 532-130-008-8). The assessment was completed under the requirements of the Western Riverside County Multiple Species Habitat Conservation Plan (MSCHP).

2.0 Property Location and Project Description

The property is located in eastern Banning, Riverside County, California (Figure 1). It consists of one parcel south of Interstate 10 and the Banning Airport. East Westward Avenue forms the southern boundary (Figure 2). Light industrial development is on the western border. A mix of rural residential and agriculture is on the southern border, and mostly open space is on the eastern border.

The property is a 40.03-acre parcel located in the southeast quarter of the southwest quarter of Section 11, Township 3 south, Range 1 east on the Cabazon USGS 7.5-minute quadrangle, San Bernardino Base and Meridian (Figure 3).

The proposed truck terminal project will consist of a 2-story office building attached to the main building with 134 dock doors, an 800 square-foot line-haul building, a 10,520 square-foot shop building with three service bays, truck wash and one office parts bay, two above ground diesel fuel storage tanks, and a guard house.

3.0 Methods

3.1 Data Review

NRAI conducted a data search for information on plant and wildlife species known occurrences within the vicinity of the project. This review included biological texts on general and specific biological resources, and those resources considered to be sensitive by various wildlife agencies, local governmental agencies and interest groups. Information sources included but are not limited to the following:

- Information provided by the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) for the property, Assessor's Parcel Number (APN) 532-130-008-8.
- U.S. Army Corps 404 requirements, State Water Resources Control Board requirements, California Department of Fish and Wildlife 1602 requirements.
- General texts and other documents regarding potential resources on the project. NRAI used the information to focus our survey efforts in the field.

Please see Section 6.0 for a complete listing of documents reviewed.

3.2 Western Riverside County Multiple Species Habitat Conservation Plan

The MSHCP is intended to balance the demands of the growth of western Riverside County with the need to preserve open space and protect species of plants and animals that are threatened with extinction. The MSHCP addresses incidental take of "covered" species. Of 146 species addressed in the Western Riverside County MSHCP, 118 are adequately conserved simply by implementing the conservation program. Incidental take of these 118 species is permitted by the Western Riverside County MSHCP. The

remaining 28 species are partially conserved. They will be adequately conserved when certain additional conservation requirements are implemented. The additional requirements are identified in the species-specific conservation objectives for those 28 species.



Figure 1. State and Regional Location of the Property



Figure 2. Aerial Showing Property Site and Condition (2018)

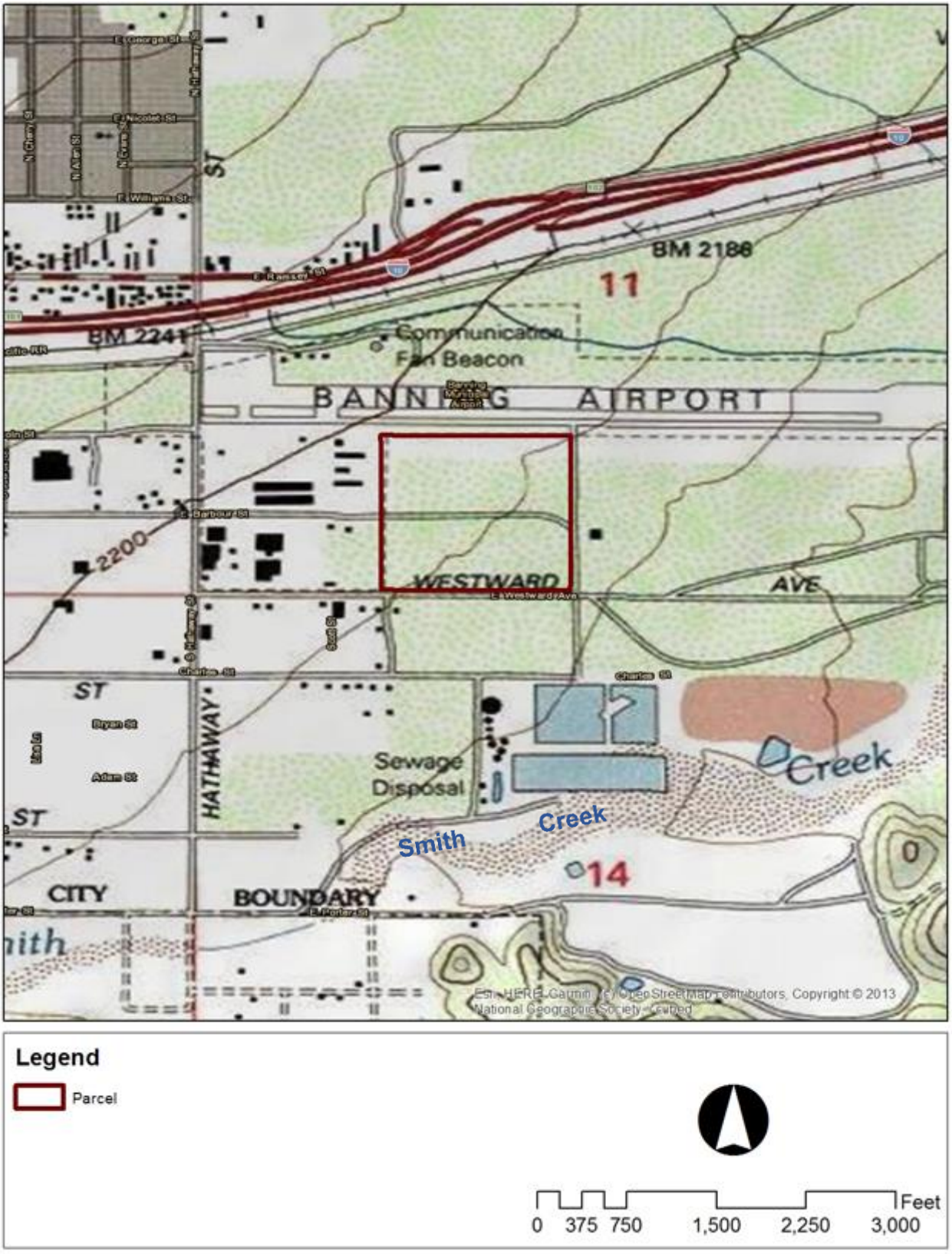


Figure 3. Regional Topographic Map of the Property

3.3 Field Assessment

Ms. Karen Kirtland of NRAI and Mr. Ricardo Montijo (subconsultant to NRAI), conducted a biological assessment of the property on March 20, 2019. The field team evaluated the property habitats, making notes on the general and sensitive biological resources present and taking representative photographs. The survey included habitat assessment surveys for resources covered under the MSHCP survey requirements.

4.0 Results

4.1 Weather, Topography and Soils

Weather at the beginning of the survey was 50 degrees Fahrenheit, overcast skies and winds five to ten miles per hour from the west. By the end of the survey, the temperature was 61 degrees Fahrenheit, overcast skies and winds five to ten miles per hour from the west.

The property is mostly flat, with one well-defined drainage running west to east along the southern half of the property, and one less well-defined drainage in the northern half of the property (Figures 4 and 5).

Three soils are found within the property boundaries (Figure 6, Natural Resources Conservation Service 2019). All three soils have been subject to some compaction from cattle grazing.

Gorgonio gravelly loamy fine sand, 2 to 15 percent slopes (GmD) is a somewhat excessively drained soil that occurs on alluvial fans. It is formed from alluvium derived from granite. Gorgonio gravelly loamy fine sand is s non-hydric soil that does not pond and only rarely floods. It is the most abundant soil on the property.

Gorgonio cobbly loamy fine sand, 2 to 15 percent slopes (GnD) is a somewhat excessively drained soil. It is formed from alluvium derived from granite and occurs on alluvial fans. Gorgonio cobbly loamy fine sand is s non-hydric soil that does not pond and only rarely floods. It occurs primarily in the northern portion of the property, predominately in the northwest corner.

Hanford cobbly coarse sandy loam, 2 to 15 percent slopes, eroded (HdD2) is a somewhat excessively drained soil. It is formed from alluvium derived from granite and occurs on alluvial fans. Hanford cobbly coarse sandy loam is s non-hydric soil that does not pond or flood. It is the least common soil on the property, found only in the northern section of the property.

4.2 Land Uses

A review of aerial imagery from Google Earth indicates that that property supported a healthy scrub community at least from 1996 to 2006. In 2006, the property was disked and it appears no plants were left. Since that time, a small amount of shrub cover has returned, mostly composed of California buckwheat (*Eriogonum fasciculatum*), annual wildflowers and weeds.

4.3 Plant Communities

According to the MSCHP, the property was classified as grassland in 1994, as desert scrub in 2005, and as grassland in 2012.

In our mapping of the property, we found the dominant plant community over the entire property to be a mixed scrub grassland (Photos 1 and 2). The lack of shrub cover may be partially due to the 2006 disking.

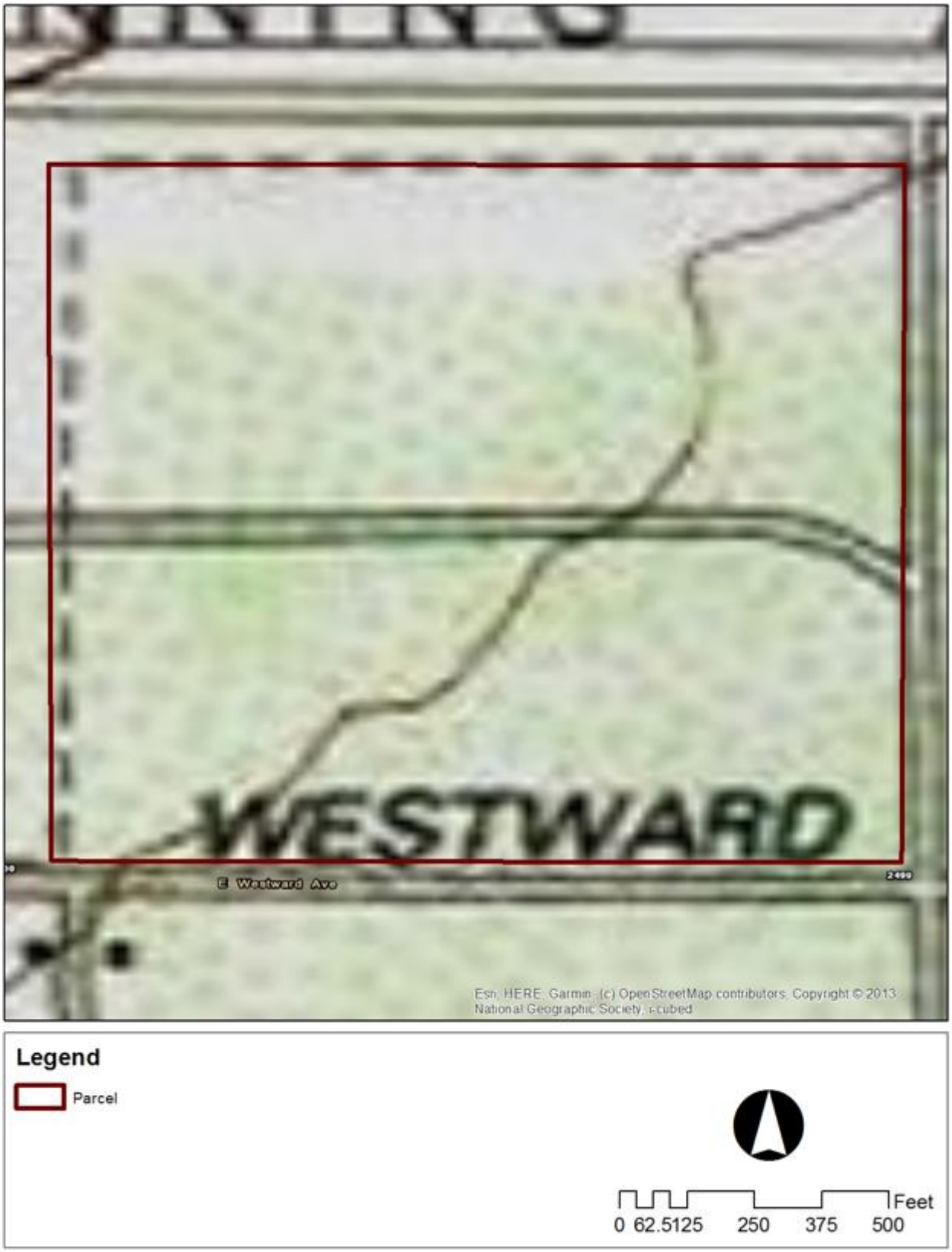


Figure 4. Detailed Topography of the Project Site



Figure 5. Location of Drainages on the Property

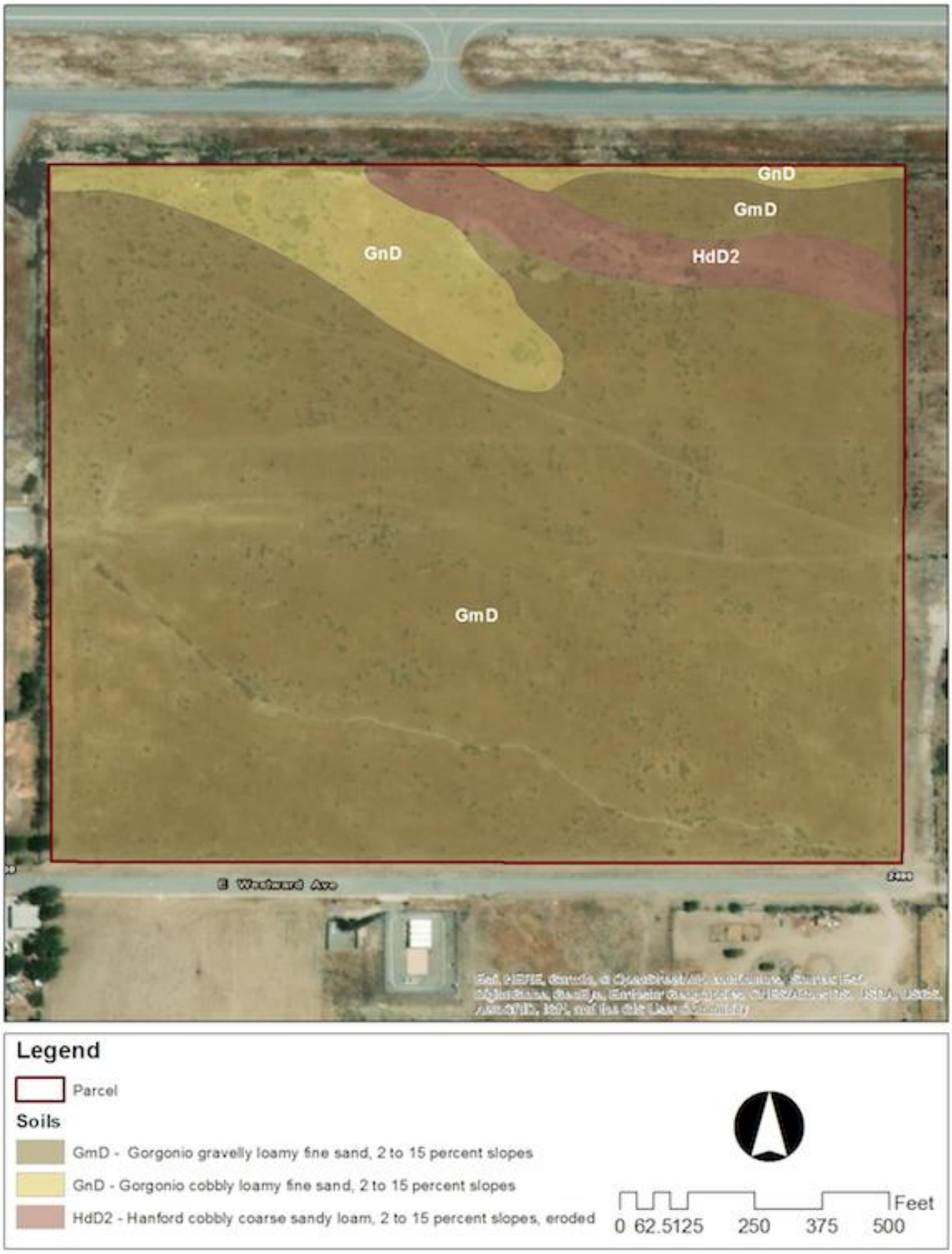


Figure 6. Distribution of Soils on the Property



Photo 1. Scattered scrub-grassland plant community in the southeastern corner of the property. Looking northwest.



Photo 2. Scattered scrub grassland along the northern border. Looking west from the eastern border.

Common species found include California buckwheat, red-stemmed filaree (*Erodium cicutarium*), and Mediterranean grass (*Schismus barbatus*). Wildflowers observed include bicolor lupine (*Lupinus bicolor*), pectocarya (*Pectocarya pencillatum*) and dobie pod (*Tropidocarpum gracile*).

A list of all plant species observed is provided in Appendix A.

4.4 Wildlife

No amphibian or reptile species were observed.

Bird species observed included common species such as Anna's hummingbird (*Calypte anna*), Say's phoebe (*Sayornis saya*), Brewer's blackbird (*Euphagus cyanocephalus*), and house finch (*Haemorhous mexicanus*).

Mammal species observed included Audubon's cottontail (*Sylvilagus audubonii*), Botta's gopher (*Thomomys bottae*) and Beechey ground squirrel (*Spermophilus beecheyi*).

A list of all wildlife species observed is provided in Appendix A.

4.5 MSHCP Consistency Analysis

Section 6 of the MSHCP states that all projects must be reviewed for compliance with plan policies pertaining to Riparian/ Riverine resources, Criteria resources, Narrow Endemic Plant Species, urban/ wildlands interface, and additional survey needs as applicable.

For this project, the MSHCP required an assessment for Narrow Endemic Plant Species, presence of burrowing owl habitat, riverine and riparian habitats, as well as vernal pools and fairy shrimp habitat. There is also a potential for jurisdictional waters to be present.

Please see Appendix B for the definitions of listing status under the U.S. Fish and Wildlife (USFWS), California Department of Fish and Wildlife (CDFW) and California Native Plant Society (CNPS) listings.

4.5.1 Criteria Area and Narrow Endemic Plant Species

There were no Criteria Area Plant Species identified as potentially present for this parcel.

Narrow Endemic Plant Species identified as potentially present were Marvin's onion (*Allium marvinii*) and many-stemmed dudleya (*Dudleya multicaulis*).

4.5.1.1 Marvin's Onion

The Marvin's (or Yucaipa) onion (*Allium marvinii*) is a perennial herb that flowers annually from an underground bulb. It is found in areas of clay soils within openings within chaparral habitats. It is known only from the Yucaipa and Beaumont area of the southern San Bernardino Mountains, at elevations ranging from 2300 to 3200 feet. Yucaipa onion flowers from April through May and would not have been visible during the survey.

Threats to the Yucaipa onion include invasion of historical habitats by non-native weeds, loss of habitat to development and the alteration of fire regimes. The alteration of fire regimes (mainly suppression) has resulted in formerly open areas preferred by this species becoming closed over.

Yucaipa onion is not listed by the USFWS or the CDFW. It is on list 1B.1 of the CNPS Inventory.

Findings

There are no suitable heavy or clayey soils present in the project area. The property does not have the chaparral plant community where this species usually occurs. Yucaipa onion is not expected to be present, and no impacts are expected.

4.5.1.2 Many-stemmed Dudleya

Many-stemmed dudleya (*Dudleya multicaulis*) is a perennial herb that grows from a corm. It is found usually on clay or similarly dense soils in chaparral, coastal scrub, valley and foothill grassland plant communities. It blooms at an elevation from 15 to 790 meters (50 to 2600 feet). Many-stemmed dudleya flowers from April through July and would not have been visible during the survey.

Many-stemmed dudleya is recorded from Los Angeles, Orange, Riverside, San Bernardino and San Diego counties, specifically the Temescal Mountains in Riverside County. It is threatened by clay mining, off-road activities, grazing, farming and development. It is not listed by the USFWS or the CDFW. It is on List 1B.2 of the CNPS Inventory.

Findings

The property lacks suitable habitat or soils for many-stemmed dudleya. There are no dense soils preferred by many-stemmed dudleya. Many-stemmed dudleya is not expected and no impacts will occur.

4.5.2 Protection of Species Associated with Riparian/Riverine Areas and Vernal Pools (Section 6.1.2)

4.5.2.1 Riparian/Riverine Areas

Riparian/ Riverine Areas are defined by the MSHCP as "*lands which contain Habitat dominated by tress [sic], shrubs, persistent emergents, or emergent mosses and lichens, which occur close to or which depend upon soil moisture from a nearby fresh water source; or areas with fresh water flow during all or a portion of the year*".

Findings

The property has two drainages. Neither drainage supports plant communities identified as necessary to make a finding that they are riparian/ riverine areas as defined by the MSHCP. The southern drainage is shown in Photos 3 and 4.

4.5.2.2 Vernal Pools

Vernal pools are defined by the MSHCP as "seasonal wetlands that occur in depression areas that have wetlands indicators of all three parameters (soils, vegetation and hydrology) during the wetter portion of the growing season but normally lack wetlands indicators of hydrology and/ or vegetation during the drier portion of the growing season . . .. Evidence concerning the persistence of an area's wetness can be obtained from its history, vegetation, soils, and drainage characteristics, uses to which it has been

subjected, and weather and hydrologic records" (Riverside County Transportation and Land Management Agency[1]).



Photo 3. Upstream section of the southern drainage.

[1] http:/ / www.rctlma.org



Photo 4. Downstream section of the southern drainage.

Findings

The field team surveyed for vernal pools. Our surveys were conducted after a wet winter during which the Banning area received average rainfall. Ponding or pooling or evidence of such areas would have been observable. No vernal pools or indications of vernal pools such as flat, unvegetated areas showing evidence of previous ponding, no patterns of inundation or distinct water-dependent plant species.

The property is unsuitable for the formation of vernal pools. The soils are unsuitable for the formation of long-term ponds, and no obligate wetland perennial plant species typical of vernal pools were observed (Photo 5). No impacts to vernal pools are expected.



Photo 5. Middle of the property showing site and soil conditions. No evidence of ponding or pooling of water was found.

4.5.2.3 Riverside Fairy Shrimp

Riverside fairy shrimp (*Streptocephalus woottoni*) are known only from ephemeral pools in farmlands and similar open, flat terrain. Fairy shrimp are confined to temporary pools that fill in spring and evaporate by late spring to early summer.

The Riverside fairy shrimp is known only from southern Orange, western Riverside and San Diego counties. Ongoing farming and development in these areas has resulted in the loss and degradation of these habitats. Therefore, the USFWS has listed the Riverside fairy shrimp as endangered.

Findings

As described in the vernal pool section, the property is unsuitable for the formation of pools. The soils are unsuitable for the formation of long-term ponds, and no obligate wetland perennial plant species typical of suitable pools were observed. There are no other sources of standing water, such as cattle ponds or watering holes that would provide suitable habitat for the Riverside fairy shrimp. No impacts to this species are expected.

4.5.3 Additional Survey Needs and Procedures (Section 6.3.2)

4.5.3.1 Burrowing Owl

The burrowing owl (*Athene cunicularia hypugaea*) is a resident species in lowland areas of southern California (Garrett & Dunn 1980). It prefers open areas for foraging and burrowing, and is found widely scattered in open desert scrub. This species is scarce in coastal areas, being found mainly in agricultural

and grassland habitats. The largest remaining numbers are in the Imperial Valley, where it is common in suitable habitat adjacent to the agricultural fields.

The burrowing owl prefers large flat open areas for nesting and hunting (Garrett & Dunn 1981). This species lives in burrows constructed by other ground-dwelling species in grassy or sparse shrubby habitat. Burrowing owls also take over other types of burrows, including manmade objects such as pipes. This species forages low over the ground surface for insect prey, and seldom flies very high in the air.

Burrowing owls are declining in coastal habitats due to development of these areas. The California Department of Fish and Wildlife (CDFW) has designated the burrowing owl as a California Species of Special Concern (CSC) (California Department of Fish and Wildlife 2019). Burrowing owls are also protected by owl-specific protections in the California Fish and Game Code.

Findings

Habitat for burrowing owl was assessed over the entire property in accordance with MSHCP "Burrowing Owl Survey Instructions". The assessment included looking for burrowing owl burrows, whitewash, pellets, animal remains and other burrowing owl indicators.

The property provides marginal habitat for the burrowing owl, but suitable active burrows in use were not observed at the time of the survey. Beechey ground squirrel burrows were observed, but they were in active use by that species.

Our survey was conducted at a time when burrowing owls should have been observable if present. No sign of burrowing owl was seen and this species is not present.

However, there is a small likelihood that burrowing owls may use or occupy the property over time, especially since there is a large area of suitable foraging and nesting habitat within the airport property to the north and open space property to the south and east.

The following measures shall be implemented:

- A pre-construction burrowing owl breeding bird survey following the recommended guidelines of the MSHCP will be required to determine if nesting is occurring.
    - Occupied nests will not be disturbed during the nesting season (February 1 through August 31) unless a qualified biologist verifies through non-invasive methods that either (a) the adult birds have not begun egg-laying and incubation; or (b) the juveniles from the occupied nests are foraging independently and are capable of independent survival.
    - If the biologist is not able to verify one of the above conditions, then no disturbance shall occur during the breeding season within a distance determined by the qualified biologist for each nest or nesting site. For the burrowing owl, the recommended distance is a minimum of 160 feet.

4.5.4 Guidelines Pertaining to the Urban/Wildland Interface (Section 6.1.4).

The Urban/ Wildland Interface guidelines of the MSHCP address indirect effects associated with locating development in the MSHCP Conservation Area near wildlands or other open space areas.

Findings

The property is bordered by open space on the east, and partial open space on the south. Project landscaping should avoid the use of weedy, non-native plant species that may spread offsite and take root in the open space areas.

We recommend invasive plant species not be used in landscape plans. A list of commonly used landscape plants to be avoided is in Appendix C.

4.5.5 Habitat Conservation Plan for the Stephens Kangaroo Rat

The species objectives for the Stephens kangaroo rat (SKR) in the Western Riverside MSHCP were designed to incorporate the objectives and be consistent with the Long-Term Stephens Kangaroo Rat Habitat Conservation Plan (SKR Plan). Any projects that are within the MSHCP boundaries must meet the SKR Plan requirements.

Findings

The project is not located within the SKR fee area. No payment is required.

4.5.6 Project Relationship to Reserve Assembly, The Pass Area Plan (Section 3.3.10)

Reserve assembly is concerned with the identification of specific areas that are necessary to assemble a sufficiently large and diverse parcel to protect the resources of concern for that reserve. Each Area has a designated conservation plan and is therefore referred to as an Area Plan. The smallest unit is the Cell, which individually forms the basis for Cell Groups that make up Area Plans.

The MSHCP defines [Criteria] Cells as “A unit within the Criteria Area generally 160 acres in size, approximating one quarter section”, and Cell Groups as “An identified grouping of Cells within the Criteria Area”.

All the Cells have been identified during the preparation of the MSHCP and form the basis for identifying areas of sensitivity. Areas outside Cells are generally not considered to have a high sensitivity for the species identified by the MSHCP, although they could have resources such as riparian habitat that are sensitive and require additional analysis.

Findings

The property is located within the MSHCP Conservation Area. It is not located within or adjacent to any Criteria Cells. No further action is required.

4.6 Jurisdictional Waters

4.6.1 Army Corps of Engineers

The Corps regulates discharges of dredged or fill material into waters of the United States. These watersheds include wetlands and non-wetland bodies of water that meet specific criteria. The lateral limit of Corps jurisdiction extends to the Ordinary High-Water Mark (OHWM) and to any wetland areas extending beyond the OHWM; thus, the maximum jurisdictional area is represented by the OHWM or wetland limit, whichever is greater.

Corps regulatory jurisdiction pursuant to Section 404 of the Clean Water Act is founded on a connection or nexus between the water body in question and interstate (waterway) commerce. This connection may be direct, through a tributary system linking a stream channel with traditional navigable waters used in interstate or foreign commerce, or may be indirect, through a nexus identified in the Corps regulations.

Findings

There is at least one well-defined drainage in the southern area of the property (Figure 5, Photos 3 and 4), and another, less well-defined drainage in the north (Figure 5). Neither drainage has a clear connection to Smith Creek, a 2nd order tributary to Whitewater Creek. Whitewater Creek is a Corps jurisdictional water. It is our professional judgement that neither of the project drainages fall under the jurisdiction of the Corps.

4.6.2 Regional Water Quality Control Board

The Corps has delegated the authority for use of 404 permits to each individual state. The use of a 404 permit in California is regulated by the State Water Resources Control Board (SWRCB) under Section 401 of the Clean Water Act regulations. The Board has authority to issue a 401 permit that allows the use of a 404 permit in the state, with the authority in the state being vested in regional offices known as Regional Water Quality Control Boards (RWQCB).

Under the Porter-Cologne Act of 2003, the SWRCB has extended its responsibilities to include impacts to water quality from non-point source pollution.

In addition, the SWRCB has the responsibility to require that projects address ground water and water quality issues, which would be evaluated as part of the geotechnical and hydrology studies. Their authority extends to all waters of the State (of California).

Findings

The property supports two drainages. It is our professional judgment that the southern drainage (Figure 5, Photos 3 and 4) may provide one or more Beneficial Uses (BUs) that might come under RWQCB protection. Impacts to this drainage may require consultation with the RWQCB.

4.6.3 California Department of Fish and Wildlife

The California Department of Fish and Wildlife (CDFW), through provisions of the State of California Administrative Code, is empowered to issue agreements for any alteration of a river, stream or lake where fish or wildlife resources may adversely be affected. Streams (and rivers) are defined by the presence of a channel bed and banks, and at least an intermittent flow of water. Lateral limits of jurisdiction are not clearly defined, but generally include any riparian resources associated with a stream or lake, CDFW regulates wetland areas only to the extent that those wetlands are part of a river, stream or lake as defined by CDFW.

Findings

The southern drainage on the property is well-defined and will come under the jurisdiction of the CDFW (Figure 5, Photos 3 and 4). The northern drainage is less well-defined and may not meet the definition of a

jurisdictional drainage (Figure 5). There are potential impacts to both drainages, and we recommend consultation with the CDFW to determine jurisdiction and whether mitigation will be required.

4.7 Raptors, Migratory Birds, and Habitat

Most of the raptor species (eagles, hawks, falcons and owls) are experiencing population declines because of habitat loss. Some, such as the peregrine falcon, have also experienced population losses because of environmental toxins affecting reproductive success, animals destroyed as pests or collected for falconry, and other direct impacts on individuals. Only a few species, such as the red-tailed hawk and barn owl, have expanded their range despite or a result of human modifications to the environment. As a group, raptors are of concern to state and federal agencies.

Raptors and all migratory bird species, whether listed or not, also receive protection under the Migratory Bird Treaty Act (MBTA) of 1918. The MBTA prohibits individuals to kill, take, possess or sell any migratory bird, bird parts (including nests and eggs) except per regulations prescribed by the Secretary of the Interior Department (16 U. S. Code 703).

Additional protection is provided to all bald and golden eagles under the Bald and Golden Eagle Protection Act of 1940, as amended. State protection is extended to all birds of prey by the CDFW Code, Section 2503.5. No take is allowed under these provisions except through the approval of the agencies or their designated representatives.

Findings

At the time of the survey, the parcel had suitable nesting habitat for ground nesting bird species such as killdeer. The following measures shall be implemented to address potential impacts.

- If start of construction occurs between February 1 and August 31, then a qualified biologist shall conduct a breeding bird survey no more than three days prior to the start of construction to determine if nesting is occurring. This survey can be conducted as part of the burrowing owl surveys.

- “Construction” includes selection of staging areas, demolition, tree, trash and debris removal, placement of equipment and machinery on to the property preparatory to grading, and any other project-related activity that increases noise and human activity on the project site beyond existing levels. Emergency measures are exempt from this definition.

- If occupied nests are found, they shall not be disturbed unless the qualified biologist verifies through non-invasive methods that either (a) the adult birds have not begun egg-laying and incubation; or (b) the juveniles from the occupied nests are capable of independent survival.

- If the biologist is not able to verify one of the above conditions, then no disturbance shall occur within a distance specified by the qualified biologist for each nest or nesting site. The qualified biologist will determine the appropriate distance in consultation with the California Department of Fish and Wildlife and the U.S. Fish and Wildlife Service.

4.8 Habitat Fragmentation and Wildlife Movement

Wildlife movement and the fragmentation of wildlife habitat are recognized as critical issues that must be considered in assessing impacts to wildlife. In summary, habitat fragmentation is the division or breaking up of larger habitat areas into smaller areas that may or may not be capable of independently sustaining wildlife and plant populations. Wildlife movement (more properly recognized as species movement) is the temporal movement of individuals (plants and animals) along diverse types of corridors. Wildlife corridors are especially important for connecting fragmented habitat areas.

Findings

The property is in area that is relatively undeveloped, but adjacent to developed areas on the north and west, and partially on the south and east. The proposed project will not add significantly to additional fragmentation of habitat or affects to wildlife movement.

5.0 References

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Appendix A - Plant and Animal Species Observed

Plants

	DICOTYLEDONS	
AMARANTHACEAE	**AMARANTH FAMILY**	
Amaranthus deflexus	Large fruited amaranth	non-native
ASTERACEAE	**SUNFLOWER FAMILY**	
Ambrosia confertiflora	Weak leaved burweed	native
Artemisia dracunculus	Tarragon	native
Corethrogyne filaginifolia	Common sandaster	native
Heterotheca grandiflora	Telegraph weed	native
Logfia filaginoides	California cottonrose	native
Sonchus oleraceus	Sow thistle	non-native
Uropappus lindleyi	Silver puffs	native
BORAGINACEAE	**BORAGE FAMILY**	
Amsinckia intermedia	Common fiddleneck	native
Cryptantha intermedia	Common cryptanth	native
Cryptantha intermedia var. *intermedia*	Common cryptantha	native
Emmenanthe penduliflora	Whispering bells	native
Pectocarya linearis	Sagebrush combseed	native
Phacelia cicutaria var. *hispida*	Caterpillar phacelia	native
Phacelia distans	Common phacelia	native
Caulanthus heterophyllus	Slender pod jewelflower	native
BRASSICACEAE	**MUSTARD FAMILY**	
Hirschfeldia incana	Mustard	invasive non-native
Lepidium nitidum	Shining peppergrass	native
Sisymbrium altissimum	Tumble mustard	non-native
Sisymbrium officinale	Hedge mustard	non-native
Tropidocarpum gracile	Slender tropidocarpum	native
CONVULVULACEAE	**MORNING GLORY FAMILY**	
Calystegia macrostegia ssp. *arida*	Southern California morning glory	native
CRASSULACEAE	**STONECROP FAMILY**	
Crassula connata	Sand pygmyweed	native
CUCURBITACEAE	**CUCUMBER FAMILY**	
Cucurbita foetidissima	Missouri gourd	native
Cucurbita palmata	Coyote melon	native
Marah macrocarpa	Chilicothe	native
EUPHORBIACEAE	**SPURGE FAMILY**	
Croton californicus	Desert croton	native
Croton setiger	Turkey-mullein	native
Ricinus communis	Castor Bean	non-native
FABACEAE	**PEA FAMILY**	
Acmispon glaber	Deerweed	native
Acmispon strigosus	Strigose lotus	native
Lupinus bicolor	Lupine	native
Melilotus indicus	Annual yellow sweetclover	non-native

Parkinsonia florida	Blue paloverde	native
Prosopis glandulosa var. *torreyana*	Honey mesquite	native
GERANIACEAE	**GERANIUM FAMILY**	
Erodium botrys	Big heron bill	non-native
Erodium cicutarium	Coastal heron's bill	invasive non-native
Erodium moschatum	Whitestem filaree	non-native
Camissoniopsis bistorta	California sun cup	native
PLANTAGINACEAE	**PLANTAIN FAMILY**	
Plantago erecta	California plantain	native
POLEMONIACEAE	**PHLOX FAMILY**	
Gilia angelensis	Chaparral gilia	native
POLYGONACEAE	**BUCKWHEAT FAMILY**	
Eriogonum fasciculatum var. *foliolosum*	California buckwheat	native
Eriogonum fasciculatum var. *polifolium*	California buckwheat	native
Rumex crispus	Curly dock	native
SOLANACEAE	**NIGHTSHADE FAMILY**	
Datura wrightii	Jimsonweed	native
	MONOCOTYLEDONS	
POACEAE	**GRASS FAMILY**	
Bromus diandrus	Ripgut brome	invasive non-native
Bromus madritensis ssp. *rubens*	Foxtail brome	invasive non-native
Festuca octoflora	Sixweeks grass	native
Poa secunda ssp. *secunda*	Sandberg's bluegrass	native
Schismus barbatus	Old han schismus	invasive non-native
THEMIDACEAE	**BRODIAEA FAMILY**	
Dichelostemma capitatum ssp. *capitatum*	Wild hyacinth	native

Taxonomy and nomenclature follow Baldwin et al. 2012.

Birds
Class Aves

Hawks, Eagles, Kites, and Osprey	**Accipitridae**
Red-tailed Hawk	*Buteo jamaicensis*
Larks	**Alaudidae**
Horned Lark	*Eremophila alpestris*
Plovers	**Charadriidae**
Killdeer	*Charadrius vociferus*
Crows and Jays	**Corvidae**
Common Raven	*Corvus corax*
American Sparrows	**Emberizidae**
White-crowned Sparrow	*Zonotrichia leucophrys*
Falcons	**Falconidae**
American Kestrel	*Falco sparverius*
Finches	**Fringilidae**
House Finch	*Haemorhous mexicanus*
Hirundinidae	**Swallows**
Barn Swallow	*Hirundo rustica*
Violet-green Swallow	*Tachycineta thalassina*
Icteridae	**Blackbirds**
Brewer’s Blackbird	*Euphagus cyanocephalus*
Western Meadowlark	*Sturnella neglecta*
Old World Sparrows	**Passeridae**
House Sparrow	*Passer domesticus*
Starlings	**Sturnidae**
European Starling	*Sturnus vulgaris*
Hummingbirds	**Trochilidae**
Anna's Hummingbird	*Calypte anna*
Flycatchers	**Tyrannidae**
Say's Phoebe	*Sayornis saya*

Mammals
Class Mammalia

Rabbits and Hares	**Leporidae**
Audubon’s Cottontail	*Sylvilagus audubonii*
Squirrels	**Sciuridae**
Beechy Ground Squirrel	*Spermophilus beecheyi*
Cattle and Cows	**Bovidae**

Cattle	*Bos* sp.

Nomenclature follows Hall 1981, Grenfell et al. 2003, and Roberts, et al. 2004.

Appendix B - Definitions of Species Status Classification

FED: Federal Classifications

END Taxa listed as endangered

THR Taxa listed as threatened

PE Taxa proposed to be listed as endangered

PT Taxa proposed to be listed as threatened

C2* The U.S. Fish and Wildlife Service (USFWS) revised its classifications of candidate taxa (species, subspecies, and other taxonomic designations). Species formerly designated as "Category 1 Candidate for listing" are now known simply as "Candidate". The former designation of "Category 2 Candidate for listing" has been discontinued. The USFWS will continue to assess the need for protection of these taxa and may, in the future, designate such taxa as Candidates. NRAI has noted the change in species status by marking with an asterisk (*) those C2 candidates that were removed from the list.

C Candidate for listing. Refers to taxa for which the USFWS has sufficient information to support a proposal to list as Endangered or Threatened and issuance of the proposal is anticipated but precluded at this time.

BCC Bird of Conservation Concern

ND Not designated as a sensitive species

STATE: State Classifications

END Taxa listed as endangered

THR Taxa listed as threatened

CE Candidate for endangered listing

CT Candidate for threatened listing

CFP California Fully Protected. Species legally protected under special legislation enacted prior to the California Endangered Species Act.

SSC Species of Special Concern. Taxa with declining population levels, limited ranges and/ or continuing threats have made them vulnerable to extinction.

SA Special Animal. Taxa of concern to the California Natural Diversity Data Base regardless of their current legal or protected status.

WL Watch list.

ND Not designated as a sensitive species

CNPS: California Native Plant Society Classifications

1A Plants presumed by CNPS to be extinct in California

1B Plants considered by CNPS to be rare or endangered in California and elsewhere

2P Plants considered by CNPS to be rare, threatened or endangered in California, but which are more common elsewhere.

3 Review list of plants suggested by CNPS for consideration as endangered but about which more information is needed.

4 Watch list of plants of limited distribution whose status should be monitored

CNPS: Threat Codes

.1 Seriously endangered in California (over 80% of occurrences threatened / high degree and immediacy of threat)

.2 Fairly endangered in California (20-80% occurrences threatened)

.3 Not very endangered in California (<20% of occurrences threatened or no current threats known)

Appendix C - Plants to be Avoided in Areas Adjacent to Wildlands

BOTANICAL NAME	COMMON NAME
Acacia spp. (all species)	acacia
Achillea millefolium	var. *millefolium* common yarrow
Ailanthus altissima	tree of heaven
Aptenia cordifolia	red apple
Arctotheca calendula	cape weed
Arctotis spp. (all species & hybrids)	African daisy
Arundo donax	giant reed or arundo grass
Asphodelus fistulosus	asphodel
Atriplex glauca	white saltbush
Atriplex semibaccata	Australian saltbush
Carex spp. (all species*)	sedge
Carpobrotus chilensis	ice plant
Carpobrotus edulis	sea fig
Centranthus ruber	red valerian
Chrysanthemum coronarium	annual chrysanthemum
Cistus ladanifer	(incl. hybrids/ varieties) gum rockrose
Cortaderia jubata [syn.C. Atacamensis]	jubata grass, pampas grass
Cortaderia dioica [syn. C. sellowana]	pampas grass
Cotoneaster spp. (all species)	cotoneaster
Cynodon dactylon	(incl. hybrids varieties) Bermuda grass
Cyperus spp. (all species*)	nutsedge, umbrella plant
Cytisus spp. (all species)	broom
Delosperma 'Alba'	white trailing ice plant
Dimorphotheca spp. (all species)	African daisy, Cape marigold
Drosanthemum floribundum	rosea ice plant
Drosanthemum hispidum	purple ice plant

BOTANICAL NAME	COMMON NAME
Eichhornia crassipes	water hyacinth
Elaegnus angustifolia	Russian olive
Eucalyptus spp. (all species)	eucalyptus or gum tree
Eupatorium coelestinum [syn. Ageratina sp.]	mist flower
Festuca arundinacea	tall fescue
Festuca rubra	creeping red fescue
Foeniculum vulgare	sweet fennel
Fraxinus uhdei	(and cultivars) evergreen ash, shamel ash
Gaura (spp.) (all species)	gaura
Gazania spp. (all species & hybrids)	gazania
Genista spp. (all species)	broom
Hedera canariensis	Algerian ivy
Hedera helix	English ivy
Hypericum spp. (all species)	St. John's Wort
Ipomoea acuminata	Mexican morning glory
Lampranthus spectabilis	trailing ice plant
Lantana camara	common garden lantana
Lantana montevidensis [syn. L. sellowiana]	lantana
Limonium perezii	sea lavender
Linaria bipartita	toadflax
Lolium multiflorum	Italian ryegrass
Lolium perenne	perennial ryegrass
Lonicera japonica	(incl. 'Halliana') Japanese honeysuckle
Lotus corniculatus	birdsfoot trefoil
Lupinus arboreus	yellow bush lupine

BOTANICAL NAME	COMMON NAME
Lupinus texanus	Texas blue bonnets
Malephora crocea	ice plant
Malephora luteola	ice plant
Mesembryanthemum nodiflorum	little ice plant
Myoporum laetum	myoporum
Myoporum pacificum	shiny myoproum
Myoporum parvifolium	(incl. 'Prostratum') ground cover myoporum
Oenothera berlandieri	Mexican evening primrose
Olea europea	European olive tree
Opuntia ficus-indica	Indian fig
Osteospermum spp. (all species)	trailing African daisy, African daisy
Oxalis pes-caprae	Bermuda buttercup
Parkinsonia aculeata	Mexican palo verde
Pennisetum clandestinum	Kikuyu grass
Pennisetum setaceum	fountain grass
Phoenix canariensis	Canary Island date palm
Phoenix dactylifera	date palm
Plumbago auriculata	cape plumbago
Polygonum spp. (all species)	knotweed
Populus nigra 'italica	Lombardy poplar
*Prosopis spp. (*all species*)*	mesquite
Ricinus communis	castorbean
Robinia pseudoacacia	black locust
Rubus procerus	Himalayan blackberry
Sapium sebiferum	Chinese tallow tree
Saponaria officinalis	bouncing bet, soapwart
Schinus molle	Peruvian pepper tree, California pepper

BOTANICAL NAME	COMMON NAME
Schinus terebinthifolius	Brazilian pepper tree
Spartium junceum	Spanish broom
Tamarix spp. (all species)	tamarisk, salt cedar
Trifolium tragiferum	strawberry clover
Tropaelolum majus	garden nasturtium
Ulex europaeus	prickly broom
Vinca major	periwinkle
Yucca gloriosa	Spanish dagger
An asterisk (*) indicates some native species of the genera exist that may be appropriate. Sources: California Exotic Pest Plant Council, United States Department of Agriculture-Division of Plant Health and Pest Prevention Services, California Native Plant Society, Fremontia Vol. 26 No. 4, October 1998, The Jepson Manual; Higher Plants of California, and County of San Diego-Department of Agriculture.	

Appendix C

A PHASE I CULTURAL RESOURCES INVESTIGATION FOR THE PROPOSED ESTES TRUCK TERMINAL, EAST WESTWARD AVENUE (APN 532-130-008), APPROXIMATELY 40+/- ACRES IN THE CITY OF BANNING, RIVERSIDE CO., CALIFORNIA

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A PHASE I CULTURAL RESOURCES INVESTIGATION FOR THE PROPOSED ESTES TRUCK TERMINAL, EAST WESTWARD AVENUE (APN 532-130-008), APPROXIMATELY 40+/- ACRES IN THE CITY OF BANNING, RIVERSIDE CO., CALIFORNIA

by,

Jeanette A. McKenna
McKenna et al., Whittier CA

INTRODUCTION

McKenna et al. (Appendix A) initiated this cultural resources survey for the proposed Estes Truck Terminal facility in Banning, Riverside County, California, at the request of Lilburn Corporation, San Bernardino, San Bernardino County, California. This investigation was prepared for the City of Banning, acting as the Lead Agency for compliance with the California Environmental Quality Act (CEQA), as amended. To insure full compliance, McKenna et al. also completed these studies for compliance with the City of Banning policies and guidelines.

PROJECT DESCRIPTION/UNDERTAKING

The proposed project involves the establishment of the Estes Truck Terminal in Banning, Riverside County, California. As currently described, the improvements will consist of "… a Truck Terminal to include 107 door cross-dock with an attached 2 story 11,200 square foot office building, a 7,280 square foot truck maintenance building, and above ground fuel tanks." Site preparation will require grading and compaction. This grading is prospered to involve between 5 and 8 feet of cuts below the current ground surface. Access to the property will be afforded from both E. Barbour Street and E. Westward Avenue. E. Barbour Street will be extended into the property and Scott Street (on eastern boundary) will require some improvements. Both Scott Street (at the intersection with E. Westward Avenue) and E. Westward Avenue will require some land dedication (right-of-way).

LOCATION AND SETTING

The proposed project involves the establishment of a trucking terminal on the south side of the Banning Airport, north of E. Westward Avenue, and east of the eastern terminus of

Barbour Street (Figure 1). The project area is located within Township 3 South, Range 1 East, and the SE ¼ of the SW ¼ of Section 11 (Figure 2). This property was identified as a gross 40.03 acre property (39.10 net acres) cross-referenced as Assessor Parcel Number 532-130-08 (Figure 3).

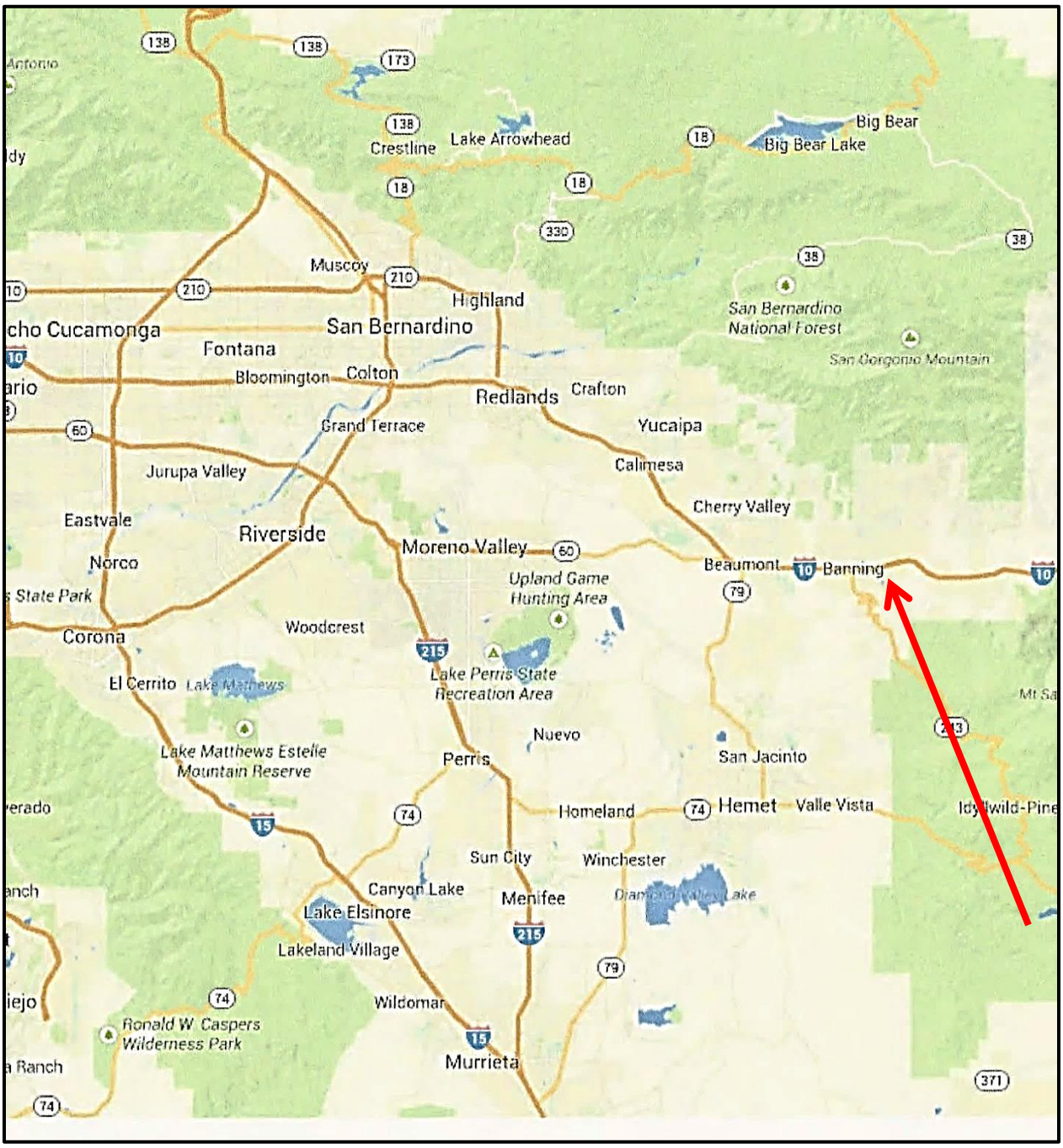


Figure 1. General Location of the Project Area, Banning, Riverside County, California.

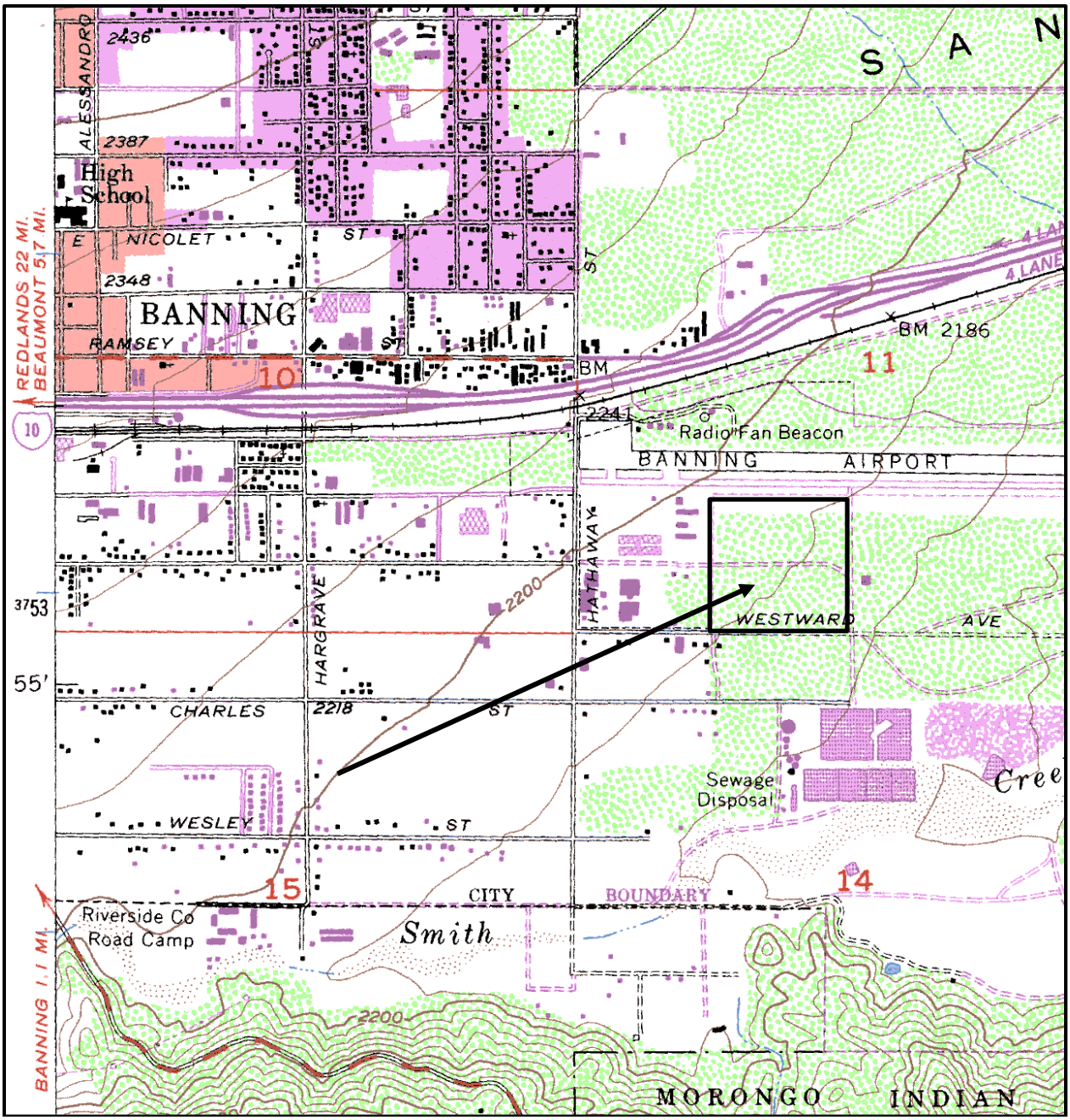


Figure 2. Specific Location of the Project Area (USGS Cabazon Quadrangle, 1988, rev. 1996).

A fairly recent aerial photograph confirmed this property to be vacant and with little evidence of prior impacts (Figure 4). The drainages identified on the property during the field survey are not illustrated on the USGS Cabazon Quadrangle, but are evidence on the aerial photograph. As such, they are not blue-line streams and not under U.S. Corps of Engineers jurisdiction.

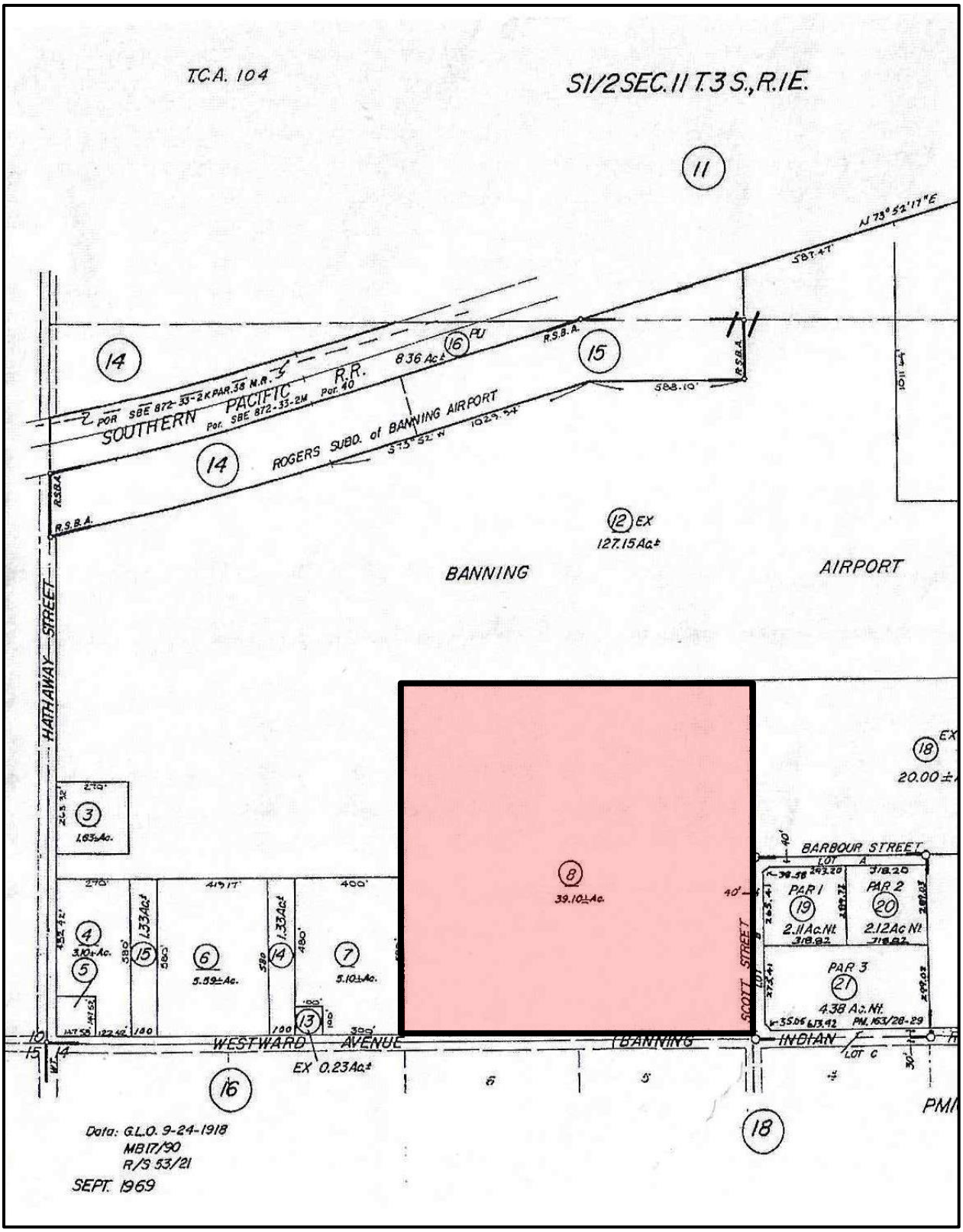


Figure 3. Assessor Parcel Map Illustrating the Project Area, Banning, CA.



Figure 4. Aerial Photograph Illustrating the Project Area.

The project area is south of the Banning Airport and north of the Sewage Disposal basins. The area is accessed from Hargrave Street (west of project area), E. Barbour Street and/or E. Westward Avenue. This particular area is directly associated with the San Gorgonio Pass, a relatively narrow valley located between the San Bernardino Mountains (north) and the San Jacinto Mountains (south). As a portion of the southern extent of the Mojave Desert and western extent of the Colorado Desert, this area is characterized by the presence of decomposing granite derived from the nearby hillsides and wind-borne or water-borne alluvial deposits.

Native vegetation in the area is generally limited to desert sage scrub, but riparian zones can be found along washes and intermittent streams. San Gorgonio River is located to

the northeast of the project area (approximately 1.75 miles) and Smith Creek runs east/west and .5 miles south of the project area.

Citing McLeod (2003 and 2019), the area is characterized as having ",,, exposures of some Mesozoic age granitics and metasedimentary rocks that, of course, will not contain recognizable vertebrate fossils." The project area, specifically, is covered by "surface deposits … of younger Quaternary Alluvium, derived as alluvial fan deposits from the Mountains to the north via the San Gorgonio River that currently flows to the northeast.

Immediately around Smith Creek, the deposits also consist of surficial deposits of younger Quaternary Alluvium that are unlikely to contain significant vertebrate fossils, at least in the uppermost layers. The Riverside County GIS system identifies the area as having a "Low" potential for paleontological sensitivity.

Currently, non-native grasses, eucalyptus trees (on the western boundary), and small saplings (5-6, possibly palo verde or pepper trees) within the project area. Given the unstable nature of alluvial deposits, prehistoric cultural remains may be present in a buried context, but may also be identified in areas of erosion, as evidenced by previously recorded surface finds. The San Gorgonio Pass was a main access route between the desert and coastal regions during prehistoric, protohistoric, and historic times, and the presence of a fresh water source in Smith Creek and the San Gorgonio River, evidence of early human activities may be present and identifiable.

CULTURE HISTORY BACKGROUND

The project area is geographically associated with both the Serrano and Cahuilla of Southern California (Kroeber 1925:615-619 and 692-708). Though near the territorial boundary separating these two populations, the area is more generally considered part of the "Pass Cahuilla" territory, a reference to the San Gorgonio Pass (Strong 1929:88-143). Cahuilla culture has been described by a number of scholars, but most thoroughly by Bean (1972 and 1978). The name "Cahuilla" translates as "master" or "powerful one."

The "Pass Cahuilla" are one of the three main Cahuilla populations associated with western Riverside County (with the Desert Cahuilla and Mountain Cahuilla). Wilke's studies have shown that the local population exploited almost every available food resource in the area.

The prehistoric Cahuilla were hunter-gatherers of Shoshonean heritage who lived in small villages of 100 to 200 persons and who were organized into clans and lineages owning village areas and associate gathering tracts (James 1969; Kroeber 1976; Bean 1978; and Emanuels 1991). The Cahuilla produced skillfully manufactured pottery (believed to have been introduced by Colorado River tribes) and basketry. They constructed brush dwellings and ritual structures; conducted trade between the eastern desert and coastal populations, enjoyed games, music, and a rich ceremonial life. They had relatively extensive exchanges and interactions with neighboring populations and maintained a wide range of

cultural traditions represented in the material remains recovered in archaeological sites throughout the area.

In the mid-1800s (ca. 1849-50), the United States took possession of the State of California and immediately initiated the completion of surveys and property identifications. Government surveyors documented the presence of twenty-two Cahuilla villages in the San Gorgonio Pass and larger Coachella Valley (to the east), with most of the populations in these villages exceeded 100 individuals (Wilke 1978:120; Wilke and Lawton 1975). Many of these villages were located in areas of fresh water – as springs, streams, or well sites. Smaller, limited use areas have been identified in areas where "walk-in wells" were excavated and maintained (Strong 1929:38), hence the references to "Indians Wells" in the Coachella Valley.

Population estimates for the prehistoric Cahuilla range from 2600 to 10,000 individuals. These individuals maintained extensive networks for trade, including contacts along the Colorado River and the Pacific Coast. Trails, small camp sites, and other limited use areas have been recorded throughout the area and attest to the wide-spread use of the Valley and Pass. Additional evidence of long-term occupation has been identified along the various shorelines of prehistoric Lake Cahuilla. Trade routes (e.g. the Coco-Maricopa Trail) and encampments between known fresh water sites have been identified through archaeological evidence and some have been recorded in historic records or on historic period maps.

Wilke (1986:9) also emphasized that the Cahuilla did not rely heavily on stone tools, but manufactured numerous tools and utility items of wood (even projectile points, at times) and ceramic goods. Nets and traps were also used in hunting and fishing. Ceramics, mainly Tizon Brown and Salton Buff wares, have been found throughout the area, represented by a wide variety of vessel types. Basketry was used, but few examples have survived. Likewise, few examples of wooden implements have survived. Recent archaeological investigations have suggested some Cahuilla practiced limited agriculture (von Worloff n.d.; see Wilke 1986:9).

The Cahuilla are also associated with a relatively complex social organization based on lineages and clans. Individual clans occupied village sites and exploited specific clan-related territories. Interactions between clans provided exchange in the form of trade, marriages, and ceremonial contacts (e.g. funerary practices). The Cahuilla practiced cremation and often burned the residences of the deceased. Extensive grave goods have also been identified and associated with the cremation practices. New residences were built some distance from the burned residence and the families reestablished themselves at the new locale.

Analysis of ethnographic and archaeological data has resulted in the development of various chronologies for the Cahuilla (Wallace 1962; Warren and Orr 1978; Weide and Barker 1975; Hall and Barker 1976; and Gallegos et al. 1979). Jertberg (1982:5-7) synthesized this data and proposed the following chronology for comparative purposes:

10,000 - 6,000 B.C.: The Lake Mojave/San Dieguito Complex and/or Western Lithic Co-Tradition). Characterized by the presence of projectile points, large knives, scrapers, chopping tools, and scraper planes (Bettinger and Taylor 1974; Campbell and Campbell 1937; Rogers 1939; Davis et al. 1969). Items associated with vegetal food processing and hunting and the presence of a coniferous woodland and plu-vial lakes. (This tradition is not known to be represented in the Indio area).

6,000 B.C. - A.D. 500: Archaic or Pinto Armagosa periods (Wallace 1962: Bettinger and Taylor 1974; Weide and Barker 1974). Characterized by diagnostic projectile points, leaf shaped blades, choppers, and scraper planes. Some sites exhibit a small assemblage of milling stones. A shift in climate and vegetation les to a shift in exploitation with an emphasis on vegetal resources. (Likewise, these periods are not represented in the immediate area, but associated with other desert populations to the north).

A.D. 500 to Contact: (unnamed). Characterized by the presence of the bow and arrow (as opposed to darts), ceramics, and cremations. Milling tools increase, including mortars and pestles. There is evidence of limited agriculture and the appearance of Shoshonean-speakers displacing local Hokan-speaking populations (Wallace 1962:176). Sites are associated with the presence of Lake Cahuilla and the exploitation of resources directly associated with fresh water sources. This unnamed period is more directly associated with the presence of Native Americans in the Indio/La Quinta area and surrounding Cahuilla territories.

Initial contact with the Cahuilla occurred in the early 1800s (ca. 1823) with the Jose Romero Expedition through the Colorado Desert (Bean and Mason 1962). This expedition noted some agricultural activities conducted by the Cahuilla and including corn, beans, and squash. Wilke and Lawton (1975) suggest the presence of agriculture was a trait derived from contact with populations in Mexico (or the Greater Southwest).

U.S. Government surveys were completed in the 1850s and led to the identification of occupied Cahuilla villages. Shortly thereafter, Blake completed surveys for railroad development in 1856, which also resulted in the identification of village sites. By 1862, the Homestead Act opened government-owned lands for settlement through purchase, land trades, or homesteading. With respect to the San Gorgonio Pass, Gunther (1984:457-458) states:

> **SAN GORGONIO PASS.** Named for San Gorgonio Rancho (see), which occupied the entire pass areas. The pass as known to the Spaniards and Mexicans at least as early as 1815. When the first *jornada para sal*, of "journey for salt," set out from Los Angeles to secure a salt supply from what is now Salton Sea, but no name was recorded for it at the time (Guinn 1907-08, p. 169). Although existence of the pass and its name were undoubtedly known to American at an early date, the first mention of the pass by name in print has yet been found was in Lieut. E.O.C. Ord's November 6, 1849, report in which he called it "San Gorgona [sic] Pass … Long before the Spanish name was applied to the pass, the Indians had their name for it. According to legend, when the Indian tribes first came into this desert area from the west, so many people were trying to get through the pass, some of the smaller tribes decided to settle where they were. The Indians called this great gap (which measures 21 miles between two high peaks of San Gorgonio and San Jacinto) *Ha much cha vis ba*, meaning "the place where there were so many people trying to get through" (Patencio 1943, p. 100).

The San Gorgonio Rancho is described by Gunter (1984:458) as "… one of the 24 principal cattle ranchos or rancherias, as well as the most distant, belonging to San Gabriel Mission …". After several disputes over the ownership of the rancho, sales were recorded in the early 1850s and into the 1860s. Subdivision and continued sales were recorded into the early 1900s. However, in the eastern extent of Banning, sales of land were relatively late, with the Southern Pacific Railroad being granter Sections 11 and 15 in 1891 and sparse land holding in Section 10 and 14 by 1901. Bureau of Land Management records show no homesteading, land sales, or land trades. The City of Banning's website provides the following brief history of the City of Banning:

> The City of Banning is located in the San Gorgonio Pass, between Mt. San Gorgonio on the north and Mt. San Jacinto to the south in Riverside County, California. Various tribes of Indians, notably the Serano [sic] and Cahuilla, were well established in the region when Mexican and Spanish expedition reached the area around 1774. It is believed that a pre-historic lake existed here since a bone fossil of a Mastodon of the Pliocene Age was discovered in 1965 (Banning Daily Record, May 19, 1965). By 1824, the San Gabriel Mission Fathers established a branch of the Mission at the highest point in the Pass, along the foothills northwest of Banning, where they raised cattle, sheep and pursued land cultivation. By that time, the area was known as Rancho San Gorgonio, so named by the padres after St. Gorgonio, A Latin martyr.
>
> Banning has a rich and colorful history. The first white man to reach the area was Dr. Isaac Smith in 1853 who, according to recorded land documents, purchased from Paulino Weaver an undivided one-third interest from the Mexican Governor, Pio Pico. Dr. Smith brought his wife and seven children

to the rancho to live and built a house known as Smith's Station, which later became Highland Home and subsequently called Highland Springs.

The following year, Banning's first permanent landmark, Gilman Ranch adobe, was built. It was ultimately used as a stage stop by the Colorado Stage & Express Line founded by Alexander & Co. of Los Angeles on its route to the Colorado River in 1862, where gold had been discovered. The route ran through the foothills a half-mile north of downtown Banning, then north of Cabazon and Whitewater, which was the last stop before reaching Palm Springs (Dos Palmas). The railroad replaced the stagecoach in 1876, but Banning is still known as "STAGECOACH TOWN, U.S.A." and is famous for its annual Stagecoach Days Celebration featuring a parade, carnival and rodeo.

The City is named in honor of General Phineas T. Banning, who freighted over the Mormon trail from Salt Lake to San Bernardino and Los Angeles. General Banning also figures prominently in the history of the town of Wilmington, California. He developed a shipping company there between San Pedro and Los Angeles, as well as operating the stage line from Wilmington to Yuma, Arizona through the Banning Pass.

Smith Creek is named in honor of Isaac Smith, as is the local Smith Creek Park. The City of Banning was incorporated in 1913 and the eastern extent of the currently incorporated City was not significantly occupied prior to 1940. The 1940 US Census data identified the single family residence at 1487 E. Barbour Street (west of the current project area) as a 1910 residence occupied by Harry Nelson in 1940. This residence is credited to D. Frank Southworth (c. 1890), a local fruit grower (Barker 1983). No residences are identified to the east of this property until 1944, with the establishment of the single family residence at 1811 Wesley Street. The residence on Wesley Street is due west of P-33-16207, a historic landscape associated with the land once owned by Walter S. Hathaway, the first mayor of the City of Banning (ca. 1913). Hathaway (hence Hathaway Street) died in 1938, shortly after his property was acquired by the City of Banning – and where the Banning Airport was developed.

The Banning Airport was established in 1945 and is currently to the north of the project area. Commercial developments on the eastern side of S. Hathaway Street date primarily to the 1970s and the earliest residence is the 1970 residence at 1741 Wesley Street.

Research completed through the Bureau of Land Management General Land Office files confirmed the property associated with Township 3 South, Range 1 East, Section 11 was granted, along with other lands, to the Southern Pacific Railroad in 1891. As previously noted, the railroad was completed through the Banning/Beaumont area in 1876. The County Archives had no records for the specific project area until ca. 1933, but additional research confirmed Fernandez purchased the SE ¼ of the SW ¼ of Section 11 directly from the Railroad in 1929.

This acquisition was confirmed by the State of California in 1930. In 1933, the land was valued at $810, but there was no assessment for improvements, indicating the property was vacant.

Thomas Fernandez (Sr.) maintained ownership of the property until 1953, when it was transferred to Otillie and Thomas B. Fernandez, Jr. Research on Ancestry.com identified Otillie Fernandez as the widow of Thomas, Sr., and Thomas, Jr. was their son. In 1962, still owned by the Fernandez family, the property was assigned a parcel number (24-27-000-61). After 1962, the only record for the Fernandez family was in 1971, when they sold some property (not the current project area property) to the Mono Power Company, suggesting they also owned property in Mono County, California. The Fernandez family apparently lived in Contra Costa County, California, Thomas being born in 1888 and Otillie in 1896. Their son, Thomas, was born in 1921, and their daughter, Anita, in 1924.

There was no record of the Fernandez ownership in Banning readily identified. However, in 1975, the property was owned by Rubber Fabrications, Inc. of West Virginia (which eventually becomes HITCO). HITCO sold the property to Photo-Sonics, Inc. in 1979 and Photo-Sonics, Inc. sold the land to 2831 Bristol, LLC in 2005. In 2019, 2831 Bristol, LLC was still listed by the County as the legal owner of the property.

Regardless of ownership, there have been no recorded improvements to the property. A modern, open water tank (holding water) on the property and evidence of cattle indicates the property was leased for modest grazing, likely for vegetation control.

METHODOLOGY

To adequately investigate and address this project area for compliance with the California Environmental Quality Act, as amended, McKenna et al. completed the following tasks:

1. Archaeological Records Search: McKenna et al. completed a standard archaeological records search through the University of California, Riverside, Eastern Information Center, Riverside, California (Appendix B). This research included a review of previously completed projects within one mile of the project area; a review of the recorded cultural resources within one mile of the project area; a review of listings for the National Register of Historic Places, the California Register of Historical Resources, California Landmarks, and California Points of Historical Interest. Historic maps were also reviewed. The results are documented later in this report (see Previous Research).

2. Native American Consultation: McKenna et al. consulted with the Native American Heritage Commission as to the presence/absence of sacred or religious sites in the vicinity of the project area (Appendix C). McKenna et al. also sent letters, with the results of the records search, to those Native

American representatives identified by the Commission, requesting information on any issues, concerns, or resources they may be aware of and requested written responses. All correspondence and responses have been incorporated into this report, both in Appendix C and in a discussion presented later in this report.

3. Paleontological Overview: A paleontological overview was prepared by the Natural History Museum of Los Angeles County (McLeod 2019; Appendix D) and a review of the County GIS system records and previous research on file at McKenna et al. McKenna et al. applied the standard County policies and protocols in assessing the sensitivity of the project area for paleontological resources.

4. Historic Background Research: Historic background research was completed through a review of the Bureau of Land Management, General Land Office Records, the Riverside County Archives, Riverside County Assessor and Recorder files, and the McKenna et al. in-house library. Additional research was completed through the University of California, Riverside, Historic Map Library. McKenna et al. reviewed brief histories of the City of Banning and the San Gorgonio Pass. The US Census data was reviewed via Ancestry.com in an effort to identify owners and associations. Some additional resources were found on-line, while others were found in published references. Supplemental data is presented in Appendix E of this report.

5. Field Survey: The field survey was completed on March 7, 2019, by Jeanette A. McKenna, MA/RPA, and Principal Investigator for McKenna et al. McKenna was accompanied by Karen Kirkland, Biological Consultant, representatives of Lilburn Corporation (Natalie Patty and Giang T. Ngo), and a representative of the project proponent (Bill Lewis of Bremco Construction, Inc.

   Prior to the completion of the field survey, the archaeological records search reviewed to identify area of sensitivity or concern. To insure adequate coverage, the project area was systematically surveyed in paralleling transects averaging 15 meter intervals (walking east/west from the southern boundary). Areas of standing rain water were avoided. Overall, 95% (+) of the property was accessible for visual examination. Ground covered varied slightly, but the property was void of any significant impediments to an intensive level of survey. The surveyor carried a Garmin GPS unit to record any identified resources (NAD 27, converted to NAD 83). The survey was supplemented by field notes (on file, McKenna et al.) and a detailed photographic record (Appendix F).

6. Analysis: The analysis was dependent upon the nature of resources, if any, identified within the project area. In this case, the four main criteria pre-

sented in CEQA was used as a baseline, supplemented by the federal guidelines and criteria, as applicable. The federal and state criteria are presented below.

7. Report Preparation: This report was prepared in a format and with the data requirements consistent with the Office of Historic Preservation Archaeological Resource Management Report guidelines, the data requested by the University of California, Riverside, Eastern Information Center; and in a manner consistent with the County and local guidelines.

EVALUATION CRITERIA

The approach to the current research was designed to address the potential eligibility of any identified cultural resource for eligibility for the National Register of Historic Places (Section 106) and/or the California Register of Historic Resources (CEQA, as amended).

Federal Criteria

This level of investigation is based on the federal criteria presented in the Code of Federal Regulations 36 CRF 60.4, as follows:

> The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structure, and objects that possess integrity of locations, design, setting, materials, workmanship, feeling, and association, and:
>
> (a) That are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> (b) That are associated with the lives of persons significant in our past; or
>
> (c) That embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> (d) That have yielded, or may be likely to yield, information important in prehistory or history.

State Criteria

The state (**CEQA**, Section 15064.5) criteria for evaluation mirror the federal guidelines and read as follows:

For purposes of this section, the term “historical resources” shall include the following:

1) A resource listed in, or determined to be eligible by the State Historical Resources Commission, for listing in the California Register of Historical Resources (Pub. Res. Code §5024.1, Title 14 CCR, Section 4850 et seq.).

2) A resource included in a local register of historical resources, as defined in section 5020.1(k) of the Public Resources Code or identified as significant in an historical resource survey meeting the requirements section 5024.1(g) of the Public Resources Code, shall be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.

3) Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be an historical resource, provided the lead agency’s determination is supported by substantial evidence in light of the whole record. Generally, a resource shall be considered by the lead agency to be “historically significant” if the resource meets the criteria for listing on the California Register of Historical Resources (Pub. Res. Code§5024.1, Title 14 CCR, Section 4852) including the following:

   A) Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;

   B) Is associated with the lives of persons important in our past;

   C) Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or

   D) Has yielded, or may be likely to yield, information important in prehistory or history.

Local (Banning) Criteria

The County of Riverside and City of Banning defer to the state guidelines and, therefore, the same criteria apply in assessing resources.

In this case, the 2006 General Plan presents the City's policy. It reads:

> According to Public Resources Code Section 5020.1, "historical resources" include but are not limited to an object, building site, area, place, record, or manuscript which is historically or archaeologically significant. This definition also applies to architectural, engineering scientific, economic agricultural, educational, social, political, military, or cultural annals of California.
>
> The California Environmental Quality Act identifies the manner in which the City must review and address issues related to archaeological and historic resources. The CEQA Guidelines state that the term "historical resources" applies to any such resources listed in or determined to be eligible for listing in the California Register of Historical Resources. The relevant criteria for determining significance are briefly described below.
>
> 1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage.
>
> 2. Is associated with the lives of persons important in our past.
>
> 3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values.
>
> 4. Has yielded, or may be likely to yield, information important in prehistory or history.
>
> As the lead agency, the City of Banning is obligated to assure that every reasonable effort is made to locate, identify, and evaluate archaeological, historical and cultural sites within its jurisdiction. As the community continues to develop, opportunities for documenting and preserving archaeological and historic sites and artifacts will decrease. The City should encourage the research and registration of appropriate sites and structures within its jurisdiction in order to maintain its important traditions and heritage for future generations.

PREVIOUS RESEARCH

McKenna et al. completed a standard archaeological records search through the University of California, Riverside, Eastern Information Center, Riverside (UCR-EIC; Appendix B). This research covered an area of one mile around the current project area (and a bit more), including areas north of the I-10 corridor and in the historic community of Banning. Here, the majority of resources were identified as standing structures. McKenna et al. emphasized those resources located south of I-10 and more applicable the current project

area. As summarized by the UCR-EIC, records identified a minimum of 66 studies completed within the one mile research radius. Two additional studies involved a long, linear transmission line alignment and the Banning General Plan, resulting in 68 reports. These studies are listed in Table 1. Some reports for 2017-2019 are not included.

Table 1. Summary of Studies Completed within One Mile of the Project Area.

Ct.	Report No.	Citation	Description	Res.
1	RI-00002	Rogers 1953	Misc. Field Notes	
2	RI-00133	King et al. 1974	SCE Devers-Vista Trans. Line	
3	RI-00161	Greenwood 1975	West Coast-Midwest Pipeline	
4	RI-00221	Carrico et al. 1982	SCE Palo Verde to Devers Line	34
5	RI-00988	Baker & Schlanger 1974	SCE Devers-Vista 200kV Line	8
6	RI-00989	Wildesen 1974	SCE Kailarowitz Trans. Line	
7	RI-00990	Baker 1974	SCE Kailarowitz Trans. Line	8
8	RI-01004	Rector & Wilke 1980	Devers-Valley-Vista Trans. Line	7
9	RI-01476	Napton & Grerathouse 1982	Morongo Indian Reservation	1
10	RI-01837	Bouscaren & McCarthy 1984	Devers-Valley Trans. Line	13
11	RI-01955	Heller et al. 1977	Sundesert Nuclear Trans. Sys.	
12	RI-01964	Yohe 1985	San Gorgonio Pass	1
13	RI-01965	LSA Associates, Inc. 1991	Cobblestone Tract No. 26460	
14	RI-01998	Compton 1986	Route 243	
15	RI-02094	Chambers Group, Inc. 1987	Beaumont Concrete Company	1
16	RI-02210	Underwood et al. 1986	US Telecom Fiber Optics Line	13
17	RI-02350	Apple & Wooley 1988	Rialto to El Paso Pipeline	11
18	RI-03014	Hogan 1992	Morongo Reservation Pipeline	
19	RI-03999	McDonald et al. 1996	Smith Creek Park, Banning	2
20	RI-04077	Dillon 1998	Banning Wastewater Facility	
21	RI-04119	Mason et al. 1998	PacBell Cell Tower Site	
22	RI-04427	Self 2000	UPRR Corridor Improvements	2
23	RI-04428	Drover 1990	Morongo Indian Reservation	
24	RI-04430	Jones & Stokes Assoc. 2000	Williams Comm. Fiber Optics	10
25	RI-04762	Barker & Huston 1990	Historic Mining Summary	
26	RI-04777	Padon 2003	Smith Correctional Facility	
27	RI-05032	McKenna 2005	140 Acre Survey	
28	RI-06098	Dice 2005	Parcel at Hathaway and Wesley	
29	RI-06099	Taniguchi 2004	Sprint Cell Tower Site	
30	RI-06707	McDougall et al. 2008	Devers-Palo Verde Trans. Line	43
31	RI- 06853	Pollack & Lerch 2005	Transmission Line Alignments	9
32	RI-07101	Patterson 2007	SCE Pole Replacements	
33	RI-07215	Holmes & Rockman 2007	115 Acres in Banning	
34	RI-07216	Hudlow 2007	APN 541-10-024 and -025	2
35	RI-07339	Tang et al. 2007	Wastewater Treatment Facility	2
36	RI-07751	Beedle 2008	Banning Substation Area	68
37	RI-07970	McLean et al. 2006	Oak Valley Substation Project	68
38	RI-08011	McLean et al 2008	Oak Valley Substation Project	
39	RI-08012	McLean et al. 2008	Oak Valley Substation Project	58

Table 1. Summary of Studies Completed within One Mile of the Project Area (cont'd.).				
Ct.	Report No.	Citation	Description	Res.
40	RI-08246	Jacquemain et al. 2009	DHHS Property Survey	
41	RI-08281	Billat 2009	Cell Tower Study	
42	RI-08299	Sander 2010	SCE Pole Replacement	
43	RI-08300	Brock 2010	Cabazon Stockpile Site	
44	RI-08374	Eckhardt et al. 2009	Devers to Valley Substation	35
45	RI-08409	Eckhardt et al. 2004	Vista to Devers Trans. Line	11
46	RI-08423	Crouthamel 1994	Morongo Indian Reservation	
47	RI-08449	Hogan et al. 2004	Banning General Plan	
48	RI-08531	Tang 2011	APN 541-183-004	
49	RI-08668	Bonner & Said 2012	Cell Tower Study	
50	RI-08839	Bonner & Williams 2012	Cell Tower Study	
51	RI-08849	Tang et al. 2012	Vista Montana Apartments	1
52	RI-08890	Gust et al. 2011	Archaeological Monitoring	
53	RI-08972	DeCarlo 2013	SCE Pole Replacement	
54	RI-08978	DeCarlo 2013	SCE Devers-Palo Verde Line	
55	RI-08981	DeCarlo et al. 2013	Devers-Palo Verde Trans. Line	22
56	RI-09167	McLean et al. 2013	West of Devers Project	49
57	RI-09303	Hoffman 2014	Morongo Indian Res. Gas Line	
58	RI-09385	De Carlo & Winslow 2015	Devers Upgrade Project	
59	RI-09403	Morgan 2014	SCE Pole Replacement	
60	RI-09570	DeCarlo et al. 2015	West of Devers Upgrade Proj.	
61	RI-10004	George 2017	Smith Correctional Facility	
62	RI-10014	Borkan & Clark 2017	Lions Park Expansion	
63	RI-10104	George 2017	Smith Correctional Facility	
64	RI-10130	Brunzell 2017	Three APN Survey	
65	RI-10154	Thomas 2017	Ramsey St. Pavement Rehab.	
66	RI-10157	Williams & Belcourt 2014	SCE Devers Upgrade	22
67	RI-10346	George et al. 2017	Banning Distribution Center	3
68	RI-10461	Eckhardt et al. 2015	Devers-Palo Verde Monitoring	26

Of the studies listed on Table 1, only three involved all or part of the project area. Specifically, RI-08449 (Hogan et al. 2004) was an overview used as the basis for the General Plan discussion. Report RI-06853 (Pollack and Lerch 2005) addressed the transmission alignment running along E. Westward Avenue and the southern boundary of the project area. Report RI-10346 (George et al. 2017) involved monitoring along the Devers-Palo Verde transmission line monitoring, also along E. Westward Avenue. No surveys or studies, other than the General Plan overview, specifically involved the current project area.

As a results of the studies completed and listed in Table 1, the UCR-EIC identified a minimum of 210 cultural resources, the majority of which are historic structures located north of the I-10 corridor. The resources identified south of I-10 and west of Hathaway Street area also dominated by historic structures. Resources identified as a result of the records search are listed in Table 2.

Table 2. Selected Cultural Resources Identified in the Vicinity of the Project Area.			
Primary No.	Trinomial	Citation	Description
P-33-000057	CA-RIV-57	Johnston and Johnston 1954; Sutton and Arkush 1984	Rock Shelter and Artifacts
P-33-000254	CA-RIV-254	Johnson & Johnson 1962	Ceramic Scatter
P-33-000372	CA-RIV-372	Johnston 1966; Rector 1980	Village Site
P-33-000373	CA-RIV-373	Johnston 1966; Rector 1980	Village Site
P-33-001398	CA-RIV-1398	Waldron 1976	Bedrock Milling Station
P-33-001399	CA-RIV-1399	Morin & Waldron 1976	Bedrock Milling Station
P-33-001400	CA-RIV-1400	Morin & Waldron 1976	Bedrock Milling Station
P-33-001401	CA-RIV-1401	Morin & Lerch 1976	Bedrock Milling Station
P-33-001402	CA-RIV-1402	Morin & Waldron 1976	Bedrock Milling Station
P-33-001403	CA-RIV-1403	Morin & Waldron 1976	Bedrock Milling Station
P-33-003443	CA-RIV-3443	Apple et al. 1988; McDougall & Mills 2016	Historic Refuse Scatter
P-33-007879		Selder 1991	54 25 S. San Gorgonio Ave.
P-33-007885	CA-RIV-5847	McDonald and Rodarte 1996; Wilson 2006	Prehistoric Rock Art Site
P-33-007886	CA-RIV-5848-H	McDonald and Rodarte 1996	Prehistoric and Historic Site
P-33-008332		Barker 1983	70 E. Barbour St.
P-33-008333		Barker 1983	225 E. Barbour St.
P-33-008334		Barker 1983; Marvin and Carmack 2005	391 E. Barbour St.
P-33-008335		Rutherford 1983	434 E. Barbour St.
P-33-008336		Barker 1983	451 E. Barbour St.
P-33-008337		Barker 1982	933 E. Barbour St.
P-33-008338		Barker 1983	1487 E. Barbour St.
P-33-008345		Rutherford 1983	215 E. George St.
P-33-008346		Rutherford 1983	272 E. George St.
P-33-008347		Rutherford 1983	779 E. George St.
P-33-008350		Barker 1983	1228 S. Hargrave St.
P-33-008352		Barker 1983	322 E. John St.
P-33-008355		Warner 1983	324 N. Murray St.
P-33-008356		Barker 1983	150 E. Ramsey St.
P-33-008357		Rutherford 1983	84 W. Ramsey St.
P-33-008360		Warner 1983	101E. Nicolet St. (BHS)
P-33-008362		Barker 1983	40 S. San Gorgonio Ave.
P-33-008363		Barker 1983	717 S. San Gorgonio Ave.
P-33-008399		Barker 1983	132 E. Wesley St.
P-33-008400		Barker 1983; Marvin and Carmack 2005	270 E. Wesley St.
P-33-009108		Barker 1983	160 N. 1st St.
P-33-009124		Starratt 1984	94 King St.

Table 2. Selected Cultural Resources Identified in the Vicinity of the Project Area (cont'd).			
Primary No.	Trinomial	Citation	Description
P-33-009125		Barker 1984	58 W. King St.
P-33-009132		Barker 1984	141 N. San Gorgonio Ave.
P-33-009134		Starratt 1984	25 S. San Gorgonio Ave.
P-33-009140		Starratt 1984	978 N. 1st St.
P-33-009163		Rounds 1985	65 N. San Gorgonio Ave.
P-33-009165		Rounds 1985	137 N. San Gorgonio Ave.
P-33-009167		Ruiz 1986 (?)	1111 N. San Gorgonio Ave.
P-33-009177		Ruiz 1986	SFR; Number Voided
P-33-009498	CA-RIV-6381-H	AShkar 1999; Taniguchi 2009; Wilson & Chimel 2009; Kremkau 2012	SPRR
P-33-012425		Unknown	Historic (Unknown)
P-33-012626		Unknown	Historic Refuse
P-33-015035		Brock 1998; Brunzell 2006; Davidson et al. 2012; Treffers 2013; Becker & Treffers 2013 & 2014	Transmission Line
P-33-015102	CA-RIV-9192	McDougall & McLean 2006; Wilson & Chimel 2009	Foundation and Refuse
P-33-015103		McDougall & McLean 2006; Wilson & Chimel 2009	Road Alignment
P-33-015104	CA-RIV-9191	McDougall & McLean 2006; Wilson & Chimel 2009	Bedrock Milling Station
P-33-015183		Marvin & Carmack 2005	371 E. Wesley St.
P-33-015184		Marvin & Carmack 2005	315 E. Wesley St.
P-33-015185		Marvin & Carmack 2005	291 E. Wesley St.
P-33-015186		Marvin & Carmack 2005	243 E. Wesley St.
P-33-015187		Marvin & Carmack 2005	185 E. Wesley St.
P-33-015188		Marvin & Carmack 2005	475 E. Charles St.
P-33-015189		Marvin & Carmack 2005	390 E. Barbour St.
P-33-015190		Marvin & Carmack 2005	391 E. Barbour St.
P-33-015191		Marvin & Carmack 2005	421 E. Barbour St.
P-33-015192		Marvin & Carmack 2005	390 E. Ramsey St.
P-33-015193		Marvin & Carmack 2005	402 E. Ramsey St.
P-33-019194		Marvin & Carmack 2005	381 E. Williams St.
P-33-015195		Marvin & Carmack 2005	403-411 E. Williams St.
P-33-015196		Marvin & Carmack 2005	380 E. Nicolet St.
P-33-015197		Marvin & Carmack 2005	416 Drury Lane
P-33-015198		Marvin & Carmack 2005	436 Drury Lane
P-33-015199		Marvin & Carmack 2005	464 Drury Lane
P-33-015200		Marvin & Carmack 2005	494 Drury Lane
P-33-015208		Marvin & Carmack 2005	370 E. George St.
P-33-015209		Marvin & Carmack 2005	355 E. George St.
P-33-015210		Marvin & Carmack 2005	418 E. George St.
P-33-015211		Marvin & Carmack 2005	417 E. George St.

Table 2. Selected Cultural Resources Identified in the Vicinity of the Project Area (cont'd).			
Primary No.	Trinomial	Citation	Description
P-33-015212		Marvin & Carmack 2005	388 E. Hoffer St.
P-33-015213		Marvin & Carmack 2005	385 E. Hoffer St.
P-33-015214		Marvin & Carmack 2005	1250 N. Allesandro St.
P-33-015215		Marvin & Carmack 2005	1190 N. San Gorgonio Ave.
P-33-015216		Marvin & Carmack 2005	53 W. Gilman St.
P-33-015217		Marvin & Carmack 2005	56 W. Gilman St.
P-33-015228		Marvin & Carmack 2005	1212 N. San Gorgonio Ave.
P-33-015229		Marvin & Carmack 2005	1221 N. San Gorgonio Ave.
P-33-015230		Marvin & Carmack 2005	73 W. Gilman St.
P-33-015231		Marvin & Carmack 2005	99 W. Gilman St.
P-33-015290		Marvin & Carmack 2005	482 Drury Lane
P-33-015293		Pollock 2005	Historic Refuse
P-33-015294		Pollock 2005	Historic Refuse
P-33-015655		Wilson 2006	Bedrock Milling Station
P-33-015678		Wilson 2006	Bedrock Milling Station
P-33-015760		Wilson 2005	Isolated Metate
P-33-015806		Tibbet 2006	Commercial Structure
P-33-015843		Avon & Ewers 2007	Engineering Structure
P-33-015847	CA-RIV-8227	Hudlow 2007	Historic Foundation
P-33-016025		Hudlow 2007	Engineering Structure
P-33-016026		Wilson 2007	Ancillary Structure
P-33-016027		Wilson 2007	Bedrock Milling Station
P-33-016207		Smallwood 2007	Historic Landscape
P-33-016208	CA-RIV-8364	George & Hintzman 2007; Smallwood 2007; Moslak & Moloney 2017	Historic Refuse Scatter
P-33-016545	CA-RIV-8691	Goodman et al. 2006	Transmission Line
P-33-016546	CA-RIV-8692	Goodman et al. 2006	Historic Quarry
P-33-016547	CA-RIV-8693	Goodman et al. 2006	Prospecting Pits (3)
P-33-016857		George & Beedle 2007	219 Allent St.
P-33-016858		George & Beedle 2007	1213 N. Blanchard St.
P-33-016859		George & Beedle 2007	1237 N. Blanchard St.
P-33-016860		George & Beedle 2007	1247 N. Blanchard St.
P-33-016861		George & Beedle 2007	1263 N. Blanchard St.
P-33-016862		George & Beedle 2007	1281 N. Blanchard St.
P-33-016863		George & Beedle 2007	1294 N. Blanchard St.
P-33-016880		George & Beedle 2007	221 Cherry St.
P-33-016881		George & Beedle 2007	1188 N. Cherry St.
P-33-016882		George & Beedle 2007	1189 N. Evans St.
P-33-016883		George & Beedle 2007	1073 E. Gilman St.
P-33-016884		George & Beedle 2007	Church, E. Gilman St.
P-33-016886		George & Beedle 2007	275 N. Hathaway St.
P-33-016887		George & Beedle 2007	331-333 N. Hathaway St.
P-33-016888		George & Beedle 2007	447 N. Hathaway St.
P-33-016889		George & Beedle 2007	947 N. Hathaway St.

Table 2. Selected Cultural Resources Identified in the Vicinity of the Project Area (cont'd).			
Primary No.	Trinomial	Citation	Description
P-33-016890		George & Beedle 2007	981 N. Hathaway St.
P-33-016892		George & Beedle 2007	1582 E. Nicolet St.
P-33-016893		George & Beedle 2007	170 S. Phillips Ave.
P-33-016894		George & Beedle 2007	228 N. Phillips Ave.
P-33-016913		George & Beedle 2007	985 E. Williams St.
P-33-016914		George & Beedle 2007	1138 E. Williams St.
P-33-016915		George & Beedle 2007	1209 E. Williams St.
P-33-016916		George & Beedle 2007	1130 to 1370 E. Williams St.
P-33-016917		George & Beedle 2007	1367 E. Williams St.
P-33-016918		George & Beedle 2007	1389 E. Williams St.
P-33-016919		George & Beedle 2007	1420-1424 E. Williams St.
P-33-016920		George & Beedle 2007	1467 E. Williams St.
P-33-016921		George & Beedle 2007	1477 E. Williams St.
P-33-016922		George & Beedle 2007	1501 E. Williams St.
P-33-016923		George & Beedle 2007	1537 E. Williams St.
P-33-016924		George & Beedle 2007	1561 E. Williams St.
P-33-016951		Wilson 2008	Rock Shelter w/Cupules
P-33-016961		Wilson 2008	Bedrock Milling Station
P-33-016963		Wilson & Wilson 2008	Bedrock Milling Station
P-33-016964		Wilson 2008	Rock Shelter w/Mano
P-33-016965		Marvin & Carmack 2005	1114 N. Allesandro St.
P-33-017577	CA-RIV-9112	Chimel & Wilson 2008	Bedrock Milling Station
P-33-017581	CA-RIV-9114	Tsunoda & Chimel 2008	Bedrock Milling Station
P-33-017585	CA-RIV-9116	DeGiovine et al. 2008	Bedrock Milling Station
P-33-017592	CA-RIV-9120	Wilson and Chmiel 2008	Bedrock Milling Station
P-33-017593	CA-RIV-9121	Wilson and Chmiel 2008	Bedrock Milling Station
P-33-017594	CA-RIV-9122	Wilson and Chmiel 2008	Bedrock Milling Station
P-33-018018	CA-RIV-9264	Brock 2010	Water Canal/Aqueduct
P-33-018645		Justus & Mengers 2010	Historic Refuse
P-33-018646		Justus & Mengers 2010	Historic Refuse
P-33-018647		Justus & Mengers 2010	Historic Refuse
P-33-020324		DeGiovine 2012	Isolated Ground Stone
P-33-022105	CA-RIV-11325	DeCarlo 2012	Historic Foundation
P-33-022289		McLean et al. 2013	Isolate (unknown)
P-33-022294		Goodwin et al. 2012	Isolate (unknown)
P-33-022295		Goodwin et al. 2012	Isolate (unknown)
P-33-022296		Goodwin et al. 2012	Isolate (unknown)
P-33-022297		Goodwin et al. 2012	Isolate (unknown)
P-33-022305		Goodwin et al. 2012	Isolate (unknown)
P-33-022342		McLean et al. 2013	Isolate (unknown)
P-33-022346	CA-RIV-11396	McLean et al. 2013	Water Conveyance System
P-33-022376	CA-RIV-11428	Goodwin et al.	Mining Site
P-33-022387	CA-RIV-11438	Miller 2013	Historic Refuse Scatter
P-33-022388	CA-RIV-11439	Miller 2013	Historic Refuse Scatter
P-33-023484		LSA Associates 2013	Transmission Line

Table 2. Selected Cultural Resources Identified in the Vicinity of the Project Area (cont'd).			
Primary No.	Trinomial	Citation	Description
P-33-023524		LSA Associates 2013	Historic Building (SFR)
P-33-023532		LSA Associates 2013	Historic Building (SFR)
P-33-023533		LSA Associates 2013	521 E. Ramsey St.
P-33-023534		LSA Associates 2013	553 E. Ramsey St.
P-33-023535		LSA Associates 2013	635 E. Ramsey St.
P-33-023536		LSA Associates 2013	685 E. Ramsey St.
P-33-023537		LSA Associates 2013	719 E. Ramsey St.
P-33-023538		LSA Associates 2013	257 N. Hargrave St.
P-33-023539		LSA Associates 2013	281 N. Hargrave St.
P-33-023541		LSA Associates 2013	477 N. Hargrave St.
P-33-023542		LSA Associates 2013	531 N. Hargrave St.
P-33-023543		LSA Associates 2013	535 N. Hargrave St.
P-33-023544		LSA Associates 2013	565 N. Hargrave St.
P-33-023545		LSA Associates 2013	Historic Building (SFR)
P-33-023546		LSA Associates 2013	Historic Building (SFR)
P-33-023547		LSA Associates 2013	725 N. Hargrave St.
P-33-023548		LSA Associates 2013	777 N. Hargrave St.
P-33-023549		LSA Associates 2013	853/883 N. Hargrave St.
P-33-023550		LSA Associates 2013	425 E. Livingston St.
P-33-023551		LSA Associates 2013	Historic Building (SFR)
P-33-023552		LSA Associates 2013	Historic Building (SFR)
P-33-023553		LSA Associates 2013	765 E. Williams St.
P-33-023554		LSA Associates 2013	Historic Building (SFR)
P-33-023555		LSA Associates 2013	Historic Building (SFR)
P-33-023556		LSA Associates 2013	1161 N. Hargrave St.
P-33-023557		LSA Associates 2013	1185 N. Hargrave St.
P-33-023558		LSA Associates 2013	1233 N. Hargrave St.
P-33-023559		LSA Associates 2013	1277-93 N. Hargrave St.
P-33-023560		LSA Associates 2013	Historic Building (SFR)
P-33-023565		LSA Associates 2013	1205 E. Gilman St.
P-33-023571		LSA Associates 2013	Historic Building (SFR)
P-33-023587		LSA Associates 2013	779 E. Wilson St.
P-33-023917		Hoffman 2014	Isolate (unknown)
P-33-024005	CA-RIV-11798	Noah et al. 2014	Farm/Ranch with Well (+)
P-33-024006	CA-RIV-11799	Noah et al. 2014	Water Conveyence System
P-33-024008	CA-RIV-11800	Noah et al. 2014	Farm/Ranch with Refuse
P-33-024009	CA-RIV-11801	Noah et al. 2014	Historic Refuse
P-33-024108		Noah 2014	Historic Building (SFR)
P-33-024109		Noah 2014	Historic Building (SFR)
P-33-024110		Noah 2014	1910 E. Westward Ave.
P-33-024111		Noah 2014	1952 E. Westward Ave.
P-33-024112		Noah 2014	1990 E. Westward Ave.
P-33-024163		Noah & Gross 2014	770 S. Hathaway St.
P-33-024164		Noah & Gross 2014	700 S. Hathaway St.
P-33-024895		Moslak & Moloney 2017	200 S. Hathaway St.

Table 2. Selected Cultural Resources Identified in the Vicinity of the Project Area (cont'd).			
Primary No.	Trinomial	Citation	Description
P-33-026820		George et al. 2017	Historic Structure
P-33-026821		Moslak & Moloney 2017	Historic Structure
P-33-026822		George et al. 2017	Historic Structure
P-33-028614		McKenna 2018	Copa-Maricopa Trail

Despite the significant number of resources recorded within the one mile radius of the current project area, including prehistoric and historic period resources, none were identified as being within the current project area. The resources identified on the periphery of the project area are listed in Table 3.

Table 3. Resources in the Immediate Vicinity of the Project Area.		
Primary No.	Citation	Description
P-33-003443	Apple et al. 1988; McDougall and Mills 2016	Historic Refuse
P-33-015293	Pollock 2005	Historic Refuse
P-33-015294	Pollock 2005	Historic Refuse
P-33-024108	Noah 2014	820 S. Hathaway St.
P-33-024109	Noah 2014	1750 E. Westward Ave.
P-33-024110	Noah 2014	1910 E. Westward Ave.
P-33-024111	Noah 2014	1952 E. Westward Ave.
P-33-024112	Noah 2014	1990 E. Westward Ave.
P-33-024163	Noah and Gross 2014	770 S. Hathaway St.
P-33-024164	Noah and Gross 2014	700 S. Hathaway St.
P-33-024895	Applied EarthWorks 2016	Banning Airport
P-33-026820	Moslak and Moloney 2017	Historic Structure
P-33-026821	George et al. 2017; Moslak and Moloney 2017	Historic Structure

In addition to the resources listed above, the records search also identified two resources (P-33-008364 and P-33-016207) without benefit of the site summaries. P-33-08364 appears to be a relatively large, amorphous site located east of the project area (> ½ mile east) and possibly a prehistoric resource. P-33-016207 is a short road alignment tentatively equated with a segment of Scott Road located south of E. Westward Avenue (and not directly aligned with the segment north of E. Westward Avenue). In either case, these resources are not within or adjacent to the project area, but sufficiently separated to avoid any impacts.

Resources of more immediate concern are P-33-024895 (Banning Airport), P-33-026820 (Historic Structure/Transmission Line), and P-33-026821 (Historic Structure). The proposed project involves improvements and right-of-way acquisition along E. Westward Avenue. The UCR-EIC records search confirmed none of the three resources are listed in local, state, or federal listings of significant resources. As such, no adverse impacts are expected. The Airport will be avoided by design and property limits. The road alignment and transmission line alignment will be in the immediate vicinity of the improvements, but no adverse impacts are anticipated.

PALEONTOLOGICAL OVERVIEW

A paleontological overview was completed for this general area in 2019 (Appendix D) and summarized the area of the current project area as consisting of younger alluvial deposits originating from the nearby mountains (to the north) via the San Gorgonio River. These younger deposits cap older, finer-grained, older alluvial deposits that may be associated with fossil remains. However, no such remains have been identified in this immediate area. Fossil specimens have been recovered from the San Jacinto Valley, Mount Eden area, and along Jackrabbit Trail, as well as Palm Springs and Seven Palms Valley. Nonetheless, the County records have identified this immediate area as having a low potential for the presence of fossil specimens.

Presently, the proposed project will involve grading between 5 and 8 feet below the present surface of the property. Per County guidelines, any excavations exceeding 8 feet below surface should be monitored for paleontological resources. In this case, such monitoring does not appear necessary. However, should excavations exceed 8 feet below surface or older alluvium is identified in shallower contexts, the initiation of a paleontological monitoring program is recommended and conducted in a manner consistent with local/County policies and guidelines.

RESULTS OF THE INVESTIGATION

The research for this study was initiated in January of 2019, and completed in March, 2019. The field survey was completed on March 7, 2019, following receipt of the archaeological records search, Native American Heritage Commission consultation, and land use research at the Riverside County Archives.

The survey was completed on a clear day, following recent rains. Small portions of the property had standing water, but overall, the entire project area was available for visual inspection. The property was accessed from E. Barbour Street, while the remainder of the property was fenced. The property was covered by a modest amount of grass, but there were no significant impediments to observation of the ground surface. The survey was completed at an intensive level. There were surface rocks exposed by erosion and at least two major erosion drainages (one in the southeastern corner of the property and one near the western boundary, near E. Barbour Street). These drainages allowed for a examination of the property's shallow substrate. Backdirt from rodent burrows and the surface rocks were also examined for the presence of artifacts or ecofacts.

As a result of the archaeological records search, the general area was determined to be sensitive for both prehistoric and historic resources. The background research also confirmed the property was not improved via any structural improvements or agricultural activities. Since being purchased from the Southern Pacific Railroad in 1927, the property had one main owner (Thomas Fernandez) during historic times (pre-1970) and has changed hands numerous times since the early 1970s. More recently, the property was used for limited cattle grazing, which also allowed for weed abatement.

In general, based on known resources in the area, prehistoric resources may be found in the form of bedrock milling stations, lithic scatters, ceramic scatters, or isolated artifacts. Historic resources would likely be identified in the form of refuse scatters or isolates. Remnants of structures was not anticipated.

As a result of the intensive survey, no evidence of prehistoric or historic resources was identified. The property yielded some evidence of modern materials: the watering tank and associated piping (coming from the property to the west); a few isolated fragments of metal; a few isolated fragment of concrete; two wooden signs; and evidence of an overgrown dirt road. None of these resources are considered historically significant. The property should be considered clear of any potentially significant cultural resources.

No evidence of paleontological resources was identified during the recent survey. Overall, the project area is not considered particularly sensitive for paleontological resources and the proposed impacts should not exceed eight feet below the surface. While the area is considered to be clear of any potentially significant paleontological specimens, impacts to older alluvial deposits may result in the identification of such resources. Given County policies, should site-preparation excavations exceed eight feet below the present surface and/or evidence of older alluvium is identified in shallower contexts, the proponent should have a paleontological monitor on-call to complete paleontological monitoring in areas deemed sensitive.

Native American consultation, not at a level compliant with B-18 or AB-52, was initiated by McKenna et al. As of this writing, McKenna et al. has received three responses to the nineteen requests sent to local representatives, including: the San Manuel Band of Mission Indians; the Agua Caliente Band of Cahuilla Indians; and the Augustine Band of

Cahuilla Indians. The San Manuel Band of Mission Indians noted the area was outside the traditional territory of the Serrano. In the case of the two Cahuilla responses, they acknowledged the property with within the traditional territory of the Cahuilla, but had no specific concerns. The Agua Caliente Band of Cahuilla Indians referred the matter to the Morongo Band of Mission Indians. Subsequent consultation is the responsibility of the City of Banning representatives.

FINDING OF FACT

No significant cultural resources or paleontological resources were identified within the current project rea. However, it is noted there is always a potential for buried resources. In the case of archaeological resources, the potential for historic resources is very low. The potential for prehistoric resources is greater, but not highly likely. Paleontological resources would only be present if older alluvium extended into the project area. At this time, it is unlikely the limited grading and compaction activities will exceed the relative depth of the younger alluvium and, therefore, unlikely to yield evidence of paleontological specimens. **Overall, the project area is considered clear of any potentially significant cultural or paleontological resources.**

RECOMMENDATIONS

Based on the findings presented above, McKenna et al. recommends the proponent have a paleontological consultant on-call to address any issues that may arise as a result of the proposed excavations and/or impacts to older alluvial deposits. If excavations extent into older alluvial deposits, the paleontological consultant should conduct a limited paleontological monitoring program to insure the adequate and professional management of the resources. If paleontological specimens are identified, they should be handled in a manner consistent with professional standards and in accordance with local policies and guidelines (e.g. the County of Riverside or the Western Center).

No prehistoric or historic cultural resources were identified within the project area. The property should be considered clear of any potentially significant cultural resources. If, however, any previously unidentified resources are uncovered during site preparation activities, an archaeological consultant should be on-call to evaluate the find(s) and, if deemed necessary, conduct archaeological monitoring, as applicable. If the remains are of Native American origin, a representative of the Native American community (e.g. Morongo) should be included in the program. All professional policies and guidelines must be followed.

If, at any time, evidence of human remains (or potentially human remains) is identified, the County Coroner must be contacted immediately and permitted to inspect the find. If the remains are determined to be of Native American origin, the Coroner with notify the Native American Heritage Commission and the Commission with identify the Most Likely Descendent (MLD). In consultation with the MLD, City, and archaeological consultant,

the disposition of the remains will be determined. Any costs incurred related to the remains will be borne by the project proponent.

CERTIFICATION

CERTIFICATION. I hereby certify that the statements furnished above and in the attached exhibits present the data and information required for this archaeological/cultural resources report, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

Jeanette A. McKenna _____ March 26, 2019

Jeanette A. McKenna, Principal Investigator, McKenna et al. Date
Riverside County Registration No. 161

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Appendix D

Estes Banning

ENERGY ANALYSIS

CITY OF BANNING

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SEPTEMBER 17, 2019

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LIST OF ABBREVIATED TERMS

(1)	Reference
AQIA	Air Quality Impact Analysis
ARB	Air Resources Board
BACM	Best Available Control Measures
BEU	Banning Electric Utility
CalEEMod	California Emissions Estimator Model
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resources Board
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CITY	City of Banning
CPUC	California Public Utilities Commission
DMV	Department of Motor Vehicles
EMFAC	Emissions Factor
FERC	Federal Energy Regulatory Commission
GWh	Gigawatt Hour
HHDT	Heavy-Heavy-Duty Trucks
HP-HR/GAL	Horsepower-Hour Per Gallon
I-10	Interstate 10
IEPR	Integrative Energy Policy Report
ISO	Independent Service Operator
ISTEA	Intermodal Surface Transportation Efficiency Act
LDA	Light Duty Auto
LDT1/LDT2	Light Duty Trucks
LHDT	Light-Heavy-Duty Trucks
MDV	Medium Duty Vehicles
MHDT	Medium-Heavy-Duty Trucks
MPG	Miles Per Gallon
MPO	Metropolitan Planning Organization
PG&E	Pacific Gas and Electric
Project	Estes Banning
SCAB	South Coast Air Basin
SCAG	Southern California Association of Governments
SCPPA	Southern California Public Power Authority
SDG&E	San Diego Gas and Electric
SF	Square Feet

SoCalGas	Southern California Gas
TAC	Toxic Air Contaminants
TEA-21	Transportation Equity Act for the 21st Century
TIA	Traffic Impact Analysis
VMT	Vehicle Miles Traveled

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EXECUTIVE SUMMARY

ES.1 SUMMARY OF FINDINGS

The results of this *Estes Banning Energy Analysis* is summarized below based on the significance criteria in Section 3 of this report consistent with Appendix G of the California Environmental Quality Act (CEQA) Guidelines (1). Table ES-1 shows the findings of significance for potential energy impacts under CEQA.

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
Energy Impact #1: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation.	5.0	*Less Than Significant*	*n/a*
Energy Impact #2: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency.	5.0	*Less Than Significant*	*n/a*

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1 INTRODUCTION

This report presents the results of the energy analysis prepared by Urban Crossroads, Inc., for the proposed Estes Banning (Project). The purpose of this report is to ensure that energy implication is considered by the City of Banning, as the lead agency, and to quantify anticipated energy usage associated with construction and operation of the proposed Project, determine if the usage amounts are efficient, typical, or wasteful for the land use type, and to emphasize avoiding or reducing inefficient, wasteful, and unnecessary consumption of energy.

1.1 SITE LOCATION

The proposed Estes Banning site is located on the northwest corner of Westward Avenue and Scott Street in the City of Banning, as shown on Exhibit 1-A. The Project site is currently vacant. An existing residential use in the Project study area is located southwest of the Project site along Westward Avenue. Vacant land surrounds the Project site to the south and east. The Interstate 10 (I-10) Freeway is located approximately 0.25 miles north of the Project site. In addition, the Banning Municipal Airport is located immediate adjacent west and north of the Project site.

The City of Banning's General Plan designates the Project site for Industrial uses. The Industrial land use designation allows for the development of industrial parks and freestanding industrial users. Industrial uses include light and medium intensity manufacturing operations, warehousing and distribution mini-storage, and associated offices. Auto storage and repair is also allowed (2).

1.2 PROJECT DESCRIPTION

The Project is proposed to consist of up to approximately 97,400 square feet (sf) of truck terminal use to include a 134 door cross-dock (this includes future expansion), a two-story office building, a line-haul building, a truck maintenance building, and a fuel station for project trucks, as shown on Exhibit 1-B. The Project is anticipated to be constructed and occupied by 2021.

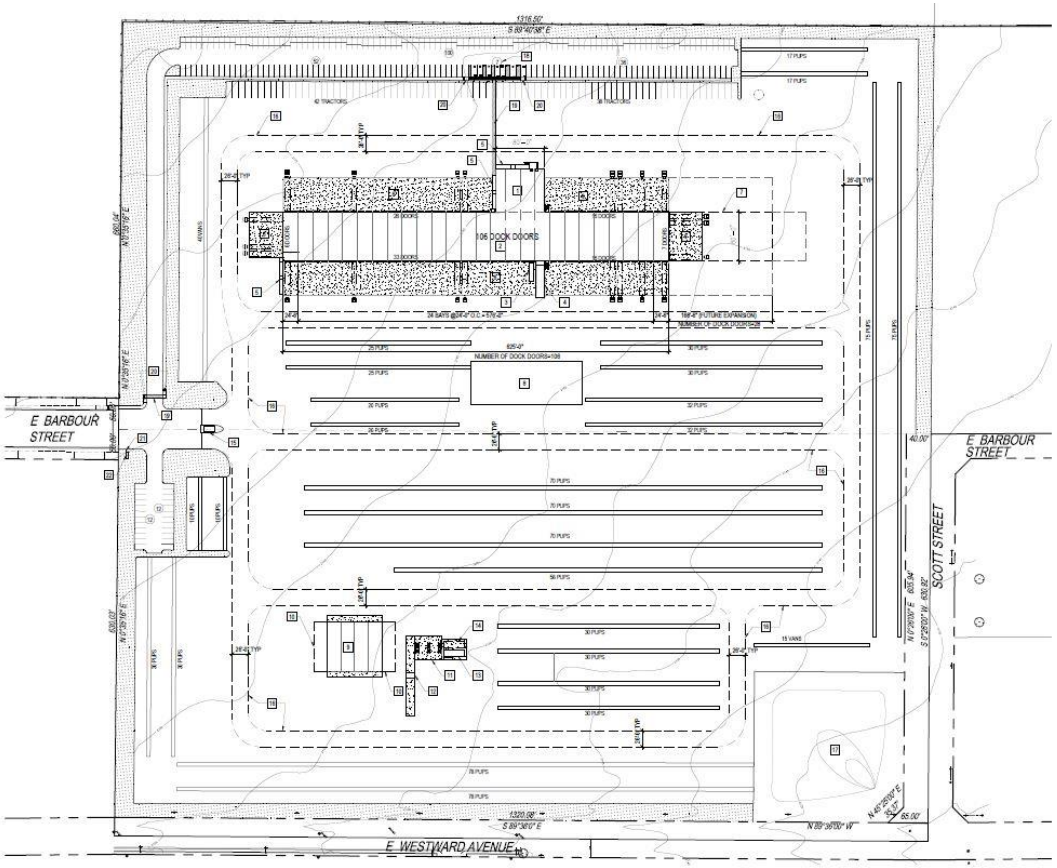
At the time this energy study was prepared, the future tenants of the proposed Project are unknown; the building is designed to accommodate one tenant or be divisible to accommodate two tenants. This study is intended to describe energy usage associated with the expected typical 24-hour, seven day per week operational activities at the Project site.

Per the *Estes Banning Traffic Impact Analysis* (TIA) prepared by Urban Crossroads, Inc., the Project is expected to generate a total of approximately 316 two-way vehicular trips per day (158 inbound and 158 outbound) which includes 90 two-way truck trips per day (45 inbound and 45 outbound) (3).

EXHIBIT 1-A: LOCATION MAP



EXHIBIT 1-B: SITE PLAN



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2 EXISTING CONDITIONS

This section provides an overview of the existing energy conditions in the Project area and region.

2.1 OVERVIEW

The most recent data for California's estimated annual energy use is from 2019 and included:

- Approximately 7,881 trillion British Thermal Unit (BTU) of energy was consumed; (4);
- Approximately 2,115 billion cubic feet of natural gas (4); and
- Approximately 15.8 billion gallons of transportation fuel (for the year 2017) (5)

The most recent data provided by the United States Energy Information Administration (EIA) for energy use in California by demand sector is from 2017 and is reported as follows:

- Approximately 40.3 percent transportation;
- Approximately 23.1 percent industrial;
- Approximately 18.0 percent residential; and
- Approximately 18.7 percent commercial (6)

In 2018, total system electric generation for California was 285,488 gigawatt-hours (GWh). California's massive electricity in-state generation system generated approximately 194,842 GWh which accounted for approximately 68% of the electricity it uses; the rest was imported from the Pacific Northwest (14%) and the U.S. Southwest (18%) (7). Natural gas is the main source for electricity generation at 47% of the total in-state electric generation system power as shown in Table 2-1.

TABLE 2-1: TOTAL ELECTRICITY SYSTEM POWER (CALIFORNIA 2018)

Fuel Type	California In-State Generation (GWh)	Percent of California In-State Generation	Northwest Imports (GWh)	Southwest Imports (GWh)	California Power Mix (GWh)	Percent California Power Mix
Coal	294	0.15%	399	8,740	9,433	3.30%
Large Hydro	22,096	11.34%	7,418	985	30,499	10.68%
Natural Gas	90,691	46.54%	49	8,904	99,644	34.91%
Nuclear	18,268	9.38%	0	7,573	25,841	9.05%
Oil	35	0.02%	0	0	35	0.01%
Other	430	0.22%	0	9	439	0.15%
Renewables	63,028	32.35%	14,074	12,400	89,502	31.36%
Biomass	5,909	3.03%	772	26	6,707	2.35%
Geothermal	11,528	5.92%	171	1,269	12,968	4.54%
Small Hydro	4,248	2.18%	334	1	4,583	1.61%
Solar	27,265	13.99%	174	5,094	32,533	11.40%
Wind	14,078	7.23%	12,623	6,010	32,711	11.46%
Unspecified Sources of Power	N/A	N/A	17,576	12,519	30,095	10.54%
Total	**194,842**	**100%**	**39,517**	**51,130**	**285,488**	**100%**

Source: https://www.energy.ca.gov/almanac/electricity_data/total_system_power.html

A summary of, and context for energy consumption and energy demands within the State is presented in "U.S. Energy Information Administration, California State Profile and Energy Estimates, Quick Facts" excerpted below:

- California was the fourth-largest producer of crude oil among the 50 states in 2017, after Texas, North Dakota, and Alaska, and, as of January 2018, third in oil refining capacity after Texas and Louisiana.
- California is the largest consumer of jet fuel among the 50 states and accounted for one-fifth of the nation's jet fuel consumption in 2016.
- California's total energy consumption is second-highest in the nation, but, in 2016, the state's per capita energy consumption ranked 48th, due in part to its mild climate and its energy efficiency programs.
- In 2017, California ranked second in the nation in conventional hydroelectric generation and first as a producer of electricity from solar, geothermal, and biomass resources.
- In 2017, solar PV and solar thermal installations provided about 16% of California's net electricity generation (8).

As indicated above, California is one of the nation's leading energy-producing states, and California per capita energy use is among the nation's most efficient. Given the nature of the proposed Project, the remainder of this discussion will focus on the three sources of energy that are most relevant to the Project—namely, electricity, natural gas, and transportation fuel for vehicle trips associated with the Project.

2.2 ELECTRICITY

The Southern California region's electricity reliability has been of concern for the past several years due to the planned retirement of aging facilities that depend upon once-through cooling technologies, as well as the June 2013 retirement of the San Onofre Nuclear Generating Station. While the once-through cooling phase-out has been ongoing since the May 2010 adoption of the State Water Resources Control Board's once-through cooling policy, the retirement of San Onofre complicated the situation. California ISO studies had revealed the extent to which the Southern California Air Basin (SCAB) region were vulnerable to low-voltage and post-transient voltage instability concerns. A preliminary plan to address these issues was detailed in the 2013 Integrative Energy Policy Report (2013 IEPR) after a collaborative process with other energy agencies, utilities, and air districts (9). If the resource development outlined in the preliminary plan continues as detailed, reliability in Southern California would likely be assured; however, tight resource margins have led energy agencies and the ARB to develop a contingency plan. This contingency plan was discussed at a public workshop in Los Angeles on August 20, 2014 and is detailed within this Section (10).

Electricity is provided to the Project by Banning Electric Utility (BEU). BEU is a publicly owned retail electrical energy distribution utility with 6 distribution substations and 134 miles of power lines serving approximately 13,500 citizens and businesses (11). BEU's energy resource base includes portions of coal, nuclear, geothermal, solar, landfill gas-to-energy, and hydro generating plants, that provide the majority of electricity (12).

California's electricity industry is an organization of traditional utilities, private generating companies, and state agencies, each with a variety of roles and responsibilities to ensure that electrical power is provided to consumers. The California Independent Service Operator (ISO" is a nonprofit public benefit corporation and is the impartial operator of the State's wholesale power grid and is charged with maintaining grid reliability, and to direct uninterrupted electrical energy supplies to California's homes and communities. While utilities still own transmission assets, the ISO routes electrical power along these assets, maximizing the use of the transmission system and its power generation resources. The ISO matches buyers and sellers of electricity to ensure that sufficient power is available to meet demand. To these ends, every five minutes the ISO forecasts electrical demands, accounts for operating reserves, and assigns the lowest cost power plant unit to meet demands while ensuring adequate system transmission capacities and capabilities (13).

Part of the ISO's charge is to plan and coordinate grid enhancements to ensure that electrical power is provided to California consumers. To this end, transmission file annual transmission expansion/modification plans to accommodate the State's growing electrical needs. The ISO reviews and either approves or denies the proposed additions. In addition, and perhaps most

importantly, the ISO works with other areas in the western United States electrical grid to ensure that adequate power supplies are available to the State. In this manner, continuing reliable and affordable electrical power is assured to existing and new consumers throughout the State.

Table 2-2 identifies BEU's specific proportional shares of electricity sources in 2017. As indicated in Table 2-2, the 2017 BEU Power Mix has renewable energy at 29% of the overall energy resources. Geothermal resources are at 4%, wind power is at 10%, large hydroelectric sources are at 15%, solar energy is at 10%, and coal is at 4% (14).

TABLE 2-2: 2017 BEU POWER CONTENT MIX

Energy Resources	2017 BEU Power Mix
Eligible Renewable	**29%**
Biomass & waste	2%
Geothermal	4%
Eligible Hydroelectric	3%
Solar	10%
Wind	10%
Coal	**4%**
Large Hydroelectric	**15%**
Natural Gas	**34%**
Nuclear	**9%**
Other	**<1%**
Unspecified Sources of power*	9%
Total	**100%**

* "Unspecified sources of power" means electricity from transactions that are not traceable to specific generation sources

2.3 NATURAL GAS

The usage associated with natural gas use were calculated using the California Emissions Estimator Model (CalEEMod). The following summary of natural gas resources and service providers, delivery systems, and associated regulation is excerpted from information provided by the California Public Utilities Commission (CPUC).

> *"The CPUC regulates natural gas utility service for approximately 10.8 million customers that receive natural gas from Pacific Gas and Electric (PG&E), Southern California Gas (SoCalGas), San Diego Gas & Electric (SDG&E), Southwest Gas, and several smaller natural gas utilities. The CPUC also regulates independent storage operators: Lodi Gas Storage, Wild Goose Storage, Central Valley Storage and Gill Ranch Storage.*
>
> *The vast majority of California's natural gas customers are residential and small commercial customers, referred to as "core" customers, who accounted for approximately*

32% of the natural gas delivered by California utilities in 2012. Large consumers, like electric generators and industrial customers, referred to as "noncore" customers, accounted for approximately 68% of the natural gas delivered by California utilities in 2012.

The CPUC regulates the California utilities' natural gas rates and natural gas services, including in-state transportation over the utilities' transmission and distribution pipeline systems, storage, procurement, metering and billing. Most of the natural gas used in California comes from out-of-state natural gas basins. In 2012, California customers received 35% of their natural gas supply from basins located in the Southwest, 16% from Canada, 40% from the Rocky Mountains, and 9% from basins located within California. California gas utilities may soon also begin receiving biogas into their pipeline systems.

Natural gas from out-of-state production basins is delivered into California via the interstate natural gas pipeline system. The major interstate pipelines that deliver out-of-state natural gas to California consumers are the Gas Transmission Northwest Pipeline, Kern River Pipeline, Transwestern Pipeline, El Paso Pipeline, Ruby Pipeline, Questar Southern Trails and Mojave Pipeline. Another pipeline, the North Baja – Baja Norte Pipeline, takes gas off the El Paso Pipeline at the California/Arizona border, and delivers that gas through California into Mexico. While the Federal Energy Regulatory Commission (FERC) regulates the transportation of natural gas on the interstate pipelines, the CPUC often participates in FERC regulatory proceedings to represent the interests of California natural gas consumers.

Most of the natural gas transported via the interstate pipelines, as well as some of the California-produced natural gas, is delivered into the PG&E and SoCalGas intrastate natural gas transmission pipeline systems (commonly referred to as California's "backbone" natural gas pipeline system). Natural gas on the utilities' backbone pipeline systems is then delivered into the local transmission and distribution pipeline systems, or to natural gas storage fields. Some large noncore customers take natural gas directly off the high-pressure backbone pipeline systems, while core customers and other noncore customers take natural gas off the utilities' distribution pipeline systems. The CPUC has regulatory jurisdiction over 150,000 miles of utility-owned natural gas pipelines, which transported 82% of the total amount of natural gas delivered to California's gas consumers in 2012.

SDG&E and Southwest Gas' southern division are wholesale customers of SoCalGas, and currently receive all of their natural gas from the SoCalGas system (Southwest Gas also provides natural gas distribution service in the Lake Tahoe area). Some other municipal wholesale customers are the cities of Palo Alto, Long Beach, and Vernon, which are not regulated by the CPUC.

Some of the natural gas delivered to California customers may be delivered directly to them without being transported over the regulated utility systems. For example, the Kern River/Mojave pipeline system can deliver natural gas directly to some large customers,

"bypassing" the utilities' systems. Much of California-produced natural gas is also delivered directly to large consumers.

PG&E and SoCalGas own and operate several natural gas storage fields that are located in northern and southern California. These storage fields, and four independently owned storage utilities – Lodi Gas Storage, Wild Goose Storage, Central Valley Storage, and Gill Ranch Storage – help meet peak seasonal natural gas demand and allow California natural gas customers to secure natural gas supplies more efficiently. (A portion of the Gill Ranch facility is owned by PG&E).

California's regulated utilities do not own any natural gas production facilities. All of the natural gas sold by these utilities must be purchased from suppliers and/or marketers. The price of natural gas sold by suppliers and marketers was deregulated by the FERC in the mid-1980's and is determined by "market forces." However, the CPUC decides whether California's utilities have taken reasonable steps in order to minimize the cost of natural gas purchased on behalf of their core customers." (15)

As indicated in the preceding discussions, natural gas is available from a variety of in-state and out-of-state sources and is provided throughout the state in response to market supply and demand. Complementing available natural gas resources, biogas may soon be available via existing delivery systems, thereby increasing the availability and reliability of resources in total. The CPUC oversees utility purchases and transmission of natural gas to ensure reliable and affordable natural gas deliveries to existing and new consumers throughout the State.

2.4 TRANSPORTATION ENERGY RESOURCES

The Project would generate additional vehicle trips with resulting consumption of energy resources, predominantly gasoline and diesel fuel. In March 2018, the Department of Motor Vehicles (DMV) identified 35 million registered vehicles in California (16), and those vehicles (as noted previously) consume an estimated 19 billion gallons of fuel each year[1]. Gasoline (and other vehicle fuels) are commercially provided commodities and would be available to the Project patrons and employees via commercial outlets.

California's on-road transportation system includes 170,000 miles of highways and major roadways, more than 27 million passenger vehicles and light trucks, and almost 8 million medium- and heavy-duty vehicles (16). While gasoline consumption has been declining since 2008 it is still by far the dominant fuel. Petroleum comprises about 92 percent of all transportation energy use, excluding fuel consumed for aviation and most marine vessels (17). Nearly 19 billion gallons of on-highway fuel are burned each year, including 15.1 billion gallons of gasoline (including ethanol) and 3.9 billion gallons of diesel fuel (including biodiesel and renewable diesel). In 2016, Californians also used 194 million therms of natural gas as a transportation fuel (18), or the equivalent of 155 million gallons of gasoline.

[1] Fuel consumptions estimated utilizing information from EMFAC2017.

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3 REGULATORY BACKGROUND

Federal and state agencies regulate energy use and consumption through various means and programs. On the federal level, the United States Department of Transportation, the United States Department of Energy, and the United States Environmental Protection Agency are three federal agencies with substantial influence over energy policies and programs. On the state level, the CPUC and the California Energy Commissions (CEC) are two agencies with authority over different aspects of energy. Relevant federal and state energy-related laws and plans are summarized below. Project consistency with applicable federal and state regulations is also presented in *italicized* text.

3.1 FEDERAL REGULATIONS

Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA)

The ISTEA promoted the development of inter-modal transportation systems to maximize mobility as well as address national and local interests in air quality and energy. ISTEA contained factors that Metropolitan Planning Organizations (MPOs) were to address in developing transportation plans and programs, including some energy-related factors. To meet the new ISTEA requirements, MPOs adopted explicit policies defining the social, economic, energy, and environmental values guiding transportation decisions. *Transportation and access to the Project site is provided primarily by the local and regional roadway systems. The Project would not interfere with, nor otherwise obstruct intermodal transportation plans or projects that may be realized pursuant to the ISTEA because Southern California Association of Governments (SCAG) is not planning for intermodal facilities on or through the Project site.*

The Transportation Equity Act for the 21st Century (TEA-21)

The TEA-21 was signed into law in 1998 and builds upon the initiatives established in the ISTEA legislation, discussed above. TEA-21 authorizes highway, highway safety, transit, and other efficient surface transportation programs. TEA-21 continues the program structure established for highways and transit under ISTEA, such as flexibility in the use of funds, emphasis on measures to improve the environment, and focus on a strong planning process as the foundation of good transportation decisions. TEA-21 also provides for investment in research and its application to maximize the performance of the transportation system through, for example, deployment of Intelligent Transportation Systems, to help improve operations and management of transportation systems and vehicle safety*. The Project site is located along major transportation corridors with proximate access to the Interstate freeway system. The site selected for the Project facilitates access, acts to reduce vehicle miles traveled (VMT), takes advantage of existing infrastructure systems, and promotes land use compatibilities through collocation of similar uses. The Project supports the strong planning processes emphasized under TEA-21. The Project is therefore consistent with, and would not otherwise interfere with, nor obstruct implementation of TEA-21.*

3.2 CALIFORNIA REGULATIONS

Integrated Energy Policy Report

Senate Bill 1389 (Bowen, Chapter 568, Statutes of 2002) requires the CEC to prepare a biennial integrated energy policy report that assesses major energy trends and issues facing the state's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources; protect the environment; ensure reliable, secure, and diverse energy supplies; enhance the state's economy; and protect public health and safety (Public Resources Code § 25301a]). The Energy Commission prepares these assessments and associated policy recommendations every two years, with updates in alternate years, as part of the Integrated Energy Policy Report.

The 2018 Integrated Energy Policy Report (2018 IEPR) was adopted February 20, 2019, and continues to work towards improving electricity, natural gas, and transportation fuel energy use in California. The 2018 IEPR focuses on a variety of topics such as including the environmental performance of the electricity generation system, landscape-scale planning, the response to the gas leak at the Aliso Canyon natural gas storage facility, transportation fuel supply reliability issues, updates on Southern California electricity reliability, methane leakage, climate adaptation activities for the energy sector, climate and sea level rise scenarios, and the California Energy Demand Forecast (19). *Electricity would be provided to the Project by BEU and natural gas is provided by SoCalGas. BEU is a member of the Southern California Public Power Authority (SCPPA). SCPPA provides many energy efficiency programs that promote operational efficiency. SoCalGas' 2018 Corporate Sustainability Report builds on existing state programs and policies. As such, the Project is consistent with, and would not otherwise interfere with, nor obstruct implementation the goals presented in the 2018 IEPR*.

State of California Energy Plan

The CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The Plan calls for the state to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including assistance to public agencies and fleet operators and encouragement of urban designs that reduce VMT and accommodate pedestrian and bicycle access. *The Project site is located along major transportation corridors with proximate access to the Interstate freeway system. The site selected for the Project facilitates access, acts to reduce VMT, takes advantage of existing infrastructure systems, and promotes land use compatibilities through the introduction of a truck terminal use on an industrial-designated site. The Project therefore supports urban design and planning processes identified under the State of California Energy Plan, is consistent with, and would not otherwise interfere with, nor obstruct implementation of the State of California Energy Plan.*

California Code Title 24, Part 6, Energy Efficiency Standards

California Code of Regulations Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The 2019 version of Title 24 was adopted by the CEC and will become effective on January 1, 2020. The 2019 Title 24 standards go into effect on January 1, 2020 and are applicable to building permit applications submitted on or after that date. The 2019 Title 24 standards require solar photovoltaic systems for new homes, establish requirements for newly constructed healthcare facilities, encourage demand responsive technologies for residential buildings, update indoor and outdoor lighting for nonresidential buildings. The CEC anticipates that single-family homes built with the 2019 standards will use approximately 7 percent less energy compared to the residential homes built under the 2016 standards. Additionally, after implementation of solar photovoltaic systems, homes built under the 2019 standards will about 53 percent less energy than homes built under the 2016 standards. Nonresidential buildings will use approximately 30 percent less energy due to lighting upgrades (20). *The 2019 version of Title 24 was adopted by the CEC and will become effective on January 1, 2020. It should be noted that the analysis herein assumes compliance with the 2019 Title 24 Standards.*

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4 PROJECT ENERGY DEMANDS AND ENERGY EFFICIENCY MEASURES

4.1 EVALUATION CRITERIA

In compliance with Appendix G of the *State CEQA Guidelines* (1), this report analyzes the project's anticipated energy use to determine if the Project would:

- Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation; or
- Conflict with or obstruct a state or local plan for renewable energy or energy efficiency

In addition, Appendix F of the *State CEQA Guidelines* (21), states that the means of achieving the goal of energy conservation includes the following:

- Decreasing overall per capita energy consumption;
- Decreasing reliance on fossil fuels such as coal, natural gas and oil; and
- Increasing reliance on renewable energy sources.

4.2 METHODOLOGY

Information from the CalEEMod outputs for the *Estes Banning Air Quality Impact Analysis* (Urban Crossroads, Inc., 2019) (AQIA) was utilized in this analysis, detailing Project related construction equipment, transportation energy demands, and facility energy demands (22).

4.2.1 CALIFORNIA EMISSIONS ESTIMATOR MODEL

On October 17, 2017, the SCAQMD, in conjunction with the California Air Pollution Control Officers Association (CAPCOA) and other California air districts, released the latest version of CalEEMod v2016.3.2. The purpose of this model is to calculate construction-source and operational-source criteria pollutants and GHG emissions from direct and indirect sources as well as energy usage. (23). Accordingly, the latest version of CalEEMod has been used to determine the proposed Project's anticipated transportation and facility energy demands. Output from the model runs for construction and operational activity are provided in Appendices 3.1 through 3.3.

4.2.2 EMISSION FACTORS MODEL

On August 19, 2019, the EPA approved the 2017 version of the Emission Factor model (EMFAC) web database for use in State Implementation Plan and transportation conformity analyses. EMFAC2017 is a mathematical model that was developed to calculate emission rates, fuel consumption, VMT from motor vehicles that operate on highways, freeways, and local roads in California and is commonly used by the California Air Resources Board (CARB) to project changes in future emissions from on-road mobile sources (24). This study utilizes summer, winter, and annual EMFAC2017 emission factors in order to derive vehicle emissions associated with Project operational activities, which vary by season.

4.2.3 LAND USES MODELED IN CALEEMOD

The Project is located on 39.10-net acres. As per information provided by the Project applicant, the Project is proposed to consist of 97,400 sf of truck terminal use to include a 134 door cross-dock (this includes future expansion), a two-story office building, a line-haul building, a truck maintenance building, and a fuel station for project trucks. It should be noted that CalEEMod does not provide an extensive selection of land use subtype categories, land uses that most closely fit the Project will be utilized. For purposes of analysis, the following land uses were modeled (25):

- 97.400 thousand square feet (TSF)/2.24 acres of Unrefrigerated Warehouse – No Rail[2]
- 1,605.796 TSF/36.86 acres Other Asphalt Surfaces[3]

4.2.4 CONSTRUCTION DURATION

Construction is expected to commence in June 2020 and will last through March 2021. The duration of construction activity represents a reasonable approximation as required per *CEQA Guidelines*. The duration of construction activity was based on CalEEMod defaults and the 2021 opening year.

TABLE 4-1: CONSTRUCTION DURATION

Phase Name	Start Date	End Date	Days
Rough Grading	06/04/2020	07/29/2020	40
Site Preparation	07/30/2020	09/30/2020	45
Fine Grading	10/01/2020	10/28/2020	20
Building Construction	10/29/2020	03/24/2021	105
Paving	01/07/2021	03/24/2021	55
Architectural Coating	01/07/2021	03/24/2021	55

Source: Construction activity based upon information provided by the Project applicant and a 2021 Opening Year.

4.2.5 CONSTRUCTION EQUIPMENT

Site specific construction fleet may vary due to specific project needs at the time of construction. The associated construction equipment was generally based on CalEEMod 2016.3.2 defaults, and the Project applicant has confirmed that the equipment list is reasonable for the Project's construction. A detailed summary of construction equipment by phase is provided in Table 3-3.

[2] The User's Guide defines Unrefrigerated Warehouse – No Rail uses as warehouse uses that do not have refrigeration and no rail spur. For purposes of analysis, this category is used to model the proposed Project's 97,400 sf/2.24 acre of truck terminal use.

[3] For purposes of analysis, the remaining 1,605,796 sf/36.86 acres will be modeled as Other Asphalt Surfaces. These surfaces are defined as an asphalt area not used as a parking lot.

TABLE 4-2: CONSTRUCTION EQUIPMENT ASSUMPTIONS

Activity	Equipment	Amount	Hours Per Day
Rough Grading	Crawler Tractors	2	8
	Excavators	2	8
	Graders	1	8
	Rubber Tired Dozers	1	8
	Scrapers	2	8
Site Preparation	Crawler Tractors	4	8
	Rubber Tired Dozers	3	8
Fine Grading	Crawler Tractors	2	8
	Excavators	2	8
	Graders	1	8
	Rubber Tired Dozers	1	8
	Scrapers	2	8
Building Construction	Cranes	1	8
	Crawler Tractors	3	8
	Forklifts	3	8
	Generator Sets	1	8
	Welders	1	8
Paving	Pavers	2	8
	Paving Equipment	2	8
	Rollers	2	8
Architectural Coating	Air Compressors	1	8

4.3 CONSTRUCTION ENERGY DEMANDS

4.3.1 CONSTRUCTION EQUIPMENT ELECTRICITY USAGE ESTIMATES

The focus within this section is the energy implications of the construction process, specifically the power cost from on-site electricity consumption during construction of the proposed Project. Based on the *2017 National Construction Estimator* (Richard Pray, 2017) (26), the typical power cost per 1,000 square feet of construction per month is estimated to be $2.32. For the Estes Banning development, the Project plans to develop consist of 97,400 sf of truck terminal use which will include a 134 door cross-dock (this includes future expansion), a two-story office building, a line-haul building, a truck maintenance building, and a fuel station for project trucks. As previously stated, the Project is anticipated to be developed in one phase within a 9-month period. Based on Table 4-3, the total power cost of the on-site electricity usage during the

construction of the proposed Project is estimated to be approximately $2,033.71. Additionally, as of October 2018, BEU's general and industrial service rate schedule is $0.16 per kWh of electricity (27)[4]. As shown on Table 4-4, the total electricity usage from on-site Project construction related activities is estimated to be approximately 12,404 kWh.

TABLE 4-3: PROJECT CONSTRUCTION POWER COST

Land Use	Power Cost (per 1,000 SF of building per month of construction)	Total Building Size (1,000 SF)	Construction Duration (months)	Total Project Construction Power Cost
Truck Terminal	$2.32	97.400	9	$2,033.71
TOTAL PROJECT CONSTRUCTION COST				***$2,033.71***

TABLE 4-4: PROJECT CONSTRUCTION ELECTRICITY USAGE

Land Use	Cost per kWh	Total Project Construction Electricity Usage (kWh)
Truck Terminal	$0.16	12,404
TOTAL PROJECT CONSTRUCTION ELECTRICTY USAGE (kWh)		***12,404***

[1]Assumes the Project will be under the GS-1 General Industrial service rate under BEU

4.3.2 CONSTRUCTION EQUIPMENT FUEL ESTIMATES

Fuel consumed by construction equipment would be the primary energy resource expended over the course of Project construction. Project construction activity timeline estimates, construction equipment schedules, equipment power ratings, load factors, and associated fuel consumption estimates are presented in Table 4-5. Eight-hour daily use of all equipment is assumed. The aggregate fuel consumption rate for all equipment is estimated at 18.5 horsepower-hour per gallon (hp-hr/gal.), obtained from CARB 2018 Emissions Factors Tables and cited fuel consumption rate factors presented in Table D-24 of the Moyer guidelines (28). For the purposes of this analysis, the calculations are based on all construction equipment being diesel-powered which is standard practice consistent with industry standards. Diesel fuel would be supplied by existing commercial fuel providers serving the City and region.

As presented in Table 4-5, Project construction activities would consume an estimated 63,244 gallons of diesel fuel. Project construction would represent a "single-event" diesel fuel demand and would not require on-going or permanent commitment of diesel fuel resources for this purpose.

[4] It should be noted that the Cost per kWh is based on the average cost between summer month and winter month rates.

TABLE 4-5: CONSTRUCTION EQUIPMENT FUEL CONSUMPTION ESTIMATES

Activity/Duration	Equipment	HP Rating	Quantity	Usage Hours	Load Factor	HP-hrs/day	Total Fuel Consumption (gal. diesel fuel)
Rough Grading (40 days)	Crawler Tractors	212	2	8	0.43	1,459	3,154
	Excavators	158	2	8	0.38	961	2,077
	Graders	187	1	8	0.41	613	1,326
	Rubber Tired Dozers	247	1	8	0.40	790	1,709
	Scrapers	367	2	8	0.48	2,819	6,094
Site Preparation (45 days)	Crawler Tractors	212	4	8	0.43	2,917	7,096
	Rubber Tired Dozers	247	3	8	0.40	2,371	5,768
Fine Grading (20 days)	Crawler Tractors	212	2	8	0.43	1,459	1,577
	Excavators	158	2	8	0.38	961	1,039
	Graders	187	1	8	0.41	613	663
	Rubber Tired Dozers	247	1	8	0.40	790	854
	Scrapers	367	2	8	0.48	2,819	3,047
Building Construction (105 days)	Cranes	231	1	8	0.29	536	3,042
	Crawler Tractors	212	3	8	0.43	2,188	12,417
	Forklifts	89	3	8	0.20	427	2,425
	Generator Sets	84	1	8	0.74	497	2,822
	Welders	46	1	8	0.45	166	940
Paving (55 days)	Pavers	130	2	8	0.42	874	2,597
	Paving Equipment	132	2	8	0.36	760	2,260
	Rollers	80	2	8	0.38	486	1,446
Architectural Coating (55 days)	Air Compressors	78	1	8	0.48	300	890
CONSTRUCTION FUEL DEMAND (GALLONS DIESEL FUEL)							***63,244***

4.3.3 CONSTRUCTION WORKER FUEL ESTIMATES

It is assumed that all construction worker trips are from light duty autos (LDA) along area roadways. With respect to estimated VMT, the construction worker trips would generate an estimated 1,260,893 VMT (22). Data regarding Project related construction worker trips were based on CalEEMod 2016.3.2 model defaults utilized within the AQIA. Output from the model runs for construction activity are provided in Appendix 3.1.

As previously stated, vehicle fuel efficiencies for LDAs were estimated using information generated within the 2017 version of the EMFAC developed by the CARB. EMFAC2017 was run for the LDA vehicle class within the California sub-area for a 2021 calendar year. Data from EMFAC2017 is shown in Appendix 3.4.

As generated by EMFAC2017, an aggregated fuel economy of LDAs ranging from model year 1974 to model year 2021 are estimated to have a fuel efficiency of 31.59 miles per gallon (mpg). Table 4-6 provides an estimated annual fuel consumption resulting from the Project generated by LDAs related to construction worker trips. Based on Table 4-6, it is estimated that 39,920 gallons of fuel will be consumed related to construction worker trips during full construction of the proposed Project. Project construction worker trips would represent a "single-event" gasoline fuel demand and would not require on-going or permanent commitment of fuel resources for this purpose.

TABLE 4-6: CONSTRUCTION WORKER FUEL CONSUMPTION ESTIMATES

Construction Activity	Worker Trips / Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Rough Grading (40 days)	20	14.7	11,760	31.59	372
Site Preparation (45 days)	18	14.7	11,907	31.59	377
Fine Grading (20 days)	20	14.7	5,880	31.59	186
Building Construction (105 days)	715	14.7	1,103,603	31.59	34,940
Paving (55 days)	15	14.7	12,128	31.59	384
Architectural Coating (55 days)	143	14.7	115,616	31.59	3,660
TOTAL CONSTRUCTION WORKER FUEL CONSUMPTION					***39,920***

4.3.4 CONSTRUCTION VENDOR FUEL ESTIMATES

With respect to estimated VMT, the construction vendor trips would generate an estimated 202,136 VMT along area roadways (22). It is assumed that 50% of all vendor trips are from Medium-Heavy-Duty-Trucks (MHDT) and 50% are from Heavy-Heavy-Duty Trucks (HHDT). These assumptions are consistent with the 2016.3.2 CalEEMod defaults utilized within the within the AQIA (22). Vehicle fuel efficiencies for MHDTs and HHDTs were estimated using information generated within EMFAC2017. For purposes of this analysis, EMFAC2017 was run for the MHDT and HHDT vehicle class within the California sub-area for a 2021 calendar year. Data from EMFAC2017 is shown in Appendix 3.4.

As generated by EMFAC2017, an aggregated fuel economy of MHDTs ranging from model year 1974 to model year 2021 are estimated to have a fuel efficiency of 9.73 mpg. Additionally, HHDTs are estimated to have a fuel efficiency of 6.93 mpg. Based on Table 4-7, it is estimated that 10,385 gallons of fuel will be consumed related to construction vendor trips (MHDTs) during full construction of the proposed Project. Table 4-8 shows the estimated fuel economy of HHDTs accessing the Project site. Based on Table 4-8, fuel consumption from construction vendor trips (HHDTs) will total approximately 14,580 gallons. The total fuel consumption from construction vendor trips (MHDTs and HHDTs) is 24,964 gallons. Project construction vendor trips would represent a "single-event" diesel fuel demand and would not require on-going or permanent commitment of diesel fuel resources for this purpose.

TABLE 4-7: CONSTRUCTION VENDOR FUEL CONSUMPTION ESTIMATES (MHDT)

Construction Activity	Vendor Trips / Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Vendor					
Building Construction (105 days)	140	6.9	101,068	9.73	10,385
PROJECT MEDIUM DUTY TRUCK TOTAL					***10,385***

TABLE 4-8: CONSTRUCTION VENDOR FUEL CONSUMPTION ESTIMATES (HHDT)

Construction Activity	Vendor/ Hauling Trips/ Day	Trip Length (miles)	Vehicle Miles Traveled	Average Vehicle Fuel Economy (mpg)	Estimated Fuel Consumption (gallons)
Vendor					
Building Construction (105 days)	140	6.9	101,068	6.93	14,580
PROJECT HEAVY DUTY TRUCK TOTAL					***14,580***

4.3.5 CONSTRUCTION ENERGY EFFICIENCY/CONSERVATION MEASURES

The equipment used for Project construction would conform to CARB regulations and California emissions standards. There are no unusual Project characteristics or construction processes that would require the use of equipment that would be more energy intensive than is used for comparable activities; or equipment that would not conform to current emissions standards (and related fuel efficiencies). Equipment employed in construction of the Project would therefore not result in inefficient wasteful, or unnecessary consumption of fuel.

The Project would utilize construction contractors which practice compliance with applicable CARB regulation regarding retrofitting, repowering, or replacement of diesel off-road construction equipment. Additionally, CARB has adopted the Airborne Toxic Control Measure to limit heavy-duty diesel motor vehicle idling in order to reduce public exposure to diesel particulate matter and other Toxic Air Contaminants (TAC). Compliance with anti-idling and emissions regulations would result in a more efficient use of construction-related energy and the minimization or elimination of wasteful or unnecessary consumption of energy. Idling restrictions and the use of newer engines and equipment would result in less fuel combustion and energy consumption.

Additionally, certain incidental construction-source energy efficiencies would likely accrue through implementation of California regulations and best available control measures (BACM). More specifically, California Code of Regulations Title 13, Motor Vehicles, section 2449(d)(3) Idling, limits idling times of construction vehicles to no more than five minutes, thereby precluding unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. To this end, “grading plans shall reference the requirement that a sign shall be posted on-site stating that construction workers need to shut off engines at or before five minutes of idling.” In this manner, construction equipment operators are informed that engines are to be turned off at or prior to five minutes of idling. Enforcement of idling limitations is realized through periodic site inspections conducted by City building officials, and/or in response to citizen complaints.

Indirectly, construction energy efficiencies and energy conservation would be achieved for the proposed development through energy efficiencies realized from bulk purchase, transport and use of construction materials.

A full analysis related to the energy needed to form construction materials is not included in this analysis due to a lack of detailed Project-specific information on construction materials. At this time, an analysis of the energy needed to create Project-related construction materials would be extremely speculative and thus has not been prepared.

In general, the construction processes promote conservation and efficient use of energy by reducing raw materials demands, with related reduction in energy demands associated with raw materials extraction, transportation, processing and refinement. Use of materials in bulk reduces energy demands associated with preparation and transport of construction materials as well as the transport and disposal of construction waste and solid waste in general, with corollary

reduced demands on area landfill capacities and energy consumed by waste transport and landfill operations.

4.4 OPERATIONAL ENERGY DEMANDS

Energy consumption in support of or related to Project operations would include transportation energy demands (energy consumed by employee and patron vehicles accessing the Project site) and facilities energy demands (energy consumed by building operations and site maintenance activities).

4.4.1 TRANSPORTATION ENERGY DEMANDS

Energy that would be consumed by Project-generated traffic is a function of total VMT and estimated vehicle fuel economies of vehicles accessing the Project site.

LIGHT-DUTY AUTOS

With respect to estimated VMT, and based on the trip frequency and trip length methodologies cited in the Project's AQIA, the Project would generate an estimated 838,349 annual VMT along area roadways for all LDAs with full build-out of the Project (22). As generated by EMFAC2017, an aggregated fuel economy of LDAs ranging from model year 1974 to model year 2021 are estimated to have a fuel efficiency of 31.59 mpg. Table 4-9 provides an estimated range of annual fuel consumption resulting from Project generated LDAs. Based on Table 4-9, it is estimated that 26,542 gallons of fuel will be consumed from Project generated LDA trips.

TABLE 4-9: PROJECT-GENERATED LDA VEHICLE TRAFFIC ANNUAL FUEL CONSUMPTION

Annual VMT	Average Vehicle Fuel Economy (mpg)	Estimated Annual Fuel Consumption (gallons)
838,349	31.59	26,542

LIGHT-DUTY TRUCKS

With respect to estimated VMT, and based on the trip frequency and trip length methodologies cited in the Project's AQIA, the Project would generate an estimated 58,712 annual VMT along area roadways for all Light-Duty Trucks (LDT1)[5] vehicles with full build-out of the Project (22). As generated by EMFAC2017, an aggregated fuel economy of LDT1s ranging from model year 1974 to model year 2021 are estimated to have a fuel efficiency of 26.44 mpg. Table 4-10 provides an estimated range of annual fuel consumption resulting from Project generated LDT1s. Based on Table 4-10, it is estimated that 2,221 gallons of fuel will be consumed from Project generated LDT1 trips.

[5] Vehicles under the LDT1 category have a gross vehicle weight rating (GVWR) of less than 6,000 lbs. and equivalent test weight (ETW) of less than or equal to 3,750 lbs.

TABLE 4-10: PROJECT-GENERATED LDT1 VEHICLE TRAFFIC ANNUAL FUEL CONSUMPTION

Annual VMT	Average Vehicle Fuel Economy (mpg)	Estimated Annual Fuel Consumption (gallons)
58,712	26.44	2,221

Additionally, the Project would generate an estimated 286,732 annual VMT along area roadways for all LDT2[6] vehicles with full build-out of the Project (22). As generated by EMFAC2017, an aggregated fuel economy of LDT2s ranging from model year 1974 to model year 2021 are estimated to have a fuel efficiency of 24.76 mpg. Table 4-11 provides an estimated range of annual fuel consumption resulting from Project generated LDT2s. Based on Table 4-11, it is estimated that 11,581 gallons of fuel will be consumed from Project generated LDT2 trips.

TABLE 4-11: PROJECT-GENERATED LDT2 VEHICLE TRAFFIC ANNUAL FUEL CONSUMPTION

Annual VMT	Average Vehicle Fuel Economy (mpg)	Estimated Annual Fuel Consumption (gallons)
286,732	24.76	11,581

MEDIUM-DUTY TRUCKS

With respect to estimated VMT, and based on the trip frequency and trip length methodologies cited in the Project's AQIA, the Project would generate an estimated 181,597 annual VMT along area roadways for all Medium-Duty Trucks (MDV) vehicles with full build-out of the Project (22). As generated by EMFAC2017, an aggregated fuel economy of MDVs ranging from model year 1974 to model year 2021 are estimated to have a fuel efficiency of 19.93 mpg. Table 4-12 provides an estimated range of annual fuel consumption resulting from Project generated MDVs. Based on Table 4-12, it is estimated that 9,113 gallons of fuel will be consumed from Project generated MDV trips.

TABLE 4-12: PROJECT-GENERATED MDV VEHICLE TRAFFIC ANNUAL FUEL CONSUMPTION

Annual VMT	Average Vehicle Fuel Economy (mpg)	Estimated Annual Fuel Consumption (gallons)
181,597	19.93	9,113

LIGHT-HEAVY DUTY TRUCKS

With respect to estimated VMT, and based on the trip frequency and trip length methodologies cited in the Project's AQIA, the Project would generate an estimated 131,037 annual VMT along area roadways for all LHDTs with full build-out of the Project (22). As generated by EMFAC2017, an aggregated fuel economy of LHDTs ranging from model year 1974 to model year 2021 are estimated to have a fuel efficiency of 14.09 mpg. Table 4-13 provides an estimated range of

[6] Vehicles under the LDT2 category have a GVWR of less than 6,000 lbs. and ETW between 3,751 lbs. and 5,750 lbs.

annual fuel consumption resulting from Project generated LHDTs. Based on Table 4-13, it is estimated that 9,297 gallons of fuel will be consumed from Project generated LHDT trips.

TABLE 4-13: PROJECT-GENERATED LHDT TRAFFIC ANNUAL FUEL CONSUMPTION

Annual VMT	Average Vehicle Fuel Economy (mpg)	Estimated Annual Fuel Consumption (gallons)
131,037	14.09	9,297

HEAVY-HEAVY DUTY TRUCKS

With respect to estimated VMT, and based on the trip frequency and trip length methodologies cited in the Project's AQIA, the Project would generate an estimated 1,179,327 annual VMT along area roadways for all HHDTs with full build-out of the Project (22). As generated by EMFAC2017, an aggregated fuel economy of HHDTs ranging from model year 1974 to model year 2021 are estimated to have a fuel efficiency of 6.93 mpg. Table 4-14 provides an estimated range of annual fuel consumption resulting from Project generated HHDTs. Based on Table 4-15, it is estimated that 170,125 gallons of fuel will be consumed from Project generated HHDT trips.

TABLE 4-14: PROJECT-GENERATED HHDT TRAFFIC ANNUAL FUEL CONSUMPTION

Annual VMT	Average Vehicle Fuel Economy (mpg)	Estimated Annual Fuel Consumption (gallons)
1,179,327	6.93	170,125

As summarized on Table 4-15, the Project will result in 2,675,752 annual VMT and an estimated annual fuel consumption of 228,879 gallons of fuel.

TABLE 4-15: PROJECT-GENERATED TRAFFIC ANNUAL FUEL CONSUMPTION (ALL VEHICLES)

Vehicle Type	Annual VMT	Estimated Annual Fuel Consumption (gallons)
LDA	838,349	26,542
LDT1	58,712	2,221
LDT2	286,732	11,581
MDV	181,597	9,113
LHDT	131,037	9,297
HHDT	1,179,327	170,125
Total (All Vehicles)	***2,675,752***	***228,879***

4.4.2 FACILITY ENERGY DEMANDS

Project building operations and Project site maintenance activities would result in the consumption of natural gas and electricity. Natural gas would be supplied to the Project by SoCalGas; electricity would be supplied to the Project by BEU. Annual natural gas and electricity demands of the Project are summarized in Table 4-16.

Energy use in buildings is divided into energy consumed by the built environment and energy consumed by uses that are independent of the construction of the building such as in plug-in appliances. In California, the California Building Standards Code Title 24 governs energy consumed by the built environment, mechanical systems, and some types of fixed lighting (29). Non-building energy use, or "plug-in" energy use can be further subdivided by specific end-use (refrigeration, cooking, appliances, etc.).

TABLE 4-16: PROJECT ANNUAL OPERATIONAL ENERGY DEMAND SUMMARY

Natural Gas Demand	kBTU/year
Truck Terminal	139,282
TOTAL PROJECT NATURAL GAS DEMAND	***139,282***
Electricity Demand	**kBTU/year**
Truck Terminal	184,865
TOTAL PROJECT ELECTRICITY DEMAND	***184,865***

4.4.3 OPERATIONAL ENERGY EFFICIENCY/CONSERVATION MEASURES

Energy efficiency/energy conservation attributes of the Project would be complemented by increasingly stringent state and federal regulatory actions addressing vehicle fuel economies and vehicle emissions standards; and enhanced building/utilities energy efficiencies mandated under California building codes (e.g., Title24, California Green Building Standards Code).

It should also be noted that the Project would not result in a substantial increase in demand or transmission service, resulting in the need for new or expanded sources of energy supply or new or expanded energy delivery systems or infrastructure because it would be served by the existing electric utility lines in the Project vicinity.

Enhanced Vehicle Fuel Efficiencies

Project annual fuel consumption estimates presented previously in Tables 4-15 and represent likely potential maximums that would occur for the Project. Under subsequent future conditions, average fuel economies of vehicles accessing the Project site can be expected to improve as older, less fuel-efficient vehicles are removed from circulation, and in response to fuel economy and emissions standards imposed on newer vehicles entering the circulation system.

Project site can be expected to improve as older, less fuel-efficient vehicles are removed from circulation, and in response to fuel economy and emissions standards imposed on newer vehicles entering the circulation system.

4.5 SUMMARY

4.5.1 CONSTRUCTION ENERGY DEMANDS

The estimated power cost of on-site electricity usage during the construction of the proposed Project is assumed to be around $2,033.71. Additionally, based on the assumed power cost, it is estimated that the total electricity usage during construction, after full Project build-out, is calculated to be around 12,404 kWh.

Construction equipment used by the Project would result in single event consumption of approximately 63,244 gallons of diesel fuel. Construction equipment use of fuel would not be atypical for the type of construction proposed because there are no aspects of the Project's proposed construction process that are unusual or energy-intensive, and Project construction equipment would conform to the applicable CARB emissions standards, acting to promote equipment fuel efficiencies.

CCR Title 13, Title 13, Motor Vehicles, section 2449(d)(3) Idling, limits idling times of construction vehicles to no more than 5 minutes, thereby precluding unnecessary and wasteful consumption of fuel due to unproductive idling of construction equipment. Best available control measures inform construction equipment operators of this requirement. Enforcement of idling limitations is realized through periodic site inspections conducted by City building officials, and/or in response to citizen complaints.

Construction worker trips for full construction of the proposed Project would result in the estimated fuel consumption of 39,920 gallons of fuel. Additionally, fuel consumption from construction vendor trips (MHDTs and HHDTs) will total approximately 24,964 gallons. Diesel fuel would be supplied by City and regional commercial vendors. Indirectly, construction energy efficiencies and energy conservation would be achieved through the use of bulk purchases, transport and use of construction materials. The 2018 IEPR released by the CEC has shown that fuel efficiencies are getting better within on and off-road vehicle engines due to more stringent government requirements (19). As supported by the preceding discussions, Project construction energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary.

4.5.2 OPERATIONAL ENERGY DEMANDS

TRANSPORTATION ENERGY DEMANDS

Annual vehicular trips and related VMT generated by the operational of the Project would result in an estimated 26,542 gallons of fuel consumption per year for LDAs, 2,221 gallons of fuel of LDT1s, 11,581 gallons of fuel for LDT2s, and 9,113 gallons for fuel for MDVs. Additionally, the operational of the Project would result in an estimated 9,297 gallons of fuel consumption per year for LHDTs, and 170,125 gallons of fuel consumption per year for HHDTs for the year 2021. The total estimated annual fuel consumption from Project generated VMT would result in a fuel demand 228,879 gallons of fuel.

Fuel would be provided by current and future commercial vendors. Trip generation and VMT generated by the Project are consistent with other industrial uses of similar scale and

configuration. That is, the Project does not propose uses or operations that would inherently result in excessive and wasteful vehicle trips and VMT, nor associated excess and wasteful vehicle energy consumption.

Enhanced fuel economies realized pursuant to federal and state regulatory actions, and related transition of LDAs, LDT1s, LDT2s, MDVs, and LHDs to alternative energy sources (e.g., electricity, natural gas, biofuels, hydrogen cells) would likely decrease future gasoline fuel demands per VMT. Location of the Project proximate to regional and local roadway systems tends to reduce VMT within the region, acting to reduce regional vehicle energy demands. In compliance with the California Green Building Standards Code, the Project would promote the use of bicycles as an alternative mean of transportation by providing short-term and/or long-term bicycle parking accommodations. As supported by the preceding discussions, Project transportation energy consumption would not be considered inefficient, wasteful, or otherwise unnecessary.

FACILITY ENERGY DEMANDS

Project facility operational energy demands are estimated at: 139,282 kBTU/year of natural gas; and 184,865 kWh/year of electricity. Natural gas would be supplied to the Project by SoCalGas; electricity would be supplied by BEU. The Project proposes truck terminal use reflecting contemporary energy efficient/energy conserving designs and operational programs. Uses proposed by the Project are not inherently energy intensive, and the Project energy demands in total would be comparable to, or less than, other truck terminal projects of similar scale and configuration.

Additionally, the Project is will implement the project design features (as summarized in the Executive Summary). Implementation of these project design features combined with the required Title 24 standards will ensure that the Project energy demands would not be considered inefficient, wasteful, or otherwise unnecessary.

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5 CONCLUSION

***Energy Impact-1: Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation*.**

As supported by the preceding analyses, Project operations would not result in the inefficient, wasteful or unnecessary consumption of energy. Further, the energy demands of the Project can be accommodated within the context of available resources and energy delivery systems. The Project would therefore not cause or result in the need for additional energy producing or transmission facilities. The Project would not engage in wasteful or inefficient uses of energy and aims to achieve energy conservations goals within the State of California.

***Energy Impact-2: Conflict with or obstruct a state or local plan for renewable energy or energy efficiency*.**

The Project would comply with the California Green Building Standards Code (CALGreen; CCR, Title 24, Part 11) as implemented by the City of Banning.

As previously discussed, the Project would provide for, and promote, energy efficiencies beyond those required under other applicable federal and State of California standards and regulations, and in so doing would meet or exceed all California Building Standards Code Title 24 standards. Moreover, energy consumed by the Project's operation is calculated to be comparable to, or less than, energy consumed by other truck terminal uses of similar scale and intensity that are constructed and operating in California. On this basis, the Project would not result in the inefficient, wasteful, or unnecessary consumption of energy. Further, the Project would not cause or result in the need for additional energy producing facilities or energy delivery systems.

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6 REFERENCES

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7 CERTIFICATIONS

The contents of this energy report represent an accurate depiction of the environmental impacts associated with the proposed Estes Banning Project. The information contained in this energy report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at (949) 336-5987.

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EDUCATION

Master of Science in Environmental Studies
California State University, Fullerton • May, 2010

Bachelor of Arts in Environmental Analysis and Design
University of California, Irvine • June, 2006

PROFESSIONAL AFFILIATIONS

AEP – Association of Environmental Planners
AWMA – Air and Waste Management Association
ASTM – American Society for Testing and Materials

PROFESSIONAL CERTIFICATIONS

Environmental Site Assessment – American Society for Testing and Materials • June, 2013
Planned Communities and Urban Infill – Urban Land Institute • June, 2011
Indoor Air Quality and Industrial Hygiene – EMSL Analytical • April, 2008
Principles of Ambient Air Monitoring – California Air Resources Board • August, 2007
AB2588 Regulatory Standards – Trinity Consultants • November, 2006
Air Dispersion Modeling – Lakes Environmental • June, 2006

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APPENDIX 3.1:

CALEEMOD ANNUAL CONSTRUCTION EMISSIONS MODEL OUTPUTS

Estes Banning (Construction - Unmitigated)

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	97.40	1000sqft	2.24	97,400.00	0
Other Asphalt Surfaces	1,605.80	1000sqft	36.86	1,605,796.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2021
Utility Company	Statewide Average				
CO2 Intensity (lb/MWhr)	1001.57	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Estes Banning (Construction - Unmitigated) - Riverside-South Coast County, Annual

Project Characteristics - Electricty will be provided to the Project by Banning Electric Utility (BEU). CalEEMod does not provided Intensity Factors for BEU, as such, the Statewide Average will be used.

Land Use - Total Project Area is 36.86 acres. Truck Terminal is 97,400 sf. Remaning area will be modeled as 1,605,796 sf of Other Apshalt Surfaces.

Construction Phase - Based on the Summary Schedule provided by the Project applicant.

Off-road Equipment - Hours are based on an 8-hour workday.

Off-road Equipment - Crawler Tractors used in lieu of Tractor/Loader/Backhoes.

Off-road Equipment - Crawler Tractors used in lieu of Tractor/Loader/Backhoes.

Off-road Equipment -

Off-road Equipment - Crawler Tractors used in lieu of Tractor/Loader/Backhoes.

Off-road Equipment - Crawler Tractors used in lieu of Tractor/Loader/Backhoes.

Grading - For purposes of analysis, total acres graded per day is based on the equipment specific grading rates (CalEEMod Appendix A) and the equipment list.

Architectural Coating - Rule 1113

Vehicle Trips - Construction Run Only.

Energy Use - Construction Run Only.

Water And Wastewater - Construction Run Only.

Solid Waste - Construction Run Only.

Construction Off-road Equipment Mitigation - Rule 403

Vehicle Emission Factors - EMFAC2017

Vehicle Emission Factors - EMFAC2017

Vehicle Emission Factors - EMFAC2017

Table Name	Column Name	Default Value	New Value
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Estes Banning (Construction - Unmitigated) - Riverside-South Coast County, Annual

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tblVehicleEF	LDT1	3.6970e-003	2.9510e-003
tblVehicleEF	LDT1	2.3290e-003	2.1110e-003
tblVehicleEF	LDT1	3.4000e-003	2.7140e-003

tblVehicleEF	LDT1	0.41	0.44
tblVehicleEF	LDT1	0.43	0.34
tblVehicleEF	LDT1	0.27	0.29
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.20	0.88
tblVehicleEF	LDT1	0.21	0.38
tblVehicleEF	LDT1	3.4550e-003	3.3820e-003
tblVehicleEF	LDT1	7.7500e-004	6.5300e-004
tblVehicleEF	LDT1	0.41	0.44
tblVehicleEF	LDT1	0.43	0.34
tblVehicleEF	LDT1	0.27	0.29
tblVehicleEF	LDT1	0.05	0.06
tblVehicleEF	LDT1	0.20	0.88
tblVehicleEF	LDT1	0.23	0.42
tblVehicleEF	LDT1	0.01	7.7080e-003
tblVehicleEF	LDT1	0.02	0.09
tblVehicleEF	LDT1	1.37	1.51
tblVehicleEF	LDT1	3.46	2.48
tblVehicleEF	LDT1	307.88	309.49
tblVehicleEF	LDT1	72.28	66.77
tblVehicleEF	LDT1	0.14	0.14
tblVehicleEF	LDT1	2.5300e-003	2.2930e-003
tblVehicleEF	LDT1	3.6970e-003	2.9510e-003
tblVehicleEF	LDT1	2.3290e-003	2.1110e-003
tblVehicleEF	LDT1	3.4000e-003	2.7140e-003
tblVehicleEF	LDT1	0.18	0.19
tblVehicleEF	LDT1	0.39	0.30

tblVehicleEF	LDT1	0.12	0.13
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.23	1.01
tblVehicleEF	LDT1	0.25	0.45
tblVehicleEF	LDT1	3.0960e-003	3.0630e-003
tblVehicleEF	LDT1	7.8400e-004	6.6100e-004
tblVehicleEF	LDT1	0.18	0.19
tblVehicleEF	LDT1	0.39	0.30
tblVehicleEF	LDT1	0.12	0.13
tblVehicleEF	LDT1	0.04	0.05
tblVehicleEF	LDT1	0.23	1.01
tblVehicleEF	LDT1	0.27	0.50
tblVehicleEF	LDT2	5.6080e-003	4.2470e-003
tblVehicleEF	LDT2	7.2840e-003	0.07
tblVehicleEF	LDT2	0.76	0.98
tblVehicleEF	LDT2	1.53	2.73
tblVehicleEF	LDT2	355.02	338.79
tblVehicleEF	LDT2	81.24	71.51
tblVehicleEF	LDT2	0.08	0.09
tblVehicleEF	LDT2	1.6030e-003	1.4980e-003
tblVehicleEF	LDT2	2.3320e-003	1.9580e-003
tblVehicleEF	LDT2	1.4740e-003	1.3790e-003
tblVehicleEF	LDT2	2.1450e-003	1.8010e-003
tblVehicleEF	LDT2	0.07	0.11
tblVehicleEF	LDT2	0.12	0.14
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.01	0.02

tblVehicleEF	LDT2	0.06	0.44
tblVehicleEF	LDT2	0.10	0.33
tblVehicleEF	LDT2	3.5560e-003	3.3520e-003
tblVehicleEF	LDT2	8.3800e-004	7.0800e-004
tblVehicleEF	LDT2	0.07	0.11
tblVehicleEF	LDT2	0.12	0.14
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.06	0.44
tblVehicleEF	LDT2	0.11	0.37
tblVehicleEF	LDT2	6.3630e-003	4.8280e-003
tblVehicleEF	LDT2	6.3270e-003	0.06
tblVehicleEF	LDT2	0.93	1.20
tblVehicleEF	LDT2	1.35	2.42
tblVehicleEF	LDT2	386.34	362.86
tblVehicleEF	LDT2	81.24	70.86
tblVehicleEF	LDT2	0.07	0.08
tblVehicleEF	LDT2	1.6030e-003	1.4980e-003
tblVehicleEF	LDT2	2.3320e-003	1.9580e-003
tblVehicleEF	LDT2	1.4740e-003	1.3790e-003
tblVehicleEF	LDT2	2.1450e-003	1.8010e-003
tblVehicleEF	LDT2	0.14	0.22
tblVehicleEF	LDT2	0.14	0.17
tblVehicleEF	LDT2	0.10	0.17
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.44
tblVehicleEF	LDT2	0.09	0.29

tblVehicleEF	LDT2	3.8710e-003	3.5900e-003
tblVehicleEF	LDT2	8.3500e-004	7.0100e-004
tblVehicleEF	LDT2	0.14	0.22
tblVehicleEF	LDT2	0.14	0.17
tblVehicleEF	LDT2	0.10	0.17
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.06	0.44
tblVehicleEF	LDT2	0.09	0.32
tblVehicleEF	LDT2	5.3900e-003	4.0760e-003
tblVehicleEF	LDT2	7.4940e-003	0.07
tblVehicleEF	LDT2	0.71	0.91
tblVehicleEF	LDT2	1.57	2.80
tblVehicleEF	LDT2	345.65	331.49
tblVehicleEF	LDT2	81.24	71.65
tblVehicleEF	LDT2	0.08	0.09
tblVehicleEF	LDT2	1.6030e-003	1.4980e-003
tblVehicleEF	LDT2	2.3320e-003	1.9580e-003
tblVehicleEF	LDT2	1.4740e-003	1.3790e-003
tblVehicleEF	LDT2	2.1450e-003	1.8010e-003
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.13	0.15
tblVehicleEF	LDT2	0.05	0.07
tblVehicleEF	LDT2	0.01	0.02
tblVehicleEF	LDT2	0.07	0.51
tblVehicleEF	LDT2	0.10	0.34
tblVehicleEF	LDT2	3.4620e-003	3.2800e-003
tblVehicleEF	LDT2	8.3900e-004	7.0900e-004

tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.13	0.15
tblVehicleEF	LDT2	0.05	0.07
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.51
tblVehicleEF	LDT2	0.11	0.38
tblVehicleEF	LHD1	5.4460e-003	4.8820e-003
tblVehicleEF	LHD1	0.01	5.3310e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	0.96	0.72
tblVehicleEF	LHD1	2.41	0.96
tblVehicleEF	LHD1	9.26	9.44
tblVehicleEF	LHD1	607.95	639.95
tblVehicleEF	LHD1	30.36	10.54
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	2.21	1.60
tblVehicleEF	LHD1	9.7200e-004	9.7000e-004
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.7100e-004	2.3300e-004
tblVehicleEF	LHD1	9.3000e-004	9.2800e-004
tblVehicleEF	LHD1	2.5390e-003	2.5010e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.0100e-004	2.1400e-004
tblVehicleEF	LHD1	3.8710e-003	3.1780e-003
tblVehicleEF	LHD1	0.10	0.08

tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.9010e-003	1.5570e-003
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.31	0.50
tblVehicleEF	LHD1	0.26	0.08
tblVehicleEF	LHD1	9.3000e-005	9.1000e-005
tblVehicleEF	LHD1	5.9620e-003	6.2250e-003
tblVehicleEF	LHD1	3.4900e-004	1.0400e-004
tblVehicleEF	LHD1	3.8710e-003	3.1780e-003
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.9010e-003	1.5570e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.31	0.50
tblVehicleEF	LHD1	0.28	0.08
tblVehicleEF	LHD1	5.4460e-003	4.8940e-003
tblVehicleEF	LHD1	0.01	5.4200e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	0.97	0.73
tblVehicleEF	LHD1	2.29	0.92
tblVehicleEF	LHD1	9.26	9.44
tblVehicleEF	LHD1	607.95	639.97
tblVehicleEF	LHD1	30.36	10.46
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	2.08	1.51
tblVehicleEF	LHD1	9.7200e-004	9.7000e-004

tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.7100e-004	2.3300e-004
tblVehicleEF	LHD1	9.3000e-004	9.2800e-004
tblVehicleEF	LHD1	2.5390e-003	2.5010e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.0100e-004	2.1400e-004
tblVehicleEF	LHD1	7.2450e-003	5.9530e-003
tblVehicleEF	LHD1	0.12	0.09
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	3.6380e-003	2.9980e-003
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.32	0.50
tblVehicleEF	LHD1	0.25	0.07
tblVehicleEF	LHD1	9.3000e-005	9.1000e-005
tblVehicleEF	LHD1	5.9620e-003	6.2250e-003
tblVehicleEF	LHD1	3.4700e-004	1.0300e-004
tblVehicleEF	LHD1	7.2450e-003	5.9530e-003
tblVehicleEF	LHD1	0.12	0.09
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	3.6380e-003	2.9980e-003
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.32	0.50
tblVehicleEF	LHD1	0.27	0.08
tblVehicleEF	LHD1	5.4460e-003	4.8810e-003
tblVehicleEF	LHD1	0.01	5.3180e-003
tblVehicleEF	LHD1	0.02	0.02

tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	0.96	0.72
tblVehicleEF	LHD1	2.41	0.96
tblVehicleEF	LHD1	9.26	9.44
tblVehicleEF	LHD1	607.95	639.95
tblVehicleEF	LHD1	30.36	10.54
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	2.18	1.59
tblVehicleEF	LHD1	9.7200e-004	9.7000e-004
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.7100e-004	2.3300e-004
tblVehicleEF	LHD1	9.3000e-004	9.2800e-004
tblVehicleEF	LHD1	2.5390e-003	2.5010e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.0100e-004	2.1400e-004
tblVehicleEF	LHD1	3.4570e-003	2.8250e-003
tblVehicleEF	LHD1	0.11	0.09
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.7350e-003	1.4150e-003
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.33	0.53
tblVehicleEF	LHD1	0.26	0.08
tblVehicleEF	LHD1	9.3000e-005	9.1000e-005
tblVehicleEF	LHD1	5.9620e-003	6.2250e-003
tblVehicleEF	LHD1	3.4900e-004	1.0400e-004
tblVehicleEF	LHD1	3.4570e-003	2.8250e-003

tblVehicleEF	LHD1	0.11	0.09
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.7350e-003	1.4150e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.33	0.53
tblVehicleEF	LHD1	0.28	0.08
tblVehicleEF	LHD2	3.6660e-003	3.1720e-003
tblVehicleEF	LHD2	4.5290e-003	3.8570e-003
tblVehicleEF	LHD2	8.3110e-003	9.0280e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.50	0.53
tblVehicleEF	LHD2	1.15	0.56
tblVehicleEF	LHD2	14.48	14.86
tblVehicleEF	LHD2	604.20	638.83
tblVehicleEF	LHD2	23.56	7.29
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.71	1.77
tblVehicleEF	LHD2	1.3360e-003	1.4390e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.8700e-004	1.1400e-004
tblVehicleEF	LHD2	1.2780e-003	1.3770e-003
tblVehicleEF	LHD2	2.6970e-003	2.7110e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5600e-004	1.0500e-004
tblVehicleEF	LHD2	1.4980e-003	1.6870e-003
tblVehicleEF	LHD2	0.04	0.04

tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	7.7800e-004	8.4200e-004
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.4100e-004	1.4200e-004
tblVehicleEF	LHD2	5.8740e-003	6.1550e-003
tblVehicleEF	LHD2	2.5700e-004	7.2000e-005
tblVehicleEF	LHD2	1.4980e-003	1.6870e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	7.7800e-004	8.4200e-004
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	3.6660e-003	3.1790e-003
tblVehicleEF	LHD2	4.5800e-003	3.8860e-003
tblVehicleEF	LHD2	8.0210e-003	8.7250e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.51	0.53
tblVehicleEF	LHD2	1.10	0.53
tblVehicleEF	LHD2	14.48	14.86
tblVehicleEF	LHD2	604.20	638.83
tblVehicleEF	LHD2	23.56	7.25
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.62	1.67
tblVehicleEF	LHD2	1.3360e-003	1.4390e-003

tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.8700e-004	1.1400e-004
tblVehicleEF	LHD2	1.2780e-003	1.3770e-003
tblVehicleEF	LHD2	2.6970e-003	2.7110e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5600e-004	1.0500e-004
tblVehicleEF	LHD2	2.8320e-003	3.1830e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.4720e-003	1.6130e-003
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.4100e-004	1.4200e-004
tblVehicleEF	LHD2	5.8740e-003	6.1560e-003
tblVehicleEF	LHD2	2.5600e-004	7.2000e-005
tblVehicleEF	LHD2	2.8320e-003	3.1830e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.4720e-003	1.6130e-003
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	3.6660e-003	3.1700e-003
tblVehicleEF	LHD2	4.5170e-003	3.8490e-003
tblVehicleEF	LHD2	8.3600e-003	9.0930e-003

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tblVehicleEF	LHD2	0.50	0.53
tblVehicleEF	LHD2	1.16	0.56
tblVehicleEF	LHD2	14.48	14.86
tblVehicleEF	LHD2	604.20	638.83
tblVehicleEF	LHD2	23.56	7.30
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.70	1.75
tblVehicleEF	LHD2	1.3360e-003	1.4390e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.8700e-004	1.1400e-004
tblVehicleEF	LHD2	1.2780e-003	1.3770e-003
tblVehicleEF	LHD2	2.6970e-003	2.7110e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5600e-004	1.0500e-004
tblVehicleEF	LHD2	1.1910e-003	1.3290e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	6.6000e-004	7.0100e-004
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.4100e-004	1.4200e-004
tblVehicleEF	LHD2	5.8740e-003	6.1550e-003
tblVehicleEF	LHD2	2.5700e-004	7.2000e-005
tblVehicleEF	LHD2	1.1910e-003	1.3290e-003

tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	6.6000e-004	7.0100e-004
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	MCY	0.42	0.32
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	19.52	19.61
tblVehicleEF	MCY	9.67	8.55
tblVehicleEF	MCY	165.74	208.30
tblVehicleEF	MCY	46.23	60.73
tblVehicleEF	MCY	1.13	1.13
tblVehicleEF	MCY	1.7750e-003	1.7570e-003
tblVehicleEF	MCY	3.4010e-003	2.8660e-003
tblVehicleEF	MCY	1.6600e-003	1.6440e-003
tblVehicleEF	MCY	3.2060e-003	2.7000e-003
tblVehicleEF	MCY	1.69	1.66
tblVehicleEF	MCY	0.85	0.84
tblVehicleEF	MCY	0.92	0.90
tblVehicleEF	MCY	2.15	2.16
tblVehicleEF	MCY	0.57	1.87
tblVehicleEF	MCY	2.08	1.83
tblVehicleEF	MCY	2.0380e-003	2.0610e-003
tblVehicleEF	MCY	6.8100e-004	6.0100e-004
tblVehicleEF	MCY	1.69	1.66
tblVehicleEF	MCY	0.85	0.84

tblVehicleEF	MCY	0.92	0.90
tblVehicleEF	MCY	2.65	2.65
tblVehicleEF	MCY	0.57	1.87
tblVehicleEF	MCY	2.26	1.99
tblVehicleEF	MCY	0.42	0.32
tblVehicleEF	MCY	0.14	0.22
tblVehicleEF	MCY	20.23	20.27
tblVehicleEF	MCY	9.11	8.00
tblVehicleEF	MCY	165.74	209.26
tblVehicleEF	MCY	46.23	59.19
tblVehicleEF	MCY	0.98	0.98
tblVehicleEF	MCY	1.7750e-003	1.7570e-003
tblVehicleEF	MCY	3.4010e-003	2.8660e-003
tblVehicleEF	MCY	1.6600e-003	1.6440e-003
tblVehicleEF	MCY	3.2060e-003	2.7000e-003
tblVehicleEF	MCY	3.35	3.28
tblVehicleEF	MCY	1.24	1.23
tblVehicleEF	MCY	2.10	2.05
tblVehicleEF	MCY	2.13	2.13
tblVehicleEF	MCY	0.57	1.86
tblVehicleEF	MCY	1.86	1.63
tblVehicleEF	MCY	2.0490e-003	2.0710e-003
tblVehicleEF	MCY	6.6500e-004	5.8600e-004
tblVehicleEF	MCY	3.35	3.28
tblVehicleEF	MCY	1.24	1.23
tblVehicleEF	MCY	2.10	2.05
tblVehicleEF	MCY	2.62	2.63

tblVehicleEF	MCY	0.57	1.86
tblVehicleEF	MCY	2.02	1.77
tblVehicleEF	MCY	0.42	0.32
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	19.04	19.14
tblVehicleEF	MCY	9.62	8.49
tblVehicleEF	MCY	165.74	207.52
tblVehicleEF	MCY	46.23	60.64
tblVehicleEF	MCY	1.12	1.12
tblVehicleEF	MCY	1.7750e-003	1.7570e-003
tblVehicleEF	MCY	3.4010e-003	2.8660e-003
tblVehicleEF	MCY	1.6600e-003	1.6440e-003
tblVehicleEF	MCY	3.2060e-003	2.7000e-003
tblVehicleEF	MCY	1.60	1.59
tblVehicleEF	MCY	1.05	1.04
tblVehicleEF	MCY	0.74	0.73
tblVehicleEF	MCY	2.15	2.15
tblVehicleEF	MCY	0.65	2.12
tblVehicleEF	MCY	2.08	1.83
tblVehicleEF	MCY	2.0310e-003	2.0540e-003
tblVehicleEF	MCY	6.8100e-004	6.0000e-004
tblVehicleEF	MCY	1.60	1.59
tblVehicleEF	MCY	1.05	1.04
tblVehicleEF	MCY	0.74	0.73
tblVehicleEF	MCY	2.64	2.65
tblVehicleEF	MCY	0.65	2.12
tblVehicleEF	MCY	2.27	1.99

tblVehicleEF	MDV	0.01	5.7580e-003
tblVehicleEF	MDV	0.02	0.09
tblVehicleEF	MDV	1.42	1.20
tblVehicleEF	MDV	3.18	3.27
tblVehicleEF	MDV	488.89	421.49
tblVehicleEF	MDV	110.15	88.73
tblVehicleEF	MDV	0.17	0.12
tblVehicleEF	MDV	1.7110e-003	1.5730e-003
tblVehicleEF	MDV	2.4630e-003	2.0550e-003
tblVehicleEF	MDV	1.5780e-003	1.4510e-003
tblVehicleEF	MDV	2.2660e-003	1.8910e-003
tblVehicleEF	MDV	0.11	0.13
tblVehicleEF	MDV	0.20	0.17
tblVehicleEF	MDV	0.09	0.11
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.25	0.45
tblVehicleEF	MDV	4.9000e-003	4.1680e-003
tblVehicleEF	MDV	1.1570e-003	8.7800e-004
tblVehicleEF	MDV	0.11	0.13
tblVehicleEF	MDV	0.20	0.17
tblVehicleEF	MDV	0.09	0.11
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.27	0.49
tblVehicleEF	MDV	0.01	6.5120e-003
tblVehicleEF	MDV	0.02	0.08

tblVehicleEF	MDV	1.73	1.46
tblVehicleEF	MDV	2.81	2.88
tblVehicleEF	MDV	530.71	447.07
tblVehicleEF	MDV	110.15	87.92
tblVehicleEF	MDV	0.16	0.11
tblVehicleEF	MDV	1.7110e-003	1.5730e-003
tblVehicleEF	MDV	2.4630e-003	2.0550e-003
tblVehicleEF	MDV	1.5780e-003	1.4510e-003
tblVehicleEF	MDV	2.2660e-003	1.8910e-003
tblVehicleEF	MDV	0.22	0.26
tblVehicleEF	MDV	0.23	0.20
tblVehicleEF	MDV	0.17	0.21
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.21	0.39
tblVehicleEF	MDV	5.3230e-003	4.4210e-003
tblVehicleEF	MDV	1.1510e-003	8.7000e-004
tblVehicleEF	MDV	0.22	0.26
tblVehicleEF	MDV	0.23	0.20
tblVehicleEF	MDV	0.17	0.21
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.23	0.43
tblVehicleEF	MDV	0.01	5.5370e-003
tblVehicleEF	MDV	0.02	0.09
tblVehicleEF	MDV	1.33	1.12
tblVehicleEF	MDV	3.24	3.34

tblVehicleEF	MDV	476.42	413.84
tblVehicleEF	MDV	110.15	88.88
tblVehicleEF	MDV	0.16	0.12
tblVehicleEF	MDV	1.7110e-003	1.5730e-003
tblVehicleEF	MDV	2.4630e-003	2.0550e-003
tblVehicleEF	MDV	1.5780e-003	1.4510e-003
tblVehicleEF	MDV	2.2660e-003	1.8910e-003
tblVehicleEF	MDV	0.09	0.10
tblVehicleEF	MDV	0.21	0.18
tblVehicleEF	MDV	0.08	0.10
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.13	0.57
tblVehicleEF	MDV	0.25	0.46
tblVehicleEF	MDV	4.7750e-003	4.0920e-003
tblVehicleEF	MDV	1.1590e-003	8.8000e-004
tblVehicleEF	MDV	0.09	0.10
tblVehicleEF	MDV	0.21	0.18
tblVehicleEF	MDV	0.08	0.10
tblVehicleEF	MDV	0.05	0.03
tblVehicleEF	MDV	0.13	0.57
tblVehicleEF	MDV	0.28	0.50
tblVehicleEF	MH	0.03	3.3370e-003
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	2.70	0.34
tblVehicleEF	MH	5.98	0.00
tblVehicleEF	MH	1,002.10	941.76
tblVehicleEF	MH	57.67	0.00

tblVehicleEF	MH	1.67	4.43
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	1.0860e-003	0.00
tblVehicleEF	MH	3.2460e-003	4.0000e-003
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	9.9800e-004	0.00
tblVehicleEF	MH	1.56	0.00
tblVehicleEF	MH	0.08	0.00
tblVehicleEF	MH	0.54	0.00
tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.35	0.00
tblVehicleEF	MH	9.9460e-003	8.9030e-003
tblVehicleEF	MH	6.8100e-004	0.00
tblVehicleEF	MH	1.56	0.00
tblVehicleEF	MH	0.08	0.00
tblVehicleEF	MH	0.54	0.00
tblVehicleEF	MH	0.13	0.08
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.39	0.00
tblVehicleEF	MH	0.03	3.3370e-003
tblVehicleEF	MH	0.02	0.00
tblVehicleEF	MH	2.78	0.34
tblVehicleEF	MH	5.56	0.00
tblVehicleEF	MH	1,002.10	941.76
tblVehicleEF	MH	57.67	0.00

tblVehicleEF	MH	1.55	4.18
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	1.0860e-003	0.00
tblVehicleEF	MH	3.2460e-003	4.0000e-003
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	9.9800e-004	0.00
tblVehicleEF	MH	2.87	0.00
tblVehicleEF	MH	0.10	0.00
tblVehicleEF	MH	1.06	0.00
tblVehicleEF	MH	0.10	0.07
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.34	0.00
tblVehicleEF	MH	9.9470e-003	8.9030e-003
tblVehicleEF	MH	6.7400e-004	0.00
tblVehicleEF	MH	2.87	0.00
tblVehicleEF	MH	0.10	0.00
tblVehicleEF	MH	1.06	0.00
tblVehicleEF	MH	0.13	0.08
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.37	0.00
tblVehicleEF	MH	0.03	3.3370e-003
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	2.70	0.34
tblVehicleEF	MH	6.02	0.00
tblVehicleEF	MH	1,002.10	941.76
tblVehicleEF	MH	57.67	0.00

tblVehicleEF	MH	1.65	4.38
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	1.0860e-003	0.00
tblVehicleEF	MH	3.2460e-003	4.0000e-003
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	9.9800e-004	0.00
tblVehicleEF	MH	1.58	0.00
tblVehicleEF	MH	0.10	0.00
tblVehicleEF	MH	0.53	0.00
tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.35	0.00
tblVehicleEF	MH	9.9460e-003	8.9030e-003
tblVehicleEF	MH	6.8200e-004	0.00
tblVehicleEF	MH	1.58	0.00
tblVehicleEF	MH	0.10	0.00
tblVehicleEF	MH	0.53	0.00
tblVehicleEF	MH	0.13	0.08
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.39	0.00
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tblVehicleEF	MHD	3.7220e-003	5.9790e-003
tblVehicleEF	MHD	0.06	8.4870e-003
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tblVehicleEF	MHD	0.28	0.57
tblVehicleEF	MHD	6.06	1.01

tblVehicleEF	MHD	151.96	74.93
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tblVehicleEF	MHD	0.65	0.69
tblVehicleEF	MHD	0.99	2.37
tblVehicleEF	MHD	1.0680e-003	2.4180e-003
tblVehicleEF	MHD	6.4490e-003	0.08
tblVehicleEF	MHD	7.8800e-004	9.6000e-005
tblVehicleEF	MHD	1.0220e-003	2.3130e-003
tblVehicleEF	MHD	6.1670e-003	0.08
tblVehicleEF	MHD	7.2400e-004	8.8000e-005
tblVehicleEF	MHD	1.7450e-003	7.1900e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	8.5800e-004	3.5500e-004
tblVehicleEF	MHD	0.03	0.11
tblVehicleEF	MHD	0.02	0.10
tblVehicleEF	MHD	0.37	0.05
tblVehicleEF	MHD	1.4610e-003	7.1000e-004
tblVehicleEF	MHD	0.01	9.5290e-003
tblVehicleEF	MHD	6.6100e-004	8.1000e-005
tblVehicleEF	MHD	1.7450e-003	7.1900e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	8.5800e-004	3.5500e-004
tblVehicleEF	MHD	0.04	0.12
tblVehicleEF	MHD	0.02	0.10

tblVehicleEF	MHD	0.40	0.05
tblVehicleEF	MHD	0.02	2.9880e-003
tblVehicleEF	MHD	3.7740e-003	6.0080e-003
tblVehicleEF	MHD	0.05	8.2030e-003
tblVehicleEF	MHD	0.26	0.28
tblVehicleEF	MHD	0.28	0.57
tblVehicleEF	MHD	5.78	0.96
tblVehicleEF	MHD	160.96	76.44
tblVehicleEF	MHD	1,066.63	1,001.04
tblVehicleEF	MHD	55.49	8.10
tblVehicleEF	MHD	0.67	0.70
tblVehicleEF	MHD	0.93	2.23
tblVehicleEF	MHD	9.0000e-004	2.0410e-003
tblVehicleEF	MHD	6.4490e-003	0.08
tblVehicleEF	MHD	7.8800e-004	9.6000e-005
tblVehicleEF	MHD	8.6100e-004	1.9530e-003
tblVehicleEF	MHD	6.1670e-003	0.08
tblVehicleEF	MHD	7.2400e-004	8.8000e-005
tblVehicleEF	MHD	3.3760e-003	1.3770e-003
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	1.6840e-003	7.0100e-004
tblVehicleEF	MHD	0.03	0.11
tblVehicleEF	MHD	0.02	0.11
tblVehicleEF	MHD	0.36	0.04
tblVehicleEF	MHD	1.5460e-003	7.2500e-004
tblVehicleEF	MHD	0.01	9.5290e-003

tblVehicleEF	MHD	6.5600e-004	8.0000e-005
tblVehicleEF	MHD	3.3760e-003	1.3770e-003
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	1.6840e-003	7.0100e-004
tblVehicleEF	MHD	0.04	0.12
tblVehicleEF	MHD	0.02	0.11
tblVehicleEF	MHD	0.39	0.05
tblVehicleEF	MHD	0.02	3.3820e-003
tblVehicleEF	MHD	3.6890e-003	5.9600e-003
tblVehicleEF	MHD	0.06	8.5610e-003
tblVehicleEF	MHD	0.49	0.43
tblVehicleEF	MHD	0.27	0.57
tblVehicleEF	MHD	6.14	1.02
tblVehicleEF	MHD	139.53	72.84
tblVehicleEF	MHD	1,066.63	1,001.03
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tblVehicleEF	MHD	0.62	0.67
tblVehicleEF	MHD	0.98	2.35
tblVehicleEF	MHD	1.2990e-003	2.9380e-003
tblVehicleEF	MHD	6.4490e-003	0.08
tblVehicleEF	MHD	7.8800e-004	9.6000e-005
tblVehicleEF	MHD	1.2430e-003	2.8110e-003
tblVehicleEF	MHD	6.1670e-003	0.08
tblVehicleEF	MHD	7.2400e-004	8.8000e-005
tblVehicleEF	MHD	1.3320e-003	5.6300e-004
tblVehicleEF	MHD	0.05	0.02

tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	6.7900e-004	2.8800e-004
tblVehicleEF	MHD	0.03	0.11
tblVehicleEF	MHD	0.02	0.11
tblVehicleEF	MHD	0.37	0.05
tblVehicleEF	MHD	1.3440e-003	6.9100e-004
tblVehicleEF	MHD	0.01	9.5290e-003
tblVehicleEF	MHD	6.6300e-004	8.1000e-005
tblVehicleEF	MHD	1.3320e-003	5.6300e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	6.7900e-004	2.8800e-004
tblVehicleEF	MHD	0.04	0.12
tblVehicleEF	MHD	0.02	0.11
tblVehicleEF	MHD	0.41	0.05
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tblVehicleEF	OBUS	8.0950e-003	8.5070e-003
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tblVehicleEF	OBUS	0.27	0.50
tblVehicleEF	OBUS	0.54	0.93
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tblVehicleEF	OBUS	1,098.07	1,407.22
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tblVehicleEF	OBUS	1.2100e-004	1.7750e-003

tblVehicleEF	OBUS	6.0450e-003	0.04
tblVehicleEF	OBUS	8.2300e-004	1.9000e-004
tblVehicleEF	OBUS	1.1600e-004	1.6990e-003
tblVehicleEF	OBUS	5.7680e-003	0.04
tblVehicleEF	OBUS	7.5700e-004	1.7400e-004
tblVehicleEF	OBUS	2.1800e-003	2.5990e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	9.3000e-004	1.1120e-003
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.05	0.26
tblVehicleEF	OBUS	0.39	0.12
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tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.0900e-004	2.0600e-004
tblVehicleEF	OBUS	2.1800e-003	2.5990e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	9.3000e-004	1.1120e-003
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tblVehicleEF	OBUS	0.05	0.26
tblVehicleEF	OBUS	0.42	0.14
tblVehicleEF	OBUS	0.01	8.9470e-003
tblVehicleEF	OBUS	8.2540e-003	8.6370e-003
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tblVehicleEF	OBUS	0.55	0.94

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tblVehicleEF	OBUS	1.04	1.59
tblVehicleEF	OBUS	1.0200e-004	1.5000e-003
tblVehicleEF	OBUS	6.0450e-003	0.04
tblVehicleEF	OBUS	8.2300e-004	1.9000e-004
tblVehicleEF	OBUS	9.8000e-005	1.4350e-003
tblVehicleEF	OBUS	5.7680e-003	0.04
tblVehicleEF	OBUS	7.5700e-004	1.7400e-004
tblVehicleEF	OBUS	4.0690e-003	4.7330e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	1.7890e-003	2.1320e-003
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tblVehicleEF	OBUS	0.05	0.26
tblVehicleEF	OBUS	0.37	0.12
tblVehicleEF	OBUS	7.6100e-004	7.0400e-004
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tblVehicleEF	OBUS	0.02	0.03
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tblVehicleEF	OBUS	0.54	0.92
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tblVehicleEF	OBUS	70.30	72.56
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tblVehicleEF	OBUS	8.2300e-004	1.9000e-004
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tblVehicleEF	OBUS	0.05	0.27
tblVehicleEF	OBUS	0.39	0.13
tblVehicleEF	OBUS	6.8300e-004	6.9200e-004

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tblVehicleEF	OBUS	8.1000e-004	2.0700e-004
tblVehicleEF	OBUS	1.8870e-003	2.3830e-003
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tblVehicleEF	SBUS	0.01	6.6110e-003
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tblVehicleEF	SBUS	1,146.29	366.87
tblVehicleEF	SBUS	1,103.40	1,115.27
tblVehicleEF	SBUS	53.92	6.06
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tblVehicleEF	SBUS	4.65	4.82
tblVehicleEF	SBUS	0.01	4.0660e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.5700e-004	4.0000e-005
tblVehicleEF	SBUS	0.01	3.8900e-003
tblVehicleEF	SBUS	2.6950e-003	2.6510e-003
tblVehicleEF	SBUS	0.02	0.03

tblVehicleEF	SBUS	4.2000e-004	3.6000e-005
tblVehicleEF	SBUS	4.6830e-003	1.3080e-003
tblVehicleEF	SBUS	0.03	8.6250e-003
tblVehicleEF	SBUS	0.94	0.36
tblVehicleEF	SBUS	2.1770e-003	6.2500e-004
tblVehicleEF	SBUS	0.11	0.10
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	0.37	0.04
tblVehicleEF	SBUS	0.01	3.5040e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.5500e-004	6.0000e-005
tblVehicleEF	SBUS	4.6830e-003	1.3080e-003
tblVehicleEF	SBUS	0.03	8.6250e-003
tblVehicleEF	SBUS	1.35	0.52
tblVehicleEF	SBUS	2.1770e-003	6.2500e-004
tblVehicleEF	SBUS	0.13	0.11
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	0.40	0.04
tblVehicleEF	SBUS	0.84	0.08
tblVehicleEF	SBUS	0.01	6.6860e-003
tblVehicleEF	SBUS	0.05	5.8380e-003
tblVehicleEF	SBUS	7.71	2.99
tblVehicleEF	SBUS	0.65	0.54
tblVehicleEF	SBUS	4.83	0.68
tblVehicleEF	SBUS	1,198.60	377.09
tblVehicleEF	SBUS	1,103.40	1,115.28
tblVehicleEF	SBUS	53.92	5.63

tblVehicleEF	SBUS	10.32	3.66
tblVehicleEF	SBUS	4.37	4.53
tblVehicleEF	SBUS	9.1190e-003	3.4340e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.5700e-004	4.0000e-005
tblVehicleEF	SBUS	8.7240e-003	3.2850e-003
tblVehicleEF	SBUS	2.6950e-003	2.6510e-003
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	4.2000e-004	3.6000e-005
tblVehicleEF	SBUS	8.4640e-003	2.3620e-003
tblVehicleEF	SBUS	0.03	9.1440e-003
tblVehicleEF	SBUS	0.93	0.36
tblVehicleEF	SBUS	4.0830e-003	1.1650e-003
tblVehicleEF	SBUS	0.11	0.10
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.31	0.03
tblVehicleEF	SBUS	0.01	3.6000e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.2400e-004	5.6000e-005
tblVehicleEF	SBUS	8.4640e-003	2.3620e-003
tblVehicleEF	SBUS	0.03	9.1440e-003
tblVehicleEF	SBUS	1.35	0.52
tblVehicleEF	SBUS	4.0830e-003	1.1650e-003
tblVehicleEF	SBUS	0.13	0.11
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.34	0.04

tblVehicleEF	SBUS	0.84	0.08
tblVehicleEF	SBUS	0.01	6.6040e-003
tblVehicleEF	SBUS	0.07	7.2110e-003
tblVehicleEF	SBUS	8.00	3.09
tblVehicleEF	SBUS	0.63	0.53
tblVehicleEF	SBUS	7.02	0.98
tblVehicleEF	SBUS	1,074.07	352.76
tblVehicleEF	SBUS	1,103.40	1,115.26
tblVehicleEF	SBUS	53.92	6.14
tblVehicleEF	SBUS	9.56	3.44
tblVehicleEF	SBUS	4.60	4.78
tblVehicleEF	SBUS	0.01	4.9380e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.5700e-004	4.0000e-005
tblVehicleEF	SBUS	0.01	4.7240e-003
tblVehicleEF	SBUS	2.6950e-003	2.6510e-003
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	4.2000e-004	3.6000e-005
tblVehicleEF	SBUS	4.1680e-003	1.1480e-003
tblVehicleEF	SBUS	0.03	8.8290e-003
tblVehicleEF	SBUS	0.94	0.36
tblVehicleEF	SBUS	2.1000e-003	6.0300e-004
tblVehicleEF	SBUS	0.11	0.10
tblVehicleEF	SBUS	0.02	0.06
tblVehicleEF	SBUS	0.38	0.04
tblVehicleEF	SBUS	0.01	3.3710e-003

tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.6100e-004	6.1000e-005
tblVehicleEF	SBUS	4.1680e-003	1.1480e-003
tblVehicleEF	SBUS	0.03	8.8290e-003
tblVehicleEF	SBUS	1.35	0.52
tblVehicleEF	SBUS	2.1000e-003	6.0300e-004
tblVehicleEF	SBUS	0.13	0.11
tblVehicleEF	SBUS	0.02	0.06
tblVehicleEF	SBUS	0.41	0.05
tblVehicleEF	UBUS	1.51	3.35
tblVehicleEF	UBUS	0.09	0.02
tblVehicleEF	UBUS	8.45	26.05
tblVehicleEF	UBUS	15.26	1.50
tblVehicleEF	UBUS	1,822.40	1,617.71
tblVehicleEF	UBUS	153.45	18.08
tblVehicleEF	UBUS	4.95	0.32
tblVehicleEF	UBUS	0.50	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.06	2.9340e-003
tblVehicleEF	UBUS	1.4200e-003	1.6100e-004
tblVehicleEF	UBUS	0.21	0.04
tblVehicleEF	UBUS	3.0000e-003	5.4780e-003
tblVehicleEF	UBUS	0.05	2.7920e-003
tblVehicleEF	UBUS	1.3060e-003	1.4800e-004
tblVehicleEF	UBUS	9.7430e-003	1.6370e-003
tblVehicleEF	UBUS	0.11	9.7740e-003
tblVehicleEF	UBUS	4.7860e-003	7.1300e-004

tblVehicleEF	UBUS	0.52	0.05
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.17	0.07
tblVehicleEF	UBUS	9.9960e-003	4.8690e-003
tblVehicleEF	UBUS	1.8100e-003	1.7900e-004
tblVehicleEF	UBUS	9.7430e-003	1.6370e-003
tblVehicleEF	UBUS	0.11	9.7740e-003
tblVehicleEF	UBUS	4.7860e-003	7.1300e-004
tblVehicleEF	UBUS	2.08	3.43
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.28	0.08
tblVehicleEF	UBUS	1.52	3.35
tblVehicleEF	UBUS	0.08	0.02
tblVehicleEF	UBUS	8.53	26.06
tblVehicleEF	UBUS	13.06	1.28
tblVehicleEF	UBUS	1,822.40	1,617.72
tblVehicleEF	UBUS	153.45	17.70
tblVehicleEF	UBUS	4.62	0.31
tblVehicleEF	UBUS	0.50	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.06	2.9340e-003
tblVehicleEF	UBUS	1.4200e-003	1.6100e-004
tblVehicleEF	UBUS	0.21	0.04
tblVehicleEF	UBUS	3.0000e-003	5.4780e-003
tblVehicleEF	UBUS	0.05	2.7920e-003
tblVehicleEF	UBUS	1.3060e-003	1.4800e-004
tblVehicleEF	UBUS	0.02	2.9250e-003

tblVehicleEF	UBUS	0.14	0.01
tblVehicleEF	UBUS	9.6600e-003	1.4550e-003
tblVehicleEF	UBUS	0.53	0.05
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.06	0.07
tblVehicleEF	UBUS	9.9970e-003	4.8690e-003
tblVehicleEF	UBUS	1.7720e-003	1.7500e-004
tblVehicleEF	UBUS	0.02	2.9250e-003
tblVehicleEF	UBUS	0.14	0.01
tblVehicleEF	UBUS	9.6600e-003	1.4550e-003
tblVehicleEF	UBUS	2.09	3.43
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.17	0.07
tblVehicleEF	UBUS	1.51	3.35
tblVehicleEF	UBUS	0.09	0.02
tblVehicleEF	UBUS	8.44	26.05
tblVehicleEF	UBUS	15.44	1.49
tblVehicleEF	UBUS	1,822.40	1,617.71
tblVehicleEF	UBUS	153.45	18.06
tblVehicleEF	UBUS	4.92	0.31
tblVehicleEF	UBUS	0.50	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.06	2.9340e-003
tblVehicleEF	UBUS	1.4200e-003	1.6100e-004
tblVehicleEF	UBUS	0.21	0.04
tblVehicleEF	UBUS	3.0000e-003	5.4780e-003
tblVehicleEF	UBUS	0.05	2.7920e-003

tblVehicleEF	UBUS	1.3060e-003	1.4800e-004
tblVehicleEF	UBUS	8.9770e-003	1.7200e-003
tblVehicleEF	UBUS	0.13	0.01
tblVehicleEF	UBUS	4.3820e-003	7.5400e-004
tblVehicleEF	UBUS	0.52	0.05
tblVehicleEF	UBUS	0.03	0.05
tblVehicleEF	UBUS	1.18	0.07
tblVehicleEF	UBUS	9.9960e-003	4.8690e-003
tblVehicleEF	UBUS	1.8130e-003	1.7900e-004
tblVehicleEF	UBUS	8.9770e-003	1.7200e-003
tblVehicleEF	UBUS	0.13	0.01
tblVehicleEF	UBUS	4.3820e-003	7.5400e-004
tblVehicleEF	UBUS	2.08	3.43
tblVehicleEF	UBUS	0.03	0.05
tblVehicleEF	UBUS	1.29	0.08
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TTP	41.00	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TTP	59.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	0.00
tblVehicleTrips	ST_TR	1.68	0.00

tblVehicleTrips	SU_TR	1.68	0.00
tblVehicleTrips	WD_TR	1.68	0.00
tblWater	IndoorWaterUseRate	22,523,750.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.4564	4.8289	2.6349	7.8400e-003	1.0303	0.1794	1.2097	0.4081	0.1657	0.5738	0.0000	705.3222	705.3222	0.1376	0.0000	708.7618
2021	0.6488	2.2542	1.9548	6.6000e-003	0.3316	0.0688	0.4004	0.0892	0.0642	0.1534	0.0000	601.4391	601.4391	0.0690	0.0000	603.1649
Maximum	**0.6488**	**4.8289**	**2.6349**	**7.8400e-003**	**1.0303**	**0.1794**	**1.2097**	**0.4081**	**0.1657**	**0.5738**	**0.0000**	**705.3222**	**705.3222**	**0.1376**	**0.0000**	**708.7618**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.4564	4.8289	2.6349	7.8400e-003	0.5435	0.1794	0.7229	0.1974	0.1657	0.3631	0.0000	705.3218	705.3218	0.1376	0.0000	708.7614
2021	0.6488	2.2542	1.9548	6.6000e-003	0.3316	0.0688	0.4004	0.0892	0.0642	0.1534	0.0000	601.4389	601.4389	0.0690	0.0000	603.1647
Maximum	**0.6488**	**4.8289**	**2.6349**	**7.8400e-003**	**0.5435**	**0.1794**	**0.7229**	**0.1974**	**0.1657**	**0.3631**	**0.0000**	**705.3218**	**705.3218**	**0.1376**	**0.0000**	**708.7614**

	ROG	NOx	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**	**35.74**	**0.00**	**30.23**	**42.37**	**0.00**	**28.98**	**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	6-4-2020	9-3-2020	2.2181	2.2181
2	9-4-2020	12-3-2020	2.2993	2.2993
3	12-4-2020	3-3-2021	2.9071	2.9071
4	3-4-2021	6-3-2021	0.7530	0.7530
		Highest	2.9071	2.9071

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	0.5253	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0423	0.0423	1.1000e-004	0.0000	0.0451
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	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.5253**	**2.0000e-004**	**0.0218**	**0.0000**	**0.0000**	**8.0000e-005**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0423**	**0.0423**	**1.1000e-004**	**0.0000**	**0.0451**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5253	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0423	0.0423	1.1000e-004	0.0000	0.0451
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	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.5253**	**2.0000e-004**	**0.0218**	**0.0000**	**0.0000**	**8.0000e-005**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0423**	**0.0423**	**1.1000e-004**	**0.0000**	**0.0451**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Estes Banning (Construction - Unmitigated) - Riverside-South Coast County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Rough Grading	Grading	6/4/2020	7/29/2020	5	40	
2	Site Preparation	Site Preparation	7/30/2020	9/30/2020	5	45	
3	Fine Grading	Grading	10/1/2020	10/28/2020	5	20	
4	Building Construction	Building Construction	10/29/2020	3/24/2021	5	105	
5	Paving	Paving	1/7/2021	3/24/2021	5	55	
6	Architectural Coating	Architectural Coating	1/7/2021	3/24/2021	5	55	

Acres of Grading (Site Preparation Phase): 157.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 36.86

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 146,100; Non-Residential Outdoor: 48,700; Striped Parking Area: 96,348 (Architectural Coating – sqft)

OffRoad Equipment

Estes Banning (Construction - Unmitigated) - Riverside-South Coast County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Rough Grading	Crawler Tractors	2	8.00	212	0.43
Rough Grading	Excavators	2	8.00	158	0.38
Rough Grading	Graders	1	8.00	187	0.41
Rough Grading	Rubber Tired Dozers	1	8.00	247	0.40
Rough Grading	Scrapers	2	8.00	367	0.48
Rough Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Crawler Tractors	4	8.00	212	0.43
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Fine Grading	Crawler Tractors	2	8.00	212	0.43
Fine Grading	Excavators	2	8.00	158	0.38
Fine Grading	Graders	1	8.00	187	0.41
Fine Grading	Rubber Tired Dozers	1	8.00	247	0.40
Fine Grading	Scrapers	2	8.00	367	0.48
Fine Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Crawler Tractors	3	8.00	212	0.43
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	8.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Rough Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	715.00	279.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	143.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Rough Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2053	0.0000	0.2053	0.0754	0.0000	0.0754	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1038	1.2177	0.6480	1.4300e-003		0.0494	0.0494		0.0454	0.0454	0.0000	125.6470	125.6470	0.0406	0.0000	126.6629
Total	**0.1038**	**1.2177**	**0.6480**	**1.4300e-003**	**0.2053**	**0.0494**	**0.2547**	**0.0754**	**0.0454**	**0.1208**	**0.0000**	**125.6470**	**125.6470**	**0.0406**	**0.0000**	**126.6629**

3.2 Rough Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8400e-003	1.2900e-003	0.0138	4.0000e-005	4.4000e-003	3.0000e-005	4.4200e-003	1.1700e-003	2.0000e-005	1.1900e-003	0.0000	3.6784	3.6784	9.0000e-005	0.0000	3.6807
Total	**1.8400e-003**	**1.2900e-003**	**0.0138**	**4.0000e-005**	**4.4000e-003**	**3.0000e-005**	**4.4200e-003**	**1.1700e-003**	**2.0000e-005**	**1.1900e-003**	**0.0000**	**3.6784**	**3.6784**	**9.0000e-005**	**0.0000**	**3.6807**

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					0.0801	0.0000	0.0801	0.0294	0.0000	0.0294	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1038	1.2177	0.6480	1.4300e-003		0.0494	0.0494		0.0454	0.0454	0.0000	125.6468	125.6468	0.0406	0.0000	126.6628
Total	**0.1038**	**1.2177**	**0.6480**	**1.4300e-003**	**0.0801**	**0.0494**	**0.1294**	**0.0294**	**0.0454**	**0.0748**	**0.0000**	**125.6468**	**125.6468**	**0.0406**	**0.0000**	**126.6628**

3.2 Rough Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8400e-003	1.2900e-003	0.0138	4.0000e-005	4.4000e-003	3.0000e-005	4.4200e-003	1.1700e-003	2.0000e-005	1.1900e-003	0.0000	3.6784	3.6784	9.0000e-005	0.0000	3.6807
Total	**1.8400e-003**	**1.2900e-003**	**0.0138**	**4.0000e-005**	**4.4000e-003**	**3.0000e-005**	**4.4200e-003**	**1.1700e-003**	**2.0000e-005**	**1.1900e-003**	**0.0000**	**3.6784**	**3.6784**	**9.0000e-005**	**0.0000**	**3.6807**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4900	0.0000	0.4900	0.2325	0.0000	0.2325	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1250	1.4352	0.5039	1.2800e-003		0.0627	0.0627		0.0577	0.0577	0.0000	112.7454	112.7454	0.0365	0.0000	113.6571
Total	**0.1250**	**1.4352**	**0.5039**	**1.2800e-003**	**0.4900**	**0.0627**	**0.5527**	**0.2325**	**0.0577**	**0.2902**	**0.0000**	**112.7454**	**112.7454**	**0.0365**	**0.0000**	**113.6571**

3.3 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8600e-003	1.3000e-003	0.0139	4.0000e-005	4.4500e-003	3.0000e-005	4.4800e-003	1.1800e-003	3.0000e-005	1.2100e-003	0.0000	3.7244	3.7244	9.0000e-005	0.0000	3.7267
Total	**1.8600e-003**	**1.3000e-003**	**0.0139**	**4.0000e-005**	**4.4500e-003**	**3.0000e-005**	**4.4800e-003**	**1.1800e-003**	**3.0000e-005**	**1.2100e-003**	**0.0000**	**3.7244**	**3.7244**	**9.0000e-005**	**0.0000**	**3.7267**

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					0.1911	0.0000	0.1911	0.0907	0.0000	0.0907	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1250	1.4352	0.5039	1.2800e-003		0.0627	0.0627		0.0577	0.0577	0.0000	112.7453	112.7453	0.0365	0.0000	113.6569
Total	**0.1250**	**1.4352**	**0.5039**	**1.2800e-003**	**0.1911**	**0.0627**	**0.2538**	**0.0907**	**0.0577**	**0.1484**	**0.0000**	**112.7453**	**112.7453**	**0.0365**	**0.0000**	**113.6569**

3.3 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8600e-003	1.3000e-003	0.0139	4.0000e-005	4.4500e-003	3.0000e-005	4.4800e-003	1.1800e-003	3.0000e-005	1.2100e-003	0.0000	3.7244	3.7244	9.0000e-005	0.0000	3.7267
Total	**1.8600e-003**	**1.3000e-003**	**0.0139**	**4.0000e-005**	**4.4500e-003**	**3.0000e-005**	**4.4800e-003**	**1.1800e-003**	**3.0000e-005**	**1.2100e-003**	**0.0000**	**3.7244**	**3.7244**	**9.0000e-005**	**0.0000**	**3.7267**

3.4 Fine Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1026	0.0000	0.1026	0.0377	0.0000	0.0377	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0519	0.6088	0.3240	7.1000e-004		0.0247	0.0247		0.0227	0.0227	0.0000	62.8235	62.8235	0.0203	0.0000	63.3315
Total	**0.0519**	**0.6088**	**0.3240**	**7.1000e-004**	**0.1026**	**0.0247**	**0.1273**	**0.0377**	**0.0227**	**0.0604**	**0.0000**	**62.8235**	**62.8235**	**0.0203**	**0.0000**	**63.3315**

3.4 Fine Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.2000e-004	6.4000e-004	6.8800e-003	2.0000e-005	2.2000e-003	1.0000e-005	2.2100e-003	5.8000e-004	1.0000e-005	6.0000e-004	0.0000	1.8392	1.8392	5.0000e-005	0.0000	1.8403
Total	**9.2000e-004**	**6.4000e-004**	**6.8800e-003**	**2.0000e-005**	**2.2000e-003**	**1.0000e-005**	**2.2100e-003**	**5.8000e-004**	**1.0000e-005**	**6.0000e-004**	**0.0000**	**1.8392**	**1.8392**	**5.0000e-005**	**0.0000**	**1.8403**

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					0.0400	0.0000	0.0400	0.0147	0.0000	0.0147	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0519	0.6088	0.3240	7.1000e-004		0.0247	0.0247		0.0227	0.0227	0.0000	62.8234	62.8234	0.0203	0.0000	63.3314
Total	**0.0519**	**0.6088**	**0.3240**	**7.1000e-004**	**0.0400**	**0.0247**	**0.0647**	**0.0147**	**0.0227**	**0.0374**	**0.0000**	**62.8234**	**62.8234**	**0.0203**	**0.0000**	**63.3314**

3.4 Fine Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.2000e-004	6.4000e-004	6.8800e-003	2.0000e-005	2.2000e-003	1.0000e-005	2.2100e-003	5.8000e-004	1.0000e-005	6.0000e-004	0.0000	1.8392	1.8392	5.0000e-005	0.0000	1.8403
Total	**9.2000e-004**	**6.4000e-004**	**6.8800e-003**	**2.0000e-005**	**2.2000e-003**	**1.0000e-005**	**2.2100e-003**	**5.8000e-004**	**1.0000e-005**	**6.0000e-004**	**0.0000**	**1.8392**	**1.8392**	**5.0000e-005**	**0.0000**	**1.8403**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0774	0.8436	0.4285	9.9000e-004		0.0377	0.0377		0.0352	0.0352	0.0000	85.8513	85.8513	0.0235	0.0000	86.4397
Total	**0.0774**	**0.8436**	**0.4285**	**9.9000e-004**		**0.0377**	**0.0377**		**0.0352**	**0.0352**	**0.0000**	**85.8513**	**85.8513**	**0.0235**	**0.0000**	**86.4397**

3.5 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0182	0.6674	0.1306	1.6500e-003	0.0405	3.7700e-003	0.0443	0.0117	3.6100e-003	0.0153	0.0000	157.7861	157.7861	0.0126	0.0000	158.1014
Worker	0.0756	0.0530	0.5655	1.6700e-003	0.1808	1.1100e-003	0.1819	0.0480	1.0200e-003	0.0490	0.0000	151.2270	151.2270	3.7900e-003	0.0000	151.3216
Total	**0.0938**	**0.7204**	**0.6960**	**3.3200e-003**	**0.2213**	**4.8800e-003**	**0.2262**	**0.0597**	**4.6300e-003**	**0.0643**	**0.0000**	**309.0131**	**309.0131**	**0.0164**	**0.0000**	**309.4231**

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	0.0774	0.8436	0.4285	9.9000e-004		0.0377	0.0377		0.0352	0.0352	0.0000	85.8512	85.8512	0.0235	0.0000	86.4395
Total	**0.0774**	**0.8436**	**0.4285**	**9.9000e-004**		**0.0377**	**0.0377**		**0.0352**	**0.0352**	**0.0000**	**85.8512**	**85.8512**	**0.0235**	**0.0000**	**86.4395**

3.5 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0182	0.6674	0.1306	1.6500e-003	0.0405	3.7700e-003	0.0443	0.0117	3.6100e-003	0.0153	0.0000	157.7861	157.7861	0.0126	0.0000	158.1014
Worker	0.0756	0.0530	0.5655	1.6700e-003	0.1808	1.1100e-003	0.1819	0.0480	1.0200e-003	0.0490	0.0000	151.2270	151.2270	3.7900e-003	0.0000	151.3216
Total	**0.0938**	**0.7204**	**0.6960**	**3.3200e-003**	**0.2213**	**4.8800e-003**	**0.2262**	**0.0597**	**4.6300e-003**	**0.0643**	**0.0000**	**309.0131**	**309.0131**	**0.0164**	**0.0000**	**309.4231**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0919	1.0020	0.5368	1.2700e-003		0.0436	0.0436		0.0406	0.0406	0.0000	110.1102	110.1102	0.0300	0.0000	110.8601
Total	**0.0919**	**1.0020**	**0.5368**	**1.2700e-003**		**0.0436**	**0.0436**		**0.0406**	**0.0406**	**0.0000**	**110.1102**	**110.1102**	**0.0300**	**0.0000**	**110.8601**

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0196	0.7674	0.1477	2.1000e-003	0.0520	1.4700e-003	0.0535	0.0150	1.4000e-003	0.0164	0.0000	200.8021	200.8021	0.0153	0.0000	201.1851
Worker	0.0904	0.0609	0.6640	2.0700e-003	0.2318	1.3900e-003	0.2332	0.0616	1.2800e-003	0.0628	0.0000	187.4799	187.4799	4.3700e-003	0.0000	187.5891
Total	**0.1101**	**0.8284**	**0.8117**	**4.1700e-003**	**0.2838**	**2.8600e-003**	**0.2867**	**0.0766**	**2.6800e-003**	**0.0792**	**0.0000**	**388.2821**	**388.2821**	**0.0197**	**0.0000**	**388.7742**

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	0.0919	1.0020	0.5368	1.2700e-003		0.0436	0.0436		0.0406	0.0406	0.0000	110.1100	110.1100	0.0300	0.0000	110.8600
Total	**0.0919**	**1.0020**	**0.5368**	**1.2700e-003**		**0.0436**	**0.0436**		**0.0406**	**0.0406**	**0.0000**	**110.1100**	**110.1100**	**0.0300**	**0.0000**	**110.8600**

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0196	0.7674	0.1477	2.1000e-003	0.0520	1.4700e-003	0.0535	0.0150	1.4000e-003	0.0164	0.0000	200.8021	200.8021	0.0153	0.0000	201.1851
Worker	0.0904	0.0609	0.6640	2.0700e-003	0.2318	1.3900e-003	0.2332	0.0616	1.2800e-003	0.0628	0.0000	187.4799	187.4799	4.3700e-003	0.0000	187.5891
Total	**0.1101**	**0.8284**	**0.8117**	**4.1700e-003**	**0.2838**	**2.8600e-003**	**0.2867**	**0.0766**	**2.6800e-003**	**0.0792**	**0.0000**	**388.2821**	**388.2821**	**0.0197**	**0.0000**	**388.7742**

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0345	0.3553	0.4030	6.3000e-004		0.0186	0.0186		0.0172	0.0172	0.0000	55.0646	55.0646	0.0178	0.0000	55.5098
Paving	0.0483					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0828**	**0.3553**	**0.4030**	**6.3000e-004**		**0.0186**	**0.0186**		**0.0172**	**0.0172**	**0.0000**	**55.0646**	**55.0646**	**0.0178**	**0.0000**	**55.5098**

3.6 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7700e-003	1.1900e-003	0.0130	4.0000e-005	4.5300e-003	3.0000e-005	4.5600e-003	1.2000e-003	3.0000e-005	1.2300e-003	0.0000	3.6665	3.6665	9.0000e-005	0.0000	3.6686
Total	**1.7700e-003**	**1.1900e-003**	**0.0130**	**4.0000e-005**	**4.5300e-003**	**3.0000e-005**	**4.5600e-003**	**1.2000e-003**	**3.0000e-005**	**1.2300e-003**	**0.0000**	**3.6665**	**3.6665**	**9.0000e-005**	**0.0000**	**3.6686**

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	0.0345	0.3553	0.4030	6.3000e-004		0.0186	0.0186		0.0172	0.0172	0.0000	55.0645	55.0645	0.0178	0.0000	55.5097
Paving	0.0483					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0828**	**0.3553**	**0.4030**	**6.3000e-004**		**0.0186**	**0.0186**		**0.0172**	**0.0172**	**0.0000**	**55.0645**	**55.0645**	**0.0178**	**0.0000**	**55.5097**

3.6 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7700e-003	1.1900e-003	0.0130	4.0000e-005	4.5300e-003	3.0000e-005	4.5600e-003	1.2000e-003	3.0000e-005	1.2300e-003	0.0000	3.6665	3.6665	9.0000e-005	0.0000	3.6686
Total	**1.7700e-003**	**1.1900e-003**	**0.0130**	**4.0000e-005**	**4.5300e-003**	**3.0000e-005**	**4.5600e-003**	**1.2000e-003**	**3.0000e-005**	**1.2300e-003**	**0.0000**	**3.6665**	**3.6665**	**9.0000e-005**	**0.0000**	**3.6686**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3374					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.0300e-003	0.0560	0.0666	1.1000e-004		3.4500e-003	3.4500e-003		3.4500e-003	3.4500e-003	0.0000	9.3619	9.3619	6.4000e-004	0.0000	9.3780
Total	**0.3454**	**0.0560**	**0.0666**	**1.1000e-004**		**3.4500e-003**	**3.4500e-003**		**3.4500e-003**	**3.4500e-003**	**0.0000**	**9.3619**	**9.3619**	**6.4000e-004**	**0.0000**	**9.3780**

3.7 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0169	0.0114	0.1238	3.9000e-004	0.0432	2.6000e-004	0.0435	0.0115	2.4000e-004	0.0117	0.0000	34.9539	34.9539	8.1000e-004	0.0000	34.9742
Total	**0.0169**	**0.0114**	**0.1238**	**3.9000e-004**	**0.0432**	**2.6000e-004**	**0.0435**	**0.0115**	**2.4000e-004**	**0.0117**	**0.0000**	**34.9539**	**34.9539**	**8.1000e-004**	**0.0000**	**34.9742**

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	0.3374					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.0300e-003	0.0560	0.0666	1.1000e-004		3.4500e-003	3.4500e-003		3.4500e-003	3.4500e-003	0.0000	9.3619	9.3619	6.4000e-004	0.0000	9.3780
Total	**0.3454**	**0.0560**	**0.0666**	**1.1000e-004**		**3.4500e-003**	**3.4500e-003**		**3.4500e-003**	**3.4500e-003**	**0.0000**	**9.3619**	**9.3619**	**6.4000e-004**	**0.0000**	**9.3780**

3.7 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0169	0.0114	0.1238	3.9000e-004	0.0432	2.6000e-004	0.0435	0.0115	2.4000e-004	0.0117	0.0000	34.9539	34.9539	8.1000e-004	0.0000	34.9742
Total	**0.0169**	**0.0114**	**0.1238**	**3.9000e-004**	**0.0432**	**2.6000e-004**	**0.0435**	**0.0115**	**2.4000e-004**	**0.0117**	**0.0000**	**34.9539**	**34.9539**	**8.1000e-004**	**0.0000**	**34.9742**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	0.00	0.00	0.00	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
Other Asphalt Surfaces	0.542116	0.037578	0.185203	0.118503	0.016241	0.005141	0.017392	0.068695	0.001383	0.001183	0.004582	0.000945	0.001038
Unrefrigerated Warehouse-No Rail	0.542116	0.037578	0.185203	0.118503	0.016241	0.005141	0.017392	0.068695	0.001383	0.001183	0.004582	0.000945	0.001038

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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					
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
Unrefrigerated Warehouse-No Rail	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					
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
Unrefrigerated Warehouse-No Rail	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			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**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	tons/yr										MT/yr					
Mitigated	0.5253	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0423	0.0423	1.1000e-004	0.0000	0.0451
Unmitigated	0.5253	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0423	0.0423	1.1000e-004	0.0000	0.0451

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	0.0675					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4558					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0400e-003	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0423	0.0423	1.1000e-004	0.0000	0.0451
Total	**0.5253**	**2.0000e-004**	**0.0218**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0423**	**0.0423**	**1.1000e-004**	**0.0000**	**0.0451**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0675					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4558					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0400e-003	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0423	0.0423	1.1000e-004	0.0000	0.0451
Total	**0.5253**	**2.0000e-004**	**0.0218**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0423**	**0.0423**	**1.1000e-004**	**0.0000**	**0.0451**

7.0 Water Detail

7.1 Mitigation Measures Water

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

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

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

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APPENDIX 3.2:

CALEEMOD ANNUAL OPERATIONAL (PASSENGER CAR) EMISSIONS MODEL OUTPUTS

Estes Banning (Operations - Passenger Cars)

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	97.40	1000sqft	2.24	97,400.00	0
Other Asphalt Surfaces	1,605.80	1000sqft	36.86	1,605,796.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2021
Utility Company	Statewide Average				
CO2 Intensity (lb/MWhr)	1001.57	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Estes Banning (Operations - Passenger Cars) - Riverside-South Coast County, Annual

Project Characteristics - Electricty will be provided to the Project by Banning Electric Utility (BEU). CalEEMod does not provided Intensity Factors for BEU, as such, the Statewide Average will be used.

Land Use - Total Project Area is 36.86 acres. Truck Terminal is 97,400 sf. Remaning area will be modeled as 1,605,796 sf of Other Apshalt Surfaces.

Construction Phase - Operations Run Only.

Off-road Equipment - Operations Run Only.

Trips and VMT - Operations Run Only.

Vehicle Trips - Trip Rates based on information provided in the TIA prepared by Urban Crossroads.

Energy Use - The project will design building shells and building components to meet 2019 Title 24 Standards which expects 30% less energy for nonresidential uses.

Water And Wastewater - The project includes the construction and operation of a 660 square foot automated truck wash. Water usage based on the assumption that 50% of incoming trucks will be washed and 30 gallons of water will be used per truck.

Fleet Mix - Fleet Mix is based on a proportional split utilizing the default CalEEMod percentages assigned to LDA, LDT1, LDT2, and MDV vehicles types.

Vehicle Emission Factors - EMFAC2017

Vehicle Emission Factors - EMFAC2017

Vehicle Emission Factors - EMFAC2017

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	1.17	0.82
tblEnergyUse	T24E	0.37	0.26
tblEnergyUse	T24NG	2.00	1.40
tblFleetMix	HHD	0.07	0.00
tblFleetMix	LDA	0.54	0.61
tblFleetMix	LDT1	0.04	0.04
tblFleetMix	LDT2	0.19	0.21
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.1410e-003	0.00
tblFleetMix	MCY	4.5820e-003	0.00
tblFleetMix	MDV	0.12	0.13
tblFleetMix	MH	1.0380e-003	0.00

tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	1.3830e-003	0.00
tblFleetMix	SBUS	9.4500e-004	0.00
tblFleetMix	UBUS	1.1830e-003	0.00
tblLandUse	LandUseSquareFeet	1,605,800.00	1,605,796.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblVehicleEF	HHD	1.43	0.03
tblVehicleEF	HHD	0.03	0.02
tblVehicleEF	HHD	0.10	0.00
tblVehicleEF	HHD	3.28	7.55
tblVehicleEF	HHD	0.46	0.36
tblVehicleEF	HHD	1.46	2.9270e-003
tblVehicleEF	HHD	6,485.38	1,409.07
tblVehicleEF	HHD	1,461.92	1,350.00
tblVehicleEF	HHD	4.62	0.03
tblVehicleEF	HHD	26.41	7.34
tblVehicleEF	HHD	2.69	3.05
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	3.8000e-005	0.00
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8680e-003	8.8980e-003

tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	3.5000e-005	0.00
tblVehicleEF	HHD	8.4000e-005	4.0000e-006
tblVehicleEF	HHD	2.5800e-003	1.0300e-004
tblVehicleEF	HHD	0.85	0.58
tblVehicleEF	HHD	4.8000e-005	2.0000e-006
tblVehicleEF	HHD	0.07	0.07
tblVehicleEF	HHD	1.8000e-004	5.3700e-004
tblVehicleEF	HHD	0.05	1.0000e-006
tblVehicleEF	HHD	0.06	0.01
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	7.1000e-005	0.00
tblVehicleEF	HHD	8.4000e-005	4.0000e-006
tblVehicleEF	HHD	2.5800e-003	1.0300e-004
tblVehicleEF	HHD	0.97	0.66
tblVehicleEF	HHD	4.8000e-005	2.0000e-006
tblVehicleEF	HHD	0.11	0.09
tblVehicleEF	HHD	1.8000e-004	5.3700e-004
tblVehicleEF	HHD	0.05	1.0000e-006
tblVehicleEF	HHD	1.35	0.03
tblVehicleEF	HHD	0.03	0.02
tblVehicleEF	HHD	0.10	0.00
tblVehicleEF	HHD	2.39	7.39
tblVehicleEF	HHD	0.46	0.36
tblVehicleEF	HHD	1.39	2.7700e-003
tblVehicleEF	HHD	6,867.98	1,402.59
tblVehicleEF	HHD	1,461.92	1,350.00

tblVehicleEF	HHD	4.62	0.03
tblVehicleEF	HHD	27.25	7.10
tblVehicleEF	HHD	2.54	2.88
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	3.8000e-005	0.00
tblVehicleEF	HHD	0.01	9.7680e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8680e-003	8.8980e-003
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	3.5000e-005	0.00
tblVehicleEF	HHD	1.6300e-004	8.0000e-006
tblVehicleEF	HHD	2.9560e-003	1.1800e-004
tblVehicleEF	HHD	0.80	0.60
tblVehicleEF	HHD	9.2000e-005	4.0000e-006
tblVehicleEF	HHD	0.07	0.07
tblVehicleEF	HHD	1.8400e-004	5.5600e-004
tblVehicleEF	HHD	0.04	1.0000e-006
tblVehicleEF	HHD	0.06	0.01
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	6.9000e-005	0.00
tblVehicleEF	HHD	1.6300e-004	8.0000e-006
tblVehicleEF	HHD	2.9560e-003	1.1800e-004
tblVehicleEF	HHD	0.92	0.69
tblVehicleEF	HHD	9.2000e-005	4.0000e-006

tblVehicleEF	HHD	0.11	0.09
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tblVehicleEF	HHD	0.05	1.0000e-006
tblVehicleEF	HHD	1.54	0.03
tblVehicleEF	HHD	0.03	3.2330e-003
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tblVehicleEF	HHD	4.51	7.76
tblVehicleEF	HHD	0.45	0.32
tblVehicleEF	HHD	1.47	2.9120e-003
tblVehicleEF	HHD	5,957.03	1,414.57
tblVehicleEF	HHD	1,461.92	1,340.32
tblVehicleEF	HHD	4.62	0.03
tblVehicleEF	HHD	25.25	7.65
tblVehicleEF	HHD	2.67	3.02
tblVehicleEF	HHD	0.02	0.01
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	3.8000e-005	0.00
tblVehicleEF	HHD	0.02	0.01
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8680e-003	8.8710e-003
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	3.5000e-005	0.00
tblVehicleEF	HHD	6.7000e-005	4.0000e-006
tblVehicleEF	HHD	2.7490e-003	1.2100e-004
tblVehicleEF	HHD	0.91	0.54

tblVehicleEF	HHD	4.1000e-005	2.0000e-006
tblVehicleEF	HHD	0.07	0.07
tblVehicleEF	HHD	1.9200e-004	5.6500e-004
tblVehicleEF	HHD	0.05	1.0000e-006
tblVehicleEF	HHD	0.06	0.01
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	7.1000e-005	0.00
tblVehicleEF	HHD	6.7000e-005	4.0000e-006
tblVehicleEF	HHD	2.7490e-003	1.2100e-004
tblVehicleEF	HHD	1.05	0.62
tblVehicleEF	HHD	4.1000e-005	2.0000e-006
tblVehicleEF	HHD	0.11	0.08
tblVehicleEF	HHD	1.9200e-004	5.6500e-004
tblVehicleEF	HHD	0.05	1.0000e-006
tblVehicleEF	LDA	4.0430e-003	2.4680e-003
tblVehicleEF	LDA	5.4670e-003	0.05
tblVehicleEF	LDA	0.58	0.66
tblVehicleEF	LDA	1.16	2.12
tblVehicleEF	LDA	255.91	265.87
tblVehicleEF	LDA	58.81	54.73
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	1.6140e-003	1.4470e-003
tblVehicleEF	LDA	2.2650e-003	1.9190e-003
tblVehicleEF	LDA	1.4880e-003	1.3330e-003
tblVehicleEF	LDA	2.0830e-003	1.7640e-003
tblVehicleEF	LDA	0.05	0.07
tblVehicleEF	LDA	0.10	0.10

tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.01	9.5180e-003
tblVehicleEF	LDA	0.04	0.21
tblVehicleEF	LDA	0.07	0.23
tblVehicleEF	LDA	2.5630e-003	2.6300e-003
tblVehicleEF	LDA	6.0800e-004	5.4200e-004
tblVehicleEF	LDA	0.05	0.07
tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.21
tblVehicleEF	LDA	0.08	0.25
tblVehicleEF	LDA	4.5900e-003	2.8100e-003
tblVehicleEF	LDA	4.7470e-003	0.05
tblVehicleEF	LDA	0.71	0.81
tblVehicleEF	LDA	1.02	1.87
tblVehicleEF	LDA	278.73	289.14
tblVehicleEF	LDA	58.81	54.24
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	1.6140e-003	1.4470e-003
tblVehicleEF	LDA	2.2650e-003	1.9190e-003
tblVehicleEF	LDA	1.4880e-003	1.3330e-003
tblVehicleEF	LDA	2.0830e-003	1.7640e-003
tblVehicleEF	LDA	0.10	0.14
tblVehicleEF	LDA	0.12	0.12
tblVehicleEF	LDA	0.07	0.10
tblVehicleEF	LDA	0.01	0.01

tblVehicleEF	LDA	0.04	0.21
tblVehicleEF	LDA	0.06	0.20
tblVehicleEF	LDA	2.7930e-003	2.8600e-003
tblVehicleEF	LDA	6.0500e-004	5.3700e-004
tblVehicleEF	LDA	0.10	0.14
tblVehicleEF	LDA	0.12	0.12
tblVehicleEF	LDA	0.07	0.10
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.04	0.21
tblVehicleEF	LDA	0.07	0.22
tblVehicleEF	LDA	3.8980e-003	2.3810e-003
tblVehicleEF	LDA	5.6140e-003	0.05
tblVehicleEF	LDA	0.54	0.62
tblVehicleEF	LDA	1.19	2.17
tblVehicleEF	LDA	249.57	259.47
tblVehicleEF	LDA	58.81	54.82
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	1.6140e-003	1.4470e-003
tblVehicleEF	LDA	2.2650e-003	1.9190e-003
tblVehicleEF	LDA	1.4880e-003	1.3330e-003
tblVehicleEF	LDA	2.0830e-003	1.7640e-003
tblVehicleEF	LDA	0.04	0.06
tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	9.8140e-003	9.1880e-003
tblVehicleEF	LDA	0.04	0.24
tblVehicleEF	LDA	0.08	0.23

tblVehicleEF	LDA	2.4990e-003	2.5670e-003
tblVehicleEF	LDA	6.0800e-004	5.4200e-004
tblVehicleEF	LDA	0.04	0.06
tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.24
tblVehicleEF	LDA	0.08	0.26
tblVehicleEF	LDT1	0.01	8.0140e-003
tblVehicleEF	LDT1	0.02	0.09
tblVehicleEF	LDT1	1.46	1.62
tblVehicleEF	LDT1	3.40	2.43
tblVehicleEF	LDT1	315.98	317.00
tblVehicleEF	LDT1	72.28	66.64
tblVehicleEF	LDT1	0.14	0.14
tblVehicleEF	LDT1	2.5300e-003	2.2930e-003
tblVehicleEF	LDT1	3.6970e-003	2.9510e-003
tblVehicleEF	LDT1	2.3290e-003	2.1110e-003
tblVehicleEF	LDT1	3.4000e-003	2.7140e-003
tblVehicleEF	LDT1	0.21	0.23
tblVehicleEF	LDT1	0.35	0.27
tblVehicleEF	LDT1	0.14	0.15
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.20	0.87
tblVehicleEF	LDT1	0.24	0.44
tblVehicleEF	LDT1	3.1780e-003	3.1370e-003
tblVehicleEF	LDT1	7.8300e-004	6.5900e-004

tblVehicleEF	LDT1	0.21	0.23
tblVehicleEF	LDT1	0.35	0.27
tblVehicleEF	LDT1	0.14	0.15
tblVehicleEF	LDT1	0.04	0.05
tblVehicleEF	LDT1	0.20	0.87
tblVehicleEF	LDT1	0.26	0.48
tblVehicleEF	LDT1	0.01	9.0560e-003
tblVehicleEF	LDT1	0.02	0.08
tblVehicleEF	LDT1	1.76	1.96
tblVehicleEF	LDT1	2.99	2.15
tblVehicleEF	LDT1	343.19	341.79
tblVehicleEF	LDT1	72.28	66.01
tblVehicleEF	LDT1	0.13	0.13
tblVehicleEF	LDT1	2.5300e-003	2.2930e-003
tblVehicleEF	LDT1	3.6970e-003	2.9510e-003
tblVehicleEF	LDT1	2.3290e-003	2.1110e-003
tblVehicleEF	LDT1	3.4000e-003	2.7140e-003
tblVehicleEF	LDT1	0.41	0.44
tblVehicleEF	LDT1	0.43	0.34
tblVehicleEF	LDT1	0.27	0.29
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.20	0.88
tblVehicleEF	LDT1	0.21	0.38
tblVehicleEF	LDT1	3.4550e-003	3.3820e-003
tblVehicleEF	LDT1	7.7500e-004	6.5300e-004
tblVehicleEF	LDT1	0.41	0.44
tblVehicleEF	LDT1	0.43	0.34

tblVehicleEF	LDT1	0.27	0.29
tblVehicleEF	LDT1	0.05	0.06
tblVehicleEF	LDT1	0.20	0.88
tblVehicleEF	LDT1	0.23	0.42
tblVehicleEF	LDT1	0.01	7.7080e-003
tblVehicleEF	LDT1	0.02	0.09
tblVehicleEF	LDT1	1.37	1.51
tblVehicleEF	LDT1	3.46	2.48
tblVehicleEF	LDT1	307.88	309.49
tblVehicleEF	LDT1	72.28	66.77
tblVehicleEF	LDT1	0.14	0.14
tblVehicleEF	LDT1	2.5300e-003	2.2930e-003
tblVehicleEF	LDT1	3.6970e-003	2.9510e-003
tblVehicleEF	LDT1	2.3290e-003	2.1110e-003
tblVehicleEF	LDT1	3.4000e-003	2.7140e-003
tblVehicleEF	LDT1	0.18	0.19
tblVehicleEF	LDT1	0.39	0.30
tblVehicleEF	LDT1	0.12	0.13
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.23	1.01
tblVehicleEF	LDT1	0.25	0.45
tblVehicleEF	LDT1	3.0960e-003	3.0630e-003
tblVehicleEF	LDT1	7.8400e-004	6.6100e-004
tblVehicleEF	LDT1	0.18	0.19
tblVehicleEF	LDT1	0.39	0.30
tblVehicleEF	LDT1	0.12	0.13
tblVehicleEF	LDT1	0.04	0.05

tblVehicleEF	LDT1	0.23	1.01
tblVehicleEF	LDT1	0.27	0.50
tblVehicleEF	LDT2	5.6080e-003	4.2470e-003
tblVehicleEF	LDT2	7.2840e-003	0.07
tblVehicleEF	LDT2	0.76	0.98
tblVehicleEF	LDT2	1.53	2.73
tblVehicleEF	LDT2	355.02	338.79
tblVehicleEF	LDT2	81.24	71.51
tblVehicleEF	LDT2	0.08	0.09
tblVehicleEF	LDT2	1.6030e-003	1.4980e-003
tblVehicleEF	LDT2	2.3320e-003	1.9580e-003
tblVehicleEF	LDT2	1.4740e-003	1.3790e-003
tblVehicleEF	LDT2	2.1450e-003	1.8010e-003
tblVehicleEF	LDT2	0.07	0.11
tblVehicleEF	LDT2	0.12	0.14
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.01	0.02
tblVehicleEF	LDT2	0.06	0.44
tblVehicleEF	LDT2	0.10	0.33
tblVehicleEF	LDT2	3.5560e-003	3.3520e-003
tblVehicleEF	LDT2	8.3800e-004	7.0800e-004
tblVehicleEF	LDT2	0.07	0.11
tblVehicleEF	LDT2	0.12	0.14
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.06	0.44
tblVehicleEF	LDT2	0.11	0.37

tblVehicleEF	LDT2	6.3630e-003	4.8280e-003
tblVehicleEF	LDT2	6.3270e-003	0.06
tblVehicleEF	LDT2	0.93	1.20
tblVehicleEF	LDT2	1.35	2.42
tblVehicleEF	LDT2	386.34	362.86
tblVehicleEF	LDT2	81.24	70.86
tblVehicleEF	LDT2	0.07	0.08
tblVehicleEF	LDT2	1.6030e-003	1.4980e-003
tblVehicleEF	LDT2	2.3320e-003	1.9580e-003
tblVehicleEF	LDT2	1.4740e-003	1.3790e-003
tblVehicleEF	LDT2	2.1450e-003	1.8010e-003
tblVehicleEF	LDT2	0.14	0.22
tblVehicleEF	LDT2	0.14	0.17
tblVehicleEF	LDT2	0.10	0.17
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.44
tblVehicleEF	LDT2	0.09	0.29
tblVehicleEF	LDT2	3.8710e-003	3.5900e-003
tblVehicleEF	LDT2	8.3500e-004	7.0100e-004
tblVehicleEF	LDT2	0.14	0.22
tblVehicleEF	LDT2	0.14	0.17
tblVehicleEF	LDT2	0.10	0.17
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.06	0.44
tblVehicleEF	LDT2	0.09	0.32
tblVehicleEF	LDT2	5.3900e-003	4.0760e-003
tblVehicleEF	LDT2	7.4940e-003	0.07

tblVehicleEF	LDT2	0.71	0.91
tblVehicleEF	LDT2	1.57	2.80
tblVehicleEF	LDT2	345.65	331.49
tblVehicleEF	LDT2	81.24	71.65
tblVehicleEF	LDT2	0.08	0.09
tblVehicleEF	LDT2	1.6030e-003	1.4980e-003
tblVehicleEF	LDT2	2.3320e-003	1.9580e-003
tblVehicleEF	LDT2	1.4740e-003	1.3790e-003
tblVehicleEF	LDT2	2.1450e-003	1.8010e-003
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.13	0.15
tblVehicleEF	LDT2	0.05	0.07
tblVehicleEF	LDT2	0.01	0.02
tblVehicleEF	LDT2	0.07	0.51
tblVehicleEF	LDT2	0.10	0.34
tblVehicleEF	LDT2	3.4620e-003	3.2800e-003
tblVehicleEF	LDT2	8.3900e-004	7.0900e-004
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.13	0.15
tblVehicleEF	LDT2	0.05	0.07
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.51
tblVehicleEF	LDT2	0.11	0.38
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tblVehicleEF	LHD1	0.01	5.3310e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	0.17

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tblVehicleEF	LHD1	2.41	0.96
tblVehicleEF	LHD1	9.26	9.44
tblVehicleEF	LHD1	607.95	639.95
tblVehicleEF	LHD1	30.36	10.54
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	2.21	1.60
tblVehicleEF	LHD1	9.7200e-004	9.7000e-004
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.7100e-004	2.3300e-004
tblVehicleEF	LHD1	9.3000e-004	9.2800e-004
tblVehicleEF	LHD1	2.5390e-003	2.5010e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.0100e-004	2.1400e-004
tblVehicleEF	LHD1	3.8710e-003	3.1780e-003
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.9010e-003	1.5570e-003
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.31	0.50
tblVehicleEF	LHD1	0.26	0.08
tblVehicleEF	LHD1	9.3000e-005	9.1000e-005
tblVehicleEF	LHD1	5.9620e-003	6.2250e-003
tblVehicleEF	LHD1	3.4900e-004	1.0400e-004
tblVehicleEF	LHD1	3.8710e-003	3.1780e-003
tblVehicleEF	LHD1	0.10	0.08

tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.9010e-003	1.5570e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.31	0.50
tblVehicleEF	LHD1	0.28	0.08
tblVehicleEF	LHD1	5.4460e-003	4.8940e-003
tblVehicleEF	LHD1	0.01	5.4200e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	0.97	0.73
tblVehicleEF	LHD1	2.29	0.92
tblVehicleEF	LHD1	9.26	9.44
tblVehicleEF	LHD1	607.95	639.97
tblVehicleEF	LHD1	30.36	10.46
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	2.08	1.51
tblVehicleEF	LHD1	9.7200e-004	9.7000e-004
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.7100e-004	2.3300e-004
tblVehicleEF	LHD1	9.3000e-004	9.2800e-004
tblVehicleEF	LHD1	2.5390e-003	2.5010e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.0100e-004	2.1400e-004
tblVehicleEF	LHD1	7.2450e-003	5.9530e-003
tblVehicleEF	LHD1	0.12	0.09
tblVehicleEF	LHD1	0.02	0.02

tblVehicleEF	LHD1	3.6380e-003	2.9980e-003
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.32	0.50
tblVehicleEF	LHD1	0.25	0.07
tblVehicleEF	LHD1	9.3000e-005	9.1000e-005
tblVehicleEF	LHD1	5.9620e-003	6.2250e-003
tblVehicleEF	LHD1	3.4700e-004	1.0300e-004
tblVehicleEF	LHD1	7.2450e-003	5.9530e-003
tblVehicleEF	LHD1	0.12	0.09
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	3.6380e-003	2.9980e-003
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.32	0.50
tblVehicleEF	LHD1	0.27	0.08
tblVehicleEF	LHD1	5.4460e-003	4.8810e-003
tblVehicleEF	LHD1	0.01	5.3180e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	0.96	0.72
tblVehicleEF	LHD1	2.41	0.96
tblVehicleEF	LHD1	9.26	9.44
tblVehicleEF	LHD1	607.95	639.95
tblVehicleEF	LHD1	30.36	10.54
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	2.18	1.59
tblVehicleEF	LHD1	9.7200e-004	9.7000e-004
tblVehicleEF	LHD1	0.01	0.01

tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.7100e-004	2.3300e-004
tblVehicleEF	LHD1	9.3000e-004	9.2800e-004
tblVehicleEF	LHD1	2.5390e-003	2.5010e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.0100e-004	2.1400e-004
tblVehicleEF	LHD1	3.4570e-003	2.8250e-003
tblVehicleEF	LHD1	0.11	0.09
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.7350e-003	1.4150e-003
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.33	0.53
tblVehicleEF	LHD1	0.26	0.08
tblVehicleEF	LHD1	9.3000e-005	9.1000e-005
tblVehicleEF	LHD1	5.9620e-003	6.2250e-003
tblVehicleEF	LHD1	3.4900e-004	1.0400e-004
tblVehicleEF	LHD1	3.4570e-003	2.8250e-003
tblVehicleEF	LHD1	0.11	0.09
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.7350e-003	1.4150e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.33	0.53
tblVehicleEF	LHD1	0.28	0.08
tblVehicleEF	LHD2	3.6660e-003	3.1720e-003
tblVehicleEF	LHD2	4.5290e-003	3.8570e-003
tblVehicleEF	LHD2	8.3110e-003	9.0280e-003
tblVehicleEF	LHD2	0.12	0.13

tblVehicleEF	LHD2	0.50	0.53
tblVehicleEF	LHD2	1.15	0.56
tblVehicleEF	LHD2	14.48	14.86
tblVehicleEF	LHD2	604.20	638.83
tblVehicleEF	LHD2	23.56	7.29
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.71	1.77
tblVehicleEF	LHD2	1.3360e-003	1.4390e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.8700e-004	1.1400e-004
tblVehicleEF	LHD2	1.2780e-003	1.3770e-003
tblVehicleEF	LHD2	2.6970e-003	2.7110e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5600e-004	1.0500e-004
tblVehicleEF	LHD2	1.4980e-003	1.6870e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	7.7800e-004	8.4200e-004
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.4100e-004	1.4200e-004
tblVehicleEF	LHD2	5.8740e-003	6.1550e-003
tblVehicleEF	LHD2	2.5700e-004	7.2000e-005
tblVehicleEF	LHD2	1.4980e-003	1.6870e-003
tblVehicleEF	LHD2	0.04	0.04

tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	7.7800e-004	8.4200e-004
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	3.6660e-003	3.1790e-003
tblVehicleEF	LHD2	4.5800e-003	3.8860e-003
tblVehicleEF	LHD2	8.0210e-003	8.7250e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.51	0.53
tblVehicleEF	LHD2	1.10	0.53
tblVehicleEF	LHD2	14.48	14.86
tblVehicleEF	LHD2	604.20	638.83
tblVehicleEF	LHD2	23.56	7.25
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.62	1.67
tblVehicleEF	LHD2	1.3360e-003	1.4390e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.8700e-004	1.1400e-004
tblVehicleEF	LHD2	1.2780e-003	1.3770e-003
tblVehicleEF	LHD2	2.6970e-003	2.7110e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5600e-004	1.0500e-004
tblVehicleEF	LHD2	2.8320e-003	3.1830e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.01	0.02

tblVehicleEF	LHD2	1.4720e-003	1.6130e-003
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.4100e-004	1.4200e-004
tblVehicleEF	LHD2	5.8740e-003	6.1560e-003
tblVehicleEF	LHD2	2.5600e-004	7.2000e-005
tblVehicleEF	LHD2	2.8320e-003	3.1830e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.4720e-003	1.6130e-003
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	3.6660e-003	3.1700e-003
tblVehicleEF	LHD2	4.5170e-003	3.8490e-003
tblVehicleEF	LHD2	8.3600e-003	9.0930e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.50	0.53
tblVehicleEF	LHD2	1.16	0.56
tblVehicleEF	LHD2	14.48	14.86
tblVehicleEF	LHD2	604.20	638.83
tblVehicleEF	LHD2	23.56	7.30
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.70	1.75
tblVehicleEF	LHD2	1.3360e-003	1.4390e-003
tblVehicleEF	LHD2	0.01	0.01

tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.8700e-004	1.1400e-004
tblVehicleEF	LHD2	1.2780e-003	1.3770e-003
tblVehicleEF	LHD2	2.6970e-003	2.7110e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5600e-004	1.0500e-004
tblVehicleEF	LHD2	1.1910e-003	1.3290e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	6.6000e-004	7.0100e-004
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.4100e-004	1.4200e-004
tblVehicleEF	LHD2	5.8740e-003	6.1550e-003
tblVehicleEF	LHD2	2.5700e-004	7.2000e-005
tblVehicleEF	LHD2	1.1910e-003	1.3290e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	6.6000e-004	7.0100e-004
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	MCY	0.42	0.32
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	19.52	19.61
tblVehicleEF	MCY	9.67	8.55

tblVehicleEF	MCY	165.74	208.30
tblVehicleEF	MCY	46.23	60.73
tblVehicleEF	MCY	1.13	1.13
tblVehicleEF	MCY	1.7750e-003	1.7570e-003
tblVehicleEF	MCY	3.4010e-003	2.8660e-003
tblVehicleEF	MCY	1.6600e-003	1.6440e-003
tblVehicleEF	MCY	3.2060e-003	2.7000e-003
tblVehicleEF	MCY	1.69	1.66
tblVehicleEF	MCY	0.85	0.84
tblVehicleEF	MCY	0.92	0.90
tblVehicleEF	MCY	2.15	2.16
tblVehicleEF	MCY	0.57	1.87
tblVehicleEF	MCY	2.08	1.83
tblVehicleEF	MCY	2.0380e-003	2.0610e-003
tblVehicleEF	MCY	6.8100e-004	6.0100e-004
tblVehicleEF	MCY	1.69	1.66
tblVehicleEF	MCY	0.85	0.84
tblVehicleEF	MCY	0.92	0.90
tblVehicleEF	MCY	2.65	2.65
tblVehicleEF	MCY	0.57	1.87
tblVehicleEF	MCY	2.26	1.99
tblVehicleEF	MCY	0.42	0.32
tblVehicleEF	MCY	0.14	0.22
tblVehicleEF	MCY	20.23	20.27
tblVehicleEF	MCY	9.11	8.00
tblVehicleEF	MCY	165.74	209.26
tblVehicleEF	MCY	46.23	59.19

tblVehicleEF	MCY	0.98	0.98
tblVehicleEF	MCY	1.7750e-003	1.7570e-003
tblVehicleEF	MCY	3.4010e-003	2.8660e-003
tblVehicleEF	MCY	1.6600e-003	1.6440e-003
tblVehicleEF	MCY	3.2060e-003	2.7000e-003
tblVehicleEF	MCY	3.35	3.28
tblVehicleEF	MCY	1.24	1.23
tblVehicleEF	MCY	2.10	2.05
tblVehicleEF	MCY	2.13	2.13
tblVehicleEF	MCY	0.57	1.86
tblVehicleEF	MCY	1.86	1.63
tblVehicleEF	MCY	2.0490e-003	2.0710e-003
tblVehicleEF	MCY	6.6500e-004	5.8600e-004
tblVehicleEF	MCY	3.35	3.28
tblVehicleEF	MCY	1.24	1.23
tblVehicleEF	MCY	2.10	2.05
tblVehicleEF	MCY	2.62	2.63
tblVehicleEF	MCY	0.57	1.86
tblVehicleEF	MCY	2.02	1.77
tblVehicleEF	MCY	0.42	0.32
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	19.04	19.14
tblVehicleEF	MCY	9.62	8.49
tblVehicleEF	MCY	165.74	207.52
tblVehicleEF	MCY	46.23	60.64
tblVehicleEF	MCY	1.12	1.12
tblVehicleEF	MCY	1.7750e-003	1.7570e-003

tblVehicleEF	MCY	3.4010e-003	2.8660e-003
tblVehicleEF	MCY	1.6600e-003	1.6440e-003
tblVehicleEF	MCY	3.2060e-003	2.7000e-003
tblVehicleEF	MCY	1.60	1.59
tblVehicleEF	MCY	1.05	1.04
tblVehicleEF	MCY	0.74	0.73
tblVehicleEF	MCY	2.15	2.15
tblVehicleEF	MCY	0.65	2.12
tblVehicleEF	MCY	2.08	1.83
tblVehicleEF	MCY	2.0310e-003	2.0540e-003
tblVehicleEF	MCY	6.8100e-004	6.0000e-004
tblVehicleEF	MCY	1.60	1.59
tblVehicleEF	MCY	1.05	1.04
tblVehicleEF	MCY	0.74	0.73
tblVehicleEF	MCY	2.64	2.65
tblVehicleEF	MCY	0.65	2.12
tblVehicleEF	MCY	2.27	1.99
tblVehicleEF	MDV	0.01	5.7580e-003
tblVehicleEF	MDV	0.02	0.09
tblVehicleEF	MDV	1.42	1.20
tblVehicleEF	MDV	3.18	3.27
tblVehicleEF	MDV	488.89	421.49
tblVehicleEF	MDV	110.15	88.73
tblVehicleEF	MDV	0.17	0.12
tblVehicleEF	MDV	1.7110e-003	1.5730e-003
tblVehicleEF	MDV	2.4630e-003	2.0550e-003
tblVehicleEF	MDV	1.5780e-003	1.4510e-003

tblVehicleEF	MDV	2.2660e-003	1.8910e-003
tblVehicleEF	MDV	0.11	0.13
tblVehicleEF	MDV	0.20	0.17
tblVehicleEF	MDV	0.09	0.11
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.25	0.45
tblVehicleEF	MDV	4.9000e-003	4.1680e-003
tblVehicleEF	MDV	1.1570e-003	8.7800e-004
tblVehicleEF	MDV	0.11	0.13
tblVehicleEF	MDV	0.20	0.17
tblVehicleEF	MDV	0.09	0.11
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.27	0.49
tblVehicleEF	MDV	0.01	6.5120e-003
tblVehicleEF	MDV	0.02	0.08
tblVehicleEF	MDV	1.73	1.46
tblVehicleEF	MDV	2.81	2.88
tblVehicleEF	MDV	530.71	447.07
tblVehicleEF	MDV	110.15	87.92
tblVehicleEF	MDV	0.16	0.11
tblVehicleEF	MDV	1.7110e-003	1.5730e-003
tblVehicleEF	MDV	2.4630e-003	2.0550e-003
tblVehicleEF	MDV	1.5780e-003	1.4510e-003
tblVehicleEF	MDV	2.2660e-003	1.8910e-003
tblVehicleEF	MDV	0.22	0.26

tblVehicleEF	MDV	0.23	0.20
tblVehicleEF	MDV	0.17	0.21
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.21	0.39
tblVehicleEF	MDV	5.3230e-003	4.4210e-003
tblVehicleEF	MDV	1.1510e-003	8.7000e-004
tblVehicleEF	MDV	0.22	0.26
tblVehicleEF	MDV	0.23	0.20
tblVehicleEF	MDV	0.17	0.21
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.23	0.43
tblVehicleEF	MDV	0.01	5.5370e-003
tblVehicleEF	MDV	0.02	0.09
tblVehicleEF	MDV	1.33	1.12
tblVehicleEF	MDV	3.24	3.34
tblVehicleEF	MDV	476.42	413.84
tblVehicleEF	MDV	110.15	88.88
tblVehicleEF	MDV	0.16	0.12
tblVehicleEF	MDV	1.7110e-003	1.5730e-003
tblVehicleEF	MDV	2.4630e-003	2.0550e-003
tblVehicleEF	MDV	1.5780e-003	1.4510e-003
tblVehicleEF	MDV	2.2660e-003	1.8910e-003
tblVehicleEF	MDV	0.09	0.10
tblVehicleEF	MDV	0.21	0.18
tblVehicleEF	MDV	0.08	0.10

tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.13	0.57
tblVehicleEF	MDV	0.25	0.46
tblVehicleEF	MDV	4.7750e-003	4.0920e-003
tblVehicleEF	MDV	1.1590e-003	8.8000e-004
tblVehicleEF	MDV	0.09	0.10
tblVehicleEF	MDV	0.21	0.18
tblVehicleEF	MDV	0.08	0.10
tblVehicleEF	MDV	0.05	0.03
tblVehicleEF	MDV	0.13	0.57
tblVehicleEF	MDV	0.28	0.50
tblVehicleEF	MH	0.03	3.3370e-003
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tblVehicleEF	MH	2.70	0.34
tblVehicleEF	MH	5.98	0.00
tblVehicleEF	MH	1,002.10	941.76
tblVehicleEF	MH	57.67	0.00
tblVehicleEF	MH	1.67	4.43
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	1.0860e-003	0.00
tblVehicleEF	MH	3.2460e-003	4.0000e-003
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	9.9800e-004	0.00
tblVehicleEF	MH	1.56	0.00
tblVehicleEF	MH	0.08	0.00
tblVehicleEF	MH	0.54	0.00

tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.35	0.00
tblVehicleEF	MH	9.9460e-003	8.9030e-003
tblVehicleEF	MH	6.8100e-004	0.00
tblVehicleEF	MH	1.56	0.00
tblVehicleEF	MH	0.08	0.00
tblVehicleEF	MH	0.54	0.00
tblVehicleEF	MH	0.13	0.08
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.39	0.00
tblVehicleEF	MH	0.03	3.3370e-003
tblVehicleEF	MH	0.02	0.00
tblVehicleEF	MH	2.78	0.34
tblVehicleEF	MH	5.56	0.00
tblVehicleEF	MH	1,002.10	941.76
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tblVehicleEF	MH	1.55	4.18
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	1.0860e-003	0.00
tblVehicleEF	MH	3.2460e-003	4.0000e-003
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	9.9800e-004	0.00
tblVehicleEF	MH	2.87	0.00
tblVehicleEF	MH	0.10	0.00
tblVehicleEF	MH	1.06	0.00

tblVehicleEF	MH	0.10	0.07
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.34	0.00
tblVehicleEF	MH	9.9470e-003	8.9030e-003
tblVehicleEF	MH	6.7400e-004	0.00
tblVehicleEF	MH	2.87	0.00
tblVehicleEF	MH	0.10	0.00
tblVehicleEF	MH	1.06	0.00
tblVehicleEF	MH	0.13	0.08
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.37	0.00
tblVehicleEF	MH	0.03	3.3370e-003
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	2.70	0.34
tblVehicleEF	MH	6.02	0.00
tblVehicleEF	MH	1,002.10	941.76
tblVehicleEF	MH	57.67	0.00
tblVehicleEF	MH	1.65	4.38
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	1.0860e-003	0.00
tblVehicleEF	MH	3.2460e-003	4.0000e-003
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	9.9800e-004	0.00
tblVehicleEF	MH	1.58	0.00
tblVehicleEF	MH	0.10	0.00
tblVehicleEF	MH	0.53	0.00

tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.35	0.00
tblVehicleEF	MH	9.9460e-003	8.9030e-003
tblVehicleEF	MH	6.8200e-004	0.00
tblVehicleEF	MH	1.58	0.00
tblVehicleEF	MH	0.10	0.00
tblVehicleEF	MH	0.53	0.00
tblVehicleEF	MH	0.13	0.08
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.39	0.00
tblVehicleEF	MHD	0.02	3.1500e-003
tblVehicleEF	MHD	3.7220e-003	5.9790e-003
tblVehicleEF	MHD	0.06	8.4870e-003
tblVehicleEF	MHD	0.35	0.34
tblVehicleEF	MHD	0.28	0.57
tblVehicleEF	MHD	6.06	1.01
tblVehicleEF	MHD	151.96	74.93
tblVehicleEF	MHD	1,066.63	1,001.03
tblVehicleEF	MHD	55.49	8.18
tblVehicleEF	MHD	0.65	0.69
tblVehicleEF	MHD	0.99	2.37
tblVehicleEF	MHD	1.0680e-003	2.4180e-003
tblVehicleEF	MHD	6.4490e-003	0.08
tblVehicleEF	MHD	7.8800e-004	9.6000e-005
tblVehicleEF	MHD	1.0220e-003	2.3130e-003
tblVehicleEF	MHD	6.1670e-003	0.08

tblVehicleEF	MHD	7.2400e-004	8.8000e-005
tblVehicleEF	MHD	1.7450e-003	7.1900e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	8.5800e-004	3.5500e-004
tblVehicleEF	MHD	0.03	0.11
tblVehicleEF	MHD	0.02	0.10
tblVehicleEF	MHD	0.37	0.05
tblVehicleEF	MHD	1.4610e-003	7.1000e-004
tblVehicleEF	MHD	0.01	9.5290e-003
tblVehicleEF	MHD	6.6100e-004	8.1000e-005
tblVehicleEF	MHD	1.7450e-003	7.1900e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	8.5800e-004	3.5500e-004
tblVehicleEF	MHD	0.04	0.12
tblVehicleEF	MHD	0.02	0.10
tblVehicleEF	MHD	0.40	0.05
tblVehicleEF	MHD	0.02	2.9880e-003
tblVehicleEF	MHD	3.7740e-003	6.0080e-003
tblVehicleEF	MHD	0.05	8.2030e-003
tblVehicleEF	MHD	0.26	0.28
tblVehicleEF	MHD	0.28	0.57
tblVehicleEF	MHD	5.78	0.96
tblVehicleEF	MHD	160.96	76.44
tblVehicleEF	MHD	1,066.63	1,001.04
tblVehicleEF	MHD	55.49	8.10

tblVehicleEF	MHD	0.67	0.70
tblVehicleEF	MHD	0.93	2.23
tblVehicleEF	MHD	9.0000e-004	2.0410e-003
tblVehicleEF	MHD	6.4490e-003	0.08
tblVehicleEF	MHD	7.8800e-004	9.6000e-005
tblVehicleEF	MHD	8.6100e-004	1.9530e-003
tblVehicleEF	MHD	6.1670e-003	0.08
tblVehicleEF	MHD	7.2400e-004	8.8000e-005
tblVehicleEF	MHD	3.3760e-003	1.3770e-003
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	1.6840e-003	7.0100e-004
tblVehicleEF	MHD	0.03	0.11
tblVehicleEF	MHD	0.02	0.11
tblVehicleEF	MHD	0.36	0.04
tblVehicleEF	MHD	1.5460e-003	7.2500e-004
tblVehicleEF	MHD	0.01	9.5290e-003
tblVehicleEF	MHD	6.5600e-004	8.0000e-005
tblVehicleEF	MHD	3.3760e-003	1.3770e-003
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	1.6840e-003	7.0100e-004
tblVehicleEF	MHD	0.04	0.12
tblVehicleEF	MHD	0.02	0.11
tblVehicleEF	MHD	0.39	0.05
tblVehicleEF	MHD	0.02	3.3820e-003
tblVehicleEF	MHD	3.6890e-003	5.9600e-003

tblVehicleEF	MHD	0.06	8.5610e-003
tblVehicleEF	MHD	0.49	0.43
tblVehicleEF	MHD	0.27	0.57
tblVehicleEF	MHD	6.14	1.02
tblVehicleEF	MHD	139.53	72.84
tblVehicleEF	MHD	1,066.63	1,001.03
tblVehicleEF	MHD	55.49	8.20
tblVehicleEF	MHD	0.62	0.67
tblVehicleEF	MHD	0.98	2.35
tblVehicleEF	MHD	1.2990e-003	2.9380e-003
tblVehicleEF	MHD	6.4490e-003	0.08
tblVehicleEF	MHD	7.8800e-004	9.6000e-005
tblVehicleEF	MHD	1.2430e-003	2.8110e-003
tblVehicleEF	MHD	6.1670e-003	0.08
tblVehicleEF	MHD	7.2400e-004	8.8000e-005
tblVehicleEF	MHD	1.3320e-003	5.6300e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	6.7900e-004	2.8800e-004
tblVehicleEF	MHD	0.03	0.11
tblVehicleEF	MHD	0.02	0.11
tblVehicleEF	MHD	0.37	0.05
tblVehicleEF	MHD	1.3440e-003	6.9100e-004
tblVehicleEF	MHD	0.01	9.5290e-003
tblVehicleEF	MHD	6.6300e-004	8.1000e-005
tblVehicleEF	MHD	1.3320e-003	5.6300e-004
tblVehicleEF	MHD	0.05	0.02

tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	6.7900e-004	2.8800e-004
tblVehicleEF	MHD	0.04	0.12
tblVehicleEF	MHD	0.02	0.11
tblVehicleEF	MHD	0.41	0.05
tblVehicleEF	OBUS	0.01	8.9240e-003
tblVehicleEF	OBUS	8.0950e-003	8.5070e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.27	0.50
tblVehicleEF	OBUS	0.54	0.93
tblVehicleEF	OBUS	6.17	2.58
tblVehicleEF	OBUS	75.04	73.28
tblVehicleEF	OBUS	1,098.07	1,407.22
tblVehicleEF	OBUS	70.10	20.86
tblVehicleEF	OBUS	0.35	0.44
tblVehicleEF	OBUS	1.12	1.70
tblVehicleEF	OBUS	1.2100e-004	1.7750e-003
tblVehicleEF	OBUS	6.0450e-003	0.04
tblVehicleEF	OBUS	8.2300e-004	1.9000e-004
tblVehicleEF	OBUS	1.1600e-004	1.6990e-003
tblVehicleEF	OBUS	5.7680e-003	0.04
tblVehicleEF	OBUS	7.5700e-004	1.7400e-004
tblVehicleEF	OBUS	2.1800e-003	2.5990e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	9.3000e-004	1.1120e-003
tblVehicleEF	OBUS	0.04	0.09

tblVehicleEF	OBUS	0.05	0.26
tblVehicleEF	OBUS	0.39	0.12
tblVehicleEF	OBUS	7.2800e-004	6.9900e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.0900e-004	2.0600e-004
tblVehicleEF	OBUS	2.1800e-003	2.5990e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	9.3000e-004	1.1120e-003
tblVehicleEF	OBUS	0.05	0.11
tblVehicleEF	OBUS	0.05	0.26
tblVehicleEF	OBUS	0.42	0.14
tblVehicleEF	OBUS	0.01	8.9470e-003
tblVehicleEF	OBUS	8.2540e-003	8.6370e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.26	0.48
tblVehicleEF	OBUS	0.55	0.94
tblVehicleEF	OBUS	5.76	2.41
tblVehicleEF	OBUS	78.48	73.81
tblVehicleEF	OBUS	1,098.07	1,407.25
tblVehicleEF	OBUS	70.10	20.57
tblVehicleEF	OBUS	0.36	0.45
tblVehicleEF	OBUS	1.04	1.59
tblVehicleEF	OBUS	1.0200e-004	1.5000e-003
tblVehicleEF	OBUS	6.0450e-003	0.04
tblVehicleEF	OBUS	8.2300e-004	1.9000e-004
tblVehicleEF	OBUS	9.8000e-005	1.4350e-003

tblVehicleEF	OBUS	5.7680e-003	0.04
tblVehicleEF	OBUS	7.5700e-004	1.7400e-004
tblVehicleEF	OBUS	4.0690e-003	4.7330e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	1.7890e-003	2.1320e-003
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.05	0.26
tblVehicleEF	OBUS	0.37	0.12
tblVehicleEF	OBUS	7.6100e-004	7.0400e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.0200e-004	2.0400e-004
tblVehicleEF	OBUS	4.0690e-003	4.7330e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	1.7890e-003	2.1320e-003
tblVehicleEF	OBUS	0.05	0.11
tblVehicleEF	OBUS	0.05	0.26
tblVehicleEF	OBUS	0.40	0.13
tblVehicleEF	OBUS	0.01	8.9200e-003
tblVehicleEF	OBUS	8.0660e-003	8.4690e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.28	0.53
tblVehicleEF	OBUS	0.54	0.92
tblVehicleEF	OBUS	6.22	2.60
tblVehicleEF	OBUS	70.30	72.56
tblVehicleEF	OBUS	1,098.07	1,407.21

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tblVehicleEF	OBUS	1.4700e-004	2.1560e-003
tblVehicleEF	OBUS	6.0450e-003	0.04
tblVehicleEF	OBUS	8.2300e-004	1.9000e-004
tblVehicleEF	OBUS	1.4100e-004	2.0620e-003
tblVehicleEF	OBUS	5.7680e-003	0.04
tblVehicleEF	OBUS	7.5700e-004	1.7400e-004
tblVehicleEF	OBUS	1.8870e-003	2.3830e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	8.5400e-004	1.0620e-003
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.05	0.27
tblVehicleEF	OBUS	0.39	0.13
tblVehicleEF	OBUS	6.8300e-004	6.9200e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.1000e-004	2.0700e-004
tblVehicleEF	OBUS	1.8870e-003	2.3830e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	8.5400e-004	1.0620e-003
tblVehicleEF	OBUS	0.05	0.11
tblVehicleEF	OBUS	0.05	0.27
tblVehicleEF	OBUS	0.42	0.14
tblVehicleEF	SBUS	0.84	0.08

tblVehicleEF	SBUS	0.01	6.6110e-003
tblVehicleEF	SBUS	0.06	6.9670e-003
tblVehicleEF	SBUS	7.83	3.03
tblVehicleEF	SBUS	0.64	0.53
tblVehicleEF	SBUS	6.66	0.94
tblVehicleEF	SBUS	1,146.29	366.87
tblVehicleEF	SBUS	1,103.40	1,115.27
tblVehicleEF	SBUS	53.92	6.06
tblVehicleEF	SBUS	10.00	3.57
tblVehicleEF	SBUS	4.65	4.82
tblVehicleEF	SBUS	0.01	4.0660e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.5700e-004	4.0000e-005
tblVehicleEF	SBUS	0.01	3.8900e-003
tblVehicleEF	SBUS	2.6950e-003	2.6510e-003
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	4.2000e-004	3.6000e-005
tblVehicleEF	SBUS	4.6830e-003	1.3080e-003
tblVehicleEF	SBUS	0.03	8.6250e-003
tblVehicleEF	SBUS	0.94	0.36
tblVehicleEF	SBUS	2.1770e-003	6.2500e-004
tblVehicleEF	SBUS	0.11	0.10
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	0.37	0.04
tblVehicleEF	SBUS	0.01	3.5040e-003
tblVehicleEF	SBUS	0.01	0.01

tblVehicleEF	SBUS	6.5500e-004	6.0000e-005
tblVehicleEF	SBUS	4.6830e-003	1.3080e-003
tblVehicleEF	SBUS	0.03	8.6250e-003
tblVehicleEF	SBUS	1.35	0.52
tblVehicleEF	SBUS	2.1770e-003	6.2500e-004
tblVehicleEF	SBUS	0.13	0.11
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	0.40	0.04
tblVehicleEF	SBUS	0.84	0.08
tblVehicleEF	SBUS	0.01	6.6860e-003
tblVehicleEF	SBUS	0.05	5.8380e-003
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tblVehicleEF	SBUS	0.65	0.54
tblVehicleEF	SBUS	4.83	0.68
tblVehicleEF	SBUS	1,198.60	377.09
tblVehicleEF	SBUS	1,103.40	1,115.28
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tblVehicleEF	SBUS	4.37	4.53
tblVehicleEF	SBUS	9.1190e-003	3.4340e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.5700e-004	4.0000e-005
tblVehicleEF	SBUS	8.7240e-003	3.2850e-003
tblVehicleEF	SBUS	2.6950e-003	2.6510e-003
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	4.2000e-004	3.6000e-005

tblVehicleEF	SBUS	8.4640e-003	2.3620e-003
tblVehicleEF	SBUS	0.03	9.1440e-003
tblVehicleEF	SBUS	0.93	0.36
tblVehicleEF	SBUS	4.0830e-003	1.1650e-003
tblVehicleEF	SBUS	0.11	0.10
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.31	0.03
tblVehicleEF	SBUS	0.01	3.6000e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.2400e-004	5.6000e-005
tblVehicleEF	SBUS	8.4640e-003	2.3620e-003
tblVehicleEF	SBUS	0.03	9.1440e-003
tblVehicleEF	SBUS	1.35	0.52
tblVehicleEF	SBUS	4.0830e-003	1.1650e-003
tblVehicleEF	SBUS	0.13	0.11
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.34	0.04
tblVehicleEF	SBUS	0.84	0.08
tblVehicleEF	SBUS	0.01	6.6040e-003
tblVehicleEF	SBUS	0.07	7.2110e-003
tblVehicleEF	SBUS	8.00	3.09
tblVehicleEF	SBUS	0.63	0.53
tblVehicleEF	SBUS	7.02	0.98
tblVehicleEF	SBUS	1,074.07	352.76
tblVehicleEF	SBUS	1,103.40	1,115.26
tblVehicleEF	SBUS	53.92	6.14
tblVehicleEF	SBUS	9.56	3.44

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tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.5700e-004	4.0000e-005
tblVehicleEF	SBUS	0.01	4.7240e-003
tblVehicleEF	SBUS	2.6950e-003	2.6510e-003
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	4.2000e-004	3.6000e-005
tblVehicleEF	SBUS	4.1680e-003	1.1480e-003
tblVehicleEF	SBUS	0.03	8.8290e-003
tblVehicleEF	SBUS	0.94	0.36
tblVehicleEF	SBUS	2.1000e-003	6.0300e-004
tblVehicleEF	SBUS	0.11	0.10
tblVehicleEF	SBUS	0.02	0.06
tblVehicleEF	SBUS	0.38	0.04
tblVehicleEF	SBUS	0.01	3.3710e-003
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tblVehicleEF	SBUS	6.6100e-004	6.1000e-005
tblVehicleEF	SBUS	4.1680e-003	1.1480e-003
tblVehicleEF	SBUS	0.03	8.8290e-003
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tblVehicleEF	SBUS	2.1000e-003	6.0300e-004
tblVehicleEF	SBUS	0.13	0.11
tblVehicleEF	SBUS	0.02	0.06
tblVehicleEF	SBUS	0.41	0.05
tblVehicleEF	UBUS	1.51	3.35

tblVehicleEF	UBUS	0.09	0.02
tblVehicleEF	UBUS	8.45	26.05
tblVehicleEF	UBUS	15.26	1.50
tblVehicleEF	UBUS	1,822.40	1,617.71
tblVehicleEF	UBUS	153.45	18.08
tblVehicleEF	UBUS	4.95	0.32
tblVehicleEF	UBUS	0.50	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.06	2.9340e-003
tblVehicleEF	UBUS	1.4200e-003	1.6100e-004
tblVehicleEF	UBUS	0.21	0.04
tblVehicleEF	UBUS	3.0000e-003	5.4780e-003
tblVehicleEF	UBUS	0.05	2.7920e-003
tblVehicleEF	UBUS	1.3060e-003	1.4800e-004
tblVehicleEF	UBUS	9.7430e-003	1.6370e-003
tblVehicleEF	UBUS	0.11	9.7740e-003
tblVehicleEF	UBUS	4.7860e-003	7.1300e-004
tblVehicleEF	UBUS	0.52	0.05
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.17	0.07
tblVehicleEF	UBUS	9.9960e-003	4.8690e-003
tblVehicleEF	UBUS	1.8100e-003	1.7900e-004
tblVehicleEF	UBUS	9.7430e-003	1.6370e-003
tblVehicleEF	UBUS	0.11	9.7740e-003
tblVehicleEF	UBUS	4.7860e-003	7.1300e-004
tblVehicleEF	UBUS	2.08	3.43
tblVehicleEF	UBUS	0.02	0.05

tblVehicleEF	UBUS	1.28	0.08
tblVehicleEF	UBUS	1.52	3.35
tblVehicleEF	UBUS	0.08	0.02
tblVehicleEF	UBUS	8.53	26.06
tblVehicleEF	UBUS	13.06	1.28
tblVehicleEF	UBUS	1,822.40	1,617.72
tblVehicleEF	UBUS	153.45	17.70
tblVehicleEF	UBUS	4.62	0.31
tblVehicleEF	UBUS	0.50	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.06	2.9340e-003
tblVehicleEF	UBUS	1.4200e-003	1.6100e-004
tblVehicleEF	UBUS	0.21	0.04
tblVehicleEF	UBUS	3.0000e-003	5.4780e-003
tblVehicleEF	UBUS	0.05	2.7920e-003
tblVehicleEF	UBUS	1.3060e-003	1.4800e-004
tblVehicleEF	UBUS	0.02	2.9250e-003
tblVehicleEF	UBUS	0.14	0.01
tblVehicleEF	UBUS	9.6600e-003	1.4550e-003
tblVehicleEF	UBUS	0.53	0.05
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.06	0.07
tblVehicleEF	UBUS	9.9970e-003	4.8690e-003
tblVehicleEF	UBUS	1.7720e-003	1.7500e-004
tblVehicleEF	UBUS	0.02	2.9250e-003
tblVehicleEF	UBUS	0.14	0.01
tblVehicleEF	UBUS	9.6600e-003	1.4550e-003

tblVehicleEF	UBUS	2.09	3.43
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.17	0.07
tblVehicleEF	UBUS	1.51	3.35
tblVehicleEF	UBUS	0.09	0.02
tblVehicleEF	UBUS	8.44	26.05
tblVehicleEF	UBUS	15.44	1.49
tblVehicleEF	UBUS	1,822.40	1,617.71
tblVehicleEF	UBUS	153.45	18.06
tblVehicleEF	UBUS	4.92	0.31
tblVehicleEF	UBUS	0.50	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.06	2.9340e-003
tblVehicleEF	UBUS	1.4200e-003	1.6100e-004
tblVehicleEF	UBUS	0.21	0.04
tblVehicleEF	UBUS	3.0000e-003	5.4780e-003
tblVehicleEF	UBUS	0.05	2.7920e-003
tblVehicleEF	UBUS	1.3060e-003	1.4800e-004
tblVehicleEF	UBUS	8.9770e-003	1.7200e-003
tblVehicleEF	UBUS	0.13	0.01
tblVehicleEF	UBUS	4.3820e-003	7.5400e-004
tblVehicleEF	UBUS	0.52	0.05
tblVehicleEF	UBUS	0.03	0.05
tblVehicleEF	UBUS	1.18	0.07
tblVehicleEF	UBUS	9.9960e-003	4.8690e-003
tblVehicleEF	UBUS	1.8130e-003	1.7900e-004
tblVehicleEF	UBUS	8.9770e-003	1.7200e-003

tblVehicleEF	UBUS	0.13	0.01
tblVehicleEF	UBUS	4.3820e-003	7.5400e-004
tblVehicleEF	UBUS	2.08	3.43
tblVehicleEF	UBUS	0.03	0.05
tblVehicleEF	UBUS	1.29	0.08
tblVehicleTrips	CNW_TTP	41.00	0.00
tblVehicleTrips	CW_TTP	59.00	100.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	1.68	2.32
tblVehicleTrips	SU_TR	1.68	2.32
tblVehicleTrips	WD_TR	1.68	2.32
tblWater	IndoorWaterUseRate	22,523,750.00	22,770,125.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	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**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

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	0.5253	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0423	0.0423	1.1000e-004	0.0000	0.0451
Energy	7.5000e-004	6.8300e-003	5.7400e-003	4.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	91.4177	91.4177	2.5700e-003	6.4000e-004	91.6726
Mobile	0.1042	0.1093	1.4831	4.5800e-003	0.5100	2.4500e-003	0.5125	0.1354	2.2600e-003	0.1376	0.0000	419.8959	419.8959	9.9300e-003	0.0000	420.1440
Waste						0.0000	0.0000		0.0000	0.0000	18.5859	0.0000	18.5859	1.0984	0.0000	46.0457
Water						0.0000	0.0000		0.0000	0.0000	7.2239	134.6967	141.9206	0.7459	0.0183	166.0284
Total	**0.6302**	**0.1163**	**1.5107**	**4.6200e-003**	**0.5100**	**3.0500e-003**	**0.5131**	**0.1354**	**2.8600e-003**	**0.1382**	**25.8098**	**646.0525**	**671.8622**	**1.8569**	**0.0190**	**723.9358**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5253	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0423	0.0423	1.1000e-004	0.0000	0.0451
Energy	7.5000e-004	6.8300e-003	5.7400e-003	4.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	91.4177	91.4177	2.5700e-003	6.4000e-004	91.6726
Mobile	0.1042	0.1093	1.4831	4.5800e-003	0.5100	2.4500e-003	0.5125	0.1354	2.2600e-003	0.1376	0.0000	419.8959	419.8959	9.9300e-003	0.0000	420.1440
Waste						0.0000	0.0000		0.0000	0.0000	18.5859	0.0000	18.5859	1.0984	0.0000	46.0457
Water						0.0000	0.0000		0.0000	0.0000	7.2239	134.6967	141.9206	0.7459	0.0183	166.0284
Total	**0.6302**	**0.1163**	**1.5107**	**4.6200e-003**	**0.5100**	**3.0500e-003**	**0.5131**	**0.1354**	**2.8600e-003**	**0.1382**	**25.8098**	**646.0525**	**671.8622**	**1.8569**	**0.0190**	**723.9358**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/4/2020	8/12/2020	5	50	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 36.86

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	158	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2020

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

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

3.2 Demolition - 2020

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	0.0000	0.0000	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 Construction Off-Site

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

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	0.1042	0.1093	1.4831	4.5800e-003	0.5100	2.4500e-003	0.5125	0.1354	2.2600e-003	0.1376	0.0000	419.8959	419.8959	9.9300e-003	0.0000	420.1440
Unmitigated	0.1042	0.1093	1.4831	4.5800e-003	0.5100	2.4500e-003	0.5125	0.1354	2.2600e-003	0.1376	0.0000	419.8959	419.8959	9.9300e-003	0.0000	420.1440

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	225.97	225.97	225.97	1,365,389	1,365,389
Total	225.97	225.97	225.97	1,365,389	1,365,389

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
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	6.90	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.542116	0.037578	0.185203	0.118503	0.016241	0.005141	0.017392	0.068695	0.001383	0.001183	0.004582	0.000945	0.001038
Unrefrigerated Warehouse-No Rail	0.614000	0.043000	0.210000	0.133000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	83.9851	83.9851	2.4300e-003	5.0000e-004	84.1958
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	83.9851	83.9851	2.4300e-003	5.0000e-004	84.1958
NaturalGas Mitigated	7.5000e-004	6.8300e-003	5.7400e-003	4.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	7.4326	7.4326	1.4000e-004	1.4000e-004	7.4768
NaturalGas Unmitigated	7.5000e-004	6.8300e-003	5.7400e-003	4.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	7.4326	7.4326	1.4000e-004	1.4000e-004	7.4768

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					
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
Unrefrigerated Warehouse-No Rail	139282	7.5000e-004	6.8300e-003	5.7400e-003	4.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	7.4326	7.4326	1.4000e-004	1.4000e-004	7.4768
Total		**7.5000e-004**	**6.8300e-003**	**5.7400e-003**	**4.0000e-005**		**5.2000e-004**	**5.2000e-004**		**5.2000e-004**	**5.2000e-004**	**0.0000**	**7.4326**	**7.4326**	**1.4000e-004**	**1.4000e-004**	**7.4768**

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					
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
Unrefrigerated Warehouse-No Rail	139282	7.5000e-004	6.8300e-003	5.7400e-003	4.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	7.4326	7.4326	1.4000e-004	1.4000e-004	7.4768
Total		**7.5000e-004**	**6.8300e-003**	**5.7400e-003**	**4.0000e-005**		**5.2000e-004**	**5.2000e-004**		**5.2000e-004**	**5.2000e-004**	**0.0000**	**7.4326**	**7.4326**	**1.4000e-004**	**1.4000e-004**	**7.4768**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	184865	83.9851	2.4300e-003	5.0000e-004	84.1958
Total		**83.9851**	**2.4300e-003**	**5.0000e-004**	**84.1958**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	184865	83.9851	2.4300e-003	5.0000e-004	84.1958
Total		**83.9851**	**2.4300e-003**	**5.0000e-004**	**84.1958**

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	0.5253	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0423	0.0423	1.1000e-004	0.0000	0.0451
Unmitigated	0.5253	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0423	0.0423	1.1000e-004	0.0000	0.0451

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	0.0675					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4558					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0400e-003	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0423	0.0423	1.1000e-004	0.0000	0.0451
Total	**0.5253**	**2.0000e-004**	**0.0218**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0423**	**0.0423**	**1.1000e-004**	**0.0000**	**0.0451**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0675					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4558					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0400e-003	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0423	0.0423	1.1000e-004	0.0000	0.0451
Total	**0.5253**	**2.0000e-004**	**0.0218**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0423**	**0.0423**	**1.1000e-004**	**0.0000**	**0.0451**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	141.9206	0.7459	0.0183	166.0284
Unmitigated	141.9206	0.7459	0.0183	166.0284

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	22.7701 / 0	141.9206	0.7459	0.0183	166.0284
Total		**141.9206**	**0.7459**	**0.0183**	**166.0284**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	22.7701 / 0	141.9206	0.7459	0.0183	166.0284
Total		**141.9206**	**0.7459**	**0.0183**	**166.0284**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	18.5859	1.0984	0.0000	46.0457
Unmitigated	18.5859	1.0984	0.0000	46.0457

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	91.56	18.5859	1.0984	0.0000	46.0457
Total		**18.5859**	**1.0984**	**0.0000**	**46.0457**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	91.56	18.5859	1.0984	0.0000	46.0457
Total		**18.5859**	**1.0984**	**0.0000**	**46.0457**

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

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APPENDIX 3.3:

CALEEMOD ANNUAL OPERATIONAL (TRUCK) EMISSIONS MODEL OUTPUTS

Estes Banning (Operations - Trucks)

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	97.40	1000sqft	2.24	97,400.00	0
Other Asphalt Surfaces	1,605.80	1000sqft	36.86	1,605,796.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2021
Utility Company	Statewide Average				
CO2 Intensity (lb/MWhr)	1001.57	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Estes Banning (Operations - Trucks) - Riverside-South Coast County, Annual

Project Characteristics - Electricty will be provided to the Project by Banning Electric Utility (BEU). CalEEMod does not provided Intensity Factors for BEU, as such, the Statewide Average will be used.

Land Use - Total Project Area is 36.86 acres. Truck Terminal is 97,400 sf. Remaning area will be modeled as 1,605,796 sf of Other Apshalt Surfaces.

Construction Phase - Operations Run Only.

Off-road Equipment - Operations Run Only.

Trips and VMT - Operations Run Only.

Vehicle Trips - Trip Rates based on information provided in the TIA prepared by Urban Crossroads.

Energy Use - The project will design building shells and building components to meet 2019 Title 24 Standards which expects 30% less energy for nonresidential uses.

Water And Wastewater - The project includes the construction and operation of a 660 square foot automated truck wash. Water usage based on the assumption that 50% of incoming trucks will be washed and 30 gallons of water will be used per truck.

Fleet Mix - Fleet Mix is based on the number of trips generated by each truck type (LHDT, MHDT, and HHDT) relative to the total number of truck trips

Vehicle Emission Factors - EMFAC2017

Vehicle Emission Factors - EMFAC2017

Vehicle Emission Factors - EMFAC2017

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	50.00	1.00
tblEnergyUse	LightingElect	1.17	0.82
tblEnergyUse	T24E	0.37	0.26
tblEnergyUse	T24NG	2.00	1.40
tblFleetMix	HHD	0.07	0.90
tblFleetMix	LDA	0.54	0.00
tblFleetMix	LDT1	0.04	0.00
tblFleetMix	LDT2	0.19	0.00
tblFleetMix	LHD1	0.02	0.10
tblFleetMix	LHD2	5.1410e-003	0.00
tblFleetMix	MCY	4.5820e-003	0.00
tblFleetMix	MDV	0.12	0.00

Estes Banning (Operations - Trucks) - Riverside-South Coast County, Annual

tblFleetMix	MH	1.0380e-003	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	1.3830e-003	0.00
tblFleetMix	SBUS	9.4500e-004	0.00
tblFleetMix	UBUS	1.1830e-003	0.00
tblLandUse	LandUseSquareFeet	1,605,800.00	1,605,796.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblVehicleEF	HHD	1.43	0.03
tblVehicleEF	HHD	0.03	0.02
tblVehicleEF	HHD	0.10	0.00
tblVehicleEF	HHD	3.28	7.55
tblVehicleEF	HHD	0.46	0.36
tblVehicleEF	HHD	1.46	2.9270e-003
tblVehicleEF	HHD	6,485.38	1,409.07
tblVehicleEF	HHD	1,461.92	1,350.00
tblVehicleEF	HHD	4.62	0.03
tblVehicleEF	HHD	26.41	7.34
tblVehicleEF	HHD	2.69	3.05
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	3.8000e-005	0.00
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	0.03	0.03

tblVehicleEF	HHD	8.8680e-003	8.8980e-003
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	3.5000e-005	0.00
tblVehicleEF	HHD	8.4000e-005	4.0000e-006
tblVehicleEF	HHD	2.5800e-003	1.0300e-004
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tblVehicleEF	HHD	4.8000e-005	2.0000e-006
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tblVehicleEF	HHD	1.8000e-004	5.3700e-004
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tblVehicleEF	HHD	7.1000e-005	0.00
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tblVehicleEF	HHD	1.8000e-004	5.3700e-004
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tblVehicleEF	HHD	0.03	0.02
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tblVehicleEF	HHD	2.39	7.39
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tblVehicleEF	HHD	1,461.92	1,350.00
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tblVehicleEF	HHD	0.06	0.06
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tblVehicleEF	HHD	3.5000e-005	0.00
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tblVehicleEF	HHD	0.01	0.01
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tblVehicleEF	HHD	4.1000e-005	2.0000e-006
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tblVehicleEF	HHD	0.01	0.01
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tblVehicleEF	HHD	6.7000e-005	4.0000e-006
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tblVehicleEF	LDA	0.04	0.05
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tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.21
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tblVehicleEF	LDA	0.12	0.12
tblVehicleEF	LDA	0.07	0.10

tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.21
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tblVehicleEF	LDA	0.12	0.12
tblVehicleEF	LDA	0.07	0.10
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.04	0.21
tblVehicleEF	LDA	0.07	0.22
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tblVehicleEF	LDA	2.0830e-003	1.7640e-003
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tblVehicleEF	LDA	0.03	0.05
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tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.03	0.05
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tblVehicleEF	LDT1	3.4000e-003	2.7140e-003
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tblVehicleEF	LDT1	0.03	0.04
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tblVehicleEF	LDT1	0.12	0.13

tblVehicleEF	LDT1	0.04	0.05
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tblVehicleEF	LDT2	0.12	0.14
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.01	0.02
tblVehicleEF	LDT2	0.06	0.44
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tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.06	0.44

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tblVehicleEF	LDT2	0.10	0.17
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.44
tblVehicleEF	LDT2	0.09	0.29
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tblVehicleEF	LDT2	8.3500e-004	7.0100e-004
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tblVehicleEF	LDT2	0.14	0.17
tblVehicleEF	LDT2	0.10	0.17
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.06	0.44
tblVehicleEF	LDT2	0.09	0.32
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tblVehicleEF	LDT2	0.13	0.15
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tblVehicleEF	LDT2	0.01	0.02
tblVehicleEF	LDT2	0.07	0.51
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tblVehicleEF	LDT2	3.4620e-003	3.2800e-003
tblVehicleEF	LDT2	8.3900e-004	7.0900e-004
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.13	0.15
tblVehicleEF	LDT2	0.05	0.07
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.51
tblVehicleEF	LDT2	0.11	0.38
tblVehicleEF	LHD1	5.4460e-003	4.8820e-003
tblVehicleEF	LHD1	0.01	5.3310e-003
tblVehicleEF	LHD1	0.02	0.02

tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	0.96	0.72
tblVehicleEF	LHD1	2.41	0.96
tblVehicleEF	LHD1	9.26	9.44
tblVehicleEF	LHD1	607.95	639.95
tblVehicleEF	LHD1	30.36	10.54
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	2.21	1.60
tblVehicleEF	LHD1	9.7200e-004	9.7000e-004
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.7100e-004	2.3300e-004
tblVehicleEF	LHD1	9.3000e-004	9.2800e-004
tblVehicleEF	LHD1	2.5390e-003	2.5010e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.0100e-004	2.1400e-004
tblVehicleEF	LHD1	3.8710e-003	3.1780e-003
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.9010e-003	1.5570e-003
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.31	0.50
tblVehicleEF	LHD1	0.26	0.08
tblVehicleEF	LHD1	9.3000e-005	9.1000e-005
tblVehicleEF	LHD1	5.9620e-003	6.2250e-003
tblVehicleEF	LHD1	3.4900e-004	1.0400e-004
tblVehicleEF	LHD1	3.8710e-003	3.1780e-003

tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.9010e-003	1.5570e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.31	0.50
tblVehicleEF	LHD1	0.28	0.08
tblVehicleEF	LHD1	5.4460e-003	4.8940e-003
tblVehicleEF	LHD1	0.01	5.4200e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	0.97	0.73
tblVehicleEF	LHD1	2.29	0.92
tblVehicleEF	LHD1	9.26	9.44
tblVehicleEF	LHD1	607.95	639.97
tblVehicleEF	LHD1	30.36	10.46
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	2.08	1.51
tblVehicleEF	LHD1	9.7200e-004	9.7000e-004
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.7100e-004	2.3300e-004
tblVehicleEF	LHD1	9.3000e-004	9.2800e-004
tblVehicleEF	LHD1	2.5390e-003	2.5010e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.0100e-004	2.1400e-004
tblVehicleEF	LHD1	7.2450e-003	5.9530e-003
tblVehicleEF	LHD1	0.12	0.09

tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	3.6380e-003	2.9980e-003
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.32	0.50
tblVehicleEF	LHD1	0.25	0.07
tblVehicleEF	LHD1	9.3000e-005	9.1000e-005
tblVehicleEF	LHD1	5.9620e-003	6.2250e-003
tblVehicleEF	LHD1	3.4700e-004	1.0300e-004
tblVehicleEF	LHD1	7.2450e-003	5.9530e-003
tblVehicleEF	LHD1	0.12	0.09
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	3.6380e-003	2.9980e-003
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.32	0.50
tblVehicleEF	LHD1	0.27	0.08
tblVehicleEF	LHD1	5.4460e-003	4.8810e-003
tblVehicleEF	LHD1	0.01	5.3180e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	0.96	0.72
tblVehicleEF	LHD1	2.41	0.96
tblVehicleEF	LHD1	9.26	9.44
tblVehicleEF	LHD1	607.95	639.95
tblVehicleEF	LHD1	30.36	10.54
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	2.18	1.59
tblVehicleEF	LHD1	9.7200e-004	9.7000e-004

tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.7100e-004	2.3300e-004
tblVehicleEF	LHD1	9.3000e-004	9.2800e-004
tblVehicleEF	LHD1	2.5390e-003	2.5010e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.0100e-004	2.1400e-004
tblVehicleEF	LHD1	3.4570e-003	2.8250e-003
tblVehicleEF	LHD1	0.11	0.09
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.7350e-003	1.4150e-003
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.33	0.53
tblVehicleEF	LHD1	0.26	0.08
tblVehicleEF	LHD1	9.3000e-005	9.1000e-005
tblVehicleEF	LHD1	5.9620e-003	6.2250e-003
tblVehicleEF	LHD1	3.4900e-004	1.0400e-004
tblVehicleEF	LHD1	3.4570e-003	2.8250e-003
tblVehicleEF	LHD1	0.11	0.09
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.7350e-003	1.4150e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.33	0.53
tblVehicleEF	LHD1	0.28	0.08
tblVehicleEF	LHD2	3.6660e-003	3.1720e-003
tblVehicleEF	LHD2	4.5290e-003	3.8570e-003
tblVehicleEF	LHD2	8.3110e-003	9.0280e-003

tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.50	0.53
tblVehicleEF	LHD2	1.15	0.56
tblVehicleEF	LHD2	14.48	14.86
tblVehicleEF	LHD2	604.20	638.83
tblVehicleEF	LHD2	23.56	7.29
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.71	1.77
tblVehicleEF	LHD2	1.3360e-003	1.4390e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.8700e-004	1.1400e-004
tblVehicleEF	LHD2	1.2780e-003	1.3770e-003
tblVehicleEF	LHD2	2.6970e-003	2.7110e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5600e-004	1.0500e-004
tblVehicleEF	LHD2	1.4980e-003	1.6870e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	7.7800e-004	8.4200e-004
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.4100e-004	1.4200e-004
tblVehicleEF	LHD2	5.8740e-003	6.1550e-003
tblVehicleEF	LHD2	2.5700e-004	7.2000e-005
tblVehicleEF	LHD2	1.4980e-003	1.6870e-003

tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	7.7800e-004	8.4200e-004
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	3.6660e-003	3.1790e-003
tblVehicleEF	LHD2	4.5800e-003	3.8860e-003
tblVehicleEF	LHD2	8.0210e-003	8.7250e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.51	0.53
tblVehicleEF	LHD2	1.10	0.53
tblVehicleEF	LHD2	14.48	14.86
tblVehicleEF	LHD2	604.20	638.83
tblVehicleEF	LHD2	23.56	7.25
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.62	1.67
tblVehicleEF	LHD2	1.3360e-003	1.4390e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.8700e-004	1.1400e-004
tblVehicleEF	LHD2	1.2780e-003	1.3770e-003
tblVehicleEF	LHD2	2.6970e-003	2.7110e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5600e-004	1.0500e-004
tblVehicleEF	LHD2	2.8320e-003	3.1830e-003
tblVehicleEF	LHD2	0.04	0.05

tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.4720e-003	1.6130e-003
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.4100e-004	1.4200e-004
tblVehicleEF	LHD2	5.8740e-003	6.1560e-003
tblVehicleEF	LHD2	2.5600e-004	7.2000e-005
tblVehicleEF	LHD2	2.8320e-003	3.1830e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.4720e-003	1.6130e-003
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	3.6660e-003	3.1700e-003
tblVehicleEF	LHD2	4.5170e-003	3.8490e-003
tblVehicleEF	LHD2	8.3600e-003	9.0930e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.50	0.53
tblVehicleEF	LHD2	1.16	0.56
tblVehicleEF	LHD2	14.48	14.86
tblVehicleEF	LHD2	604.20	638.83
tblVehicleEF	LHD2	23.56	7.30
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.70	1.75
tblVehicleEF	LHD2	1.3360e-003	1.4390e-003

tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.8700e-004	1.1400e-004
tblVehicleEF	LHD2	1.2780e-003	1.3770e-003
tblVehicleEF	LHD2	2.6970e-003	2.7110e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5600e-004	1.0500e-004
tblVehicleEF	LHD2	1.1910e-003	1.3290e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	6.6000e-004	7.0100e-004
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.4100e-004	1.4200e-004
tblVehicleEF	LHD2	5.8740e-003	6.1550e-003
tblVehicleEF	LHD2	2.5700e-004	7.2000e-005
tblVehicleEF	LHD2	1.1910e-003	1.3290e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	6.6000e-004	7.0100e-004
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	MCY	0.42	0.32
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	19.52	19.61

tblVehicleEF	MCY	9.67	8.55
tblVehicleEF	MCY	165.74	208.30
tblVehicleEF	MCY	46.23	60.73
tblVehicleEF	MCY	1.13	1.13
tblVehicleEF	MCY	1.7750e-003	1.7570e-003
tblVehicleEF	MCY	3.4010e-003	2.8660e-003
tblVehicleEF	MCY	1.6600e-003	1.6440e-003
tblVehicleEF	MCY	3.2060e-003	2.7000e-003
tblVehicleEF	MCY	1.69	1.66
tblVehicleEF	MCY	0.85	0.84
tblVehicleEF	MCY	0.92	0.90
tblVehicleEF	MCY	2.15	2.16
tblVehicleEF	MCY	0.57	1.87
tblVehicleEF	MCY	2.08	1.83
tblVehicleEF	MCY	2.0380e-003	2.0610e-003
tblVehicleEF	MCY	6.8100e-004	6.0100e-004
tblVehicleEF	MCY	1.69	1.66
tblVehicleEF	MCY	0.85	0.84
tblVehicleEF	MCY	0.92	0.90
tblVehicleEF	MCY	2.65	2.65
tblVehicleEF	MCY	0.57	1.87
tblVehicleEF	MCY	2.26	1.99
tblVehicleEF	MCY	0.42	0.32
tblVehicleEF	MCY	0.14	0.22
tblVehicleEF	MCY	20.23	20.27
tblVehicleEF	MCY	9.11	8.00
tblVehicleEF	MCY	165.74	209.26

tblVehicleEF	MCY	46.23	59.19
tblVehicleEF	MCY	0.98	0.98
tblVehicleEF	MCY	1.7750e-003	1.7570e-003
tblVehicleEF	MCY	3.4010e-003	2.8660e-003
tblVehicleEF	MCY	1.6600e-003	1.6440e-003
tblVehicleEF	MCY	3.2060e-003	2.7000e-003
tblVehicleEF	MCY	3.35	3.28
tblVehicleEF	MCY	1.24	1.23
tblVehicleEF	MCY	2.10	2.05
tblVehicleEF	MCY	2.13	2.13
tblVehicleEF	MCY	0.57	1.86
tblVehicleEF	MCY	1.86	1.63
tblVehicleEF	MCY	2.0490e-003	2.0710e-003
tblVehicleEF	MCY	6.6500e-004	5.8600e-004
tblVehicleEF	MCY	3.35	3.28
tblVehicleEF	MCY	1.24	1.23
tblVehicleEF	MCY	2.10	2.05
tblVehicleEF	MCY	2.62	2.63
tblVehicleEF	MCY	0.57	1.86
tblVehicleEF	MCY	2.02	1.77
tblVehicleEF	MCY	0.42	0.32
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	19.04	19.14
tblVehicleEF	MCY	9.62	8.49
tblVehicleEF	MCY	165.74	207.52
tblVehicleEF	MCY	46.23	60.64
tblVehicleEF	MCY	1.12	1.12

tblVehicleEF	MCY	1.7750e-003	1.7570e-003
tblVehicleEF	MCY	3.4010e-003	2.8660e-003
tblVehicleEF	MCY	1.6600e-003	1.6440e-003
tblVehicleEF	MCY	3.2060e-003	2.7000e-003
tblVehicleEF	MCY	1.60	1.59
tblVehicleEF	MCY	1.05	1.04
tblVehicleEF	MCY	0.74	0.73
tblVehicleEF	MCY	2.15	2.15
tblVehicleEF	MCY	0.65	2.12
tblVehicleEF	MCY	2.08	1.83
tblVehicleEF	MCY	2.0310e-003	2.0540e-003
tblVehicleEF	MCY	6.8100e-004	6.0000e-004
tblVehicleEF	MCY	1.60	1.59
tblVehicleEF	MCY	1.05	1.04
tblVehicleEF	MCY	0.74	0.73
tblVehicleEF	MCY	2.64	2.65
tblVehicleEF	MCY	0.65	2.12
tblVehicleEF	MCY	2.27	1.99
tblVehicleEF	MDV	0.01	5.7580e-003
tblVehicleEF	MDV	0.02	0.09
tblVehicleEF	MDV	1.42	1.20
tblVehicleEF	MDV	3.18	3.27
tblVehicleEF	MDV	488.89	421.49
tblVehicleEF	MDV	110.15	88.73
tblVehicleEF	MDV	0.17	0.12
tblVehicleEF	MDV	1.7110e-003	1.5730e-003
tblVehicleEF	MDV	2.4630e-003	2.0550e-003

tblVehicleEF	MDV	1.5780e-003	1.4510e-003
tblVehicleEF	MDV	2.2660e-003	1.8910e-003
tblVehicleEF	MDV	0.11	0.13
tblVehicleEF	MDV	0.20	0.17
tblVehicleEF	MDV	0.09	0.11
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.25	0.45
tblVehicleEF	MDV	4.9000e-003	4.1680e-003
tblVehicleEF	MDV	1.1570e-003	8.7800e-004
tblVehicleEF	MDV	0.11	0.13
tblVehicleEF	MDV	0.20	0.17
tblVehicleEF	MDV	0.09	0.11
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.27	0.49
tblVehicleEF	MDV	0.01	6.5120e-003
tblVehicleEF	MDV	0.02	0.08
tblVehicleEF	MDV	1.73	1.46
tblVehicleEF	MDV	2.81	2.88
tblVehicleEF	MDV	530.71	447.07
tblVehicleEF	MDV	110.15	87.92
tblVehicleEF	MDV	0.16	0.11
tblVehicleEF	MDV	1.7110e-003	1.5730e-003
tblVehicleEF	MDV	2.4630e-003	2.0550e-003
tblVehicleEF	MDV	1.5780e-003	1.4510e-003
tblVehicleEF	MDV	2.2660e-003	1.8910e-003

tblVehicleEF	MDV	0.22	0.26
tblVehicleEF	MDV	0.23	0.20
tblVehicleEF	MDV	0.17	0.21
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.21	0.39
tblVehicleEF	MDV	5.3230e-003	4.4210e-003
tblVehicleEF	MDV	1.1510e-003	8.7000e-004
tblVehicleEF	MDV	0.22	0.26
tblVehicleEF	MDV	0.23	0.20
tblVehicleEF	MDV	0.17	0.21
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.23	0.43
tblVehicleEF	MDV	0.01	5.5370e-003
tblVehicleEF	MDV	0.02	0.09
tblVehicleEF	MDV	1.33	1.12
tblVehicleEF	MDV	3.24	3.34
tblVehicleEF	MDV	476.42	413.84
tblVehicleEF	MDV	110.15	88.88
tblVehicleEF	MDV	0.16	0.12
tblVehicleEF	MDV	1.7110e-003	1.5730e-003
tblVehicleEF	MDV	2.4630e-003	2.0550e-003
tblVehicleEF	MDV	1.5780e-003	1.4510e-003
tblVehicleEF	MDV	2.2660e-003	1.8910e-003
tblVehicleEF	MDV	0.09	0.10
tblVehicleEF	MDV	0.21	0.18

tblVehicleEF	MDV	0.08	0.10
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.13	0.57
tblVehicleEF	MDV	0.25	0.46
tblVehicleEF	MDV	4.7750e-003	4.0920e-003
tblVehicleEF	MDV	1.1590e-003	8.8000e-004
tblVehicleEF	MDV	0.09	0.10
tblVehicleEF	MDV	0.21	0.18
tblVehicleEF	MDV	0.08	0.10
tblVehicleEF	MDV	0.05	0.03
tblVehicleEF	MDV	0.13	0.57
tblVehicleEF	MDV	0.28	0.50
tblVehicleEF	MH	0.03	3.3370e-003
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	2.70	0.34
tblVehicleEF	MH	5.98	0.00
tblVehicleEF	MH	1,002.10	941.76
tblVehicleEF	MH	57.67	0.00
tblVehicleEF	MH	1.67	4.43
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	1.0860e-003	0.00
tblVehicleEF	MH	3.2460e-003	4.0000e-003
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	9.9800e-004	0.00
tblVehicleEF	MH	1.56	0.00
tblVehicleEF	MH	0.08	0.00

tblVehicleEF	MH	0.54	0.00
tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.35	0.00
tblVehicleEF	MH	9.9460e-003	8.9030e-003
tblVehicleEF	MH	6.8100e-004	0.00
tblVehicleEF	MH	1.56	0.00
tblVehicleEF	MH	0.08	0.00
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tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.39	0.00
tblVehicleEF	MH	0.03	3.3370e-003
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tblVehicleEF	MH	2.78	0.34
tblVehicleEF	MH	5.56	0.00
tblVehicleEF	MH	1,002.10	941.76
tblVehicleEF	MH	57.67	0.00
tblVehicleEF	MH	1.55	4.18
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	1.0860e-003	0.00
tblVehicleEF	MH	3.2460e-003	4.0000e-003
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	9.9800e-004	0.00
tblVehicleEF	MH	2.87	0.00
tblVehicleEF	MH	0.10	0.00

tblVehicleEF	MH	1.06	0.00
tblVehicleEF	MH	0.10	0.07
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.34	0.00
tblVehicleEF	MH	9.9470e-003	8.9030e-003
tblVehicleEF	MH	6.7400e-004	0.00
tblVehicleEF	MH	2.87	0.00
tblVehicleEF	MH	0.10	0.00
tblVehicleEF	MH	1.06	0.00
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tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.37	0.00
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tblVehicleEF	MH	1.65	4.38
tblVehicleEF	MH	0.01	0.02
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tblVehicleEF	MH	0.10	0.00

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tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.35	0.00
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tblVehicleEF	MH	6.8200e-004	0.00
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tblVehicleEF	MH	0.53	0.00
tblVehicleEF	MH	0.13	0.08
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.39	0.00
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tblVehicleEF	MHD	0.02	0.10
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tblVehicleEF	MHD	0.01	9.5290e-003
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tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	8.5800e-004	3.5500e-004
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tblVehicleEF	MHD	0.02	2.9880e-003
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tblVehicleEF	MHD	0.28	0.57
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tblVehicleEF	MHD	160.96	76.44
tblVehicleEF	MHD	1,066.63	1,001.04

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tblVehicleEF	MHD	6.4490e-003	0.08
tblVehicleEF	MHD	7.8800e-004	9.6000e-005
tblVehicleEF	MHD	8.6100e-004	1.9530e-003
tblVehicleEF	MHD	6.1670e-003	0.08
tblVehicleEF	MHD	7.2400e-004	8.8000e-005
tblVehicleEF	MHD	3.3760e-003	1.3770e-003
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	1.6840e-003	7.0100e-004
tblVehicleEF	MHD	0.03	0.11
tblVehicleEF	MHD	0.02	0.11
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tblVehicleEF	MHD	0.01	9.5290e-003
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tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	1.6840e-003	7.0100e-004
tblVehicleEF	MHD	0.04	0.12
tblVehicleEF	MHD	0.02	0.11
tblVehicleEF	MHD	0.39	0.05
tblVehicleEF	MHD	0.02	3.3820e-003

tblVehicleEF	MHD	3.6890e-003	5.9600e-003
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tblVehicleEF	MHD	0.98	2.35
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tblVehicleEF	MHD	6.4490e-003	0.08
tblVehicleEF	MHD	7.8800e-004	9.6000e-005
tblVehicleEF	MHD	1.2430e-003	2.8110e-003
tblVehicleEF	MHD	6.1670e-003	0.08
tblVehicleEF	MHD	7.2400e-004	8.8000e-005
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tblVehicleEF	MHD	6.7900e-004	2.8800e-004
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tblVehicleEF	MHD	0.02	0.11
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tblVehicleEF	OBUS	8.0950e-003	8.5070e-003
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tblVehicleEF	OBUS	6.0450e-003	0.04
tblVehicleEF	OBUS	8.2300e-004	1.9000e-004
tblVehicleEF	OBUS	1.1600e-004	1.6990e-003
tblVehicleEF	OBUS	5.7680e-003	0.04
tblVehicleEF	OBUS	7.5700e-004	1.7400e-004
tblVehicleEF	OBUS	2.1800e-003	2.5990e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	9.3000e-004	1.1120e-003

tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.05	0.26
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tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.0900e-004	2.0600e-004
tblVehicleEF	OBUS	2.1800e-003	2.5990e-003
tblVehicleEF	OBUS	0.02	0.02
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tblVehicleEF	OBUS	6.0450e-003	0.04
tblVehicleEF	OBUS	8.2300e-004	1.9000e-004

tblVehicleEF	OBUS	9.8000e-005	1.4350e-003
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tblVehicleEF	OBUS	4.0690e-003	4.7330e-003
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tblVehicleEF	OBUS	0.05	0.26
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tblVehicleEF	UBUS	0.06	2.9340e-003
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tblVehicleEF	UBUS	9.7430e-003	1.6370e-003
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tblVehicleEF	UBUS	4.7860e-003	7.1300e-004
tblVehicleEF	UBUS	0.52	0.05
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.17	0.07
tblVehicleEF	UBUS	9.9960e-003	4.8690e-003
tblVehicleEF	UBUS	1.8100e-003	1.7900e-004
tblVehicleEF	UBUS	9.7430e-003	1.6370e-003
tblVehicleEF	UBUS	0.11	9.7740e-003
tblVehicleEF	UBUS	4.7860e-003	7.1300e-004
tblVehicleEF	UBUS	2.08	3.43

tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.28	0.08
tblVehicleEF	UBUS	1.52	3.35
tblVehicleEF	UBUS	0.08	0.02
tblVehicleEF	UBUS	8.53	26.06
tblVehicleEF	UBUS	13.06	1.28
tblVehicleEF	UBUS	1,822.40	1,617.72
tblVehicleEF	UBUS	153.45	17.70
tblVehicleEF	UBUS	4.62	0.31
tblVehicleEF	UBUS	0.50	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.06	2.9340e-003
tblVehicleEF	UBUS	1.4200e-003	1.6100e-004
tblVehicleEF	UBUS	0.21	0.04
tblVehicleEF	UBUS	3.0000e-003	5.4780e-003
tblVehicleEF	UBUS	0.05	2.7920e-003
tblVehicleEF	UBUS	1.3060e-003	1.4800e-004
tblVehicleEF	UBUS	0.02	2.9250e-003
tblVehicleEF	UBUS	0.14	0.01
tblVehicleEF	UBUS	9.6600e-003	1.4550e-003
tblVehicleEF	UBUS	0.53	0.05
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.06	0.07
tblVehicleEF	UBUS	9.9970e-003	4.8690e-003
tblVehicleEF	UBUS	1.7720e-003	1.7500e-004
tblVehicleEF	UBUS	0.02	2.9250e-003
tblVehicleEF	UBUS	0.14	0.01

tblVehicleEF	UBUS	9.6600e-003	1.4550e-003
tblVehicleEF	UBUS	2.09	3.43
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.17	0.07
tblVehicleEF	UBUS	1.51	3.35
tblVehicleEF	UBUS	0.09	0.02
tblVehicleEF	UBUS	8.44	26.05
tblVehicleEF	UBUS	15.44	1.49
tblVehicleEF	UBUS	1,822.40	1,617.71
tblVehicleEF	UBUS	153.45	18.06
tblVehicleEF	UBUS	4.92	0.31
tblVehicleEF	UBUS	0.50	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.06	2.9340e-003
tblVehicleEF	UBUS	1.4200e-003	1.6100e-004
tblVehicleEF	UBUS	0.21	0.04
tblVehicleEF	UBUS	3.0000e-003	5.4780e-003
tblVehicleEF	UBUS	0.05	2.7920e-003
tblVehicleEF	UBUS	1.3060e-003	1.4800e-004
tblVehicleEF	UBUS	8.9770e-003	1.7200e-003
tblVehicleEF	UBUS	0.13	0.01
tblVehicleEF	UBUS	4.3820e-003	7.5400e-004
tblVehicleEF	UBUS	0.52	0.05
tblVehicleEF	UBUS	0.03	0.05
tblVehicleEF	UBUS	1.18	0.07
tblVehicleEF	UBUS	9.9960e-003	4.8690e-003
tblVehicleEF	UBUS	1.8130e-003	1.7900e-004

tblVehicleEF	UBUS	8.9770e-003	1.7200e-003
tblVehicleEF	UBUS	0.13	0.01
tblVehicleEF	UBUS	4.3820e-003	7.5400e-004
tblVehicleEF	UBUS	2.08	3.43
tblVehicleEF	UBUS	0.03	0.05
tblVehicleEF	UBUS	1.29	0.08
tblVehicleTrips	CNW_TTP	41.00	0.00
tblVehicleTrips	CW_TL	16.60	40.00
tblVehicleTrips	CW_TTP	59.00	100.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	1.68	0.92
tblVehicleTrips	SU_TR	1.68	0.92
tblVehicleTrips	WD_TR	1.68	0.92
tblWater	IndoorWaterUseRate	22,523,750.00	22,770,125.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	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**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

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	0.5253	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0423	0.0423	1.1000e-004	0.0000	0.0451
Energy	7.5000e-004	6.8300e-003	5.7400e-003	4.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	91.4177	91.4177	2.5700e-003	6.4000e-004	91.6726
Mobile	0.1212	5.0925	0.8223	0.0178	0.5629	0.0725	0.6354	0.1549	0.0693	0.2243	0.0000	1,715.5206	1,715.5206	0.0222	0.0000	1,716.0761
Waste						0.0000	0.0000		0.0000	0.0000	18.5859	0.0000	18.5859	1.0984	0.0000	46.0457
Water						0.0000	0.0000		0.0000	0.0000	7.2239	134.6967	141.9206	0.7459	0.0183	166.0284
Total	**0.6473**	**5.0995**	**0.8499**	**0.0178**	**0.5629**	**0.0731**	**0.6360**	**0.1549**	**0.0699**	**0.2249**	**25.8098**	**1,941.6773**	**1,967.4870**	**1.8692**	**0.0190**	**2,019.8679**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5253	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0423	0.0423	1.1000e-004	0.0000	0.0451
Energy	7.5000e-004	6.8300e-003	5.7400e-003	4.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	91.4177	91.4177	2.5700e-003	6.4000e-004	91.6726
Mobile	0.1212	5.0925	0.8223	0.0178	0.5629	0.0725	0.6354	0.1549	0.0693	0.2243	0.0000	1,715.5206	1,715.5206	0.0222	0.0000	1,716.0761
Waste						0.0000	0.0000		0.0000	0.0000	18.5859	0.0000	18.5859	1.0984	0.0000	46.0457
Water						0.0000	0.0000		0.0000	0.0000	7.2239	134.6967	141.9206	0.7459	0.0183	166.0284
Total	**0.6473**	**5.0995**	**0.8499**	**0.0178**	**0.5629**	**0.0731**	**0.6360**	**0.1549**	**0.0699**	**0.2249**	**25.8098**	**1,941.6773**	**1,967.4870**	**1.8692**	**0.0190**	**2,019.8679**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/4/2020	6/4/2020	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 36.86

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	158	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2020

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

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

3.2 Demolition - 2020

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	0.0000	0.0000	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 Construction Off-Site

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

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	0.1212	5.0925	0.8223	0.0178	0.5629	0.0725	0.6354	0.1549	0.0693	0.2243	0.0000	1,715.5206	1,715.5206	0.0222	0.0000	1,716.0761
Unmitigated	0.1212	5.0925	0.8223	0.0178	0.5629	0.0725	0.6354	0.1549	0.0693	0.2243	0.0000	1,715.5206	1,715.5206	0.0222	0.0000	1,716.0761

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	90.00	90.00	90.00	1,310,365	1,310,365
Total	90.00	90.00	90.00	1,310,365	1,310,365

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
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	40.00	8.40	6.90	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.542116	0.037578	0.185203	0.118503	0.016241	0.005141	0.017392	0.068695	0.001383	0.001183	0.004582	0.000945	0.001038
Unrefrigerated Warehouse-No Rail	0.000000	0.000000	0.000000	0.000000	0.100000	0.000000	0.000000	0.900000	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	83.9851	83.9851	2.4300e-003	5.0000e-004	84.1958
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	83.9851	83.9851	2.4300e-003	5.0000e-004	84.1958
NaturalGas Mitigated	7.5000e-004	6.8300e-003	5.7400e-003	4.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	7.4326	7.4326	1.4000e-004	1.4000e-004	7.4768
NaturalGas Unmitigated	7.5000e-004	6.8300e-003	5.7400e-003	4.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	7.4326	7.4326	1.4000e-004	1.4000e-004	7.4768

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					
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
Unrefrigerated Warehouse-No Rail	139282	7.5000e-004	6.8300e-003	5.7400e-003	4.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	7.4326	7.4326	1.4000e-004	1.4000e-004	7.4768
Total		**7.5000e-004**	**6.8300e-003**	**5.7400e-003**	**4.0000e-005**		**5.2000e-004**	**5.2000e-004**		**5.2000e-004**	**5.2000e-004**	**0.0000**	**7.4326**	**7.4326**	**1.4000e-004**	**1.4000e-004**	**7.4768**

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					
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
Unrefrigerated Warehouse-No Rail	139282	7.5000e-004	6.8300e-003	5.7400e-003	4.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	7.4326	7.4326	1.4000e-004	1.4000e-004	7.4768
Total		**7.5000e-004**	**6.8300e-003**	**5.7400e-003**	**4.0000e-005**		**5.2000e-004**	**5.2000e-004**		**5.2000e-004**	**5.2000e-004**	**0.0000**	**7.4326**	**7.4326**	**1.4000e-004**	**1.4000e-004**	**7.4768**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	184865	83.9851	2.4300e-003	5.0000e-004	84.1958
Total		**83.9851**	**2.4300e-003**	**5.0000e-004**	**84.1958**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	184865	83.9851	2.4300e-003	5.0000e-004	84.1958
Total		**83.9851**	**2.4300e-003**	**5.0000e-004**	**84.1958**

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	0.5253	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0423	0.0423	1.1000e-004	0.0000	0.0451
Unmitigated	0.5253	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0423	0.0423	1.1000e-004	0.0000	0.0451

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	0.0675					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4558					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0400e-003	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0423	0.0423	1.1000e-004	0.0000	0.0451
Total	**0.5253**	**2.0000e-004**	**0.0218**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0423**	**0.0423**	**1.1000e-004**	**0.0000**	**0.0451**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0675					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4558					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0400e-003	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0423	0.0423	1.1000e-004	0.0000	0.0451
Total	**0.5253**	**2.0000e-004**	**0.0218**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0423**	**0.0423**	**1.1000e-004**	**0.0000**	**0.0451**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	141.9206	0.7459	0.0183	166.0284
Unmitigated	141.9206	0.7459	0.0183	166.0284

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	22.7701 / 0	141.9206	0.7459	0.0183	166.0284
Total		**141.9206**	**0.7459**	**0.0183**	**166.0284**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	22.7701 / 0	141.9206	0.7459	0.0183	166.0284
Total		**141.9206**	**0.7459**	**0.0183**	**166.0284**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	18.5859	1.0984	0.0000	46.0457
Unmitigated	18.5859	1.0984	0.0000	46.0457

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	91.56	18.5859	1.0984	0.0000	46.0457
Total		**18.5859**	**1.0984**	**0.0000**	**46.0457**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	91.56	18.5859	1.0984	0.0000	46.0457
Total		**18.5859**	**1.0984**	**0.0000**	**46.0457**

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

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APPENDIX 3.4:

EMFAC2017 MODEL OUTPUTS

EMFAC2017 (v1.0.2) Emissions Inventory
Region Type: County
Region: RIVERSIDE
Calendar Year: 2021
Season: Annual
Vehicle Classification: EMFAC2007 Categories
Units: miles/day for VMT, trips/day for Trips, tons/day for Emissions, 1000 gallons/day for Fuel Consumption

Region	CalYr	VehClass	MdlYr	Speed	Fuel	Population	VMT	Fuel_Consumption	Fuel_Consumption	Total Fuel	VMT	Total VMT	Miles per Gallon	Vehicle Class
RIVERSIDE	2021	HHDT	Aggregated	Aggregated	GAS	8.256088183	649.7325832	0.15635274	156.35274	553640.7845	649.7325832	3837906.057	6.93	HHDT
RIVERSIDE	2021	HHDT	Aggregated	Aggregated	DSL	27250.49208	3825933.398	548.6130704	548613.0704		3825933.398			
RIVERSIDE	2021	HHDT	Aggregated	Aggregated	NG	278.9618671	11322.92601	4.871361355	4871.361355		11322.92601			
RIVERSIDE	2021	LDA	Aggregated	Aggregated	GAS	750300.8612	29816029.44	959.9773206	959977.3206	965560.9616	29816029.44	30497458.72	31.59	LDA
RIVERSIDE	2021	LDA	Aggregated	Aggregated	DSL	6761.576428	284051.9489	5.583640967	5583.640967		284051.9489			
RIVERSIDE	2021	LDA	Aggregated	Aggregated	ELEC	10150.83139	397377.3325	0	0		397377.3325			
RIVERSIDE	2021	LDT1	Aggregated	Aggregated	GAS	80587.47931	3017205.799	114.6030537	114603.0537	114639.7103	3017205.799	3030847.153	26.44	LDT1
RIVERSIDE	2021	LDT1	Aggregated	Aggregated	DSL	42.61597748	937.3229162	0.036656565	36.65656499		937.3229162			
RIVERSIDE	2021	LDT1	Aggregated	Aggregated	ELEC	312.6717202	12704.03137	0	0		12704.03137			
RIVERSIDE	2021	LDT2	Aggregated	Aggregated	GAS	246596.5095	9631963.535	392.0360383	392036.0383	393578.008	9631963.535	9744734.894	24.76	LDT2
RIVERSIDE	2021	LDT2	Aggregated	Aggregated	DSL	1288.993364	58422.33846	1.541969714	1541.969714		58422.33846			
RIVERSIDE	2021	LDT2	Aggregated	Aggregated	ELEC	1692.169129	54349.02026	0	0		54349.02026			
RIVERSIDE	2021	LHDT1	Aggregated	Aggregated	GAS	20885.97436	692854.0522	65.01212921	65012.12921	98537.28051	692854.0522	1388805.699	14.09	LHDT1
RIVERSIDE	2021	LHDT1	Aggregated	Aggregated	DSL	19999.77791	695951.6473	33.5251513	33525.1513		695951.6473			
RIVERSIDE	2021	LHDT2	Aggregated	Aggregated	GAS	3292.646696	108726.4545	11.69203093	11692.03093	25761.96958	108726.4545	376440.2063	14.61	LHDT2
RIVERSIDE	2021	LHDT2	Aggregated	Aggregated	DSL	7676.540568	267713.7518	14.06993865	14069.93865		267713.7518			
RIVERSIDE	2021	MCY	Aggregated	Aggregated	GAS	35659.71718	267522.3909	6.987624248	6987.624248	6987.624248	267522.3909	267522.3909	38.29	MCY
RIVERSIDE	2021	MDV	Aggregated	Aggregated	GAS	208791.3729	7677992.855	389.092347	389092.347	395217.4272	7677992.855	7875321.205	19.93	MDV
RIVERSIDE	2021	MDV	Aggregated	Aggregated	DSL	3985.674779	171354.6461	6.125080214	6125.080214		171354.6461			
RIVERSIDE	2021	MDV	Aggregated	Aggregated	ELEC	787.1076762	25973.70389	0	0		25973.70389			
RIVERSIDE	2021	MH	Aggregated	Aggregated	GAS	6261.085587	50694.80757	9.933138973	9933.138973	11918.79395	50694.80757	72156.79568	6.05	MH
RIVERSIDE	2021	MH	Aggregated	Aggregated	DSL	2593.424644	21461.98811	1.985654976	1985.654976		21461.98811			
RIVERSIDE	2021	MHDT	Aggregated	Aggregated	GAS	1963.203703	103976.7898	20.22169968	20221.69968	109638.0089	103976.7898	1067044.901	9.73	MHDT
RIVERSIDE	2021	MHDT	Aggregated	Aggregated	DSL	15756.35982	963068.1107	89.41630921	89416.30921		963068.1107			
RIVERSIDE	2021	OBUS	Aggregated	Aggregated	GAS	589.4801253	27261.01125	5.36936518	5369.36518	8180.419843	27261.01125	52116.13959	6.37	OBUS
RIVERSIDE	2021	OBUS	Aggregated	Aggregated	DSL	347.9929903	24855.12833	2.811054663	2811.054663		24855.12833			
RIVERSIDE	2021	SBUS	Aggregated	Aggregated	GAS	475.4713498	19228.87737	2.150891371	2150.891371	6918.746382	19228.87737	55087.63668	7.96	SBUS
RIVERSIDE	2021	SBUS	Aggregated	Aggregated	DSL	1131.955947	35858.75931	4.767855011	4767.855011		35858.75931			
RIVERSIDE	2021	UBUS	Aggregated	Aggregated	GAS	163.4848401	23017.81637	3.736316018	3736.316018	13112.25473	23017.81637	65327.65273	4.98	UBUS
RIVERSIDE	2021	UBUS	Aggregated	Aggregated	DSL	1.105797941	58.57190354	0.006566346	6.56634569		58.57190354			
RIVERSIDE	2021	UBUS	Aggregated	Aggregated	ELEC	5.058469431	271.5303965	0	0		271.5303965			
RIVERSIDE	2021	UBUS	Aggregated	Aggregated	NG	306.621625	41979.73406	9.369372368	9369.372368		41979.73406			

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Appendix E

SOILS SOUTHWEST, INC.
SOILS, MATERIALS AND ENVIRONMENTAL ENGINEERING CONSULTANTS

897 VIA LATA, SUITE N • COLTON, CA 92324 • (909) 370-0474 • (909) 370-0481 • FAX (909) 370-3156

Feasibility Study Report of Geotechnical Investigations & Soil Infiltration Testing for WQMP-BMP Design

Proposed Estes Express Line Truck Terminal
East Terminus of E. Barbour St.
City of Banning, California
A.P.N. 532-13-008

Project No. 19010-F/BMP
July 2, 2019

Prepared for:

Bremco Construction, Inc.
3470 East Spring Street
Long Beach, CA 90806

soilssouthwest@aol.com
Established 1984

SOILS SOUTHWEST, INC.
SOILS, MATERIALS AND ENVIRONMENTAL ENGINEERING CONSULTANTS

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July 2, 2019

Project No. 19010-F/BMP

Bremco Construction, Inc.
3470 East Spring Street
Long Beach, CA 90806

Attention: Mr. William O. Lewis, PE, President

Subject: Feasibility Study Report of Geotechnical Investigations &
Soil Infiltration Testing for WQMP-BMP Design
Proposed Estes Express Line Truck Terminal
East Terminus of E. Barbour St., City of Banning, California
A.P.N. 532-13-008

Reference: Preliminary Site Topo Map by AEI Consultants, dated July 5, 2018

Gentlemen:

Presented herewith are the Reports of Geotechnical Investigation and Soil Infiltration testing for WQMP-BMP design conducted for the site of the proposed Estes Express Line Truck Terminal to be constructed on a vacant parcel located at the east terminus of East Barbour Street, City of Banning, California. No grading and/or development plans are currently prepared and none such are available for our review. Accordingly, the findings and recommendations included should be considered "preliminary", subject to revision following detailed development plans review.

Based on the test explorations completed, it is our opinion that the site, in general, is underlain by upper dry, loose, compressible and variable consistency alluvial deposits of fine to coarse gravelly sands, overlying gravely riverbed type sand with rocks, cobbles, and small boulders. Moderate caving is experienced in between about 6 to 8 feet below grade. No shallow depth groundwater was encountered.

Based on review of the available published documents, it is our understanding that the site is not situated within an AP Special Studies Zone, and with groundwater at a depth in excess of 50 feet, the site is considered non-susceptible to soils liquefaction in event of a strong motion earthquake.

Compressible in nature, the near grade soils are considered unsuitable for directly supporting structural loadings without excessive differential settlements to load bearing foundations. When, however, graded as described herein, the structural pads constructed should be adequate for the development proposed.

The findings and opinions contained in this report are based on subsurface explorations and analyses made in accordance with the generally accepted engineering principles.

Should you have any questions regarding this report please call the undersigned at your convenience.

We offer no other warranty, express or implied.

Respectfully submitted,
Soils Southwest, Inc.

Moloy Gupta, RCE 31708



John Flippin
Project Coordinator

1.0 Introduction

This report presents the results of Geotechnical Investigation and Soil Infiltration testing for WQMP BMP design conducted for the site of the proposed truck terminal to be located at the east terminus of East Barbour Street, City of Banning, California. In absence of precise grading and development plans the recommendations included should be considered as "preliminary", and subject to revision following grading plan review.

The purpose of this evaluation is to determine the nature and engineering properties of the near grade and subsurface soils, and to provide geotechnical recommendations for foundation design, slab-on-grade, paving, parking, site grading, utility trench excavations and backfill, and inspections and geotechnical testing during construction.

The recommendations contained reflect our best estimate of the soils conditions as encountered during test explorations completed at the locations as described. It is not to be considered as a warranty of the soils for other areas, or for the dissimilar imported fills when used during grading.

The preliminary recommendations supplied should be considered valid and applicable for the soils as encountered, as well as when the following conditions are fulfilled:

i. Pre-grade meeting with contractor, public agency and soils engineer,
ii. Excavated bottom inspections and verifications by soils engineer prior to backfill placement,
iii. Continuous observations and testing during site preparation and structural fill soils placement,
iv. Observation and inspection of footing trenching prior to steel and concrete placement,
v. Plumbing trench backfill placement prior to concrete slab-on-grade placement,
vi. On and off-site utility trench backfill testing and verifications, and
vii. Review of the précised grading and construction details prepared by others.

1.1 Proposed Development

Based on review of the preliminary project descriptions supplied, it is understood that, among others, the subject development will include (i)107 door cross dock warehouse structure with attached 2-story office structure, along with detached maintenance building with diesel fuel dispensing island. Use of steel and/or concrete tilt-up frame with spread footings and concrete slab-on-grades are assumed for the project described. Installation of on-site WQMP-BMP infiltration basin, paving, parking and driveways are anticipated to complete the project. Moderate site preparations and grading should be expected with the development planned. For preliminary analyses, structural loadings of 50 kips and 5 klf are assumed for isolated spread and load bearing wall foundations, respectively.

1.2 Site Description

The rectangular shaped fenced parcel of about +/- 40.03 acres (+/-1,743.759 square feet)is bounded by Banning Airport to the north and west, by East Westward Avenue to the south, by Scott Street and vacant undeveloped land to the east, and by East Barbour Street and industrial property to the west. Overall vertical relief within the parcel is currently unknown; however, based on the available topo mapping, sheet flow from incidental rainfall appears to flow towards the southeast.

With the exception of various surface weeds, desert brush, widely scattered debris, and a natural drainage ravine running from East Barbour to the property's southeast corner, presence of no other significant features were noted.

2.0 Scope of Services

Being beyond scope of work, no Geologic and/or Environmental Site Assessment is included. Reports on such will be provided on request.

Geotechnical evaluations included subsurface explorations, soil sampling, necessary laboratory testing, engineering analyses and the preparation of this report. The scope of work included the following:

- **Field Explorations**

  Field investigations included six (6) geotechnical exploratory test trenches explored within the areas as delineated by the Austin Company engineering using a backhoe, along with two (2) 8'x8' x 5' deep test excavations for WQMP-BMP Infiltration testing. Approximate test excavation locations are shown on attached Plate A.

  During excavations, the soils encountered were continuously logged, bulk and undisturbed samples were procured, and in-situ soil density testing were made using a Nuclear Gauge (ASTM-D 2922). Collected samples were subsequently transferred to our laboratory for necessary testing. Description of the soils encountered is shown on the Log of Boring in Appendix A.

- **Laboratory Testing**

  Representative samples on selected bulk and undisturbed site soils were tested in our laboratory to aid in the soils classification and to evaluate relevant engineering properties pertaining to the project requirements. Laboratory testing included the following:

- In-situ moisture contents and dry density (ASTM Standard D2216),
- Maximum Dry Density-Optimum Moisture content (ASTM Standard D1557),
- Direct Shear (ASTM Standard D3080),
- Soil Consolidation (ASTM Standard D2435),
- Soil Sand Equivalent, SE (ASTM D2419), and
- Soil Grain size analysis (ASTM D422).

General descriptions of the test procedures and test results are provided in Appendix B.

- Based on the field investigation and laboratory testing, engineering analyses and evaluations were made on which to base our preliminary recommendations for design of foundations, slab-on-grade, paving and parking, site grading, utility trench backfill, site preparations and grading, and monitoring during construction.

- Preparation of this report for initial use by the project design professionals.

The recommendations supplied should be considered as 'tentative' and may require revision and/or upgrading following review of the final grading and development plans, when supplied.

3.0 Existing Site Conditions

3.1 Subsurface Conditions

In general, the site is underlain by upper dry, loose, compressible and variable consistency alluviums off silty, fine to coarse sands, overlying silty gravely riverbed type coarse sands with numerous cobbles, rocks and boulders. Moderate soil caving may be anticipated within depths varying from 6 to 8 feet below grade. No shallow depth groundwater was encountered.

The near surface low-density loose and highly compressible soils existing as described should be considered unsuitable for directly supporting structural loadings or imported structural fill soils placement without excessive differential settlements to load bearing footings and concrete slab-on-grade. When, however, graded in form of subexcavations of the upper dry loose and compressible local soils and their replacement as engineered fills as described herein, the structural pads thus constructed should be considered adequate for the development planned.

Laboratory shear tests conducted on the local undisturbed and on upper bulk soils remolded to 90% relative compaction indicate moderate shear strengths under increased moisture conditions. Results of the laboratory shear tests are provided in Plate B-1 of this report.

While soil consolidation tests conducted on the upper undisturbed soils indicate moderate potential for compressibility, results of the similar tests conducted on samples remolded to 90% indicate tolerable soil hydro-consolidation potential under anticipated structural loadings. Results of the laboratory determined soils consolidation potential is shown on Plate B-2 in Appendix B.

Silty and gravely in nature, the site soils are considered "very low" in expansion characteristic with an Expansion Index, EI, less than 20.

It is recommended that during and following mass grading completion, additional laboratory testing should be performed to verify the expansion potential for the soils in contact with concrete slab-on-grade and load bearing foundations.

3.2 Excavatability

It is our opinion that grading and excavations required for the project may be accomplished using conventional heavy-duty construction equipment. No blasting or jack-hammering is anticipated

3.3 Groundwater

No groundwater was encountered within the maximum exploratory depth of 12 feet below grade. Recorded historical groundwater table is at a depth in excess of 400 feet as described below.

It is our opinion that during construction, no special construction requirements including de-watering, etc should be expected. However, provisions should be considered for disposing of surface runoff away from structural pads once constructed.

Fluctuations in groundwater levels can occur due to seasonal variations in the amount of rainfall, runoff, altered natural drainage paths, and other factors not evident at the time of this investigation. The designer and contractor, however, should be aware of possibility of groundwater fluctuations while designing and during construction.

The following table describes the historical and the current groundwater levels as recorded in the nearest well as listed by the local reporting agency.

GROUNDWATER TABLE	
Reporting Agency	Water Master Support Services-San Bernardino Valley Conservation District/Western Municipal Water District Cooperative Well Measuring Program, Fall 2018
Well Number	01S/01E-14A001 – City of Banning-R-1(C7&MW2)
Well Monitoring Agency	San Gorgonio Water Agency
Well Location: Township/Range/Section	T3S-R1E-Section 14
Well Elevation:	n/a
Current Depth to Water (Measured in feet)	445
Current Date Water was Measured	November 2, 2016
Depth to Water (Measured in feet) (Shallowest)	371.3
Date Water was Measured (Shallowest)	October 28,1999

3.4 Subsurface Variations

It is our opinion that variations in subsoils continuity and depths of subsoil deposits may be expected. Due to the nature and depositional characteristics of the soils underlying, care should be exercised in interpolating or extrapolating of the subsurface conditions existing in between and beyond the test explorations completed as described. Although not encountered, based on prior historical use of the property, presence of underlying buried utilities may be expected.

3.5 Soil Corrosivity Analyses

Since during mass grading, local soil matrix are expected to change considerably, no soil chemical analysis is included at this time. It is recommended that following mass grading completion representative site soils should be laboratory tested to determine pH, sulfate, chloride and resistivity, in minimum. Results of such will be provided on request.

3.6 Faulting and Seismicity

3.6.1 Direct or Primary Seismic Hazards

Surface ground rupture along with active fault zones and ground shaking represent primary or direct seismic hazards to structures. Based on review of the CGS: Division of Mines and Geology Cabazon Quadrangle dated June 1, 1995, it is our understanding that the site is not situated within an AP Special Studies Zone where an earthquake fault passes through the site or its adjacent.

According to the current (2016) CBC, the site is considered within Seismic Zone 4. As a result, it is likely that moderate to severe ground shaking may be anticipated. during the life expectancy of the structures currently proposed.

3.6.2 Induced or Secondary Seismic Hazards

In addition to ground shaking, effects of seismic activities may include surface fault rupture, differential settlements, ground lurching and lateral spreading. Effects of such are discussed below.

3.6.2.1 Surface Fault Rupture

Potential for surface rupture resulting from nearby fault movement is not known for certainty; however, it is our opinion that such potential, if any, should be relatively "low" considering the proximity of the nearest South San Andreas Fault at about 3.34 miles away.

3.6.2.2 Flooding

Flooding hazards include tsunamis (seismic sea waves), seiches, and failure of manmade reservoirs, open storage tanks, aqueducts and others bodies of water. It is our opinion that the potential for these hazards is considered remote due to the inland site location and the distance to any nearby bodies of water.

3.6.2.3 Land-Sliding

Seismically induced landslides and other slope failures are common occurrences during or soon after and earthquake. With the near level existing and future structural pad(s) as planned, it is our opinion that the potential for seismically induced landslides may be considered as remote.

3.6.2.4 Lateral Spreading

Seismically induced lateral spreading involves lateral movement of soils due to ground shaking. Lateral spreading is demonstrated by near vertical cracks with predominantly horizontal movement of the soil mass involved. The topography of the subject site and the adjacent properties has a near-zero slope ratio. Accordingly, it is our opinion the potential for lateral spreading of the subject site is considered remote.

3.6.2.5 Liquefaction

Liquefaction is caused by build-up of excess hydrostatic pressure in saturated cohesion-less soils due to cyclic stress generated by ground shaking during an earthquake. The significant factors on which soil liquefaction potential depends include, among others, the soil type, soil relative density, intensity of earthquake, and duration of ground-shaking and depth of groundwater.

With the historical groundwater table at a depth in excess of 100 feet as per the Department of Conservation Special Publication 117, along with the presence of underlying medium dense to dense gravely sandy soils, it is our opinion that site soil liquefaction susceptibility potential during an earthquake, should be considered "remote".

3.6.2.6 Settlement and Subsidence

With an earthquake magnitude of M=8.0 and ground acceleration of 0.588g, it is our opinion that seismically induced ground settlements may be estimated to about ½- inch or less.

3.7 Seismic Design Parameters

The design spectrum was developed based on the 2016 CBC with site coordinates of 33.919490°N and -116.854047°W. Results of the seismic parameters are presented below.

3.8 Seismic Design Coefficients

Based on the 2008 USGS National Seismic Hazard Map soil parameter computer program, it is understood that the subject site is situated at about 3.34 miles from the South San Andreas Fault. For foundation and structural design, the following seismic parameters are suggested based on the current 2016 CBC.

Recommended values are based upon the ATCouncil.org Hazard Design Map Parameters and the California Geologic Survey: PSHA Ground Motion Interpolator Supplemental seismic parameters as provided in Appendix C of this report. The following presents the seismic design parameters evaluated based on available publications published by the California Geological Survey (CGS), the 2016 CBC, and the ASCE Standard 7-10.

The following presents the seismic design parameters as based on the available publications as currently published by the California Geological Survey and 2016 CBC.

TABLE 3.8A.1 Seismic Design Parameters

CBC Chapter 16	2016 ASCE 7-10 Standard Seismic Design Parameters	Recommended Values
1613A.5.2	Site Class	D
1613.5.1	The mapped spectral accelerations at short period	S_s
1613.5.1	The mapped spectral accelerations at 1.0-second period	S_1
1613A5.3(1)	Site Class D / Seismic Coefficient, S_s	1.500 g
1613A5.3(2)	Site Class D / Seismic Coefficient, S_1	0.600 g
1613A5.3(1)	Site Class D / Seismic Coefficient, F_a	1.000 g
1613A5.3(2)	Site Class D / Seismic Coefficient, F_v	1.500 g
16A-37 Equation	Spectral Response Accelerations, $S_{Ms} = F_a S_s$	1.500 g
16A-38 Equation	Spectral Response Accelerations, $S_{M1} = F_v S_1$	0.900 g
16A-39 Equation	Design Spectral Response Accelerations, $S_{Ds} = 2/3 \times S_{Ms}$	1.000 g
16A-40 Equation	Design Spectral Response Accelerations, $S_{D1} = 2/3 \times S_{Ms}$	0.600 g

TABLE 3.8A.2 Seismic Source Type

Based on California Geological Survey-Probabilistic Seismic Hazard Assessment Peak Horizontal Ground Acceleration (PHGA) having a 10 percent probability of exceedance in a 50 year period is described as below:

Seismic Source Type / Appendix C	
Nearest Maximum Fault Magnitude	M>\=8.0
Peak Horizontal Ground Acceleration (PHGA)	0.588g

In design, vertical acceleration may be assumed to about 1/3 to 2/3 of the estimated horizontal ground accelerations described.

It should be noted that lateral force requirement in design should be intended to resist total structural collapse due to the described PHGA of 0.565g or greater. However, during life time use of the structure built, it is our opinion that some structural damage may be anticipated requiring structural repairs. Use of flexible lifelines connections is suggested.

4.0 Evaluations and Recommendations

4.1 General Evaluations

Based on the field investigations, laboratory testing and subsequent engineering analysis completed at this time, it is our opinion that from geotechnical viewpoint, the site should be considered suitable for the proposed development, provided the recommendations presented are incorporated in final design and construction.

With the presence of the upper compressible dry, loose and old fill soils existing as described, it is our opinion that *no new structural fills or load bearing footings should be established bearing directly on the surface soils currently existing.* For adequate support, subgrade preparations should be considered, including subexcavations of the upper compressible soils, followed by their replacement as engineered fills compacted to minimum 95% relative compaction.

Site preparations and grading should be performed in accordance with the current CBC and as per the general grading guidelines of the local building officials, and as provided Section 5 of this report.

4.1.1 Preparations for Structural Pads

In absence of precise pad grade elevations, vertical extents of grading (cut, fill or cut/fill transition) for proposed structures and planned grades for truck parking etc., are currently unknown. Accordingly, the recommendations included should be considered "preliminary", subject to revision following grading plan review.

Based on field explorations and laboratory testing completed at this time, it is our opinion that, in general, the project site primarily consists of near surface minimum 3 to 5 feet of low-density compressible soils considered inadequate for directly supporting structural loadings without excessive differential settlements to footings and concrete slab-on-grade. For adequate structural support, it is suggested that individual structural pad preparations should include subexcavations of the near surface loose and compressible soils to either:

(i) 5 feet below the present grade surface, or
(ii) to the depth of the underlying moist and dense natural soils as approved by soils engineer, or
(iii) to the depth as required to maintain a 24-inch thick compacted fill mat blanket below foundation bottoms, whichever is greater.

Actual subexcavation depth, however, should be determined by soils engineer during grading.

Following subexcavations, site preparations should also include 6-inch cross-ripping or scarification, moisture conditioning to near Optimum moisture content, and recompaction prior to the excavated soils replacement in 6 to 8-inch thick vertical lifts compacted to minimum 95 percent.

In general, the site preparations and grading described should encompass the individual structural pad areas, and beyond. Foot-print areas described should be defined as the areas extending from the outer edge of the planned structure, plus, either to:

(i) a distance of 5 feet, or
(ii) to the nearest property line, or
(iii) to the nearest constraint, such as existing foundations, or
(iv) as determined by soils engineer during grading.

The sub-excavation depths described should be considered as "preliminary". Localized additional sub-excavations may be warranted within areas underlain by undocumented old fills, buried debris, buried utilities and abandoned sewer and/or buried septic systems and others. Actual subexcavation depth should be determined by soils engineer during grading.

It is recommended that the excavated subgrades should be verified and approved by soils engineer prior to structural fill soil placement. Revised and supplemental recommendations may be warranted following precise grading/development plan review.

It is currently unknown if imported fills soils will be required for the structures panned. Imported fill soils, if required, should be free of debris, roots, organic and clay, similar to the local soils, or as described below.

4.1.2 Structural Fill Soils Requirements

The on-site soils free of organic, debris and rocks larger than 8-inch in diameter, should be considered suitable for re-use as structural backfills. Imported fills, if required, should have the following geotechnical characteristics:

Expansion Index, EI	Less than 50 (Low Expansive)
Plasticity Index, PI	Less than 15
Percent Passing 200 sieve	Less than 20
Maximum Rock Size	8-inch

Prior to importation of new fills, if any, it is suggested that representative imported soils should be verified and approved by soils engineer.

4.2 Spread Foundations

The structures planned may be supported by continuous wall and/or isolated spread footings founded exclusively into engineered fills of local sandy soils or similar imported fills compacted to minimum 90%. Use of footings straddling over cut/fill transition, shall be avoided.

Since finish pad grade elevations are currently unknown, for adequate structural bearing, the following general grading recommendations are supplied:

(a) For the pads proposed following cuts (if any), it is recommended that following such cuts, the cut surface should be further subexcavated to a minimum vertical depth equal to the planned footing embedment plus 24-inch. The site grading should also include local excavated soils replacement as engineered fills compacted to 95%, or better.

(b) Within low-lying areas requiring new fill soils placement over the current grade surface, following removal of near surface loose and compressible soils to full depth as required to expose the underlying moist dense subgrades, site grading should include further scarification, moisturization and recompaction, followed by approved soils placement for structural support compacted to 95%. For adequate support, compacted fill mat thickness below foundation bottoms should be at least 24-inch.

(c) Within areas of cut/fill transition pads, if any, it is recommended that within areas requiring cuts, the cut portions of the pad should be further subexcavated and replaced with engineered fills, the overall depth of below foundation bottoms should be at least 24-nch. Within areas requiring fill soils to proposed finished grade, depth of engineered fills below foundation bottoms should similarly be 24-inch thick compacted to minimum 95% as described.

With the slightly silty gravely sandy nature of the local soils, it is recommended that excavated footing trenches should be sufficiently "moistened" immediately prior to reinforcing steel and concrete placement.

For design, allowable vertical soil bearing capacity may be estimated from the following equations:

Continuous Footing: $q_{allowable} = 3000 + 1500d + 400b$
Isolated Square: $q_{allowable} = 3500 + 1500d + 300b$, where

$q_{allowable}$ = allowable soil vertical bearing capacity, in psf.
d= footing depth, ft.

(Note: the bearing capacities described are based on footing depth d =18 inch, and Minimum footing width b=15 inch).

For the structures planned, footings should be sized to minimum 15-inch wide, embedded to minimum 24-inch below the lowest adjacent final grade surface, or as designed by the structural engineer based upon seismic design parameters and horizontal peak ground acceleration (PGA) as described earlier in this report. The above soil bearing capacities may be increased by about 300 psf for each additional footing depth in excess of the minimum recommended.

Total maximum vertical bearing capacity is recommended not to exceed 4000 psf and 5000 psf for continuous wall and isolated footings, respectively. If normal code requirements are applied, the above capacities may further be increased by an additional 1/3 for short duration of loading, which includes the effects of wind and seismic forces.

From geotechnical viewpoint, footing reinforcements consisting of 2-#4 rebar placed near the top and 2-#4 rebar near bottom of continuous footings are recommended. Additional reinforcements if specified by project structural engineer should be incorporated during construction.

Based on the laboratory determined soils consolidation characteristics, settlements to properly designed and constructed foundations supported exclusively into engineered fills of site soils or its equivalent or better and carrying the maximum anticipated structural loadings, are expected to be within tolerable limits. Over a 40-ft. span, estimated total and differential settlements are about 1 and 1/2-inch, respectively. When gravelly sandy soils are used, most of the elastic deformations, however, should be expected to occur during construction.

It is recommended that excavated footing trenches should be verified, tested and certified by soils engineer prior to actual concrete placement. Soils Southwest, Inc. will assume no responsibility for any structural distress in event excavated footings is poured without verifications as suggested.

4.3 Concrete Slab-on-Grade

No concrete slabs, sidewalks and flatworks should be placed bearing directly on the surface soils currently existing. The subgrades prepared to receive footings load bearing foundations should be adequate for concrete slab-on-grade placement. For (office/industrial/heavy construction equipment traffic areas), use of 5-inch thick (net) concrete slabs are recommended reinforced with #3 rebar at 18-inch o/c. Actual slab thickness and reinforcing requirements, however, should be designed by project structural engineer based upon structural loadings, during construction loadings, along with the seismic design parameters and horizontal peak ground acceleration (PGA) as provided in this report. Construction joints within concrete slabs should be spaced at about 24 to 30 times the slab thickness, with maximum spacing not exceeding 15 feet.

Within moisture sensitive areas (office etc.) concrete slabs should be underlain by 2-inch of compacted clean sand, followed by 10-mil thick vapor barrier such as commercially available StegoWrap or its similar.

The gravelly sands used should have a Sand Equivalent, SE, of 30 or greater

Subgrades to receive concrete should be adequately "'dampened" (not flooded) as would be expected in any such concrete placement. Use of "low-slump" concrete is recommended. In addition, it is recommended that utility trenches underlying concrete slabs should be thoroughly backfilled with gravelly sandy soils, mechanically compacted to the minimum percent compaction as recommended. Water jetting should not be allowed in lieu of mechanical compaction unless suggested by the project geotechnical engineer.

4.3.1 Concrete Curing and Crack Control

The recommendations presented in this report are intended to reduce the potential for cracking of concrete slabs-on-grade.

Occurrence of concrete cracking may also be reduced and/or controlled by limiting the slump of the concrete used, proper concrete placement and curing, and by placement of crack control joints at reasonable intervals, in particular, where re-entrant slab corners occur.

For standard crack control, it is suggested that construction/expansion joints should be considered at spacing not exceeding 24 to 36 time the slab thickness. Shorter distance between joint spacing would provide greater crack control. Joints at curves and angle points are suggested, as recommended by structural engineer.

It is recommended to minimize potential for "warping" no excess water should be allowed on graded surface immediately prior to concrete placemen.

4.4 Resistance to Lateral Loads

Resistance to lateral loads can be restrained by friction acting at the base of foundation and by passive earth pressure. A coefficient of friction of 0.40 may be assumed with normal dead load forces for footing established on compacted fill.

An allowable passive lateral earth resistance of 300 pounds per square foot per foot of depth may be assumed for the sides of foundations poured against compacted fills. The maximum lateral passive earth pressure is recommended not to exceed 2000 pounds per square foot.

For design, lateral pressures from local soils or its similar or better imported fills used as level backfill may be estimated from the following equivalent fluid density:

Active:	35 pcf
At Rest:	60 pcf

4.5 Shrinkage and Subsidence

It is our opinion that the local or similar imported fills when used in grading may be subjected to a volume change. Assuming a 95% relative compaction for graded fills, and assuming an overexcavation and re-compaction depth of about 5 feet as described, such volume change for the current grades due to shrinkage may be on the order of 15-20 percent. For estimation purpose, site subsoils subsidence may be approximated to about 3-3.5-inch when conventional construction equipments are used.

4.6 Construction Consideration

4.6.1 Unsupported Excavation

Temporary construction excavation up to a depth of 4 feet may be made without any lateral support. It is recommended that no surcharge loads such as construction equipments, be allowed within a line drawn upward at 45 degree from the toe of temporary excavations. Use of sloping for deep excavation may be considered where plan excavation dimensions are not constrained by any existing structure.

4.6.2 Supported Excavations

AS per CalOsha, use of shoring is recommended for vertical cuts in excess of 4 feet.

4.7 Soil Caving

Considering the sandy gravelly site soils with rocks, minor caving may be expected during deep excavations. Temporary excavations in excess of 4 feet should be made at a slope ratio of 2 to 1 (h:v) or flatter, or as per the construction guidelines as provided by Cal-Osha.

4.8 Structural Pavement Thickness

Flexible Asphalt Paving: Based on estimated Traffic Index (TI), laboratory determined soil Sand Equivalent and on soil the R-value of 70 for the local soils existing as encountered, for preliminary estimation purposes, the following flexible pavement sections may be considered.

Service Area	Traffic Index, TI	Pavement Type	Paving Thickness (inch)
On-Site paving/parking for commercial/industrial vehicular traffic, including fire engine and garbage truck etc.	7.0	ac over Cl. II base	4.0 ac over 6.0 CL.II base

Within paving areas subgrade soils should be scarified/cross-ripped to minimum 18-inch, moisture conditioned to 3% to 5% percent over optimum, and recompacted to at least 95% to soil's Maximum Dry Density as determined by the method ASTM D1557. The asphalt and base materials used should be similarly compacted to minimum 95%, or as recommended by the project structural engineer.

The pavement evaluations are based on estimated Traffic Index (TI) as shown, and on soil R-value as described. It is recommended that following mass grading completion, representative site soils should be further laboratory tested to determined actual soil R-value, based on which and on the TI as provided by the local public agency, paving thickness should be determined for actual implementation on site.

Concrete Paving/Driveways, if considered, should be at least 6-inch thick, reinforced with #4 rebar at 18" o/c, placed, directly over the local sandy gravelly soils compacted to minimum 95%.

Actual paving thickness, however, should be supplied by the project structural engineer based on soil Subgrade Reaction, k_s, of 300 pcf.

Driveway slab reinforcing and construction and expansion joints etc. should be incorporated as recommended by the project structural engineer.

4.9 Site Preparations

The site preparation should include subexcavations of the upper compressible, loose and disturbed soils, stock-piling, moisturization and/or aeration to 3% to 5% over optimum moisture content. Site preparation should also include re-placement of the excavated soils and other approved imported soils in 6-8 inch thick lifts compacted to 95 percent or better. Such earth work should be in accordance with the applicable grading recommendations provided in the current CBC and as recommended in Section 5.0 of this report.

4.10 Retaining Wall (if any)

Although type of wall proposed is currently unknown, for conventional concrete retaining structure, if planned, the following equivalent fluid density may be considered for preliminary design purpose, provided the imported fills are considered similar to the local soils or its equivalent or better.

Slope Surface of Retained Material (horz. to vert.)	Equivalent Fluid Density (pcf) Imported Clean Sand	Local Site Soil
Level	30	40
2:1	35	60

For design, retaining wall foundation bearing capacity may be estimated from the bearing capacity equations as described earlier.

The recommended lateral pressures do not include any surface load surcharge. Use of heavy equipment near retaining wall may develop lateral pressure in excess of the parameters described above. Walls adjacent to traffic should be designed to resist a uniform lateral pressure of 100 pounds per square foot, which is a result of an assumed 300 pounds per square foot surcharge behind the walls due to normal traffic. If the traffic is kept back ten feet from the wall, the traffic surcharge may be neglected.

Installation of 'french-drain' behind retaining walls is recommended to minimize water pressure build-up. Use of impervious material is preferred within upper 18 inches of the backfill placed.

Backfill behind retaining wall should be compacted to a minimum 90 percent relative laboratory Maximum Dry Density as determined by the ASTM D1557 test method. Flooding and/or jetting behind wall should not be permitted. Local sandy soils or its equivalent or better imported fills may be considered as backfill. Adjacent to existing creek, retaining wall foundations should be deepened so as to maintain a minimum 10 feet lateral setback measuring horizontally in between the outer face of the footings to the creek embankment slope surface.

4.11 Utility Trench Backfill

Utility trench backfill within the structural pads, and beyond should be placed in accordance with the following recommendations:

- Trench backfill should be placed in thin lifts compacted to 90 percent or better of the laboratory maximum dry density for the soils used. As an alternative; clean granular sand may be used having a SE value greater than 30. Jetting is not recommended within utility trench backfill.

- Exterior trenches along a foundation or a toe of a slope and extending below a 1:1 imaginary line projected from the outside bottom edge of the footing or toe of the slope should be compacted to 90 percent of the Maximum Dry Density for the soils used during backfill. All trench excavations should conform to the requirements and safety as specified by the Cal-Osha

4.12 Pre-Construction Meeting

It is recommended that no grading operation should be commenced without the presence of a representative of this office. An on-site pre-grading meeting should be arranged in between soils engineer, grading contractor, project civil engineer, local governing agencies and others prior to any construction.

4.13 Seasonal Limitations

No fill shall be placed, spread or rolled during unfavorable weather conditions. Where the work is interrupted by heavy rains, fill operations shall not be resumed until moisture conditions are considered favorable by the soils engineer.

4.14 Planters

To minimize potential differential settlement to foundations, planters requiring heavy irrigation should be restricted from using adjacent to footings. In event such becomes unavoidable, planter boxes with sealed bottoms, should be considered.

4.15 Landscape Maintenance

Only the amount of irrigation necessary to sustain plant life should be provided. Pad drainage should be directed towards streets and to other approved areas away from foundations. Slope areas should be planted with draught resistant vegetation. Over watering landscape areas could adversely affect the proposed site development during its life-time use.

4.16 Observations and Testing During Construction

Recommendations provided are based on the assumption that structural footings and slab-on-grade be established exclusively into compacted fills. Excavated footings should be inspected, verified and certified by soils engineer prior to steel and concrete placement to ensure their sufficient embedment and proper bearing as recommended. Structural backfills discussed should be placed under direct observations and testing by this facility.

Excess soils generated from footing excavations should be removed from pad areas and such should not be allowed on subgrades prepared to receive concrete slab-on-grade.

4.17 Plan Review

In absence of site-specific detailed development plan and the soils types that will be imported for backfills, the recommendations supplied should be considered as "preliminary". It is recommended that grading and development plans should be reviewed when prepared in order verify adequacy of the geotechnical recommendations supplied. Supplemental recommendations may be warranted following grading plan review.

5.0 Design Recommendations for WQMP-BMP Storm Water Infiltration based on Soils infiltration testing using Double-Ring Infiltrometer

Presented herewith are the results of soils percolation testing performed for the proposed WQMP-BMP storm water disposal system design based on two (2) soil infiltration testing conducted within the front parking areas, P-1 and P-2, as shown on the attached Plate A.

The in-situ soil infiltration rate is established by testing near surface using the standardized and well-documented Double-Ring Infiltrometer testing in general conformance to the ASTM Standard D3385.

The near surface soils encountered primarily consist of fine to medium coarse slightly silty sands with rocks, cobbles, and scattered small boulders overlying gravely medium coarse to coarse sugar-like riverbed type sand with silty fine lenses as observed with accompanying soil sample trenches as described earlier in this report. No shallow depth groundwater was encountered. Descriptions of the soils encountered are provided in the attached Log of Test Pit P-1 and P-2..

Based on the field infiltration testing completed, it is our opinion that the observed average soils infiltration rate is 17.55 in/hr. For design, it is suggested that, use of an appropriate factor of safety should considered to the observed rate as selected by design engineer to account for long-term saturation, inconsistencies in subsoil conditions, potential for silting and lack of maintenance.

5.1 Excavated Test Pits (P-1 and P-2)

For soil infiltration testing using percolation testing using Double-Ring Infiltrometer two (2) test- excavations were made measuring about 8'x8' to about maximum 5 feet below grade. Water used during percolation testing was supplied by a portable water tank.

Supplemental equipment used are as follows:

- Double Ring Infiltrometer with inner and outer rings of 12 inch and 24 inch (2 to 1 ratio) diameter, respectively
- Shovel (flat head)
- Level
- Mallet-like small sledge hammer
- 2" x 4" timber (for protecting plate while hammering in rings)
- Plastic measuring rulers (30 cm/12-inc) with millimeter and centimeter scale ruler
- Watch
- Rubber plash guards

5.2 Methodology and Test Procedures

Soil infiltration test was performed using two described concentric rings established at the bottom of test excavation pit excavated as described. During testing, the 12-inch diameter inner ring was centered inside the 24-inch diameter outer-ring. Prior to actual testing, the outer ring was driven into local soils to about 10 centimeters, followed by the inner ring to about ½ of the outer ring penetration depth stated. Both the rings were pushed into soil using a sledge hammer and driving plate with a 2" x 4" timber for protecting the driving plate.

A soil berm, using local soils was formed and compacted around the outer annular ring. Water was used to fill the annular-space to about 4-inch, followed by the inner-ring to the same level described. Testing time intervals were based on observation of the existing dense fine silty calcium cemented sandy soils as encountered.

5.3 Infiltration Test Results

Based on the soils infiltration testing completed, for WQMP-BMP design the following infiltration rates may be considered. Actual field test data are attached.

Observed Infiltration Rate for Design

Test Date Test No. (5-30-19)	Test Depth (ft.) Below Grade	Observed Rate (inch/hour.) (Inner Ring)
P-1	5.0	21.06
P-2	5.0	14.04

For design, based on the testing completed for the test locations described the observed average infiltration rate is 17.55 inch/hour.

For design, it is suggested that, use of an appropriate factor of safety should considered to the observed average rate due to the potentials for future accumulation of silts, fines, oil, grease and others. Regular maintenance of the basin surfaces in form of removal of debris, oil and fines are strongly recommended. A maintenance record of such is suggested for future use, if any.

Suggested Site Requirements for Stormwater BMP installation

The invert of stormwater infiltration shall be at least 10 feet above the groundwater elevation. Stormwater infiltration BMPs shall not be placed on steep slopes and shall not create the condition or potential for slopes instability.

Stormwater infiltration shall not increase the potential for static or seismic settlement of structures on or adjacent to the site. Potential geotechnical hazards that shall be addressed including potentials for collapsible and liquefaction, if any.

Stormwater infiltration shall not place an increased surcharge on structures or foundations on or its adjacents. The pore-water pressure shall not be increased on soil retaining structures on or adjacent to the site.

The invert of stormwater infiltration shall be set back at least 15 feet, and outside a 1:1 plan drawn up from the bottom of adjacent foundations.

Stormwater infiltration shall not be located near utility lines where the introduction of stormwater could cause damage to utilities or settlement of trench backfill. Stormwater infiltration is not allowed within 100 feet of any potable groundwater production well.

6.0 Earth Work/General Grading Recommendations

Site preparations and grading should involve overexcavation and replacement of local soils as structural fill compacted to the percent compaction as described in the report.

Structural Backfill:

During grading, excavated site soils or its equivalent or better imported fills, should be considered suitable for reuse as backfill material. Loose soils, formwork and debris should be removed prior to backfilling the walls. On-site sand backfill should be placed and compacted in accordance with the recommended specifications provided below. Where space limitations do not allow conventional backfilling operations, special backfill materials and procedures may be required. Pea gravel or other select backfill can be used in limited space areas. Recommendations for placement and densification of pea gravel or other special backfill can be provided during construction.

Site Drainage:

Adequate positive drainage should be provided away from the structure to prevent water from ponding and to reduce percolation of water into backfill. A desirable slope for surface drainage is 2 percent in landscape areas and 1 percent in paved areas. Planters and landscaped areas adjacent to building perimeter should be designed to minimize water filtration into subsoils. Considerations should be given to the use of closed planter bottoms, concrete slabs and perimeter subdrains where applicable.

Utility Trenches:

Buried utility conduits should be bedded and backfilled around the conduit in accordance with the project specifications. Where conduit underlies concrete slab-on-grade and pavement, the remaining trench backfill above the pipe should be placed and compacted in accordance with the following grading specifications.

General Grading Recommendations:

Recommended general specifications for surface preparation to receive fill and compaction for structural and utility trench backfill and others are presented below.

1. Areas to be graded, backfilled or paved, shall be grubbed, stripped and cleaned of all buried and undetected debris, structures, concrete, vegetation and other deleterious materials prior to grading.

2. Where compacted fill is to provide vertical support for foundations, all loose, soft and other incompetent soils should be removed to full depth as approved by soils engineer, or at least up to the depth as previously described in this report. The areas of such removal should extend at least 5 feet beyond the perimeter of exterior foundation limit or to the extent as approved by soils engineer during grading.

3. The recommended compaction for fill to support foundations and slab-on-grade is 90% of soil's Maximum Dry Density at or near Optimum Moisture Content. To minimize potential differential settlements to foundations and slabs straddling over cut and fill transition, cut portions following cut, should be further over excavated and such be replaced as engineered fill compacted to at least 90% of the soil's Maximum Dry Density as described in this report.

4. Utility trenches within building pad areas and beyond should be backfilled with granular material and such should be compacted to at least 90% of the maximum density for the material used.

5. Compaction for all structural fills shall be determined relative to the maximum dry density as determined by ASTM D1557-91 compaction methods. All in-situ field density of compacted fill shall be determined by the ASTM D1556-82 standard methods or by other approved procedures.

6. All new imported soils if required shall be clean granular, non-expansive material or as approved by the soils engineer.

7. During grading, fill soils shall be placed as thin layers, thickness of which following compaction shall not exceed six inches.

8. No rocks over six inches in diameter shall be permitted to use as a grading material without prior approval of the soils engineer.

9. No jetting and/or water tampering be considered for backfill compaction for utility trenches without prior approval of the soils engineer. For such backfill, hand tampering with fill layers of 8 to 12 inches in thickness or as approved by the soils engineer is recommended.

10. Any and all utility trenches at depth as well as cesspool and abandoned septic tank within building pad area and beyond, should either be completely excavated and removed from the site, or should be backfilled with gravel, slurry or by other material, as approved by soils engineer.

11. Any and all import soils if required during grading should be equivalent to the site soils or better. Such should be approved by the soils engineer prior to their use.

12. Any and all grading required for pavement, side-walk or other facilities to be used by general public, should be constructed under direct observation of soils engineer or as required by the local public agencies.

13. A site meeting should be held between grading contractor and soils engineer prior to actual construction. Two days of prior notice will be required for such meeting.

7.0 Closure

The conclusions and recommendations presented are based on the findings and observations made at the time of subsurface test explorations. The recommendations should be considered 'preliminary' since they are based on soil samples only.

If during construction, the subsoils exposed appear to be different from those as used during this evaluation, this office should be notified to consider any possible need for modifications to the design parameters described.

Recommendations provided are based on the assumptions that structural footings will be established exclusively into compacted fills of the local soils or its equivalent or better. No footings and/or slabs should be allowed straddling over cut/fill transition interface.

Final grading and foundation plans should be reviewed by this office when they become available. Site grading must be performed under inspection by geotechnical representative of this office. Footing excavations should be inspected prior to steel and concrete placement to ensure that foundations are founded into satisfactory soils and excavations are free of loose and disturbed materials.

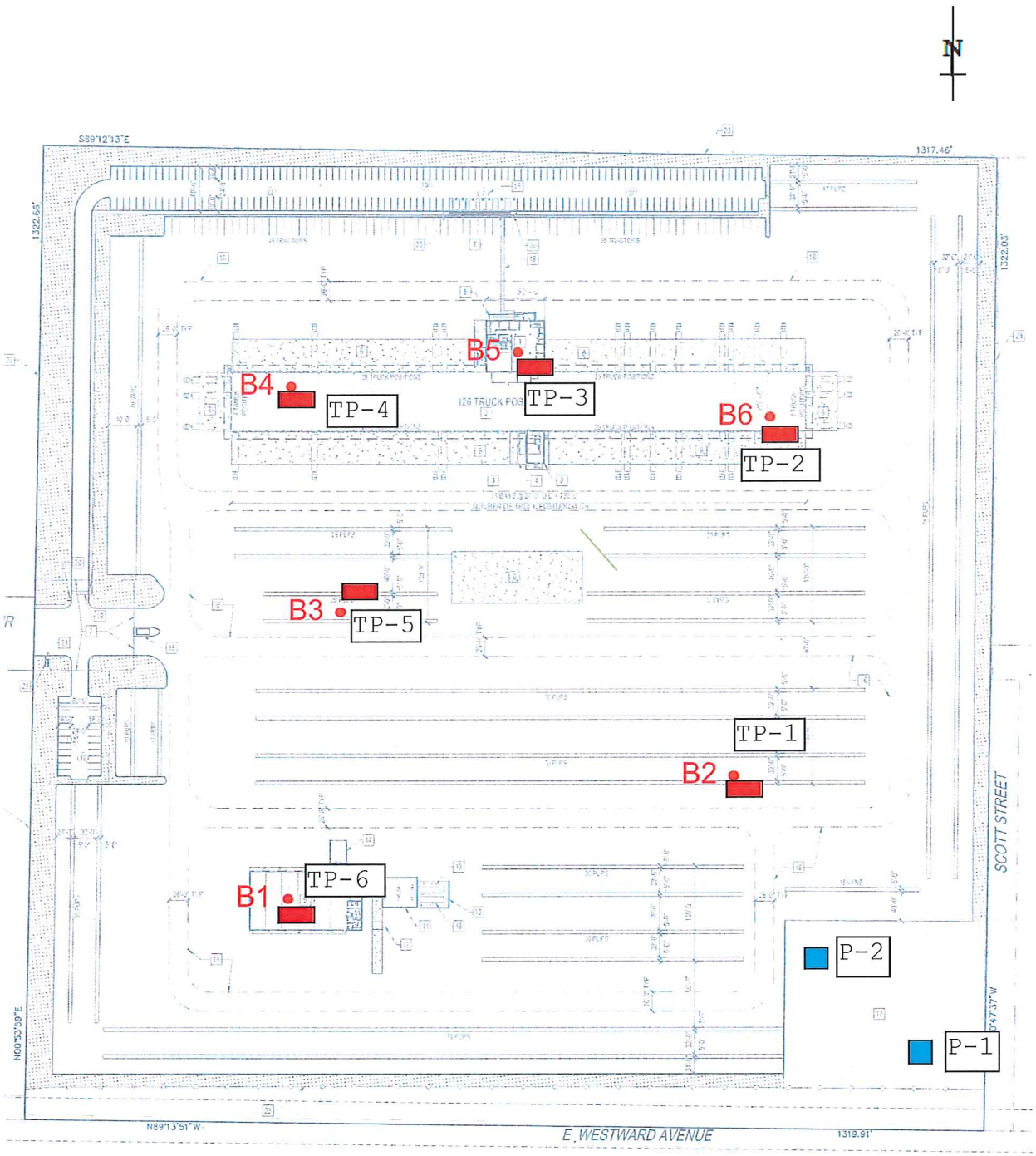
A pregrading meeting between grading contractor and soils engineer is recommended prior to construction preferably at the site, to discuss the grading procedures to be implemented and other requirements described in this report to be fulfilled.

This report has been prepared exclusively for the use of the addressee for the project referenced in the context. It shall not be transferred or be used by other parties without a written consent by Soils Southwest, Inc. We cannot be responsible for use of this report by others without inspection and testing of grading operations by our personnel.

Should the project be delayed beyond one year after the date of this report; the recommendations presented shall be reviewed to consider any possible change in site conditions.

The recommendations presented are based on the assumption that the necessary geotechnical observations and testing during construction will be performed by a representative of this office. The field observations are considered a continuation of the geotechnical investigation performed. If another firm is retained for geotechnical observations and testing during construction, our professional liability and responsibility shall be limited to the extent that Soils Southwest, Inc. would not be the geotechnical engineer of record. In addition, a Letter of Transfer of Responsibility will be required indemnifying Soils Southwest, Inc. from any liability for structural distress that may arise during lifetime use of the development planned.

PLOT PLAN AND TEST LOCATIONS
(Not to Scale)



Legend: TP-1 Approximate Test Pit Locations of Geotechnical Evaluations

P-1 Approximate Location of BMP Infiltration Test Boring

Plate 1

8.0 APPENDIX A

Field Explorations

Field evaluations included site reconnaissance and seventeen (6) soil exploratory test trenches and two (2) WQMP-BMP infiltration test pits using a backhoe. During site reconnaissance, the surface conditions were noted and test exploration locations were determined.

Soils encountered during explorations were logged and such were classified by visual observations in accordance with the generally accepted classification system. The field descriptions were modified, where appropriate, to reflect laboratory test results. Approximate test locations are shown on Plate 1.

Relatively undisturbed soils were tested using a portable nuclear gauge to determine relative in-situ moisture and compaction. In addition to undisturbed testing, bulk soil samples were procured and taken to the laboratory for further analyses.

Logs of test explorations are presented in the following summary sheets that include the description of the soils and/or fill materials encountered.

LOG OF TEST EXPLORATIONS

Soils Southwest, Inc.
897 Via Lata, Suite N
Colton, CA 92324
(909) 370-0474 Fax (909) 370-3156

LOG OF TEST PIT TP-1

Project: Estes Express Lines/Bremco Construction		**Job No.:** 19010-F/BMP
Logged By: John F.	**Boring Diam.:** bucket	**Date:** May 30,2019

Sample Type	Water Content in %	Dry Density in PCF	Percent Compaction	Unified Classification System	Graphic	Depth in Feet	Description and Remarks
				SP			weeds, gravels
							SAND - brown, traces of silt, fine to medium coarse, pebble, rock frag, occasional rock 1"-2", damp
							- color change to light gray-brown, fine to medium coarse, rocks, cobbles, dry
						5	
				GP-SP			- riverbed type sand, gravely, coarse, rocks cobbles
							- caving
				SP-SM			- color change to gray, gravely, very coarse riverbed type sand, rocks, cobbles, occasional small boulders, dry, loose
						10	
							- color change to light brown, slightly silty, gravely, fine to medium coarse
							- Refusal @ 9.5 ft. due to large cobbles and boulders
						15	- no bedrock
							- no groundwater
						20	
						25	
						30	

Groundwater: n/a **Approx. Depth of Bedrock:** n/a **Datum:** n/a **Elevation:** +/-2153	**Site Location** Proposed Industrial Building and Parking East Terminus of E. Barbour St. Banning, California	**Plate #**

Bulk/Grab sample

Soils Southwest, Inc.
897 Via Lata, Suite N
Colton, CA 92324
(909) 370-0474 Fax (909) 370-3156

LOG OF TEST PIT TP-2

Project: Estes Express Lines/Bremco Construction		**Job No.:** 19010-F/BMP
Logged By: John F.	**Boring Diam.:** bucket	**Date:** May 30,2019

Sample Type	Water Content in %	Dry Density in PCF	Percent Compaction	Unified Classification System	Graphic	Depth in Feet	Description and Remarks
				SP-SM			weeds, rocks, and cobbles
							SAND - brown, slightly silty, fine to medium coarse, rocks, cobbles, occasional boulder, damp
				GP-SP			
■	5.0	119.7	98.9			5	- color change to light gray-brown, gravely, medium to medium coarse - riverbed type sands
				SP-SM			- caving, color change to light brown, slightly silty, fine to medium coarse, with rock, cobbles, occasional boulders, dry to damp
						10	
				GP-SP			- color change to brown to yellowish light brown, gravely, medium to medium coarse, rock, cobbles - color change to gray, gravely, medium coarse to coarse, rocks, cobbles, scattered boulders
						15	- color change to light brown to light gray-brown, gravely, medium coarse, rock fragments, rock, occasional cobbles
							- End of test trench @ 13 ft. - no bedrock - no groundwater
						20	
						25	
						30	

Groundwater: n/a **Approx. Depth of Bedrock:** n/a **Datum:** n/a **Elevation:** +/-2160	**Site Location** Proposed Industrial Building and Parking East Terminus of E. Barbour St. Banning, California	**Plate #**

■ California sampler

Soils Southwest, Inc.
897 Via Lata, Suite N
Colton, CA 92324
(909) 370-0474 Fax (909) 370-3156

LOG OF TEST PIT TP-3

Project: Estes Express Lines/Bremco Construction		**Job No.:** 19010-F/BMP
Logged By: John F.	**Boring Diam.:** bucket	**Date:** May 30,2019

Sample Type	Water Content in %	Dry Density in PCF	Percent Compaction	Unified Classification System	Graphic	Depth in Feet	Description and Remarks
				SP			weeds, rocks, cobbles
							SAND - brown, traces of silts, fine to medium, rocks, cobbles, occasional small boulders, damp, loose
■	2.1	112.6	93.0	GP-SP			- color change to light yellowish gray-brown traces of silt, fine to medium, rocks, cobbles
						5	- gravely, riverbed type sand, medium coarse dry
							- medium coarse to coarse, rocks, cobbles, boulders, looose, dry
						10	- color change to gray, gravely coarse with lense of light brown silt fine and moist sand
							- End of test trench @ 10.0 ft.
							- no bedrock
							- no groundwater
						15	
						20	
						25	
						30	

Groundwater: n/a **Approx. Depth of Bedrock:** n/a **Datum:** n/a **Elevation:** +/-2165	**Site Location** Proposed Industrial Building and Parking East Terminus of E. Barbour St. Banning, California	**Plate #**

■ California sampler

Soils Southwest, Inc.
897 Via Lata, Suite N
Colton, CA 92324
(909) 370-0474 Fax (909) 370-3156

LOG OF TEST PIT TP-4

Project: Estes Express Lines/Bremco Construction		**Job No.:**	19010-F/BMP
Logged By: John F.	**Boring Diam.:** bucket	**Date:**	May 30,2019

Sample Type	Water Content in %	Dry Density in PCF	Percent Compaction	Unified Classification System	Graphic	Depth in Feet	Description and Remarks
				SP-SM			weeds, rocks, cobbles, boulders
							SAND - brown, slightly silty, fine to medium coarse, rocks, cobbles, boulders, damp to moist
						5	
■	5.3	113.1	93.0	GP-SP			- color change to gray-brown, gravely, medium to medium coarse
				SP			- color change to light brown, traces of silt, fine to medium coarse, damp, rocks cobbles, occasional boulders
				SP-SM			- caving, slightly silty, fine to medium coarse
				GP-SP		10	- color change to gray, gravely, medium coarse to coarse, rock fragments, rocks, cobbles, occasional boulders, dry to damp
							- End of test trench @ 9.0 ft.
							- no bedrock
						15	- no groundwater
						20	
						25	
						30	

Groundwater: n/a Approx. Depth of Bedrock: n/a Datum: n/a Elevation: +/-2173	**Site Location** Proposed Industrial Building and Parking East Terminus of E. Barbour St. Banning, California	**Plate #**

■ California sampler

Soils Southwest, Inc.
897 Via Lata, Suite N
Colton, CA 92324
(909) 370-0474 Fax (909) 370-3156

LOG OF TEST PIT TP-5

Project: Estes Express Lines/Bremco Construction		**Job No.:** 19010-F/BMP
Logged By: John F.	**Boring Diam.:** bucket	**Date:** May 30,2019

Sample Type	Water Content in %	Dry Density in PCF	Percent Compaction	Unified Classification System	Graphic	Depth in Feet	Description and Remarks
				SP			weeds, rocks, cobbles
							SAND - brown to gray-brown, traces of silt, fine to medium coarse with rocks, cobbles, scattered small boulders, damp
							- scattered root
				GP-SP		5	- color change to light grayish brown, gravely, riverbed type sand, medium to coarse, rocks, cobbles, dry to damp
							- color change to light yellowish brown, gravely, medium coarse to coarse, rocks, cobbles
						10	- gravely, medium coarse, damp
							- End of test trench @ 9.0 ft.
							- no bedrock
							- no groundwater
						15	
						20	
						25	
						30	

Groundwater: n/a Approx. Depth of Bedrock: n/a Datum: n/a Elevation: +/-2170	**Site Location** Proposed Industrial Building and Parking East Terminus of E. Barbour St. Banning, California	**Plate #**

Bulk/Grab sample California sampler

Soils Southwest, Inc.
897 Via Lata, Suite N
Colton, CA 92324
(909) 370-0474 Fax (909) 370-3156

LOG OF TEST PIT TP-6

Project: Estes Express Lines/Bremco Construction		**Job No.:** 19010-F/BMP
Logged By: John F.	**Boring Diam.:** bucket	**Date:** May 30,2019

Sample Type	Water Content in %	Dry Density in PCF	Percent Compaction	Unified Classification System	Graphic	Depth in Feet	Description and Remarks
				SP			weeds, rocks, cobbles
							SAND - brown to light brown, traces of silt fine to medium, pebble, rock fragment
							- color change to light yellowish gray brown fine to medium, pebble, rock fragments
						5	
	10	97.5	80.57	SM-ML			- color change to light brown, silty, fine damp
							- scattered rock, cobble, and small boulder
				SP		10	- color change to light yellowish brown, traces of silt, fine to gravely coarse riverbed type sand with rocks, cobbles, and occasional small boulders
							- End of test trench @ 10.0 ft.
							- no bedrock
							- no groundwater
						15	
						20	
						25	
						30	

Groundwater: n/a **Approx. Depth of Bedrock:** n/a **Datum:** n/a **Elevation:** +/-2159	**Site Location** Proposed Industrial Building and Parking East Terminus of E. Barbour St. Banning, California	**Plate #**

California sampler Bulk/Grab sample

Soils Southwest, Inc.
897 Via Lata, Suite N
Colton, CA 92324
(909) 370-0474 Fax (909) 370-3156

LOG OF TEST PIT P-1

Project: Estes Express Lines/Bremco Construction		**Job No.:** 19010-F/BMP
Logged By: John F.	**Boring Diam.:** bucket	**Date:** May 30,2019

Sample Type	Water Content in %	Dry Density in PCF	Percent Compaction	Unified Classification System	Graphic	Depth in Feet	Description and Remarks
							gravels, weeds, rocks, and cobbles
							SAND - brown, slightly silty, fine to medium coarse, rocks, cobbles
							- color change to light gray-brown, gravely, medium to medium coarse, rocks, cobbles
							- scattered boulders
						5	
							- End of infiltration test pit @ 5.0 ft.
							- no bedrock
							- no groundwater
						10	
						15	
						20	
						25	
						30	

Groundwater: n/a **Approx. Depth of Bedrock:** n/a **Datum:** n/a **Elevation:** n/a	**Site Location** Proposed Industrial Building and Parking East Terminus of E. Barbour St. Banning, California	**Plate #**

Bulk/Grab sample California sampler

Soils Southwest, Inc.
897 Via Lata, Suite N
Colton, CA 92324
(909) 370-0474 Fax (909) 370-3156

LOG OF TEST PIT P-2

Project: Estes Express Lines/Bremco Construction		**Job No.:** 19010-F/BMP
Logged By: John F.	**Boring Diam.:** bucket	**Date:** May 30,2019

Sample Type	Water Content in %	Dry Density in PCF	Percent Compaction	Unified Classification System	Graphic	Depth in Feet	Description and Remarks
							gravels, weeds, scattered debris
							SAND - gray-brown, traces of silt, fine to medium coarse, rocks, cobbles
							- color change to light gray-brown, gravely, medium to medium coarse, rocks, cobbles, scattered small boulders, dampds
						5	
							- End of infiltration test pit @ 5.0 ft.
							- no bedrock
							- no groundwater
						10	
						15	
						20	
						25	
						30	

Groundwater: n/a **Approx. Depth of Bedrock:** n/a **Datum:** n/a **Elevation:** n/a	**Site Location** Proposed Industrial Building and Parking East Terminus of E. Barbour St. Banning, California	**Plate #**

Bulk/Grab sample California sampler

9.0 APPENDIX B

Laboratory Test Programs

Laboratory tests were conducted on representative soils for the purpose of classification and for the determination of the physical properties and engineering characteristics. The number and selection of the types of testing for a given study are based on the geotechnical conditions of the site. A summary of the various laboratory tests performed for the project is presented below.

Moisture Content and Dry Density (D2216):

Data obtained from these test, performed on undisturbed samples are used to aid in the classification and correlation of the soils and to provide qualitative information regarding soil strength and compressibility.

Direct Shear (D3080):

Data obtained from this test performed at increased and field moisture conditions on relatively remolded soil sample is used to evaluate soil shear strengths. Samples contained in brass sampler rings, placed directly on test apparatus are sheared at a constant strain rate of 0.002 inch per minute under saturated conditions and under varying loads appropriate to represent anticipated structural loadings. Shearing deformations are recorded to failure. Peak and/or residual shear strengths are obtained from the measured shearing load versus deflection curve. Test results, plotted on graphical form, are presented on Plate B-1 of this section.

Consolidation (D2835):

Drive-tube samples are tested at their field moisture contents and at increased moisture conditions since the soils may become saturated during life-time use of the planned structure.

Data obtained from this test performed on relatively undisturbed and/or remolded samples, were used to evaluate the consolidation characteristics of foundation soils under anticipated foundation loadings. Preparation for this test involved trimming the sample, placing it in one inch high brass ring, and loading it into the test apparatus which contained porous stones to accommodate drainage during testing. Normal axial loads are applied at a load increment ratio, successive loads being generally twice the preceding.

Soil samples are usually under light normal load conditions to accommodate seating of the apparatus. Samples were tested at the field moisture conditions at a predetermined normal load. Potentially moisture sensitive soil typically demonstrated significant volume change with the introduction of free water. The results of the consolidation tests are presented in graphical forms on Plate B-2.

Potential Expansion (ASTM Standard D4829-88)

Slightly silty and gravely sandy in nature, the site soils are considered 'very low' in expansion characteristic. Supplemental testing for soil expansion should be performed following mass grading completion.

Laboratory Test Results

A. Table I: In-Situ Moisture-Density (ASTM D2922 Portable Nuclear Gauge)

Test Trench No.	Sample Depth, ft.	Dry Density, pcf.	Moisture Content, %
2	4.0	119.7	5.01
3	3.0	112.6	2.05
4	5.0	113.1	5.28
6	5.0	97.5	9.99

Table II: Max. Density/Optimum Moisture Content (ASTM D1557)

Sample Location	Max. Dry Density, pcf	Opt. Moisture (%)
TP-1 @ 2-5 ft. (greyish lt. brown, silty, fine to med. coarse, pebbles, rock fragments, occasional rocks)	121.0 133 w/10% rock correction	9.0
TP-6 @ 4-5 ft. (lt. brown, silty, fine to medium, pebble, occasional rock fragments, scattered rock 1"-2"	116.0	12.0

C. Table III: Sand Equivalent

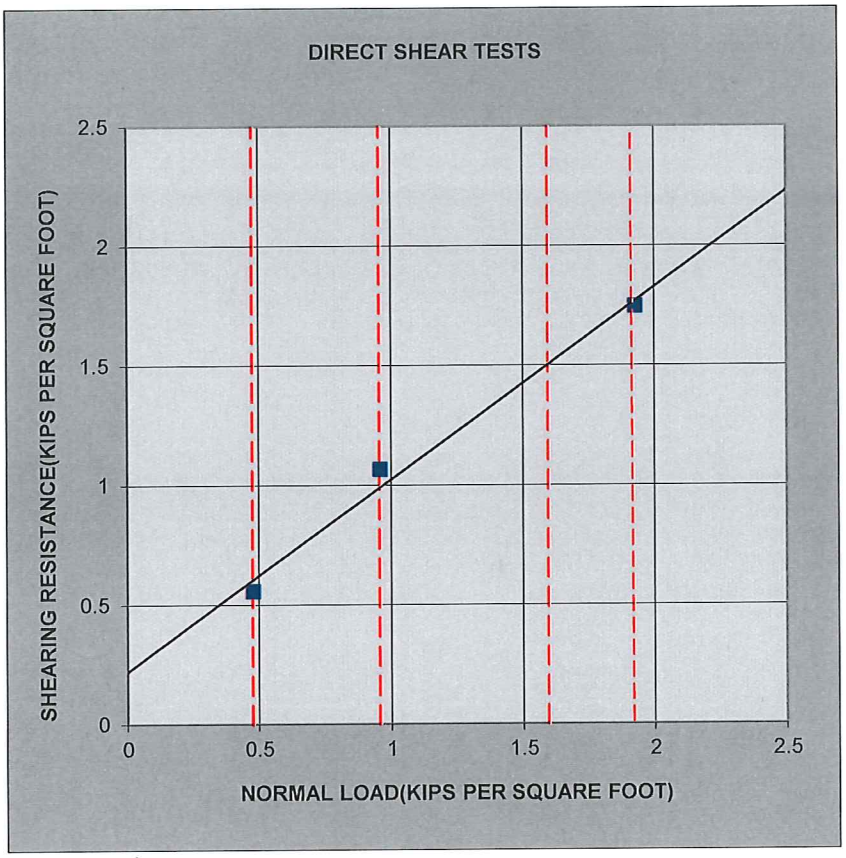
Sample Location @ depth, ft.	Sand Equivalent Average
TP-1 @ 1-5	42

D. Table IV: Consolidation (D2835)

Trench TP #	Depth (ft.)	Consolidation prior to saturation (@ 2 kips)	Hydro collapse (%)	Total Consolidation (%@ 8 kips) (saturated)
1 (remolded)	0 - 5	0.4	0.0	1.7
6 (remolded)	4-5	0.7	0.5	2.6

E. Table V: Direct Shear (ASTM D3080)

Test Trench & Sample Depth	Test Condition	Cohesion (PSF)	Friction (Degree)
TP1@ 0-5 ft	Remolded to 90%	220.77	38.78
TP6@ 4-5ft		300.73	35.35

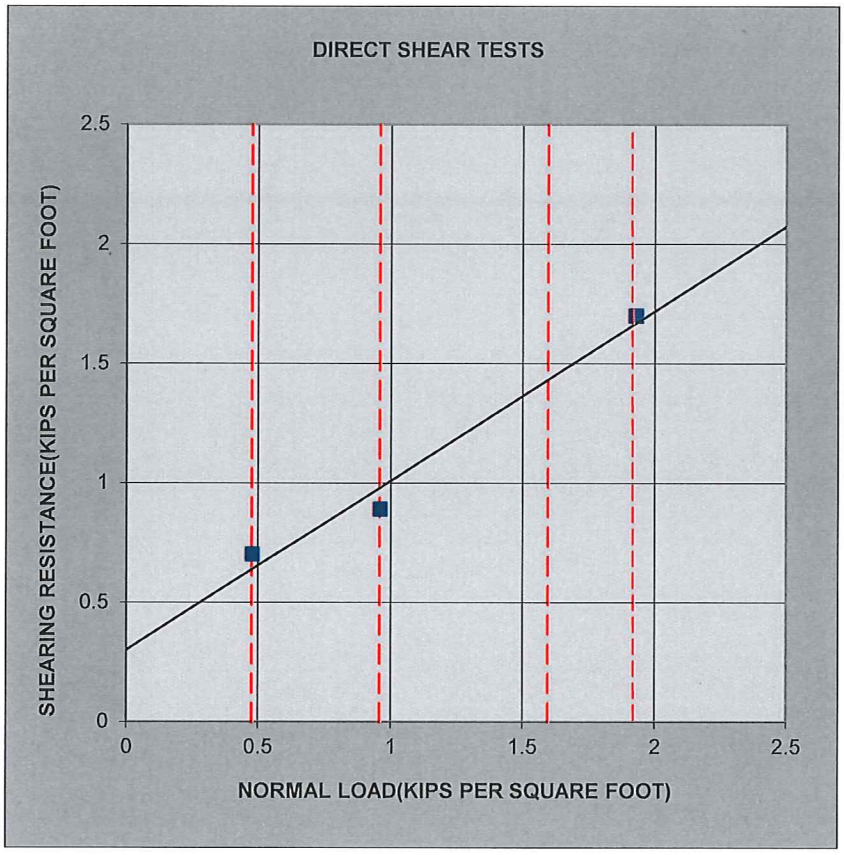


SYMBOL	LOCATION	DEPTH (FT)	TEST CONDITION	COHESION (psf)	FRICTION (degree)
■	TP-1	0 to 5	Remolded to 90% Residual	220.77	38.78

Estes Express Lines/Bremco Construction
East Terminus of E. Barbour Street
Banning, California

PROJECT NO.	19010-F
PLATE	B-1

SOILS SOUTHWEST, INC.
Consulting Foundation Engineers



SYMBOL	LOCATION	DEPTH (FT)	TEST CONDITION	COHESION (psf)	FRICTION (degree)
■	TP-6	4 to 5	Remolded to 90% Residual	300.73	35.35

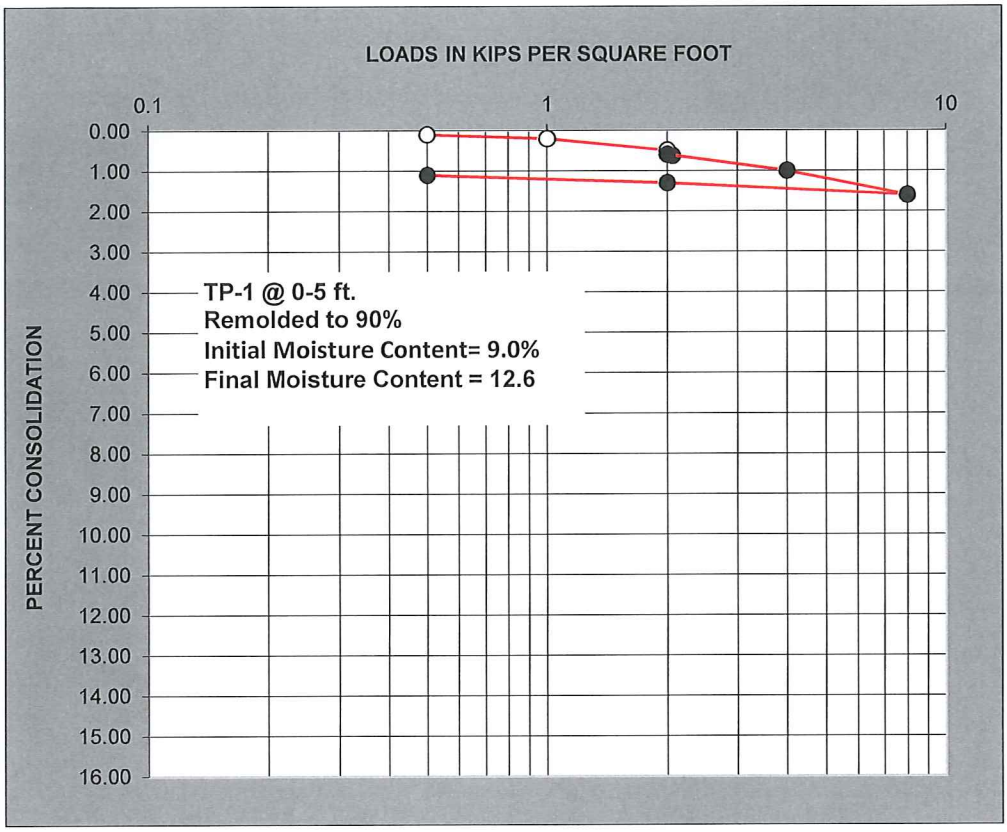
Estes Express Lines/Bremco Construction
East Terminus of E. Barbour Street
Banning, California

PROJECT NO. 19010-F

PLATE B-1-1

SOILS SOUTHWEST, INC.
Consulting Foundation Engineers

CONSOLIDATION TESTS

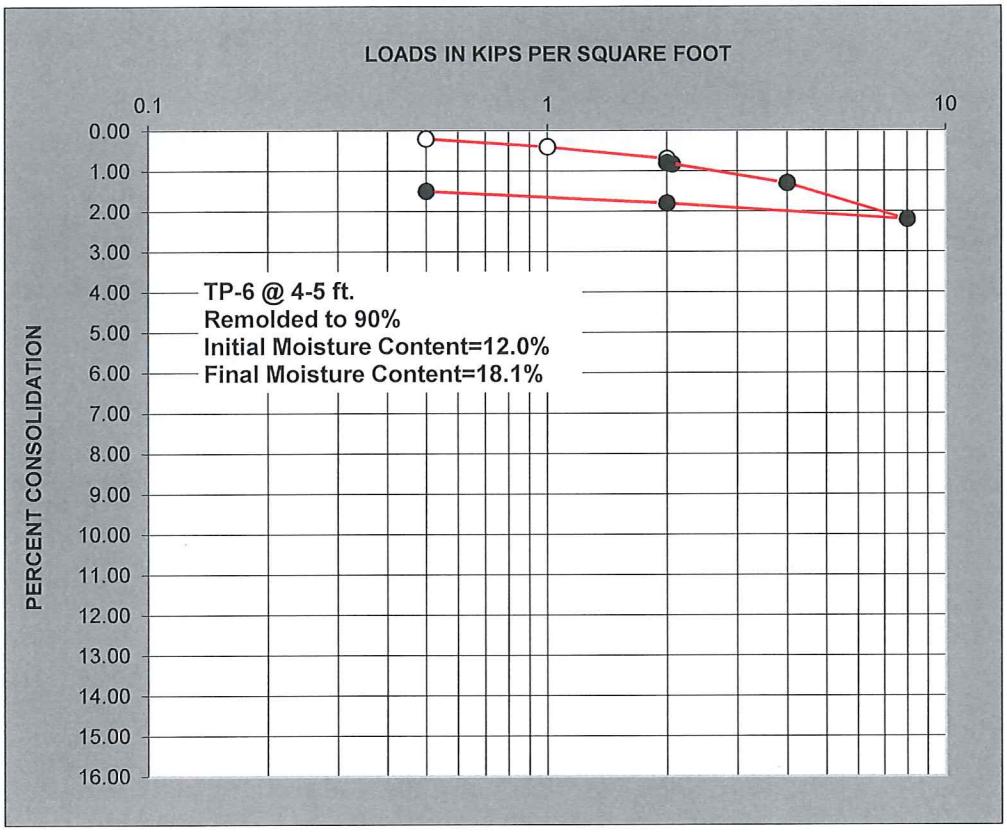


- **WATER PERMITTED TO CONTACT SAMPLE**

	PROJECT	Proposed Trucking Terminal East Terminus @ East Barbour St., Banning		
	PROJECT NO.	19010-F	PLATE	B-2

SOILS SOUTHWEST INC.
Consulting Foundation Engineers

CONSOLIDATION TESTS



- **WATER PERMITTED TO CONTACT SAMPLE**

	PROJECT	Proposed Trucking Terminal East Terminus @ East Barbour St., Banning		
	PROJECT NO.	19010-F	PLATE	B-2-1

SOILS SOUTHWEST INC.
Consulting Foundation Engineers

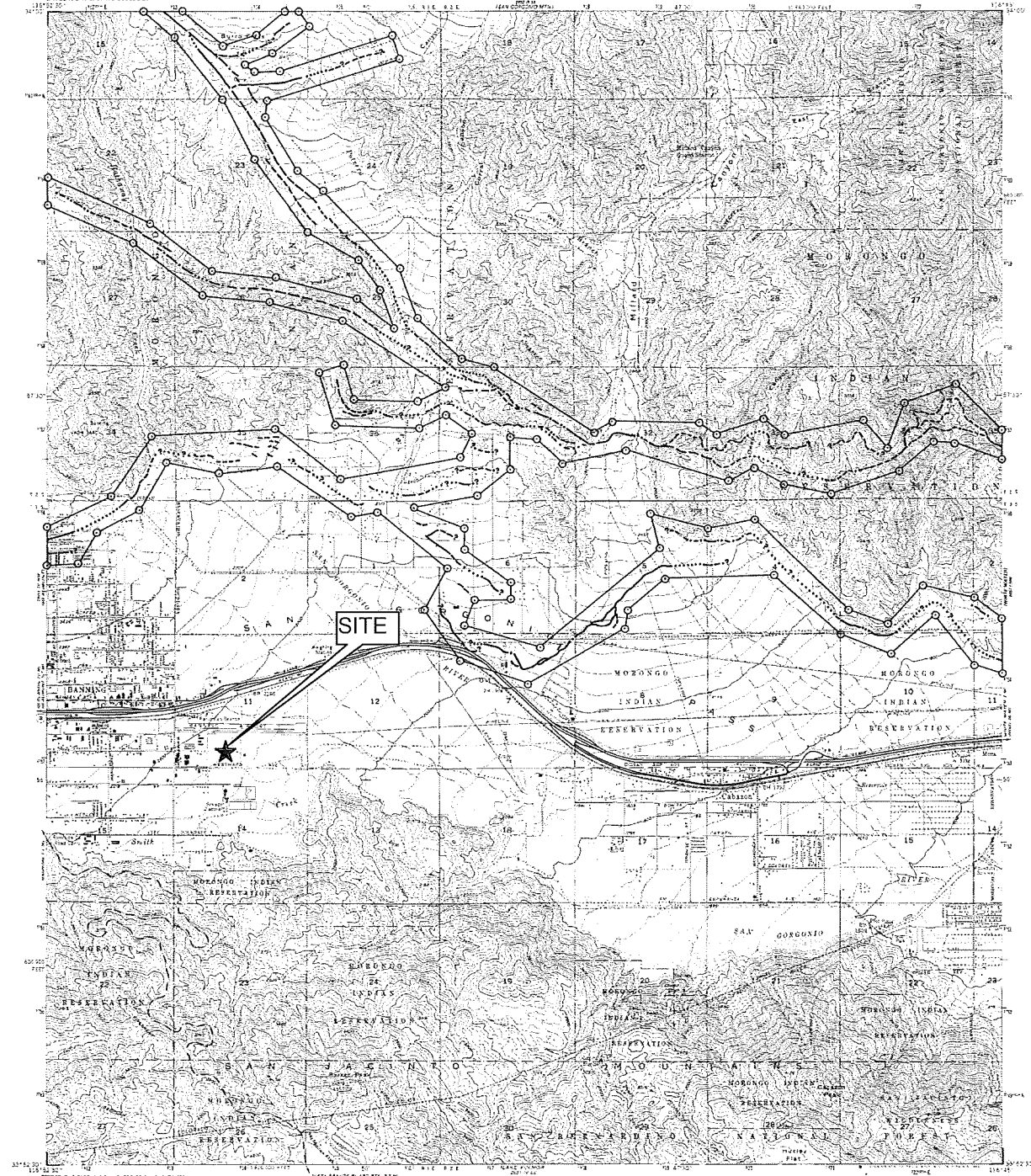
APPENDIX C

Supplemental Seismic Design Parameters

STATE OF CALIFORNIA PETE WILSON, GOVERNOR
THE RESOURCES AGENCY DOUGLAS P WHEELER, SECRETARY
DEPARTMENT OF CONSERVATION MICHAEL F BYRNE, DIRECTOR

DIVISION OF MINES AND GEOLOGY
JAMES F. DAVIS, STATE GEOLOGIST

CABAZON QUADRANGLE
CALIFORNIA—RIVERSIDE CO.
7.5 MINUTE SERIES (TOPOGRAPHIC)



TOPOGRAPHIC BASE MAP BY U.S. GEOLOGICAL SURVEY 1956
PHOTOREVISED 1968

SCALE 1:24,000

1 MILE
1/2 0
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 0 1 KILOMETER

CONTOUR INTERVAL 40 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

MAP EXPLANATION

Active Faults

1906 C

Faults considered to have been active during Holocene time and to have potential for surface rupture; solid line where accurately located, long dash where approximately located, short dash where inferred, dotted where concealed, query (?) indicates additional uncertainty. Evidence of historic offset indicated by year of earthquake-associated event or C for displacement caused by fault creep.

Earthquake Fault Zone Boundaries

These are delineated as straight-line segments that connect encircled turning points so as to define Earthquake Fault Zone segments.

Seaward projection of zone boundary.

STATE OF CALIFORNIA
EARTHQUAKE FAULT ZONES

Delineated in compliance with
Chapter 7.5, Division 2 of the California Public Resources Code
(Alquist-Priolo Earthquake Fault Zoning Act)

CABAZON QUADRANGLE

REVISED OFFICIAL MAP
Effective: June 1, 1995

James F. Davis State Geologist

REFERENCES USED TO COMPILE FAULT DATA

Cabazon Quadrangle

Hope, R.A., 1966, Most recently active breaks along the San Andreas and related faults between Cajon Pass and Salton Sea, California: U.S. Geological Survey Open File Map, 1:24,000

Matti, J.C., Morton, D.M., and Cox, B.F., 1992, The San Andreas Fault system in the vicinity of the central Transverse Ranges Province, Southern California: U.S. Geological Survey Open File Report 92-354, 39p., scale 1:250,000 (modified by unpublished U.S. Geological Survey mapping as shown in Treiman, 1994)

Treiman, J.A., 1994, The San Gorgonio Pass, Banning and related faults, Riverside County, California: California Division of Mines and Geology Fault Evaluation Report FER-239 (unpublished)

For additional information on faults in the map area, the reference used for zoning, and additional references consulted, refer to unpublished Fault Evaluation Reports on file at regional offices of DMG.

IMPORTANT - PLEASE NOTE

1) *This map may not show all faults that have the potential for surface fault rupture, either within the Earthquake Fault Zones or outside their boundaries.*
2) Faults shown are the basis for establishing the boundaries of the Earthquake Fault Zones.
3) The identification and location of these faults are based on the best available data. However, the quality of data used is varied. Traces have been drawn as accurately as possible at this map scale.
4) Fault information on this map is not sufficient to serve as a substitute for the geologic site investigations required under Chapter 7.5 of Division 2 of the California Public Resources Code.

⚠ This is a beta release of the new ATC Hazards by Location website. Please contact us with feedback.

ATC Hazards by Location

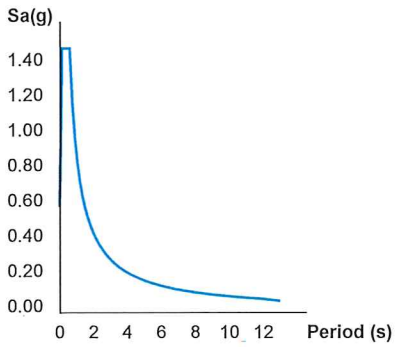
Search Information

Coordinates:	34.093533, -117.4753212
Timestamp:	2019-02-14T17:57:31.700Z
Hazard Type:	Seismic
Reference Document:	ASCE7-10
Risk Category:	III
Site Class:	D
Report Title:	Bremco Construction/E. Barbour St., Banning, CA

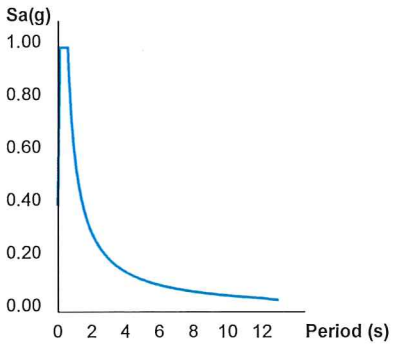
Map Results



MCER Horizontal Response Spectrum



Design Horizontal Response Spectrum



Text Results

Basic Parameters

Name	Value	Description
S_S	1.5	MCE_R ground motion (period=0.2s)
S_1	0.6	MCE_R ground motion (period=1.0s)
S_{MS}	1.5	Site-modified spectral acceleration value
S_{M1}	0.9	Site-modified spectral acceleration value
S_{DS}	1	Numeric seismic design value at 0.2s SA

S_{D1}	0.6	Numeric seismic design value at 1.0s SA

Additional Information

Name	Value	Description
SDC	D	Seismic design category
F_a	1	Site amplification factor at 0.2s
F_v	1.5	Site amplification factor at 1.0s
PGA	0.506	MCE_G peak ground acceleration
F_{PGA}	1	Site amplification factor at PGA
PGA_M	0.506	Site modified peak ground acceleration
T_L	12	Long-period transition period (s)
SsRT	2.337	Probabilistic risk-targeted ground motion (0.2s)
SsUH	2.152	Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years)
SsD	1.5	Factored deterministic acceleration value (0.2s)
S1RT	0.892	Probabilistic risk-targeted ground motion (1.0s)
S1UH	0.844	Factored uniform-hazard spectral acceleration (2% probability of exceedance in 50 years)
S1D	0.6	Factored deterministic acceleration value (1.0s)
PGAd	0.506	Factored deterministic acceleration value (PGA)

The results indicated here DO NOT reflect any state or local amendments to the values or any delineation lines made during the building code adoption process. Users should confirm any output obtained from this tool with the local Authority Having Jurisdiction before proceeding with design.

Disclaimer

Hazard loads are provided by the United States Geological Survey Seismic Design Web Services.

While the information presented on this website is believed to be correct, ATC and its sponsors and contributors assume no responsibility or liability for its accuracy. The material presented in the report should not be used or relied upon for any specific application without competent examination and verification of its accuracy, suitability and applicability by engineers or other licensed professionals. ATC does not intend that the use of this information replace the sound judgment of such competent professionals, having experience and knowledge in the field of practice, nor to substitute for the standard of care required of such professionals in interpreting and applying the results of the report provided by this website. Users of the information from this website assume all liability arising from such use. Use of the output of this website does not imply approval by the governing building code bodies responsible for building code approval and interpretation for the building site described by latitude/longitude location in the report.

2008 National Seismic Hazard Maps - Source Parameters

New Search

Distance in Miles	Name	State	Pref Slip Rate (mm/yr)	Dip (degrees)	Dip Dir	Slip Sense	Rupture Top (km)	Rupture Bottom (km)	Length (km)
3.34	S. San Andreas;PK+CH+CC+BB+NM+SM+NSB+SSB+BG	CA	n/a	86		strike slip	0.1	13	479
3.34	S. San Andreas;CC+BB+NM+SM+NSB+SSB	CA	n/a	90	V	strike slip	0	14	322
3.34	S. San Andreas;CC+BB+NM+SM+NSB+SSB+BG	CA	n/a	85		strike slip	0	14	380
3.34	S. San Andreas;CC+BB+NM+SM+NSB+SSB+BG+CO	CA	n/a	86		strike slip	0.1	13	449
3.34	S. San Andreas;CH+CC+BB+NM+SM+NSB+SSB	CA	n/a	90	V	strike slip	0	14	384
3.34	S. San Andreas;CH+CC+BB+NM+SM+NSB+SSB+BG	CA	n/a	86		strike slip	0	14	442
3.34	S. San Andreas;NM+SM+NSB+SSB	CA	n/a	90	V	strike slip	0	13	213
3.34	S. San Andreas;NM+SM+NSB+SSB+BG	CA	n/a	83		strike slip	0	14	271
3.34	S. San Andreas;NM+SM+NSB+SSB+BG+CO	CA	n/a	84		strike slip	0.1	13	340
3.34	S. San Andreas;NSB+SSB	CA	n/a	90	V	strike slip	0	13	79
3.34	S. San Andreas;NSB+SSB+BG	CA	n/a	75		strike slip	0	14	136
3.34	S. San Andreas;PK+CH+CC+BB+NM+SM+NSB+SSB	CA	n/a	90	V	strike slip	0.1	13	421
3.34	S. San Andreas;PK+CH+CC+BB+NM+SM+NSB+SSB+BG+CO	CA	n/a	86		strike slip	0.1	13	548
3.34	S. San Andreas;SM+NSB+SSB	CA	n/a	90	V	strike slip	0	13	176
3.34	S. San Andreas;SM+NSB+SSB+BG	CA	n/a	81		strike slip	0	13	234
3.34	S. San Andreas;SM+NSB+SSB+BG+CO	CA	n/a	83		strike slip	0.1	13	303
3.34	S. San Andreas;SSB	CA	16	90	V	strike slip	0	13	43

2008 National Seismic Hazard Maps - Source Parameters

New Search

Fault Name	State
S. San Andreas;PK+CH+CC+BB+NM+SM+NSB+SSB+BG	California

GEOMETRY	
Dip (degrees)	86
Dip direction	
Sense of slip	strike slip
Rupture top (km)	0.1
Rupture bottom (km)	13
Rake (degrees)	180
Length (km)	479

MODEL VALUES		
Slip Rate	n/a	
Probability of activity	1	
	ELLSWORTH	HANKS
Minimum magnitude	6.5	6.5
Maximum magnitude	7.99	8.12

b-value	0.8	0.8

Fault Model	Deformation Model	Char Rate[1]	GR-a-value[1]	Weight
A priori	2.1	5.41e-05 / 5.41e-05	NA / NA	0.50
Moment Balanced	2.1	5.05e-05 / 4.39e-05	NA / NA	0.25
Moment Balanced	2.2	4.74e-05 / 3.80e-05	NA / NA	0.10
Moment Balanced	2.3	5.23e-05 / 4.60e-05	NA / NA	0.15

[1] 1st Value is based on Ellsworth relation and 2nd value is based on Hanks and Bakun relation

Ground Motion Interpolator (2008)

Longitude: -116.854047

Latitude: 33.91949

VS30: 270 (180-1050 m/sec)

Return Period:

2% in 50 years 10% in 50 years

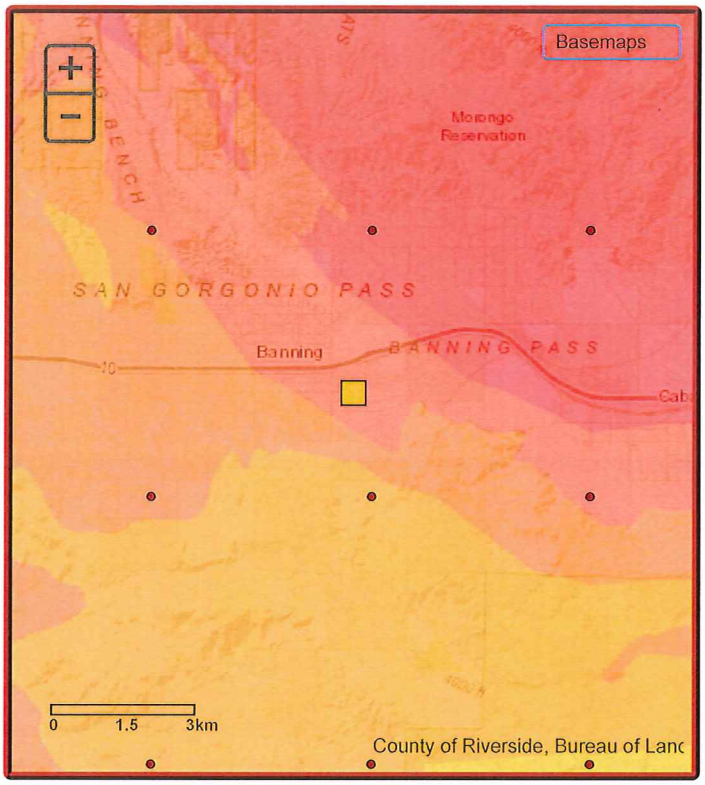
Spectral Acceleration:

PGA 0.2 second SA 1.0 second SA

Submit

Inputs:	**Result:**
-116.854047, 33.91949 vs30: 270 m/sec 10% in 50 years PGA	**0.588 g**

Information and Disclaimer



APPENDIX D

Field Infiltration Test Data

Double Ring Infiltrometer- BMP

Field Data Sheet

TEST PIT : P-1

Job No. 19010-BMP

Estes Express Lines/Bremco

East Terminus of East Barbour St., Banning

Date of Test: 5/30/2019

Tested By: RM

Test Depth (ft) 5.0

Soil Description: gravely medium to medium coarse, rocks, cobbles

Trial No.	1 Test Time Interval (min)	2 Start/End	3 Time hr/min	Flow Reading ANNULAR SPACE/Field 4 cm	5 (cm/min)	Flow Reading INNER RING/Field 6 cm	7 DROP (cm)	Flow Rate Inner 8 (7)/1 cm/ minute	Flow Rate Inner 9 ((8)x60x0.39) in/hr	Remarks (weather conditions,etc. 1 cm = 0.39-in
1	10	S	10:20	10.00		10.00				sunny, warm
		E	10:30	0.00	0.67	0.00	10.00	1.00	23.40	
2	10	S	10:38	10.00		10.00				refill
		E	10:48	0.00	0.67	0.50	9.50	0.95	22.23	
3	10	S	10:50	10.00		10.00				refill
		E	11:00	0.00	0.67	0.50	9.50	0.95	22.23	
4	10	S	11:02	10.00		10.00				refill
		E	11:12	0.00	0.67	0.50	9.50	0.95	22.23	
5	10	S	11:14	10.00		10.00				refill
		E	11:24	0.00	0.33	1.00	9.00	0.90	21.06	

S = Start

E = End

Double Ring Infiltrometer- BMP

Field Data Sheet

TEST PIT : P-2

Job No. 19010-BMP

Estes Express Lines/Bremco
East Terminus of East Barbour St., Banning

Date of Test: 5/30/2019

Tested By: RM

Test Depth (ft) 5.0

Soil Description: gray-brown, fine to medium coarse with tracesof silt,rock, cobbles, boulders

Trial No.	1 Test Time Interval (min)	2 Start/End	3 Time hr/min	Flow Reading ANNULAR SPACE/Field 4 cm	5 (cm/min)	Flow Reading INNER RING/Field 6 cm	7 DROP (cm)	Flow Rate Inner 8 (7)/1 cm/ minute	Flow Rate Inner 9 ((8)x60x0.39) in/hr	Remarks (weather conditions,etc. 1 cm = 0.39-in
1	10	S	10:32	10.00		10.00				sunny, warm
		E	10:42	2.00	0.53	3.25	6.75	0.68	15.80	
2	10	S	10:44	10.00		10.00				refill
		E	10:54	2.25	0.52	3.50	6.50	0.65	15.21	
3	10	S	10:55	10.00		10.00				refill
		E	11:05	2.50	0.50	4.00	6.00	0.60	14.04	
4	10	S	11:07	10.00		10.00				refill
		E	11:17	2.50	0.50	4.00	6.00	0.60	14.04	
5	10	S	11:22	10.00		10.00				refill
		E	11:32	2.50	0.25	4.00	6.00	0.60	14.04	

S = Start
E = End

PROFESSIONAL LIMITATIONS

Our investigation was performed using the degree of care and skill ordinarily exercised, under similar circumstances by other reputable Soils Engineers practicing in these general or similar localities. No other warranty, expressed or implied, is made as to the conclusions and professional advice included in this report.

The investigations are based on soil samples only, consequently the recommendations provided shall be considered "preliminary'. The samples taken and used for testing and the observations made are believed representative of site conditions; however, soil and geologic conditions can vary significantly between test excavations. If this occurs, the Project Soils Engineer must evaluate the changed conditions, and designs adjusted as required or alternate design recommended.

The 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 project architect and engineers. Appropriate recommendations should be incorporated into structural plans. The necessary steps should be taken to see that out such recommendations in field.

The findings of this report are valid as of this present date. However, changes in the conditions of a property can occur with the passage of time, whether they due to natural process or the works of man on this or adjacent properties. In addition, changes in applicable or appropriate standards may occur from legislation or broadening of knowledge. Accordingly, the findings of this report may be invalidated wholly or partially by change outside of our control. Therefore, this report is subject to review and should be updated after a period of one year.

RECOMMENDED SERVICES

The review of grading plans and specifications, field observations and testing by a geotechnical representative of this office is integral part of the conclusions and recommendations made in this report. If Soils Southwest, Inc. (SSI) is not retained for these services, the Client agrees to assume SSI's responsibility for any potential claims that may arise during and after construction, or during the life-time use of the structure and its appurtenant.

The recommendations supplied should be considered valid and applicable, provided the following conditions, in minimum, are met:

i. Pre-grade meeting with contractor, public agency and soils engineer,
ii. Excavated bottom inspections and verification s by soils engineer prior to backfill placement,
iii. Continuous observations and testing during site preparation and structural fill soils placement,
iv. Observation and inspection of footing trenching prior to steel and concrete placement,
v. Subgrade verifications including plumbing trench backfills prior to concrete slab-on-grade placement,
vi. On and off-site utility trench backfill testing and verifications,
vii. Precise-grading plan review, and
viii. Consultations as required during construction, or upon your request.

In the event the above conditions are not strictly fulfilled, Soils Southwest, Inc. will assume no responsibility for any structural distresses during its life-time use

Appendix F

Estes Banning

GREENHOUSE GAS ANALYSIS

CITY OF BANNING

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SEPTEMBER 14, 2019

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LIST OF ABBREVIATED TERMS

(1)	Reference
AB	Assembly Bill
AB 32	Global Warming Solutions Act
AB 1493	Pavley Regulations and Fuel Efficiency Standards
AB 1881	California Water Conservation in Landscaping Act of 2006
APA	Administrative Procedure Act
AQIA	Air Quality Impact Analysis
BAU	Business As Usual
C_2F_6	Hexafluoroethane
C_2H_6	Ethane
$C_2H_2F_4$	Tetrafluroethane
$C_2H_4F_2$	Ethylidene Fluoride
CAA	Federal Clean Air Act
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CALFIRE	California Department of Forestry and Fire Protection
CALGAPS	California LBNL GHG Analysis of Policies Spreadsheet
CALGreen	California Green Building Standards Code
CALSTA	California State Transportation Agency
CALTRANS	California Department of Transportation
CAPCOA	California Air Pollution Control Officers Association
CARB	California Air Resource Board
CAP	Climate Action Plan
CBSC	California Building Standards Commission
CEC	California Energy Commission
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CDFA	California Department of Food and Agriculture
CF_4	Tetrafluoromethane
CFC	Chlorofluorocarbons
CH_4	Methane
CHF_3	Carbon Trifluoride
CITY	City of Banning
CNRA	California Natural Resources Agency
CO	Carbon Monoxide
CO_2	Carbon Dioxide

CO_2e	Carbon Dioxide Equivalent
COP	Conference of the Parties
CPUC	California Public Utilities Commission
CTC	California Transportation Commission
DOF	Department of Finance
EMFAC	Emission Factor Model
EPA	Environmental Protection Agency
FBMSM	Facility-Based Mobile Source Measures
FED	Functional Equivalent Document
GCC	Global Climate Change
GHGA	Greenhouse Gas Analysis
GOBIZ	Governor's Office of Business and Economic Development
GPD	Gallons Per Day
GPY	Gallons Per Year
GWP	Global Warming Potential
H_2O	Water
HFC	Hydrofluorocarbons
HHDT	Heavy-Heavy-Duty Trucks
HP	Horsepower
I-10	Interstate 10
IBANK	California Infrastructure and Economic Development Bank
IPCC	Intergovernmental Panel on Climate Change
ISO	Independent System Operator
ITE	Institute of Transportation Engineers
LBNL	Lawrence Berkeley National Laboratory
LCA	Life-Cycle Analysis
LCFS	Low Carbon Fuel Standard
LDA	Light-Duty Auto
LDT1/LDT2	Light-Duty Trucks
LEV	Low-Emission Vehicle
LHDT	Light-Heavy-Duty Trucks
MARB	March Air Reserve Base
MDV	Medium-Duty Vehicles
MHDT	Medium-Heavy-Duty Tucks
MMR	Mandatory Reporting Rule
$MMTCO_2e$	Million Metric Ton of Carbon Dioxide Equivalent
MPG	Miles Per Gallon
MPOs	Metropolitan Planning Organizations

MT/YR	Metric Tons Per Year
$MTCO_2e$	Metric Ton of Carbon Dioxide Equivalent
MY	Model Year
NHTSA	National Highway Traffic Safety Administration
N_20	Nitrogen Dioxide/Nitrous Oxide
NDC	Nationally Determined Contributions
NF_3	Nitrogen Trifluoride
NIOSH	National Institute for Occupational Safety and Health
NO_X	Oxides of Nitrogen
OPR	Office of Planning and Research
PFC	Perfluorocarbons
PM_{10}	Particulate Matter 10 microns in diameter or less
$PM_{2.5}$	Particulate Matter 2.5 microns in diameter or less
PPM	Parts Per Million
PPT	Parts Per Trillion
Project	Estes Banning
RPS	Renewable Portfolio Standards
RTP	Regional Transportation Plan
RV	Recreational Vehicle
SAR	Second Assessment Report
SB	Senate Bill
SB 32	California Global Warming Solutions Act of 2006
SB 375	Regional Greenhouse Gas Emissions Reduction
SB 1078	Renewable Portfolio Standards
SB 1368	Emissions Performance Standards
SCAG	Southern California Association of Governments
SCAQMD	South Coast Air Quality Management District
SF_6	Sulfur Hexaflouride
SGC	Strategic Growth Council
SLPS	Short-Lived Climate Pollutant Strategy
SP	Service Population
SWCRB	State Water Resources Control Board
TAZ	Traffic Analysis Zones
TIA	Traffic Impact Analysis
TITLE 20	Appliance Energy Efficiency Standards
TITLE 24	Building Energy Efficiency Standards
UNFCCC	United Nations' Framework Convention on Climate Change
URBEMIS	Urban Emissions

UTR	Utility Tractors
VMT	Vehicle Miles Traveled
VOC	Volatile Organic Compounds
WRI	World Resources Institute
ZE/NZE	Zero and Near-Zero Emissions

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EXECUTIVE SUMMARY

ES.1 SUMMARY OF FINDINGS

The results of this *Estes Banning Greenhouse Gas Analysis* is summarized below based on the significance criteria in Section 3 of this report consistent with Appendix G of the California Environmental Quality Act (CEQA) Guidelines (1). Table ES-1 shows the findings of significance for potential greenhouse gas (GHG) impacts under CEQA.

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
GHG Impact #1: The Project would not generate direct or indirect GHG emission that would result in a significant impact on the environment.	3.8	*Less Than Significant*	*n/a*
GHG Impact #2: The Project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.	3.8	*Less Than Significant*	*n/a*

ES.2 PROJECT REQUIREMENTS

The Project would be required to comply with regulations imposed by the State of California and the South Coast Air Quality Management District (SCAQMD) aimed at the reduction of air pollutant emissions. Those that are directly and indirectly applicable to the Project and that would assist in the reduction of GHG emissions include:

- Global Warming Solutions Act of 2006 (AB32) (2).
- Regional GHG Emissions Reduction Targets/Sustainable Communities Strategies (SB 375) (3).
- Pavley Fuel Efficiency Standards (AB 1493). Establishes fuel efficiency ratings for new vehicles (4).
- Title 24 California Code of Regulations - California Building Code (CCR, Title 24). Establishes energy efficiency requirements for new construction (5).
- Title 20 California Code of Regulations - Appliance Energy Efficiency Standards (CCR, Title 20). Establishes energy efficiency requirements for appliances (6).
- Executive Order S-01-07 - Low Carbon Fuel Standard (LCFS). Requires carbon content of fuel sold in California to be 10% less by 2020 (7).
- California Water Conservation in Landscaping Act of 2006 (AB 1881). Requires local agencies to adopt the Department of Water Resources updated Water Efficient Landscape Ordinance or equivalent by January 1, 2010 to ensure efficient landscapes in new development and reduced water waste in existing landscapes (8).

- Statewide Retail Provider Emissions Performance Standards (SB 1368). Requires energy generators to achieve performance standards for GHG emissions (9).
- Renewable Portfolio Standards (SB 1078). Requires electric corporations to increase the amount of energy obtained from eligible renewable energy resources to 20 percent by 2010 and 33 percent by 2020 (10).
- California Global Warming Solutions Act of 2006 (SB 32). Requires the state to reduce statewide GHG emissions to 40% below 1990 levels by 2030, a reduction target that was first introduced in Executive Order B-30-15 (11).

Promulgated regulations that will affect the Project's emissions are accounted for in the Project's GHG calculations provided in this report. In particular, the AB 1493, LCFS, and SB 1078 will be in effect for the AB 32 target year of 2020, and therefore are accounted for in the Project's emission calculations.

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1 INTRODUCTION

This report presents the results of the greenhouse gas analysis (GHGA) prepared by Urban Crossroads, Inc., for the proposed Estes Banning (Project). The purpose of this GHGA is to evaluate Project-related construction and operational emissions and determine the level of GHG impacts as a result of constructing and operating the proposed Project.

1.1 SITE LOCATION

The proposed Estes Banning site is located on the northwest corner of Westward Avenue and Scott Street in the City of Banning, as shown on Exhibit 1-A. The Project site is currently vacant. An existing residential use in the Project study area is located southwest of the Project site along Westward Avenue. Vacant land surrounds the Project site to the south and east. The Interstate 10 (I-10) Freeway is located approximately 0.25 miles north of the Project site. In addition, the Banning Municipal Airport is located immediate adjacent west and north of the Project site.

The City of Banning's General Plan designates the Project site for Industrial uses. The Industrial land use designation allows for the development of industrial parks and freestanding industrial users. Industrial uses include light and medium intensity manufacturing operations, warehousing and distribution mini-storage, and associated offices. Auto storage and repair is also allowed (12).

1.2 PROJECT DESCRIPTION

The Project is proposed to consist of up to approximately 97,400 square feet (sf) of truck terminal use to include a 134 door cross-dock (this includes future expansion), a two-story office building, a line-haul building, a truck maintenance building, and a fuel station for project trucks, as shown on Exhibit 1-B. The Project is anticipated to be constructed and occupied by 2021.

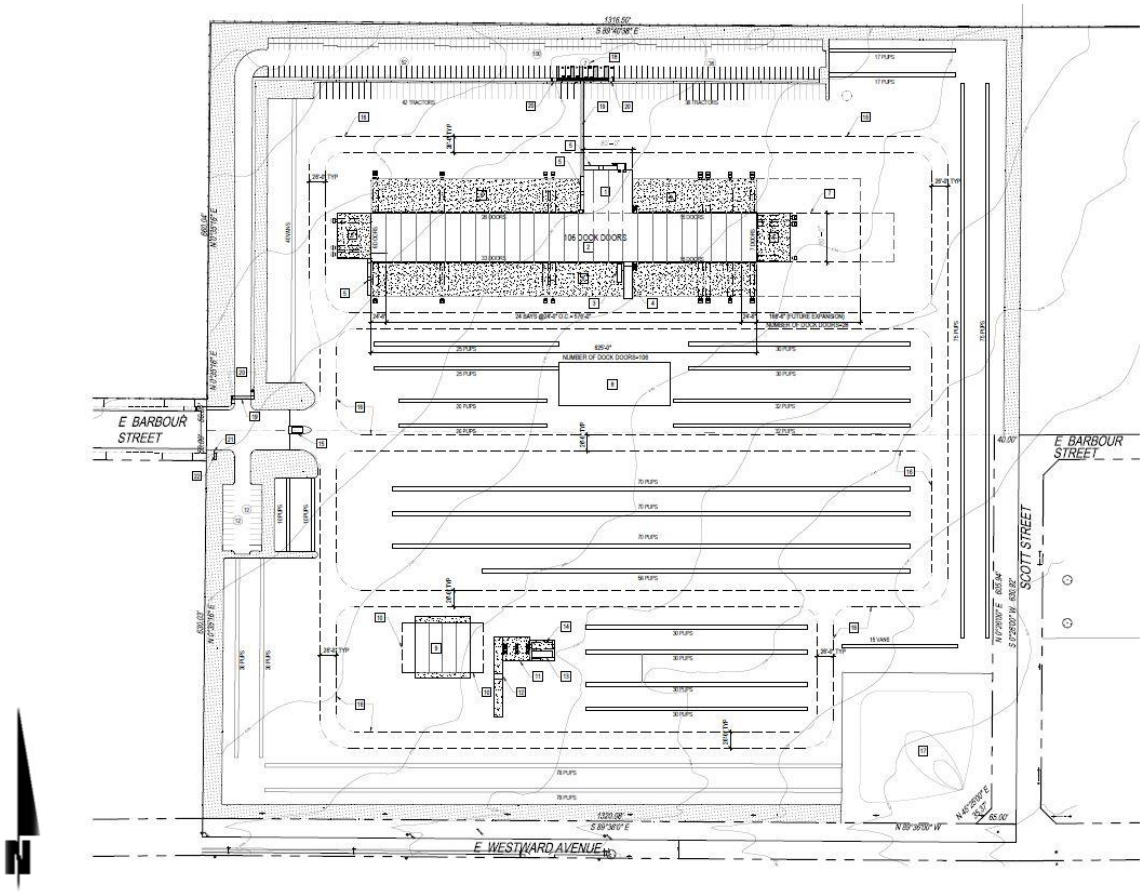
This air study is intended to describe air quality emission impacts associated with the expected typical 24-hour, seven day per week operational activities at the Project site.

Per the *Estes Banning Traffic Impact Analysis* (TIA) prepared by Urban Crossroads, Inc., the Project is expected to generate a total of approximately 316 two-way vehicular trips per day (158 inbound and 158 outbound) which includes 90 two-way truck trips per day (45 inbound and 45 outbound) (13).

EXHIBIT 1-A: LOCATION MAP



EXHIBIT 1-B: SITE PLAN



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2 CLIMATE CHANGE SETTING

2.1 INTRODUCTION TO GLOBAL CLIMATE CHANGE

Global Climate Change (GCC) is defined as the change in average meteorological conditions on the earth with respect to temperature, precipitation, and storms. The majority of scientists believe that the climate shift taking place since the Industrial Revolution is occurring at a quicker rate and magnitude than in the past. Scientific evidence suggests that GCC is the result of increased concentrations of GHGs in the earth's atmosphere, including carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), and fluorinated gases. The majority of scientists believe that this increased rate of climate change is the result of GHGs resulting from human activity and industrialization over the past 200 years.

An individual project like the proposed Project evaluated in this GHGA cannot generate enough GHG emissions to affect a discernible change in global climate. However, the proposed Project may participate in the potential for GCC by its incremental contribution of GHGs combined with the cumulative increase of all other sources of GHGs, which when taken together constitute potential influences on GCC. Because these changes may have serious environmental consequences, Section 3.0 will evaluate the potential for the proposed Project to have a significant effect upon the environment as a result of its potential contribution to the greenhouse effect.

2.2 GLOBAL CLIMATE CHANGE DEFINED

GCC refers to the change in average meteorological conditions on the earth with respect to temperature, wind patterns, precipitation and storms. Global temperatures are regulated by naturally occurring atmospheric gases such as water (H_2O) vapor, CO_2, N_2O, CH_4, hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). These particular gases are important due to their residence time (duration they stay) in the atmosphere, which ranges from 10 years to more than 100 years. These gases allow solar radiation into the earth's atmosphere, but prevent radioactive heat from escaping, thus warming the earth's atmosphere. GCC can occur naturally as it has in the past with the previous ice ages.

Gases that trap heat in the atmosphere are often referred to as GHGs. GHGs are released into the atmosphere by both natural and anthropogenic (human) activity. Without the natural GHG effect, the earth's average temperature would be approximately 61° Fahrenheit cooler than it is currently. The cumulative accumulation of these gases in the earth's atmosphere is considered to be the cause for the observed increase in the earth's temperature.

2.3 GREENHOUSE GASES

GREENHOUSE GASES AND HEALTH EFFECTS

GHGs trap heat in the atmosphere, creating a GHG effect that results in global warming and climate change. Many gases demonstrate these properties and as discussed in Table 2-1. For the purposes of this analysis, emissions of CO_2, CH_4, and N_2O were evaluated (see Table 3-1 later in

this report) because these gases are the primary contributors to GCC from development projects. Although there are other substances such as fluorinated gases that also contribute to GCC, these fluorinated gases were not evaluated as their sources are not well-defined and do not contain accepted emissions factors or methodology to accurately calculate these gases.

TABLE 2-1: GREENHOUSE GASES

Greenhouse Gases	Description	Sources	Health Effects
H_2O	H_20 is the most abundant, important, and variable GHG in the atmosphere. H_2O vapor is not considered a pollutant; in the atmosphere it maintains a climate necessary for life. Changes in its concentration are primarily considered to be a result of climate feedbacks related to the warming of the atmosphere rather than a direct result of industrialization. A climate feedback is an indirect, or secondary, change, either positive or negative, that occurs within the climate system in response to a forcing mechanism. The feedback loop in which H_2O is involved is critically important to projecting future climate change. As the temperature of the atmosphere rises, more H_2O is evaporated from ground storage (rivers, oceans, reservoirs, soil). Because the air is warmer, the relative humidity can be higher (in essence, the air is able to 'hold' more H_2O when it is warmer), leading to more H_2O vapor in the atmosphere. As a GHG, the higher concentration of H_2O vapor is then able to absorb more thermal indirect energy radiated from the Earth, thus further warming the atmosphere. The warmer atmosphere can then hold more H_2O vapor and so on and so on. This is referred to as a "positive feedback loop." The extent to which this positive feedback loop	The main source of H_2O vapor is evaporation from the oceans (approximately 85 percent). Other sources include evaporation from other H_2O bodies, sublimation (change from solid to gas) from sea ice and snow, and transpiration from plant leaves.	There are no known direct health effects related to H_2O vapor at this time. It should be noted however that when some pollutants react with H_2O vapor, the reaction forms a transport mechanism for some of these pollutants to enter the human body through H_2O vapor.

Greenhouse Gases	Description	Sources	Health Effects
	will continue is unknown as there are also dynamics that hold the positive feedback loop in check. As an example, when H_2O vapor increases in the atmosphere, more of it will eventually condense into clouds, which are more able to reflect incoming solar radiation (thus allowing less energy to reach the earth's surface and heat it up) (14).		
CO_2	CO_2 is an odorless and colorless GHG. Since the industrial revolution began in the mid-1700s, the sort of human activity that increases GHG emissions has increased dramatically in scale and distribution. Data from the past 50 years suggests a corollary increase in levels and concentrations. As an example, prior to the industrial revolution, CO_2 concentrations were fairly stable at 280 parts per million (ppm). Today, they are around 370 ppm, an increase of more than 30 percent. Left unchecked, the concentration of CO_2 in the atmosphere is projected to increase to a minimum of 540 ppm by 2100 as a direct result of anthropogenic sources (15).	CO_2 is emitted from natural and manmade sources. Natural sources include: the decomposition of dead organic matter; respiration of bacteria, plants, animals and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources include: the burning of coal, oil, natural gas, and wood. CO_2 is naturally removed from the air by photosynthesis, dissolution into ocean water, transfer to soils and ice caps, and chemical weathering of carbonate rocks (16).	Outdoor levels of CO_2 are not high enough to result in negative health effects. According to the National Institute for Occupational Safety and Health (NIOSH) high concentrations of CO_2 can result in health effects such as: headaches, dizziness, restlessness, difficulty breathing, sweating, increased heart rate, increased cardiac output, increased blood pressure, coma, asphyxia, and/or convulsions. It should be noted that current concentrations of CO_2 in the earth's atmosphere are estimated to be approximately 370 ppm, the actual reference exposure level (level at which adverse health effects typically occur) is at exposure levels of 5,000 ppm averaged over 10 hours in a 40-hour workweek and short-term reference exposure levels of 30,000 ppm averaged over a 15 minute period (17).

Greenhouse Gases	Description	Sources	Health Effects
CH_4	CH_4 is an extremely effective absorber of radiation, although its atmospheric concentration is less than CO_2 and its lifetime in the atmosphere is brief (10-12 years), compared to other GHGs.	CH_4 has both natural and anthropogenic sources. It is released as part of the biological processes in low oxygen environments, such as in swamplands or in rice production (at the roots of the plants). Over the last 50 years, human activities such as growing rice, raising cattle, using natural gas, and mining coal have added to the atmospheric concentration of CH_4. Other anthropocentric sources include fossil-fuel combustion and biomass burning (18).	CH_4 is extremely reactive with oxidizers, halogens, and other halogen-containing compounds. Exposure to high levels of CH_4 can cause asphyxiation, loss of consciousness, headache and dizziness, nausea and vomiting, weakness, loss of coordination, and an increased breathing rate.
N_2O	N_2O, also known as laughing gas, is a colorless GHG. Concentrations of N_2O also began to rise at the beginning of the industrial revolution. In 1998, the global concentration was 314 parts per billion (ppb).	N_2O is produced by microbial processes in soil and H_2O, including those reactions which occur in fertilizer containing nitrogen. In addition to agricultural sources, some industrial processes (fossil fuel-fired power plants, nylon production, nitric acid production, and vehicle emissions) also contribute to its atmospheric load. It is used as an aerosol spray propellant, i.e., in whipped cream bottles. It is also	N_2O can cause dizziness, euphoria, and sometimes slight hallucinations. In small doses, it is considered harmless. However, in some cases, heavy and extended use can cause Olney's Lesions (brain damage) (19).

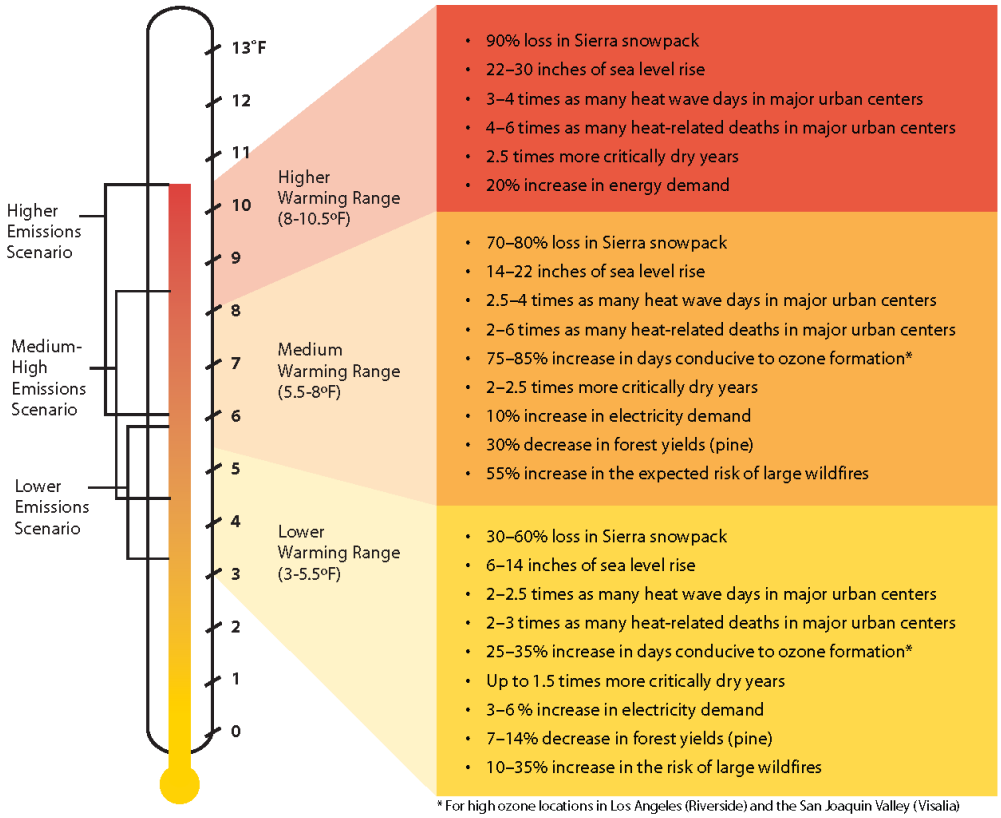
Greenhouse Gases	Description	Sources	Health Effects
		used in potato chip bags to keep chips fresh. It is used in rocket engines and in race cars. N_2O can be transported into the stratosphere, be deposited on the earth's surface, and be converted to other compounds by chemical reaction (19).	
Chlorofluorocarbons (CFCs)	CFCs are gases formed synthetically by replacing all hydrogen atoms in CH_4 or ethane (C_2H_6) with chlorine and/or fluorine atoms. CFCs are nontoxic, nonflammable, insoluble and chemically unreactive in the troposphere (the level of air at the earth's surface).	CFCs have no natural source but were first synthesized in 1928. They were used for refrigerants, aerosol propellants and cleaning solvents. Due to the discovery that they are able to destroy stratospheric ozone, a global effort to halt their production was undertaken and was extremely successful, so much so that levels of the major CFCs are now remaining steady or declining. However, their long atmospheric lifetimes mean that some of the CFCs will remain in the atmosphere for over 100 years (20).	In confined indoor locations, working with CFC-113 or other CFCs is thought to result in death by cardiac arrhythmia (heart frequency too high or too low) or asphyxiation.

Greenhouse Gases	Description	Sources	Health Effects
HFCs	HFCs are synthetic, man-made chemicals that are used as a substitute for CFCs. Out of all the GHGs, they are one of three groups with the highest global warming potential (GWP). The HFCs with the largest measured atmospheric abundances are (in order), HFC-23 (CHF_3), HFC-134a (CH_2FCF), and HFC-152a (CH_3CF_2). Prior to 1990, the only significant emissions were of HFC-23. HFC-134a emissions are increasing due to its use as a refrigerant.	HFCs are manmade for applications such as automobile air conditioners and refrigerants.	No health effects are known to result from exposure to HFCs.
PFCs	PFCs have stable molecular structures and do not break down through chemical processes in the lower atmosphere. High-energy ultraviolet rays, which occur about 60 kilometers above earth's surface, are able to destroy the compounds. Because of this, PFCs have very long lifetimes, between 10,000 and 50,000 years. Two common PFCs are tetrafluoromethane (CF_4) and hexafluoroethane (C_2F_6). The EPA estimates that concentrations of CF_4 in the atmosphere are over 70 parts per trillion (ppt).	The two main sources of PFCs are primary aluminum production and semiconductor manufacture.	No health effects are known to result from exposure to PFCs.
SF_6	SF_6 is an inorganic, odorless, colorless, nontoxic, nonflammable gas. It also has the highest GWP of any gas evaluated (23,900) (21). The EPA indicates that concentrations in the 1990s were about 4 ppt.	SF_6 is used for insulation in electric power transmission and distribution equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas for leak detection.	In high concentrations in confined areas, the gas presents the hazard of suffocation because it displaces the oxygen needed for breathing.
Nitrogen Trifluoride (NF_3)	NF_3 is a colorless gas with a distinctly moldy odor. The World Resources Institute (WRI)	NF_3 is used in industrial processes and is produced in the manufacturing of	Long-term or repeated exposure may affect the liver

Greenhouse Gases	Description	Sources	Health Effects
	indicates that NF_3 has a 100-year GWP of 17,200 (22).	semiconductors, LCD (Liquid Crystal Display) panels, types of solar panels, and chemical lasers.	and kidneys and may cause fluorosis (23).

The potential health effects related directly to the emissions of CO_2, CH_4, and N_2O as they relate to development projects such as the proposed Project are still being debated in the scientific community. Their cumulative effects to GCC have the potential to cause adverse effects to human health. Increases in Earth's ambient temperatures would result in more intense heat waves, causing more heat-related deaths. Scientists also purport that higher ambient temperatures would increase disease survival rates and result in more widespread disease. Climate change will likely cause shifts in weather patterns, potentially resulting in devastating droughts and food shortages in some areas (24). Exhibit 2-A presents the potential impacts of global warming (25).

EXHIBIT 2-A: SUMMARY OF PROJECTED GLOBAL WARMING IMPACT, 2070-2099 (AS COMPARED WITH 1961-1990)



Source: Barbara H. Allen-Diaz. "Climate change affects us all." *University of California, Agriculture and Natural Resources*, 2009.

2.4 GLOBAL WARMING POTENTIAL

GHGs have varying GWP values. GWP of a GHG indicates the amount of warming a gas causes over a given period of time and represents the potential of a gas to trap heat in the atmosphere. CO_2 is utilized as the reference gas for GWP, and thus has a GWP of 1. Carbon dioxide equivalent (CO_2e) is a term used for describing the difference GHGs in a common unit. CO_2e signifies the amount of CO_2 which would have the equivalent GWP.

The atmospheric lifetime and GWP of selected GHGs are summarized at Table 2-2. As shown in the table below, GWP for the Second Assessment Report, the Intergovernmental Panel on Climate Change (IPCC)'s scientific and socio-economic assessment on climate change, range from 1 for CO_2 to 23,900 for SF_6 and GWP for the IPCC's 5th Assessment Report range from 1 for CO_2 to 23,500 for SF_6 (26).

TABLE 2-2: GLOBAL WARMING POTENTIAL AND ATMOSPHERIC LIFETIME OF SELECT GHGS

Gas	Atmospheric Lifetime (years)	Global Warming Potential (100-year time horizon)	
		Second Assessment Report	5th Assessment Report
CO_2	See*	1	1
CH_4	12 .4	21	28
N_2O	121	310	265
HFC-23	222	11,700	12,400
HFC-134a	13.4	1,300	1,300
HFC-152a	1.5	140	138
SF_6	3,200	23,900	23,500

*As per Appendix 8.A. of IPCC's 5th Assessment Report, no single lifetime can be given.
Source: Table 2.14 of the IPCC Fourth Assessment Report, 2007

2.5 GREENHOUSE GAS EMISSIONS INVENTORIES

Global

Worldwide anthropogenic (human) GHG emissions are tracked by the IPCC for industrialized nations (referred to as Annex I) and developing nations (referred to as Non-Annex I). Human GHG emissions data for Annex I nations are available through 2017. Based on the latest available data, the sum of these emissions totaled approximately 29,216,501 Gg CO_2e[1] (27) (28) as summarized on Table 2-3.

[1] The global emissions are the sum of Annex I and non-Annex I countries, without counting Land-Use, Land-Use Change and Forestry (LULUCF). For countries without 2017 data, the UNFCCC data for the most recent year were used. United Nations Framework Convention on Climate Change, "Annex I Parties – GHG total without LULUCF," The most recent GHG emissions for China and India are from 2014.

United States

As noted in Table 2-3, the United States, as a single country, was the number two producer of GHG emissions in 2017.

TABLE 2-3: TOP GHG PRODUCING COUNTRIES AND THE EUROPEAN UNION [2]

Emitting Countries	GHG Emissions (Gg CO_2e)
China	11,911,710
United States	6,456,718
European Union (28-member countries)	4,323,163
India	3,079,810
Russian Federation	2,155,470
Japan	1,289,630
Total	**29,216,501**

Note: Gg – gigagram

State of California

California has significantly slowed the rate of growth of GHG emissions due to the implementation of energy efficiency programs as well as adoption of strict emission controls, but is still a substantial contributor to the U.S. emissions inventory total (29). The California Air Resource Board (CARB) compiles GHG inventories for the State of California. Based upon the 2018 GHG inventory data (i.e., the latest year for which data are available) for the 2000-2016 GHG emissions period, California emitted an average 429.4 million metric tons of CO_2e ($MMTCO_2e$) per year including emissions resulting from imported electrical power in 2015 (30).

2.6 EFFECTS OF CLIMATE CHANGE IN CALIFORNIA

Public Health

Higher temperatures may increase the frequency, duration, and intensity of conditions conducive to air pollution formation. For example, days with weather conducive to ozone formation could increase from 25 to 35 percent under the lower warming range to 75 to 85 percent under the medium warming range. In addition, if global background ozone levels increase as predicted in some scenarios, it may become impossible to meet local air quality standards. Air quality could be further compromised by increases in wildfires, which emit fine particulate matter that can travel long distances, depending on wind conditions. The Climate Scenarios report indicates that large wildfires could become up to 55 percent more frequent if GHG emissions are not significantly reduced.

In addition, under the higher warming range scenario, there could be up to 100 more days per year with temperatures above 90°F in Los Angeles and 95°F in Sacramento by 2100. This is a large

[2] Used http://unfccc.int data for Annex I countries. Consulted the CAIT Climate Data Explorer in https://www.climatewatchdata.org site to reference Non-Annex I countries of China and India.

increase over historical patterns and approximately twice the increase projected if temperatures remain within or below the lower warming range. Rising temperatures could increase the risk of death from dehydration, heat stroke/exhaustion, heart attack, stroke, and respiratory distress caused by extreme heat.

Water Resources

A vast network of man-made reservoirs and aqueducts captures and transports water throughout the state from northern California rivers and the Colorado River. The current distribution system relies on Sierra Nevada snowpack to supply water during the dry spring and summer months. Rising temperatures, potentially compounded by decreases in precipitation, could severely reduce spring snowpack, increasing the risk of summer water shortages.

If temperatures continue to increase, more precipitation could fall as rain instead of snow, and the snow that does fall could melt earlier, reducing the Sierra Nevada spring snowpack by as much as 70 to 90 percent. Under the lower warming range scenario, snowpack losses could be only half as large as those possible if temperatures were to rise to the higher warming range. How much snowpack could be lost depends in part on future precipitation patterns, the projections for which remain uncertain. However, even under the wetter climate projections, the loss of snowpack could pose challenges to water managers and hamper hydropower generation. It could also adversely affect winter tourism. Under the lower warming range, the ski season at lower elevations could be reduced by as much as a month. If temperatures reach the higher warming range and precipitation declines, there might be many years with insufficient snow for skiing and snowboarding.

The State's water supplies are also at risk from rising sea levels. An influx of saltwater could degrade California's estuaries, wetlands, and groundwater aquifers. Saltwater intrusion caused by rising sea levels is a major threat to the quality and reliability of water within the southern edge of the Sacramento/San Joaquin River Delta – a major fresh water supply.

Agriculture

Increased temperatures could cause widespread changes to the agriculture industry reducing the quantity and quality of agricultural products statewide. First, California farmers could possibly lose as much as 25 percent of the water supply needed. Although higher CO_2 levels can stimulate plant production and increase plant water-use efficiency, California's farmers could face greater water demand for crops and a less reliable water supply as temperatures rise. Crop growth and development could change, as could the intensity and frequency of pest and disease outbreaks. Rising temperatures could aggravate ozone pollution, which makes plants more susceptible to disease and pests and interferes with plant growth.

Plant growth tends to be slow at low temperatures, increasing with rising temperatures up to a threshold. However, faster growth can result in less-than-optimal development for many crops, so rising temperatures could worsen the quantity and quality of yield for a number of California's agricultural products. Products likely to be most affected include wine grapes, fruits and nuts.

In addition, continued GCC could shift the ranges of existing invasive plants and weeds and alter competition patterns with native plants. Range expansion could occur in many species while range contractions may be less likely in rapidly evolving species with significant populations already established. Should range contractions occur, new or different weed species could fill the emerging gaps. Continued GCC could alter the abundance and types of many pests, lengthen pests' breeding season, and increase pathogen growth rates.

Forests and Landscapes

GCC has the potential to intensify the current threat to forests and landscapes by increasing the risk of wildfire and altering the distribution and character of natural vegetation. If temperatures rise into the medium warming range, the risk of large wildfires in California could increase by as much as 55 percent, which is almost twice the increase expected if temperatures stay in the lower warming range. However, since wildfire risk is determined by a combination of factors, including precipitation, winds, temperature, and landscape and vegetation conditions, future risks will not be uniform throughout the state. In contrast, wildfires in northern California could increase by up to 90 percent due to decreased precipitation.

Moreover, continued GCC has the potential to alter natural ecosystems and biological diversity within the state. For example, alpine and subalpine ecosystems could decline by as much as 60 to 80 percent by the end of the century as a result of increasing temperatures. The productivity of the state's forests has the potential to decrease as a result of GCC.

Rising Sea Levels

Rising sea levels, more intense coastal storms, and warmer water temperatures could increasingly threaten the state's coastal regions. Under the higher warming range scenario, sea level is anticipated to rise 22 to 35 inches by 2100. Elevations of this magnitude would inundate low-lying coastal areas with saltwater, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats. Under the lower warming range scenario, sea level could rise 12-14 inches.

2.7 REGULATORY SETTING

INTERNATIONAL

Climate change is a global issue involving GHG emissions from all around the world; therefore, countries such as the ones discussed below have made an effort to reduce GHGs.

Intergovernmental Panel on Climate Change. In 1988, the United Nations and the World Meteorological Organization established the IPCC to assess the scientific, technical and socioeconomic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts, and options for adaptation and mitigation.

United Nation's Framework Convention on Climate Change ("Convention"). On March 21, 1994, the U.S. joined a number of countries around the world in signing the Convention. Under the Convention, governments gather and share information on GHG emissions, national policies, and best practices; launch national strategies for addressing GHG emissions and adapting to

expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of climate change.

International Climate Change Treaties. The Kyoto Protocol is an international agreement linked to the Convention. The major feature of the Kyoto Protocol is that it sets binding targets for 37 industrialized countries and the European community for reducing GHG emissions at an average of five percent against 1990 levels over the five-year period 2008–2012. The Convention (as discussed above) encouraged industrialized countries to stabilize emissions; however, the Protocol commits them to do so. Developed countries have contributed more emissions over the last 150 years; therefore, the Protocol places a heavier burden on developed nations under the principle of "common but differentiated responsibilities."

In 2001, President George W. Bush indicated that he would not submit the treaty to the U.S. Senate for ratification, which effectively ended American involvement in the Kyoto Protocol. In December 2009, international leaders met in Copenhagen to address the future of international climate change commitments post-Kyoto. No binding agreement was reached in Copenhagen; however, the Committee identified the long-term goal of limiting the maximum global average temperature increase to no more than 2° Celsius above pre-industrial levels, subject to a review in 2015. The UN Climate Change Committee held additional meetings in Durban, South Africa in November 2011; Doha, Qatar in November 2012; and Warsaw, Poland in November 2013. The meetings are gradually gaining consensus among participants on individual climate change issues.

On September 23, 2014 more than 100 Heads of State and Government and leaders from the private sector and civil society met at the Climate Summit in New York hosted by the United Nations. At the Summit, heads of government, business and civil society announced actions in areas that would have the greatest impact on reducing emissions, including climate finance, energy, transport, industry, agriculture, cities, forests, and building resilience.

Parties to the U.N. Framework Convention on Climate Change (UNFCCC) reached a landmark agreement on December 12, 2015 in Paris, charting a fundamentally new course in the two-decade-old global climate effort. Culminating a four-year negotiating round, the new treaty ends the strict differentiation between developed and developing countries that characterized earlier efforts, replacing it with a common framework that commits all countries to put forward their best efforts and to strengthen them in the years ahead. This includes, for the first time, requirements that all parties report regularly on their emissions and implementation efforts and undergo international review.

The agreement and a companion decision by parties were the key outcomes of the conference, known as the 21st session of the UNFCCC Conference of the Parties (COP) 21. Together, the Paris Agreement and the accompanying COP decision:

- Reaffirm the goal of limiting global temperature increase well below 2 degrees Celsius, while urging efforts to limit the increase to 1.5 degrees;
- Establish binding commitments by all parties to make "nationally determined contributions" (NDCs), and to pursue domestic measures aimed at achieving them;

- Commit all countries to report regularly on their emissions and "progress made in implementing and achieving" their NDCs, and to undergo international review;
- Commit all countries to submit new NDCs every five years, with the clear expectation that they will "represent a progression" beyond previous ones;
- Reaffirm the binding obligations of developed countries under the UNFCCC to support the efforts of developing countries, while for the first time encouraging voluntary contributions by developing countries too;
- Extend the current goal of mobilizing $100 billion a year in support by 2020 through 2025, with a new, higher goal to be set for the period after 2025;
- Extend a mechanism to address "loss and damage" resulting from climate change, which explicitly will not "involve or provide a basis for any liability or compensation;"
- Require parties engaging in international emissions trading to avoid "double counting;" and
- Call for a new mechanism, similar to the Clean Development Mechanism under the Kyoto Protocol, enabling emission reductions in one country to be counted toward another country's NDC (C2ES 2015a) (31).

On June 2, 2017 President Donald Trump announced his intention to withdraw from the Paris Agreement. It should be noted that under the terms of the agreement, the United Sates cannot formally announce its resignation until November 4, 2019. Subsequently, withdrawal would be effective one year after notification in 2020.

NATIONAL

Prior to the last decade, there have been no concrete federal regulations of GHGs or major planning for climate change adaptation. The following are actions regarding the federal government, GHGs, and fuel efficiency.

GHG Endangerment. In *Massachusetts v. Environmental Protection Agency* 549 U.S. 497 (2007), decided on April 2, 2007, the Supreme Court found that four GHGs, including CO_2, are air pollutants subject to regulation under Section 202(a)(1) of the Clean Air Act (CAA). The Court held that the EPA Administrator must determine whether emissions of GHGs from new motor vehicles cause or contribute to air pollution, which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. On December 7, 2009, the EPA Administrator signed two distinct findings regarding GHGs under section 202(a) of the CAA:

- Endangerment Finding: The Administrator finds that the current and projected concentrations of the six key well-mixed GHGs— CO_2, CH_4, N_2O, HFCs, PFCs, and sulfur hexafluoride—in the atmosphere threaten the public health and welfare of current and future generations.
- Cause or Contribute Finding: The Administrator finds that the combined emissions of these well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution, which threatens public health and welfare.

These findings do not impose requirements on industry or other entities. However, this was a prerequisite for implementing GHG emissions standards for vehicles, as discussed in the section

"Clean Vehicles" below. After a lengthy legal challenge, the U.S. Supreme Court declined to review an Appeals Court ruling that upheld the EPA Administrator's findings (32).

Clean Vehicles. Congress first passed the Corporate Average Fuel Economy law in 1975 to increase the fuel economy of cars and light duty trucks. The law has become more stringent over time. On May 19, 2009, President Obama put in motion a new national policy to increase fuel economy for all new cars and trucks sold in the U.S. On April 1, 2010, the EPA and the Department of Transportation's National Highway Traffic Safety Administration (NHTSA) announced a joint final rule establishing a national program that would reduce GHG emissions and improve fuel economy for new cars and trucks sold in the U.S.

The first phase of the national program applies to passenger cars, light-duty trucks, and medium-duty (MD) passenger vehicles, covering model years 2012 through 2016. They require these vehicles to meet an estimated combined average emissions level of 250 grams of CO_2 per mile, equivalent to 35.5 miles per gallon (mpg) if the automobile industry were to meet this CO_2 level solely through fuel economy improvements. Together, these standards would cut CO_2 emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012–2016). The EPA and the NHTSA issued final rules on a second-phase joint rulemaking establishing national standards for light-duty vehicles for model years 2017 through 2025 in August 2012 (EPA 2012c). The new standards for model years 2017 through 2025 apply to passenger cars, light-duty trucks, and MD passenger vehicles. The final standards are projected to result in an average industry fleetwide level of 163 grams/mile of CO_2 in model year 2025, which is equivalent to 54.5 mpg if achieved exclusively through fuel economy improvements.

The EPA and the U.S. Department of Transportation issued final rules for the first national standards to reduce GHG emissions and improve fuel efficiency of heavy-duty (HD) trucks and buses on September 15, 2011, effective November 14, 2011. For combination tractors, the agencies are proposing engine and vehicle standards that begin in the 2014 model year and achieve up to a 20 percent reduction in CO_2 emissions and fuel consumption by the 2018 model year. For HD pickup trucks and vans, the agencies are proposing separate gasoline and diesel truck standards, which phase in starting in the 2014 model year and achieve up to a 10-percent reduction for gasoline vehicles and a 15 percent reduction for diesel vehicles by the 2018 model year (12 and 17 percent respectively if accounting for air conditioning leakage). Lastly, for vocational vehicles, the engine and vehicle standards would achieve up to a 10 percent reduction in fuel consumption and CO_2 emissions from the 2014 to 2018 model years.

On April 2, 2018, the EPA signed the Mid-term Evaluation Final Determination, which finds that the model year 2022-2025 GHG standards are not appropriate and should be revised (33). This Final Determination serves to initiate a notice to further consider appropriate standards for model year 2022-2025 light-duty vehicles. On August 24, 2018, the EPA and NHTSA published a proposal to freeze the model year 2020 standards through model year 2026 and to revoke California's waiver under the CAA to establish more stringent standards (34).

Mandatory Reporting of GHGs. The Consolidated Appropriations Act of 2008, passed in December 2007, requires the establishment of mandatory GHG reporting requirements. On

September 22, 2009, the EPA issued the Final Mandatory Reporting of GHGs Rule, which became effective January 1, 2010. The rule requires reporting of GHG emissions from large sources and suppliers in the U.S. and is intended to collect accurate and timely emissions data to inform future policy decisions. Under the rule, suppliers of fossil fuels or industrial GHGs, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons per year (MT/yr) or more of GHG emissions are required to submit annual reports to the EPA.

New Source Review. The EPA issued a final rule on May 13, 2010, that establishes thresholds for GHGs that define when permits under the New Source Review Prevention of Significant Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities. This final rule "tailors" the requirements of these CAA permitting programs to limit which facilities will be required to obtain Prevention of Significant Deterioration and Title V permits. In the preamble to the revisions to the Federal Code of Regulations, the EPA states:

> *"This rulemaking is necessary because without it the Prevention of Significant Deterioration and Title V requirements would apply, as of January 2, 2011, at the 100 or 250 tons per year levels provided under the Clean Air Act, greatly increasing the number of required permits, imposing undue costs on small sources, overwhelming the resources of permitting authorities, and severely impairing the functioning of the programs. EPA is relieving these resource burdens by phasing in the applicability of these programs to GHG sources, starting with the largest GHG emitters. This rule establishes two initial steps of the phase-in. The rule also commits the agency to take certain actions on future steps addressing smaller sources but excludes certain smaller sources from Prevention of Significant Deterioration and Title V permitting for GHG emissions until at least April 30, 2016."*

The EPA estimates that facilities responsible for nearly 70 percent of the national GHG emissions from stationary sources will be subject to permitting requirements under this rule. This includes the nation's largest GHG emitters—power plants, refineries, and cement production facilities.

Standards of Performance for GHG Emissions for New Stationary Sources: Electric Utility Generating Units. As required by a settlement agreement, the EPA proposed new performance standards for emissions of CO_2 for new, affected, fossil fuel-fired electric utility generating units on March 27, 2012. New sources greater than 25 megawatts would be required to meet an output-based standard of 1,000 pounds of CO_2 per megawatt-hour, based on the performance of widely used natural gas combined cycle technology. It should be noted that on February 9, 2016 the U.S. Supreme Court issued a stay of this regulation pending litigation. Additionally, the current EPA Administrator has also signed a measure to repeal the Clean Power Plan, including the CO_2 standards.

Cap-and-Trade. Cap-and-trade refers to a policy tool where emissions are limited to a certain amount and can be traded or provides flexibility on how the emitter can comply. Successful examples in the U.S. include the Acid Rain Program and the Nitrous Oxide (NO_X) Budget Trading Program and Clean Air Interstate Rule in the northeast. There is no federal GHG cap-and-trade

program currently; however, some states have joined to create initiatives to provide a mechanism for cap-and-trade.

The Regional GHG Initiative is an effort to reduce GHGs among the states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont. Each state caps CO_2 emissions from power plants, auctions CO_2 emission allowances, and invests the proceeds in strategic energy programs that further reduce emissions, save consumers money, create jobs, and build a clean energy economy. The Initiative began in 2008.

The Western Climate Initiative partner jurisdictions have developed a comprehensive initiative to reduce regional GHG emissions to 15 percent below 2005 levels by 2020. The partners were originally California, British Columbia, Manitoba, Ontario, and Quebec. However, Manitoba and Ontario are not currently participating. California linked with Quebec's cap-and-trade system January 1, 2014, and joint offset auctions took place in 2015 (C2ES 2015).

SmartWay Program. The SmartWay Program is a public-private initiative between the EPA, large and small trucking companies, rail carriers, logistics companies, commercial manufacturers, retailers, and other federal and state agencies. Its purpose is to improve fuel efficiency and the environmental performance (reduction of both GHG emissions and air pollution) of the goods movement supply chains. SmartWay is comprised of four components (EPA 2014):

1. SmartWay Transport Partnership: A partnership in which freight carriers and shippers commit to benchmark operations, track fuel consumption, and improve performance annually.
2. SmartWay Technology Program: A testing, verification, and designation program to help freight companies identify equipment, technologies, and strategies that save fuel and lower emissions.
3. SmartWay Vehicles: A program that ranks light-duty cars and small trucks and identifies superior environmental performers with the SmartWay logo.
4. SmartWay International Interests: Guidance and resources for countries seeking to develop freight sustainability programs modeled after SmartWay.

SmartWay effectively refers to requirements geared towards reducing fuel consumption. Most large trucking fleets driving newer vehicles are compliant with SmartWay design requirements. Moreover, over time, all HD trucks will have to comply with the CARB GHG Regulation that is designed with the SmartWay Program in mind, to reduce GHG emissions by making them more fuel-efficient. For instance, in 2015, 53 foot or longer dry vans or refrigerated trailers equipped with a combination of SmartWay-verified low-rolling resistance tires and SmartWay-verified aerodynamic devices would obtain a total of 10 percent or more fuel savings over traditional trailers.

Through the SmartWay Technology Program, the EPA has evaluated the fuel saving benefits of various devices through grants, cooperative agreements, emissions and fuel economy testing, demonstration projects and technical literature review. As a result, the EPA has determined the following types of technologies provide fuel saving and/or emission reducing benefits when used properly in their designed applications, and has verified certain products:

- Idle reduction technologies – less idling of the engine when it is not needed would reduce fuel consumption.

- Aerodynamic technologies minimize drag and improve airflow over the entire tractor-trailer vehicle. Aerodynamic technologies include gap fairings that reduce turbulence between the tractor and trailer, side skirts that minimize wind under the trailer, and rear fairings that reduce turbulence and pressure drop at the rear of the trailer.
- Low rolling resistance tires can roll longer without slowing down, thereby reducing the amount of fuel used. Rolling resistance (or rolling friction or rolling drag) is the force resisting the motion when a tire rolls on a surface. The wheel will eventually slow down because of this resistance.
- Retrofit technologies include things such as diesel particulate filters, emissions upgrades (to a higher tier), etc., which would reduce emissions.
- Federal excise tax exemptions.

CALIFORNIA

Legislative Actions to Reduce GHGs

The State of California legislature has enacted a series of bills that constitute the most aggressive program to reduce GHGs of any state in the nation. Some legislation such as the landmark AB 32 was specifically enacted to address GHG emissions. Other legislation such as Title 24 and Title 20 energy standards were originally adopted for other purposes such as energy and water conservation, but also provide GHG reductions. This section describes the major provisions of the legislation.

Global Warming Solutions Act of 2006 (AB 32). The California State Legislature enacted AB 32, which requires that GHGs emitted in California be reduced to 1990 levels by the year 2020. "GHGs" as defined under AB 32 include CO_2, CH_4, N_2O, HFCs, PFCs, and sulfur hexafluoride. Since AB 32 was enacted, a seventh chemical, nitrogen trifluoride, has also been added to the list of GHGs. The CARB is the state agency charged with monitoring and regulating sources of GHGs. AB 32 states the following:

> *"Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems."*

CARB approved the 1990 GHG emissions level of 427 $MMTCO_2e$ on December 6, 2007 (CARB 2007). Therefore, emissions generated in California in 2020 are required to be equal to or less than 427 $MMTCO_2e$. Emissions in 2020 in a "business as usual" (BAU) scenario were estimated to be 596 $MMTCO_2e$, which do not account for reductions from AB 32 regulations (CARB 2008). At that level, a 28.4 percent reduction was required to achieve the 427 $MMTCO_2e$ 1990 inventory. In October 2010, CARB prepared an updated 2020 forecast to account for the recession and slower forecasted growth. The forecasted inventory without the benefits of adopted regulation

is now estimated at 545 $MMTCO_2e$. Therefore, under the updated forecast, a 21.7 percent reduction from BAU is required to achieve 1990 levels (CARB 2010).

Progress in Achieving AB 32 Targets and Remaining Reductions Required

The State has made steady progress in implementing AB 32 and achieving targets included in Executive Order S-3-05. The progress is shown in updated emission inventories prepared by CARB for 2000 through 2012 (CARB 2014a). The State has achieved the Executive Order S-3-05 target for 2010 of reducing GHG emissions to 2000 levels. As shown below, the 2010 emission inventory achieved this target.

- 1990: 427 $MMTCO_2e$ (AB 32 2020 target)
- 2000: 463 $MMTCO_2e$ (an average 8 percent reduction needed to achieve 1990 base)
- 2010: 450 $MMTCO_2e$ (an average 5 percent reduction needed to achieve 1990 base)

CARB has also made substantial progress in achieving its goal of achieving 1990 emissions levels by 2020. As described earlier in this section, CARB revised the 2020 BAU inventory forecast to account for new lower growth projections, which resulted in a new lower reduction from BAU to achieve the 1990 base. The previous reduction from 2020 BAU needed to achieve 1990 levels was 28.4 percent and the latest reduction from 2020 BAU is 21.7 percent.

- 2020: 545 $MMTCO_2e$ BAU (an average 21.7 percent reduction from BAU needed to achieve 1990 base)

California Global Warming Solutions Act of 2006 (SB 32). On September 8, 2016, Governor Jerry Brown signed the Senate Bill (SB) 32 and its companion bill, Assembly Bill (AB) 197. SB 32 requires the state to reduce statewide GHG emissions to 40 percent below 1990 levels by 2030, a reduction target that was first introduced in Executive Order B-30-15. The new legislation builds upon the AB 32 goal of 1990 levels by 2020 and provides an intermediate goal to achieving S-3-05, which sets a statewide GHG reduction target of 80 percent below 1990 levels by 2050. AB 197 creates a legislative committee to oversee regulators to ensure that CARB not only responds to the Governor, but also the Legislature (11).

CARB Scoping Plan. CARB's Climate Change Scoping Plan ("Scoping Plan") contains measures designed to reduce the State's emissions to 1990 levels by the year 2020 to comply with AB 32 (CARB 2008). The Scoping Plan identifies recommended measures for multiple GHG emission sectors and the associated emission reductions needed to achieve the year 2020 emissions target—each sector has a different emission reduction target. Most of the measures target the transportation and electricity sectors. As stated in the Scoping Plan, the key elements of the strategy for achieving the 2020 GHG target include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewables energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;

- Establishing targets for transportation related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, goods movement measures, and the LCFS; and
- Creating targeted fees, including a public goods charge on water use, fees on high GWP gases, and a fee to fund the administrative costs of the State's long-term commitment to AB 32 implementation.

The CARB approved the First Update to the Scoping Plan ("Update") on May 22, 2014. The Update identifies the next steps for California's climate change strategy. The Update shows how California continues on its path to meet the near-term 2020 GHG limit, but also sets a path toward long-term, deep GHG emission reductions. The report establishes a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050. The Update identifies progress made to meet the near-term objectives of AB 32 and defines California's climate change priorities and activities for the next several years. The Update does not set new targets for the State but describes a path that would achieve the long term 2050 goal of Executive Order S-05-03 for emissions to decline to 80 percent below 1990 levels by 2050 (CARB 2014).

Forecasting the amount of emissions that would occur in 2020 if no actions are taken was necessary to assess the amount of reductions California must achieve to return to the 1990 emissions level by 2020 as required by AB 32. The no-action scenario is known as "business-as-usual" or BAU. The CARB originally defined the BAU scenario as emissions in the absence of any GHG emission reduction measures discussed in the Scoping Plan.

As part of CEQA compliance for the Scoping Plan, CARB prepared a Supplemental Functional Equivalent Document (FED) in 2011. The FED included an updated 2020 BAU emissions inventory projection based on current economic forecasts (i.e., as influenced by the economic downturn) and emission reduction measures already in place, replacing its prior 2020 BAU emissions inventory. CARB staff derived the updated emissions estimates by projecting emissions growth, by sector, from the state's average emissions from 2006–2008. The new BAU estimate includes emission reductions for the million-solar-roofs program, the AB 1493 (Pavley I) motor vehicle GHG emission standards, and the LCFS. In addition, CARB factored into the 2020 BAU inventory emissions reductions associated with 33 percent Renewables Portfolio Standard (RPS) for electricity generation. The updated BAU estimate of 507 $MMTCO_2e$ by 2020 requires a reduction of 80 $MMTCO_2e$, or a 16 percent reduction below the estimated BAU levels to return to 1990 levels (i.e., 427 $MMTCO_2e$) by 2020.

In order to provide a BAU reduction that is consistent with the original definition in the Scoping Plan and with threshold definitions used in thresholds adopted by lead agencies for CEQA purposes and many CAPs, the updated inventory without regulations was also included in the Supplemental FED. The CARB 2020 BAU projection for GHG emissions in California was originally estimated to be 596 $MMTCO_2e$. The updated CARB 2020 BAU projection in the Supplemental FED is 545 $MMTCO_2e$. Considering the updated BAU estimate of 545 $MMTCO_2e$ by 2020, CARB estimates a 21.7 percent reduction below the estimated statewide BAU levels is necessary to

return to 1990 emission levels (i.e., 427 $MMTCO_2e$) by 2020, instead of the approximate 28.4 percent BAU reduction previously reported under the original Climate Change Scoping Plan (2008).

2017 Climate Change Scoping Plan Update

In November 2017, CARB released the final 2017 Scoping Plan Update, which identifies the State's post-2020 reduction strategy. The 2017 Scoping Plan Update reflects the 2030 target of a 40 percent reduction below 1990 levels, set by Executive Order B-30-15 and codified by SB 32. Key programs that the proposed Second Update builds upon include the Cap-and-Trade Regulation, the LCFS, and much cleaner cars, trucks and freight movement, utilizing cleaner, renewable energy, and strategies to reduce CH_4 emissions from agricultural and other wastes.

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.

California's climate strategy will require contributions from all sectors of the economy, including the land base, and will include enhanced focus on zero- and near-zero-emission (ZE/NZE) vehicle technologies; continued investment in renewables, including solar roofs, wind, and other distributed generation; greater use of low carbon fuels; integrated land conservation and development strategies; coordinated efforts to reduce emissions of short-lived climate pollutants (CH_4, 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 direct GHG reductions at refineries will further support air quality co-benefits in neighborhoods, including in disadvantaged communities historically located adjacent to these large stationary sources, as well as efforts with California's local air pollution control and air quality management districts (air districts) to tighten emission 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 ZEV buses and trucks.
- LCFS, with an increased stringency (18 percent by 2030).
- Implementing SB 350, which expands the RPS to 50 percent RPS and doubles energy efficiency savings by 2030.
- California Sustainable Freight Action Plan, which improves freight system efficiency, utilizes near-zero emissions technology, and deployment of zero-emission vehicles (ZEV) trucks.
- Implementing the proposed Short-Lived Climate Pollutant Strategy (SLPS), which focuses on reducing CH_4 and hydroflurocarbon emissions by 40 percent and anthropogenic black carbon emissions by 50 percent by year 2030.
- Continued implementation of SB 375.
- Post-2020 Cap-and-Trade Program that includes declining caps.
- 20 percent reduction in GHG emissions from refineries by 2030.
- Development of a Natural and Working Lands Action Plan to secure California's land base as a net carbon sink.

Note, however, that the 2017 Scoping Plan acknowledges that:

> *"[a]chieving net zero increases in GHG emissions, resulting in no contribution to GHG impacts, may not be feasible or appropriate for every project, however, and the inability of a project to mitigate its GHG emissions to net zero does not imply the project results in a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA."*

In addition to the statewide strategies listed above, the 2017 Scoping Plan also identifies local governments as essential partners in achieving the State's long-term GHG reduction goals and identifies local actions to reduce GHG emissions. As part of the recommended actions, CARB recommends that local governments achieve a community-wide goal to achieve emissions of no more than 6 metric tons of CO_2e ($MTCO_2e$) or less per capita by 2030 and 2 $MTCO_2e$ or less per capita by 2050. For CEQA projects, CARB states that lead agencies may develop evidenced-based bright-line numeric thresholds—consistent with the Scoping Plan and the State's long-term GHG goals—and projects with emissions over that amount may be required to incorporate on-site design features and mitigation measures that avoid or minimize project emissions to the degree feasible; or, a performance-based metric using a CAP or other plan to reduce GHG emissions is appropriate.

According to research conducted by the Lawrence Berkeley National Laboratory (LBNL) and supported by CARB, California, under its existing and proposed GHG reduction policies, is on track to meet the 2020 reduction targets under AB 32 and could achieve the 2030 goals under SB 32. The research utilized a new, validated model known as the California LBNL GHG Analysis of Policies Spreadsheet (CALGAPS), which simulates GHG and criteria pollutant emissions in California from 2010 to 2050 in accordance to existing and future GHG-reducing policies. The CALGAPS model showed that GHG emissions through 2020 could range from 317 to 415 $MTCO_2e$ per year, "indicating that existing state policies will likely allow California to meet its target [of 2020 levels under AB 32]." CALGAPS also showed that by 2030, emissions could range from 211 to 428 $MTCO_2e$ per year, indicating that "even if all modeled policies are not implemented, reductions could be sufficient to reduce emissions 40 percent below the 1990 level [of SB 32]." CALGAPS analyzed emissions through 2050 even though it did not generally account for policies that might be put in place after 2030. Although the research indicated that the emissions would not meet the State's 80 percent reduction goal by 2050, various combinations of policies could allow California's cumulative emissions to remain very low through 2050 (35) (36).

Cap-and-Trade Program. The Scoping Plan identifies a Cap-and-Trade Program as one of the key strategies for California to reduce GHG emissions. According to CARB, a cap-and-trade program will help put California on the path to meet its goal of reducing GHG emissions to 1990 levels by the year 2020 and ultimately achieving an 80 percent reduction from 1990 levels by 2050. Under cap-and-trade, an overall limit on GHG emissions from capped sectors is established, and facilities subject to the cap will be able to trade permits to emit GHGs within the overall limit.

CARB adopted a California Cap-and-Trade Program pursuant to its authority under AB 32. See Title 17 of the California Code of Regulations (CCR) §§ 95800 to 96023). The Cap-and-Trade Program is designed to reduce GHG emissions from major sources (deemed "covered entities")

by setting a firm cap on statewide GHG emissions and employing market mechanisms to achieve AB 32's emission-reduction mandate of returning to 1990 levels of emissions by 2020. The statewide cap for GHG emissions from the capped sectors (e.g., electricity generation, petroleum refining, and cement production) commenced in 2013 and will decline over time, achieving GHG emission reductions throughout the program's duration.

Covered entities that emit more than 25.000 $MTCO_2e$ per year must comply with the Cap-and-Trade Program. Triggering of the 25.000 $MTCO_2e$ per year "inclusion threshold" is measured against a subset of emissions reported and verified under the California Regulation for the Mandatory Reporting of GHG Emissions (Mandatory Reporting Rule or "MRR").

Under the Cap-and-Trade Program, CARB issues allowances equal to the total amount of allowable emissions over a given compliance period and distributes these to regulated entities. Covered entities are allocated free allowances in whole or part (if eligible), and may buy allowances at auction, purchase allowances from others, or purchase offset credits. Each covered entity with a compliance obligation is required to surrender "compliance instruments" (30) for each $MTCO_2e$ of GHG they emit. There also are requirements to surrender compliance instruments covering 30 percent of the prior year's compliance obligation by November of each year. For example, in November 2014, a covered entity was required to submit compliance instruments to cover 30 percent of its 2013 GHG emissions.

The Cap-and-Trade Program provides a firm cap, ensuring that the 2020 statewide emission limit will not be exceeded. An inherent feature of the Cap-and-Trade program is that it does not guarantee GHG emissions reductions in any discrete location or by any particular source. Rather, GHG emissions reductions are only guaranteed on an accumulative basis. As summarized by CARB in the First Update:

> *"The Cap-and-Trade Regulation gives companies the flexibility to trade allowances with others or take steps to cost-effectively reduce emissions at their own facilities. Companies that emit more have to turn in more allowances or other compliance instruments. Companies that can cut their GHG emissions have to turn in fewer allowances. But as the cap declines, aggregate emissions must be reduced. In other words, a covered entity theoretically could increase its GHG emissions every year and still comply with the Cap-and-Trade Program if there is a reduction in GHG emissions from other covered entities. Such a focus on aggregate GHG emissions is considered appropriate because climate change is a global phenomenon, and the effects of GHG emissions are considered cumulative (CARB 2014)."*

The Cap-and-Trade Program works with other direct regulatory measures and provides an economic incentive to reduce emissions. If California's direct regulatory measures reduce GHG emissions more than expected, then the Cap-and-Trade Program will be responsible for relatively fewer emissions reductions. If California's direct regulatory measures reduce GHG emissions less than expected, then the Cap-and-Trade Program will be responsible for relatively more emissions reductions. Thus, the Cap-and-Trade Program assures that California will meet its 2020 GHG emissions reduction mandate:

> *"The Cap-and-Trade Program establishes an overall limit on GHG emissions from most of the California economy—the "capped sectors." Within the capped sectors, some of the reductions are being accomplished through direct regulations, such as improved building and appliance efficiency standards, the [Low Carbon Fuel Standard] LCFS, and the 33 percent [Renewables Portfolio Standard] RPS. Whatever additional reductions are needed to bring emissions within the cap is accomplished through price incentives posed by emissions allowance prices. Together, direct regulation and price incentives assure that emissions are brought down cost-effectively to the level of the overall cap. The Cap-and-Trade Regulation provides assurance that California's 2020 limit will be met because the regulation sets a firm limit on 85 percent of California's GHG emissions. In sum, the Cap-and-Trade Program will achieve aggregate, rather than site specific or project-level, GHG emissions reductions. Also, due to the regulatory architecture adopted by CARB in AB 32, the reductions attributed to the Cap-and-Trade Program can change over time depending on the State's emissions forecasts and the effectiveness of direct regulatory measures (CARB 2014)."*

As of January 1, 2015, the Cap-and-Trade Program covered approximately 85 percent of California's GHG emissions. The Cap-and-Trade Program covers the GHG emissions associated with electricity consumed in California, whether generated in-state or imported. Accordingly, GHG emissions associated with CEQA projects' electricity usage are covered by the Cap-and-Trade Program.The Cap-and-Trade Program also covers fuel suppliers (natural gas and propane fuel providers and transportation fuel providers) to address emissions from such fuels and from combustion of other fossil fuels not directly covered at large sources in the Program's first compliance period. While the Cap-and-Trade Program technically covered fuel suppliers as early as 2012, they did not have a compliance obligation (i.e., they were not fully regulated) until 2015. The Cap-and-Trade Program covers the GHG emissions associated with the combustion of transportation fuels in California, whether refined in-state or imported. The point of regulation for transportation fuels is when they are "supplied" (i.e., delivered into commerce). Accordingly, as with stationary source GHG emissions and GHG emissions attributable to electricity use, virtually all, if not all, of GHG emissions from CEQA projects associated with VMT are covered by the Cap-and-Trade Program (CARB 2015) (37). In addition, the Scoping Plan differentiates between "capped" and "uncapped" strategies. "Capped" strategies are subject to the proposed cap-and-trade program. The Scoping Plan states that the inclusion of these emissions within the Program will help ensure that the year 2020 emission targets are met despite some degree of uncertainty in the emission reduction estimates for any individual measure. Implementation of the capped strategies is calculated to achieve a sufficient amount of reductions by 2020 to achieve the emission target contained in AB 32. "Uncapped" strategies that will not be subject to the cap-and-trade emissions caps and requirements are provided as a margin of safety by accounting for additional GHG emission reductions.[3]

[3] On March 17, 2011, the San Francisco Superior Court issued a final decision in *Association of Irritated Residents v. California Air Resources Board* (Case No. CPF-09-509562). While the Court upheld the validity of the CARB Scoping Plan for the implementation of AB 32, the Court enjoined CARB from further rulemaking under AB 32 until CARB amends its CEQA environmental review of the Scoping Plan to address the

Sustainable Communities and Climate Protection Act of 2008 (SB 375). Passing the Senate on August 30, 2008, Senate Bill (SB) 375 was signed by the Governor on September 30, 2008. According to SB 375, the transportation sector is the largest contributor of GHG emissions, which emits over 40 percent of the total GHG emissions in California. SB 375 states, "Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32." SB 375 does the following: it (1) requires metropolitan planning organizations to include sustainable community strategies in their regional transportation plans for reducing GHG emissions, (2) aligns planning for transportation and housing, and (3) creates specified incentives for the implementation of the strategies.

Concerning CEQA, SB 375, as codified in Public Resources Code Section 21159.28, states that CEQA findings for certain projects are not required to reference, describe, or discuss (1) growth inducing impacts, or (2) any project-specific or cumulative impacts from cars and light-duty truck trips generated by the project on global warming or the regional transportation network, if the project:

1. Is in an area with an approved sustainable communities strategy or an alternative planning strategy that the CARB accepts as achieving the GHG emission reduction targets.
2. Is consistent with that strategy (in designation, density, building intensity, and applicable policies).
3. Incorporates the mitigation measures required by an applicable prior environmental document.

Pavley Regulations and Fuel Efficiency Standards (AB 1493). California AB 1493, enacted on July 22, 2002, required CARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. Implementation of the regulation was delayed by lawsuits filed by automakers and by the EPA's denial of an implementation waiver. The EPA subsequently granted the requested waiver in 2009, which was upheld by the U.S. District Court for the District of Columbia in 2011.

The standards phase in during the 2009 through 2016 model years. When fully phased in, the near-term (2009–2012) standards will result in about a 22 percent reduction compared with the 2002 fleet, and the mid-term (2013–2016) standards will result in about a 30 percent reduction. Several technologies stand out as providing significant reductions in emissions at favorable costs. These include discrete variable valve lift or camless valve actuation to optimize valve operation rather than relying on fixed valve timing and lift as has historically been done; turbocharging to boost power and allow for engine downsizing; improved multi-speed transmissions; and improved air conditioning systems that operate optimally, leak less, and/or use an alternative refrigerant.

The second phase of the implementation for the Pavley bill was incorporated into Amendments to the Low-Emission Vehicle Program referred to as LEV III or the Advanced Clean Cars program. The Advanced Clean Car program combines the control of smog-causing pollutants and GHG

flaws identified by the Court. On May 23, 2011, CARB filed an appeal. On June 24, 2011, the Court of Appeal granted CARB's petition staying the trail court's order pending consideration of the appeal. In the interest of informed decision-making, on June 13, 2011, CARB released the expanded alternatives analysis in a draft Supplement to the AB 32 Scoping Plan Functional Equivalent Document. The CARB Board approved the Scoping Plan and the CEQA document on August 24, 2011.

emissions into a single coordinated package of requirements for model years 2017 through 2025. The regulation will reduce GHGs from new cars by 34 percent from 2016 levels by 2025. The new rules will clean up gasoline and diesel-powered cars, and deliver increasing numbers of zero-emission technologies, such as full battery electric cars, newly emerging plug-in hybrid electric vehicles and hydrogen fuel cell cars. The package will also ensure adequate fueling infrastructure is available for the increasing numbers of hydrogen fuel cell vehicles planned for deployment in California.

Clean Energy and Pollution Reduction Act of 2015 (SB 350). In October 2015, the legislature approved, and the Governor signed SB 350, which reaffirms California's commitment to reducing its GHG emissions and addressing climate change. Key provisions include an increase in the RPS, higher energy efficiency requirements for buildings, initial strategies towards a regional electricity grid, and improved infrastructure for electric vehicle charging stations. Provisions for a 50 percent reduction in the use of petroleum statewide were removed from the Bill because of opposition and concern that it would prevent the Bill's passage. Specifically, SB 350 requires the following to reduce statewide GHG emissions:

- Increase the amount of electricity procured from renewable energy sources from 33 percent to 50 percent by 2030, with interim targets of 40 percent by 2024, and 25 percent by 2027.
- Double the energy efficiency in existing buildings by 2030. This target will be achieved through the California Public Utility Commission (CPUC), the California Energy Commission (CEC), and local publicly owned utilities.
- Reorganize the Independent System Operator to develop more regional electrify transmission markets and to improve accessibility in these markets, which will facilitate the growth of renewable energy markets in the western United States (California Leginfo 2015).

EXECUTIVE ORDERS RELATED TO GHG EMISSIONS

California's Executive Branch has taken several actions to reduce GHGs through the use of Executive Orders. Although not regulatory, they set the tone for the state and guide the actions of state agencies.

Executive Order B-55-18 and SB 100. Executive Order B-55-18 and SB 100. SB 100 and Executive Order B-55-18 were signed by Governor Brown on September 10, 2018. Under the existing RPS, 25 percent of retail sales are required to be from renewable sources by December 31, 2016, 33 percent by December 31, 2020, 40 percent by December 31, 2024, 45 percent by December 31, 2027, and 50 percent by December 31, 2030. SB 100 raises California's RPS requirement to 50 percent renewable resources target by December 31, 2026, and to achieve a 60 percent target by December 31, 2030. SB 100 also requires that retail sellers and local publicly owned electric utilities procure a minimum quantity of electricity products from eligible renewable energy resources so that the total kilowatt hours of those products sold to their retail end-use customers achieve 44 percent of retail sales by December 31, 2024, 52 percent by December 31, 2027, and 60 percent by December 31, 2030. In addition to targets under AB 32 and SB 32, Executive Order B-55-18 establishes a carbon neutrality goal for the state of California by 2045; and sets a goal to maintain net negative emissions thereafter. The Executive Order directs the California Natural Resources Agency (CNRA), California Environmental Protection Agency (CalEPA), the Department

of Food and Agriculture (CDFA), and CARB to include sequestration targets in the Natural and Working Lands Climate Change Implementation Plan consistent with the carbon neutrality goal.

Executive Order S-3-05. Former California Governor Arnold Schwarzenegger announced on June 1, 2005, through Executive Order S-3-05, the following reduction targets for GHG emissions:

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that will stabilize the climate. The 2020 goal was established to be a mid-term target. Because this is an executive order, the goals are not legally enforceable for local governments or the private sector.

Executive Order S-01-07. The Governor signed Executive Order S-01-07 on January 18, 2007. The order mandates that a statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. In particular, the Executive Order established a LCFS and directed the Secretary for Environmental Protection to coordinate the actions of the CEC, the CARB, the University of California, and other agencies to develop and propose protocols for measuring the "life-cycle carbon intensity" of transportation fuels. This analysis supporting development of the protocols was included in the State Implementation Plan for alternative fuels (State Alternative Fuels Plan adopted by CEC on December 24, 2007) and was submitted to CARB for consideration as an "early action" item under AB 32. The CARB adopted the LCFS on April 23, 2009.

The LCFS was challenged in the U.S. District Court in Fresno in 2011. The court's ruling issued on December 29, 2011, included a preliminary injunction against CARB's implementation of the rule. The Ninth Circuit Court of Appeals stayed the injunction on April 23, 2012, pending final ruling on appeal, allowing CARB to continue to implement and enforce the regulation. The Ninth Circuit Court's decision, filed September 18, 2013, vacated the preliminary injunction. In essence, the court held that LCFS adopted by CARB were not in conflict with federal law. On August 8, 2013, the Fifth District Court of Appeal (California) ruled CARB failed to comply with CEQA and the Administrative Procedure Act (APA) when adopting regulations for LCFS. In a partially published opinion, the Court of Appeal reversed the trial court's judgment and directed issuance of a writ of mandate setting aside Resolution 09-31 and two executive orders of CARB approving LCFS regulations promulgated to reduce GHG emissions. However, the court tailored its remedy to protect the public interest by allowing the LCFS regulations to remain operative while CARB complies with the procedural requirements it failed to satisfy.

To address the Court ruling, CARB was required to bring a new LCFS regulation to the Board for consideration in February 2015. The proposed LCFS regulation was required to contain revisions to the 2010 LCFS as well as new provisions designed to foster investments in the production of the low-carbon intensity fuels, offer additional flexibility to regulated parties, update critical technical information, simplify and streamline program operations, and enhance enforcement.

On November 16, 2015 the Office of Administrative Law (OAL) approved the Final Rulemaking Package. The new LCFS regulation became effective on January 1, 2016.

Executive Order S-13-08. Executive Order S-13-08 states that "climate change in California during the next century is expected to shift precipitation patterns, accelerate sea level rise and increase temperatures, thereby posing a serious threat to California's economy, to the health and welfare of its population and to its natural resources." Pursuant to the requirements in the Order, the 2009 California Climate Adaptation Strategy (CNRA 2009) was adopted, which is the ". . . first statewide, multi-sector, region-specific, and information-based climate change adaptation strategy in the United States." Objectives include analyzing risks of climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

Executive Order B-30-15. On April 29, 2015, Governor Edmund G. Brown Jr. issued an executive order to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. The Governor's executive order aligns California's GHG reduction targets with those of leading international governments ahead of the United Nations Climate Change Conference in Paris late 2015. The Order sets a new interim statewide GHG emission reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030 in order to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050 and directs CARB to update the Climate Change Scoping Plan to express the 2030 target in terms of $MMTCO_2e$. The Order also requires the state's climate adaptation plan to be updated every three years, and for the State to continue its climate change research program, among other provisions. As with Executive Order S-3-05, this Order is not legally enforceable for local governments and the private sector. Legislation that would update AB 32 to make post 2020 targets and requirements a mandate is in process in the State Legislature.

CALIFORNIA REGULATIONS AND BUILDING CODES

California has a long history of adopting regulations to improve energy efficiency in new and remodeled buildings. These regulations have kept California's energy consumption relatively flat even with rapid population growth.

Appliance Efficiency Standards (CCR, Title 20). CCR, Title 20: Division 2, Chapter 4, Article 4, Sections 1601-1608: Appliance Efficiency Regulations regulates the sale of appliances in California. The Appliance Efficiency Regulations include standards for both federally regulated appliances and non-federally regulated appliances. 23 categories of appliances are included in the scope of these regulations. The standards within these regulations apply to appliances that are sold or offered for sale in California, except those sold wholesale in California for final retail sale outside the state and those designed and sold exclusively for use in recreational vehicles or other mobile equipment (CEC 2012).

Energy Efficiency Standards and California Green Building Standards (CCR, Title 24). CCR Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible

incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The 2019 version of Title 24 was adopted by the CEC and will become effective on January 1, 2020. As such, the analysis herein assumes compliance with the 2019 Title 24 Standards.

The CEC indicates that the 2019 Title 24 standards will require solar photovoltaic systems for new homes, establish requirements for newly constructed healthcare facilities, encourage demand responsive technologies for residential buildings, update indoor and outdoor lighting for nonresidential buildings. The CEC anticipates that single-family homes built with the 2019 standards will use approximately 7 percent less energy compared to the residential homes built under the 2016 standards. Additionally, after implementation of solar photovoltaic systems, homes built under the 2019 standards will about 53 percent less energy than homes built under the 2016 standards. Nonresidential buildings will use approximately 30 percent less energy due to lighting upgrades (38).

CCR, Title 24, Part 11: California Green Building Standards Code (CALGreen) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went in effect on January 1, 2011, and is administered by the California Building Standards Commission (BSC). CALGreen is updated on a regular basis, with the most recent approved update consisting of the 2019 California Green Building Code Standards that will be effective January 1, 2020. Local jurisdictions are permitted to adopt more stringent requirements, as state law provides methods for local enhancements. CALGreen recognizes that many jurisdictions have developed existing construction and demolition ordinances and defers to them as the ruling guidance provided, they establish a minimum 65 percent diversion requirement. The code also provides exemptions for areas not served by construction and demolition recycling infrastructure. The State Building Code provides the minimum standard that buildings must meet in order to be certified for occupancy, which is generally enforced by the local building official. 2019 CALGreen standards are applicable to the Project and require (39):

- Short-term bicycle parking. If the new project or an additional alteration is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5 percent of new visitor motorized vehicle parking spaces being added, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- Long-term bicycle parking. For new buildings with tenant spaces that have 10 or more tenant-occupants, provide secure bicycle parking for 5 percent of the tenant-occupant vehicular parking spaces with a minimum of one bicycle parking facility (5.106.4.1.2).
- Designated parking. In new projects or additions to alterations that add 10 or more vehicular parking spaces, provide designated parking for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table 5.106.5.2 (5.106.5.2).
- Construction waste management. Recycle and/or salvage for reuse a minimum of 65 percent of the nonhazardous construction and demolition waste in accordance with Section 5.408.1.1. 5.405.1.2, or 5.408.1.3; or meet a local construction and demolition waste management ordinance, whichever is more stringent (5.408.1).

- Excavated soil and land clearing debris. 100 percent of trees, stumps, rocks and associated vegetation and soils resulting primarily from land clearing shall be reused or recycled. For a phase project, such material may be stockpiled on site until the storage site is developed (5.408.3).
- Recycling by Occupants. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of non-hazardous materials for recycling, including (at a minimum) paper, corrugated cardboard, glass, plastics, organic waste, and metals or meet a lawfully enacted local recycling ordinance, if more restrictive (5.410.1).
- Water conserving plumbing fixtures and fittings. Plumbing fixtures (water closets and urinals) and fittings (faucets and showerheads) shall comply with the following:
    - Water Closets. The effective flush volume of all water closets shall not exceed 1.28 gallons per flush (5.303.3.1)
    - Urinals. The effective flush volume of wall-mounted urinals shall not exceed 0.125 gallons per flush (5.303.3.2.1). The effective flush volume of floor-mounted or other urinals shall not exceed 0.5 gallons per flush (5.303.3.2.2).
    - Showerheads. Single showerheads shall have a minimum flow rate of not more than 1.8 gallons per minute and 80 psi (5.303.3.3.1). When a shower is served by more than one showerhead, the combine flow rate of all showerheads and/or other shower outlets controlled by a single valve shall not exceed 1.8 gallons per minute at 80 psi (5.303.3.3.2).
    - Faucets and fountains. Nonresidential lavatory faucets shall have a maximum flow rate of note more than 0.5 gallons per minute at 60 psi (5.303.3.4.1). Kitchen faucets shall have a maximum flow rate of not more than 1.8 gallons per minute of 60 psi (5.303.3.4.2). Wash fountains shall have a maximum flow rate of not more than 1.8 gallons per minute (5.303.3.4.3). Metering faucets shall not deliver more than 0.20 gallons per cycle (5.303.3.4.4). Metering faucets for wash fountains shall have a maximum flow rate not more than 0.20 gallons per cycle (5.303.3.4.5).
- Outdoor portable water use in landscaped areas. Nonresidential developments shall comply with a local water efficient landscape ordinance or the current California Department of Water Resources' Model Water Efficient (MWELO), whichever is more stringent (5.304.1).
- Water meters. Separate submeters or metering devices shall be installed for new buildings or additions in excess of 50,000 square feet or for excess consumption where any tenant within a new building or within an addition that is project to consume more than 1,000 gal/day (5.303.1.1 and 5.303.1.2).
- Outdoor water use in rehabilitated landscape projects equal or greater than 2,500 square feet. Rehabilitated landscape projects with an aggregate landscape area equal to or greater than 2,500 square feet requiring a building or landscape permit (5.304.3).
- Commissioning. For new buildings 10,000 square feet and over, building commissioning shall be included in the design and construction processes of the building project to verify that the building systems and components meet the owner's or owner representative's project requirements (5.410.2).

Model Water Efficient Landscape Ordinance. The Model Water Efficient Landscape Ordinance ("Ordinance") was required by AB 1881, the Water Conservation Act. The bill required local agencies to adopt a local landscape ordinance at least as effective in conserving water as the Model Ordinance by January 1, 2010. Reductions in water use of 20 percent consistent with (SBX-

7-7) 2020 mandate are expected upon compliance with the ordinance. Governor Brown's Drought Executive Order of April 1, 2015 (EO B-29-15) directed Department of Water Resources (DWR) to update the Ordinance through expedited regulation. The California Water Commission approved the revised Ordinance on July 15, 2015 effective December 15, 2015. New development projects that include landscape areas of 500 sf or more are subject to the Ordinance. The update requires:

- More efficient irrigation systems;
- Incentives for graywater usage;
- Improvements in on-site stormwater capture;
- Limiting the portion of landscapes that can be planted with high water use plants; and
- Reporting requirements for local agencies.

CARB Refrigerant Management Program. CARB adopted a regulation in 2009 to reduce refrigerant GHG emissions from stationary sources through refrigerant leak detection and monitoring, leak repair, system retirement and retrofitting, reporting and recordkeeping, and proper refrigerant cylinder use, sale, and disposal. The regulation is set forth in sections 95380 to 95398 of Title 17, CCR. The rules implementing the regulation establish a limit on statewide GHG emissions from stationary facilities with refrigeration systems with more than 50 pounds of a high GWP refrigerant. The refrigerant management program is designed to (1) reduce emissions of high-GWP GHG refrigerants from leaky stationary, non-residential refrigeration equipment; (2) reduce emissions from the installation and servicing of refrigeration and air-conditioning appliances using high-GWP refrigerants; and (3) verify GHG emission reductions.

Tractor-Trailer GHG Regulation. The tractors and trailers subject to this regulation must either use EPA SmartWay certified tractors and trailers or retrofit their existing fleet with SmartWay verified technologies. The regulation applies primarily to owners of 53-foot or longer box-type trailers, including both dry-van and refrigerated-van trailers, and owners of the HD tractors that pull them on California highways. These owners are responsible for replacing or retrofitting their affected vehicles with compliant aerodynamic technologies and low rolling resistance tires. Sleeper cab tractors model year 2011 and later must be SmartWay certified. All other tractors must use SmartWay verified low rolling resistance tires. There are also requirements for trailers to have low rolling resistance tires and aerodynamic devices.

Phase I and 2 Heavy-Duty Vehicle GHG Standards. CARB has adopted a new regulation for GHG emissions from HD trucks and engines sold in California. It establishes GHG emission limits on truck and engine manufacturers and harmonizes with the EPA rule for new trucks and engines nationally. Existing HD vehicle regulations in California include engine criteria emission standards, tractor-trailer GHG requirements to implement SmartWay strategies (i.e., the Heavy-Duty Tractor-Trailer Greenhouse Gas Regulation), and in-use fleet retrofit requirements such as the Truck and Bus Regulation. In September 2011, the EPA adopted their new rule for HD trucks and engines. The EPA rule has compliance requirements for new compression and spark ignition engines, as well as trucks from Class 2b through Class 8. Compliance requirements begin with model year (MY) 2014 with stringency levels increasing through MY 2018. The rule organizes

truck compliance into three groupings, which include a) HD pickups and vans; b) vocational vehicles; and c) combination tractors. The EPA rule does not regulate trailers.

CARB staff has worked jointly with the EPA and the NHTSA on the next phase of federal GHG emission standards for MD and HD vehicles, called federal Phase 2. The federal Phase 2 standards were built on the improvements in engine and vehicle efficiency required by the Phase 1 emission standards and represent a significant opportunity to achieve further GHG reductions for 2018 and later model year HD vehicles, including trailers. But as discussed above, the EPA and NHTSA have proposed to roll back GHG and fuel economy standards for cars and light-duty trucks, which suggests a similar rollback of Phase 2 standards for MD and HD vehicles may be pursued.

SB 97 and the CEQA Guidelines Update. Passed in August 2007, SB 97 added Section 21083.05 to the Public Resources Code. The code states "(a) On or before July 1, 2009, the Office of Planning and Research shall prepare, develop, and transmit to the Resources Agency guidelines for the mitigation of GHG emissions or the effects of GHG emissions as required by this division, including, but not limited to, effects associated with transportation or energy consumption. (b) On or before January 1, 2010, the Resources Agency shall certify and adopt guidelines prepared and developed by the Office of Planning and Research pursuant to subdivision (a)." Section 21097 was also added to the Public Resources Code. It provided CEQA protection until January 1, 2010 for transportation projects funded by the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006 or projects funded by the Disaster Preparedness and Flood Prevention Bond Act of 2006, in stating that the failure to analyze adequately the effects of GHGs would not violate CEQA.

On December 28, 2018, the Natural Resources Agency announced the OAL approved the amendments to the CEQA Guidelines for implementing the CEQA. The CEQA Amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in CEQA documents. The CEQA Amendments fit within the existing CEQA framework by amending existing CEQA Guidelines to reference climate change.

Section 1506.4 was amended to state that in determining the significance of a project's GHG emissions, the lead agency should focus its analysis on the reasonably foreseeable incremental contribution of the project's emissions to the effects of climate change. A project's incremental contribution may be cumulatively considerable even if it appears relatively small compared to statewide, national or global emissions. The agency's analysis should consider a timeframe that is appropriate for the project. The agency's analysis also must reasonably reflect evolving scientific knowledge and state regulatory schemes. Additionally, a lead agency may use a model or methodology to estimate GHG emissions resulting from a project. The lead agency has discretion to select the model or methodology it considers most appropriate to enable decision makers to intelligently take into account the project's incremental contribution to climate change. The lead agency must support its selection of a model or methodology with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use (40).

REGIONAL

The project is within the South Coast Air Basin (SCAB), which is under the jurisdiction of the SCAQMD.

South Coast Air Quality Management District

SCAQMD is the agency responsible for air quality planning and regulation in the SCAB. The SCAQMD addresses the impacts to climate change of projects subject to SCAQMD permit as a lead agency if they are the only agency having discretionary approval for the project and acts as a responsible agency when a land use agency must also approve discretionary permits for the project. The SCAQMD acts as an expert commenting agency for impacts to air quality. This expertise carries over to GHG emissions, so the agency helps local land use agencies through the development of models and emission thresholds that can be used to address GHG emissions.

In 2008, SCAQMD formed a Working Group to identify GHG emissions thresholds for land use projects that could be used by local lead agencies in the SCAB. The Working Group developed several different options that are contained in the SCAQMD Draft Guidance Document – Interim CEQA GHG Significance Threshold, that could be applied by lead agencies. The working group has not provided additional guidance since release of the interim guidance in 2008. The SCAQMD Board has not approved the thresholds; however, the Guidance Document provides substantial evidence supporting the approaches to significance of GHG emissions that can be considered by the lead agency in adopting its own threshold. The current interim thresholds consist of the following tiered approach:

- Tier 1 consists of evaluating whether or not the project qualifies for any applicable exemption under CEQA.
- Tier 2 consists of determining whether the project is consistent with a GHG reduction plan. If a project is consistent with a qualifying local GHG reduction plan, it does not have significant GHG emissions.
- Tier 3 consists of screening values, which the lead agency can choose, but must be consistent with all projects within its jurisdiction. A project's construction emissions are averaged over 30 years and are added to the project's operational emissions. If a project's emissions are below one of the following screening thresholds, then the project is less than significant:
    - Residential and Commercial land use: 3,000 $MTCO_2e$ per year
    - Industrial land use: 10,000 $MTCO_2e$ per year
    - Based on land use type: residential: 3,500 $MTCO_2e$ per year; commercial: 1,400 $MTCO_2e$ per year; or mixed use: 3,000 $MTCO_2e$ per year
- Tier 4 has the following options:
    - Option 1: Reduce BAU emissions by a certain percentage; this percentage is currently undefined.
    - Option 2: Early implementation of applicable AB 32 Scoping Plan measures
    - Option 3, 2020 target for service populations (SP), which includes residents and employees: 4.8 $MTCO_2e$/SP/year for projects and 6.6 $MTCO_2e$/SP/year for plans;
    - Option 3, 2035 target: 3.0 $MTCO_2e$/SP/year for projects and 4.1 $MTCO_2e$/SP/year for plans

- Tier 5 involves mitigation offsets to achieve target significance threshold.

The SCAQMD's interim thresholds used the Executive Order S-3-05-year 2050 goal as the basis for the Tier 3 screening level. Achieving the Executive Order's objective would contribute to worldwide efforts to cap CO_2 concentrations at 450 ppm, thus stabilizing global climate.

SCAQMD only has authority over GHG emissions from development projects that include air quality permits. At this time, it is unknown if the project would include stationary sources of emissions subject to SCAQMD permits. Notwithstanding, if the Project requires a stationary permit, it would be subject to the applicable SCAQMD regulations.

SCAQMD Regulation XXVII, adopted in 2009 includes the following rules:

- Rule 2700 defines terms and post global warming potentials.
- Rule 2701, SoCal Climate Solutions Exchange, establishes a voluntary program to encourage, quantify, and certify voluntary, high quality certified GHG emission reductions in the SCAQMD.
- Rule 2702, GHG Reduction Program created a program to produce GHG emission reductions within the SCAQMD. The SCAQMD will fund projects through contracts in response to requests for proposals or purchase reductions from other parties.

2.8 THRESHOLDS OF SIGNIFICANCE

The City of Banning does not have an adopted threshold of significance for GHG emissions. For CEQA purposes, the City has discretion to select an appropriate significance criterion, based on substantial evidence. The SCAQMD's adopted numerical threshold of 10,000 $MTCO_2e$ per year for industrial stationary source emissions is selected as the significance criterion. The SCAQMD-adopted industrial threshold was selected by the City because the proposed Project is analogous to an industrial use much more closely than any other land use such as commercial or residential in terms of its expected operating characteristics. The Project proposes the development of warehousing use within two buildings that will serve mid- stream functions in the goods movement chain between manufacturers and consumers, characteristic of an industrial operation. Further, analysis of the Project's traffic generation in this EIR is based on the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition, 2017 for industrial and warehouse uses. Also, 10,000 $MTCO_2e$ has been used as the significance threshold by many local government lead agencies for logistics projects throughout the SCAG region since the SCAQMD adopted this threshold for its own use. Further, to ensure that the threshold is conservative in its application, although the SCAQMD uses their adopted 10,000 $MTCO_2e$ threshold to determine the significance of stationary source emissions for industrial projects, the 10,000 $MTCO_2e$ threshold used in this EIR is applied to all sources of Project-related GHG emissions whether stationary source, mobile source, area source, or other.

Use of this threshold is also consistent with guidance provided in the CAPCOA *CEQA and Climate Change* handbook, as such the City has opted to use a non-zero threshold approach based on Approach 2 of the handbook. Threshold 2.5 (Unit-Based Thresholds Based on Market Capture) establishes a numerical threshold based on capture of approximately 90 percent of emissions from future development. The latest threshold developed by SCAQMD using this method is

10,000 $MTCO_2e$ per year for industrial projects. This threshold is based on the review of 711 CEQA projects.

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3 PROJECT GREENHOUSE GAS IMPACT

3.1 INTRODUCTION

The Project has been evaluated to determine if it will result in a significant GHG impact. The significance of these potential impacts is described in the following section.

3.2 STANDARDS OF SIGNIFICANCE

The criteria used to determine the significance of potential Project-related GHG impacts are taken from the Initial Study Checklist in Appendix G of the State CEQA Guidelines (14 California Code of Regulations §§15000, et seq.). Based on these thresholds, a project would result in a significant impact related to GHG if it would (1):

- Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment?
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of GHGs?

3.3 CALIFORNIA EMISSIONS ESTIMATOR MODEL™ EMPLOYED TO ANALYZE GHG EMISSIONS

On October 17, 2017, the SCAQMD, in conjunction with the California Air Pollution Control Officers Association (CAPCOA) and other California air districts, released the latest version of the California Emissions Estimator Model™ (CalEEMod) v2016.3.2. The purpose of this model is to calculate construction-source and operational-source criteria pollutant (VOCs, NO_X, SO_X, CO, PM_{10}, and $PM_{2.5}$) and GHG emissions from direct and indirect sources; and quantify applicable air quality and GHG reductions achieved from mitigation measures (41). Accordingly, the latest version of CalEEMod™ has been used for this Project to determine GHG emissions. Output from the model runs for construction and operational activity are provided in Appendices 3.1 through 3.3. CalEEMod includes GHG emissions from the following source categories: construction, area, energy, mobile, waste, water.

3.3.1 EMFAC2017 EMISSION RATES

On August 19, 2019, the EPA approved the 2017 version of the Emission Factor model (EMFAC) web database for use in State Implementation Plan and transportation conformity analyses. EMFAC2017 is a mathematical model that was developed to calculate emission rates, fuel consumption, VMT from motor vehicles that operate on highways, freeways, and local roads in California and is commonly used by the CARB to project changes in future emissions from on-road mobile sources (42). This GHGA utilizes summer, winter, and annual EMFAC2017 emission factors in order to derive vehicle emissions associated with Project operational activities, which vary by season.

3.3.2 LAND USES MODELED IN CALEEMOD

The Project is located on 39.10-net acres. As per information provided by the Project applicant, the Project is proposed to consist of 97,400 square feet (sf) of truck terminal use to include a 134 door cross-dock (this includes future expansion), a two-story office building, a line-haul building, a truck maintenance building, and a fuel station for project trucks. It should be noted that CalEEMod does not provide an extensive selection of land use subtype categories, land uses that most closely fit the Project will be utilized. For purposes of analysis, the following land uses were modeled (43):

- 97.400 thousand square feet (TSF)/2.24 acres of Unrefrigerated Warehouse – No Rail[4]
- 1,605.796 TSF/36.86 acres Other Asphalt Surfaces[5]

3.4 CONSTRUCTION AND OPERATIONAL LIFE-CYCLE ANALYSIS NOT REQUIRED

A full life-cycle analysis (LCA) for construction and operational activity is not included in this analysis due to the lack of consensus guidance on LCA methodology at this time (44). Life-cycle analysis (i.e., assessing economy-wide GHG emissions from the processes in manufacturing and transporting all raw materials used in the project development, infrastructure and on-going operations) depends on emission factors or econometric factors that are not well established for all processes. At this time, an LCA would be extremely speculative and thus has not been prepared.

Additionally, the SCAQMD recommends analyzing direct and indirect project GHG emissions generated within California and not life-cycle emissions because the life-cycle effects from a project could occur outside of California, might not be very well understood or documented, and would be challenging to mitigate (45). Additionally, the science to calculate life cycle emissions is not yet established or well defined; therefore, SCAQMD has not recommended, and is not requiring, life-cycle emissions analysis.

3.5 CONSTRUCTION EMISSIONS

Project construction actvities would generate CO_2 and CH_4 emissions The report *Estes Banning Air Quality Impact Analysis Report* (Urban Crossroads, Inc., 2019) contains detailed information regarding Project construction activities (46). As discussed in the AQIA, Construction related emissions are expected from the following construction activities:

- Rough Grading
- Site Preparation
- Fine Grading
- Building Construction

[4] The User's Guide defines Unrefrigerated Warehouse – No Rail uses as warehouse uses that do not have refrigeration and no rail spur. For purposes of analysis, this category is used to model the proposed Project's 97,400 sf/2.24 acre of truck terminal use.

[5] For purposes of analysis, the remaining 1,605,796 sf/36.86 acres will be modeled as Other Asphalt Surfaces. These surfaces are defined as an asphalt area not used as a parking lot.

- Paving
- Architectural Coating

3.5.1 CONSTRUCTION DURATION

Construction is expected to commence in June 2020 and will last through March 2021. The construction schedule utilized in the analysis, shown in Table 3-2, represents a "worst-case" analysis scenario should construction occur any time after the respective dates since emission factors for construction decrease as time passes and the analysis year increases due to emission regulations becoming more stringent.[6] The duration of construction activity and associated equipment represents a reasonable approximation of the expected construction fleet as required per *CEQA Guidelines*. The duration of construction activity was based on CalEEMod defaults and the 2021 opening year.

TABLE 3-1: CONSTRUCTION DURATION

Phase Name	Start Date	End Date	Days
Rough Grading	06/04/2020	07/29/2020	40
Site Preparation	07/30/2020	09/30/2020	45
Fine Grading	10/01/2020	10/28/2020	20
Building Construction	10/29/2020	03/24/2021	105
Paving	01/07/2021	03/24/2021	55
Architectural Coating	01/07/2021	03/24/2021	55

Source: Construction activity based upon information provided by the Project applicant and a 2021 Opening Year.

3.5.2 CONSTRUCTION EQUIPMENT

Site specific construction fleet may vary due to specific project needs at the time of construction. The associated construction equipment was generally based on CalEEMod 2016.3.2 defaults, and the Project applicant has confirmed that the equipment list is reasonable for the Project's construction. A detailed summary of construction equipment assumptions by phase is provided at Table 3-2. Please refer to specific detailed modeling inputs/outputs contained in Appendix 3.1 of this GHGA.

[6] As shown in the CalEEMod User's Guide Version 2016.3.2, Section 4.3 "Offroad Equipment" as the analysis year increases, emission factors for the same equipment pieces decrease due to the natural turnover of older equipment being replaced by newer less polluting equipment and new regulatory requirements.

TABLE 3-2: CONSTRUCTION EQUIPMENT ASSUMPTIONS

Activity	Equipment	Amount	Hours Per Day
Rough Grading	Crawler Tractors	2	8
	Excavators	2	8
	Graders	1	8
	Rubber Tired Dozers	1	8
	Scrapers	2	8
Site Preparation	Crawler Tractors	4	8
	Rubber Tired Dozers	3	8
Fine Grading	Crawler Tractors	2	8
	Excavators	2	8
	Graders	1	8
	Rubber Tired Dozers	1	8
	Scrapers	2	8
Building Construction	Cranes	1	8
	Crawler Tractors	3	8
	Forklifts	3	8
	Generator Sets	1	8
	Welders	1	8
Paving	Pavers	2	8
	Paving Equipment	2	8
	Rollers	2	8
Architectural Coating	Air Compressors	1	8

Source: CalEEMod model output, See Appendix 3.1 detailed model outputs.

3.5.3 CONSTRUCTION EMISSIONS SUMMARY

For construction phase Project emissions, GHGs are quantified and amortized over the life of the Project. To amortize the emissions over the life of the Project, the SCAQMD recommends calculating the total GHG emissions for the construction activities, dividing it by a 30-year project life then adding that number to the annual operational phase GHG emissions (47). As such, construction emissions were amortized over a 30-year period and added to the annual operational phase GHG emissions. The amortized construction emissions are presented in Table 3-3.

TABLE 3-3: AMORTIZED ANNUAL CONSTRUCTION EMISSIONS

Year	Emissions (MT/yr)			
	CO_2	CH_4	N_2O	Total CO_2E
2020	705.32	0.14	0.00	708.76
2021	601.44	0.07	0.00	603.16
Total Annual Construction Emissions	1,306.76	0.21	0.00	1,311.93
Amortized Construction Emissions ($MTCO_2e$)	**43.56**	**0.01**	**0.00**	**43.73**

Source: CalEEMod model output, See Appendix 3.1 detailed model outputs.

3.6 OPERATIONAL EMISSIONS

Operational activities associated with the proposed Project will result in emissions of CO_2, CH_4, and N_2O from the following primary sources:

- Area Source Emissions
- Energy Source Emissions
- Mobile Source Emissions
- Water Supply, Treatment, and Distribution
- Solid Waste

3.6.1 AREA SOURCE EMISSIONS

Landscape Maintenance Equipment

Landscape maintenance equipment would generate emissions from fuel combustion and evaporation of unburned fuel. Equipment in this category would include lawnmowers, shedders/grinders, blowers, trimmers, chain saws, and hedge trimmers used to maintain the landscaping of the Project. The emissions associated with landscape maintenance equipment were calculated based on assumptions provided in CalEEMod.

3.6.2 ENERGY SOURCE EMISSIONS

Combustion Emissions Associated with Natural Gas and Electricity

GHGs are emitted from buildings as a result of activities for which electricity and natural gas are typically used as energy sources. Combustion of any type of fuel emits CO_2 and other GHGs directly into the atmosphere; these emissions are considered direct emissions associated with a building; the building energy use emissions do not include street lighting[7]. GHGs are also emitted during the generation of electricity from fossil fuels; these emissions are considered to be indirect emissions. Unless otherwise noted, CalEEMod default parameters were used.

[7] The CalEEMod emissions inventory model does not include indirect emission related to street lighting. Indirect emissions related to street lighting are expected to be negligible and cannot be accurately quantified at this time as there is insufficient information as to the number and type of street lighting that would occur.

Title 24 Energy Efficiency Standards

California's Energy Efficiency Standards for Residential and Nonresidential Buildings was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity. The 2019 version of Title 24 was adopted by the CEC and will become effective on January 1, 2020. As such, the analysis herein assumes compliance with the 2019 Title 24 Standards because the Project will be constructed after January 1, 2020.

3.6.3 MOBILE SOURCE EMISSIONS

Vehicles

The Project related GHG impacts derive primarily from vehicle trips generated by the Project. Trip characteristics available from the *Estes Banning Traffic Impact Analysis* (Urban Crossroads, Inc., 2019) (TIA) were utilized in this analysis (13).

3.5.3.1 Trip Length

SCAQMD Recommendation

In the last five years, the SCAQMD has provided numerous comments on the trip length for warehouse/distribution and industrial land use projects. The SCAQMD asserts that the model-default trip length in CalEEMod™ and the URBan EMISsions (URBEMIS) 2007 model (version 9.2.4) would underestimate emissions. It should be noted that for warehouse, distribution center, and industrial land use projects, most of the heavy-duty trucks would be hauling consumer goods, often from the POLA and POLB and/or to destinations outside of California. The SCAQMD states that for this reason, the CalEEMod™ and the URBEMIS model default trip length (approximately 12.6 miles) would not be representative of activities at like facilities. The average trip length for heavy trucks were based on the SCAQMD documents for the implementation of the Facility-Based Mobile Source Measures (FBMSMs) adopted in the 2016 AQMP. SCAQMD's "Preliminary Warehouse Emission Calculations" cites 39.9-mile trip length for heavy-heavy trucks (48).

3.5.3.2 Approach for Analysis of the Project

Separate model runs were utilized in order to more accurately model emissions resulting from passenger car and truck operations.

The first run analyzed truck emissions, incorporated the SCAQMD truck trip length of 40 miles and an assumption of 100% primary trips. In order to be consistent with the TIA, trucks are broken down by truck type. The trucks are comprised of 2-axle/Light-Heavy-Duty Trucks (LHDT), 3-axle/Medium-Heavy-Duty Trucks (MHDT), and 4+-axle/Heavy-Heavy-Duty Trucks (HHDT). For purposes of analysis, the following truck fleet of 10.00% of LHDT, 0.00% of MHDT, and 90.00% of HHDT for truck terminal was used. It should be noted that the Project-specific truck fleet mix is based on the number of trips generated by each truck type (LHDT, MHDT, and HHDT) relative to the total number of truck trips.

The second run analyzed passenger car emissions, incorporated the CalEEMod default trip length of 16.6 miles for passenger cars and an assumption of 100% primary trips. In order to account for emissions generated by passenger cars, the following fleet mix was utilized in this analysis: 61.40% Light-Duty-Auto vehicles (LDA), 4.30% Light-Duty Trucks (LDT1)[8], 21.00% Light-Duty Trucks (LDT2)[9], and 13.30% Medium-Duty Vehicles (MDV). It is important to note that although the TIA does not breakdown passenger cars by type, this analysis assumes that passenger cars include LDA, LDT1, LDT2, and MDV vehicles types. The Project-specific passenger car fleet mix is based on a proportional split utilizing the default CalEEMod percentages assigned to LDA, LDT1, LDT2, and MDV vehicles types.

3.6.4 WATER SUPPLY, TREATMENT AND DISTRIBUTION

Indirect GHG emissions result from the production of electricity used to convey, treat and distribute water and wastewater. The amount of electricity required to convey, treat and distribute water depends on the volume of water as well as the sources of the water. CalEEMod default parameters were used to estimate GHG emissions associated with water supply, treatment and distribution for the Project scenario.

3.6.5 SOLID WASTE

Industrial land uses will result in the generation and disposal of solid waste. A large percentage of this waste will be diverted from landfills by a variety of means, such as reducing the amount of waste generated, recycling, and/or composting. The remainder of the waste not diverted will be disposed of at a landfill. GHG emissions from landfills are associated with the anaerobic breakdown of material. GHG emissions associated with the disposal of solid waste associated with the proposed Project were calculated by CalEEMod using default parameters.

3.7 EMISSIONS SUMMARY

The annual GHG emissions associated with the operation of the proposed Project are estimated to be 2,483.74 $MTCO_2e$ per year as summarized in Table 3-4.

[8] Vehicles under the LDT1 category have a gross vehicle weight rating (GVWR) of less than 6,000 lbs. and equivalent test weight (ETW) of less than or equal to 3,750 lbs.

[9] Vehicles under the LDT2 category have a GVWR of less than 6,000 lbs. and ETW between 3,751 lbs. and 5,750 lbs.

TABLE 3-4: PROJECT GHG EMISSIONS

Emission Source	Emissions (MT/yr)			
	CO_2	CH_4	N_2O	Total CO_2e
Annual construction-related emissions amortized over 30 years	43.56	0.01	0.00	43.73
Area Source	0.04	1.10e-04	0.00	0.05
Energy Source	91.42	5.70e-03	6.40e-04	91.67
Mobile Source (Passenger Car)	419.90	9.93e-03	0.00	420.14
Mobile Source (Truck)	1,715.52	0.02	0.00	1,716.08
Waste	18.59	1.10	0.00	46.05
Water Usage	141.92	0.75	0.02	166.03
Total CO_2e (All Sources)	**2,483.74**			

Source: CalEEMod model output, See Appendices 3.1 through 3.3 for detailed model outputs.

3.7 GREENHOUSE GAS EMISSIONS FINDINGS AND RECOMMENDATIONS

GHG Impact 1: The Project would not generate direct or indirect GHG emission that would result in a significant impact on the environment.

The City of Banning does not have an adopted threshold of significance for GHG emissions. For CEQA purposes, the City has discretion to select an appropriate significance criterion, based on substantial evidence. The SCAQMD's adopted numerical threshold of 10,000 $MTCO_2e$ per year for industrial stationary source emissions is selected as the significance criterion. The SCAQMD-adopted industrial threshold was selected by the City because the proposed Project is more analogous to an industrial use than any other land use such as commercial or residential in terms of its expected operating characteristics. The Project proposes a warehouse use that will serve mid- stream functions in the goods movement chain between manufacturers and consumers, characteristic of an industrial operation. Further, analysis of the Project's traffic generation in this report is based on the ITE Trip Generation Manual, 10th Edition, 2017 for warehouse and industrial land use categories. Also, 10,000 $MTCO_2e$ has been used as the significance threshold by many local government lead agencies for logistics projects throughout the SCAG region since the SCAQMD adopted this threshold for its own use. Further, to ensure that the threshold is conservative in its application, although the SCAQMD uses their adopted 10,000 $MTCO_2e$ threshold to determine the significance of stationary source emissions for industrial projects, the 10,000 $MTCO_2e$ threshold used in this CEQA document is applied to all sources of Project-related GHG emissions whether stationary source, mobile source, area source, or other.

Use of this threshold is also consistent with guidance provided in the CAPCOA *CEQA and Climate Change* handbook, as such, the City has opted to use a non-zero threshold approach based on Approach 2 of the handbook. Threshold 2.5 (Unit-Based Thresholds Based on Market Capture) establishes a numerical threshold based on capture of approximately 90 percent of

emissions from future development. The latest threshold developed by SCAQMD using this method is 10,000 $MTCO_2e$ based on the review of 711 CEQA projects.

As previously stated, the Project will result in approximately 2,483.74 $MTCO_2e$ per year. As such, the Project would not exceed the SCAQMD's numeric threshold of 10,000 $MTCO_2e$. Thus, project-related emissions would not have a significant direct or indirect impact on GHG and climate change and no mitigation or further analysis is required

GHG Impact #2: The Project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs.

As previously stated, pursuant to 15604.4 of the CEQA Guidelines, a lead agency may rely on qualitative analysis or performance-based standards to determine the significance of impacts from GHG emissions (40). As such, the Project's consistency with AB 32 and SB 32 are discussed below.

2008 Scoping Plan Consistency

ARB's *Scoping Plan* identifies strategies to reduce California's GHG emissions in support of AB32 which requires the State to reduce its GHG emissions to 1990 levels by 2020. Many of the strategies identified in the Scoping Plan are not applicable at the project level, such as long-term technological improvements to reduce emissions from vehicles. Some measures are applicable and supported by the project, such as energy efficiency. Finally, while some measures are not directly applicable, the project would not conflict with their implementation. Reduction measures are grouped into 18 action categories, as follows:

1. **California Cap-and-Trade Program Linked to Western Climate Initiative Partner Jurisdictions.** Implement a broad-based California cap-and-trade program to provide a firm limit on emissions. Link the California cap–and-trade program with other Western Climate Initiative Partner programs to create a regional market system to achieve greater environmental and economic benefits for California.[10] Ensure California's program meets all applicable AB 32 requirements for market-based mechanisms.
2. **California Light-Duty Vehicle GHG Standards.** Implement adopted Pavley standards and planned second phase of the program. Align zero-emission vehicle, alternative and renewable fuel and vehicle technology programs with long-term climate change goals.
3. **Energy Efficiency.** Maximize energy efficiency building and appliance standards, and pursue additional efficiency efforts including new technologies, and new policy and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California (including both investor-owned and publicly owned utilities).
4. **Renewables Portfolio Standards.** Achieve 33 percent renewable energy mix statewide.
5. **Low Carbon Fuel Standard.** Develop and adopt the LCFS.
6. **Regional Transportation-Related GHG Targets.** Develop regional GHG emissions reduction targets for passenger vehicles.
7. **Vehicle Efficiency Measures.** Implement light-duty vehicle efficiency measures.

[10] California Air Resources Board. California GHG Emissions – Forecast (2002-2020). October 2010

8. **Goods Movement.** Implement adopted regulations for the use of shore power for ships at berth. Improve efficiency in goods movement activities.
9. **Million Solar Roofs Program.** Install 3,000 megawatts of solar-electric capacity under California's existing solar programs.
10. **Medium- and Heavy-Duty Vehicles.** Adopt medium- (MD) and heavy-duty (HD) vehicle efficiencies. Aerodynamic efficiency measures for HD trucks pulling trailers 53-feet or longer that include improvements in trailer aerodynamics and use of rolling resistance tires were adopted in 2008 and went into effect in 2010.[11] Future, yet to be determined improvements, includes hybridization of MD and HD trucks.
11. **Industrial Emissions.** Require assessment of large industrial sources to determine whether individual sources within a facility can cost-effectively reduce GHG emissions and provide other pollution reduction co-benefits. Reduce GHG emissions from fugitive emissions from oil and gas extraction and gas transmission. Adopt and implement regulations to control fugitive methane emissions and reduce flaring at refineries.
12. **High Speed Rail.** Support implementation of a high-speed rail system.
13. **Green Building Strategy.** Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings.
14. **High Global Warming Potential Gases.** Adopt measures to reduce high warming global potential gases.
15. **Recycling and Waste.** Reduce methane emissions at landfills. Increase waste diversion, composting and other beneficial uses of organic materials, and mandate commercial recycling. Move toward zero-waste.
16. **Sustainable Forests.** Preserve forest sequestration and encourage the use of forest biomass for sustainable energy generation. The 2020 target for carbon sequestration is 5 million MTCO2E/YR.
17. **Water.** Continue efficiency programs and use cleaner energy sources to move and treat water.
18. **Agriculture.** In the near-term, encourage investment in manure digesters and at the five-year Scoping Plan update determine if the program should be made mandatory by 2020.

Table 3-5 summarizes the project's consistency with the State Scoping Plan. As summarized, the project will not conflict with any of the provisions of the Scoping Plan and in fact supports seven of the action categories through energy efficiency, water conservation, recycling, and landscaping.

TABLE 3-5: 2008 SCOPING PLAN CONSISTENCY SUMMARY

Action	Supporting Measures[12]	Consistency
Cap-and-Trade Program	--	Not applicable. These programs involve capping emissions from electricity generation, industrial facilities, and broad scoped fuels. Caps do not directly affect commercial projects.

[11] California Air Resources Board. Scoping Plan Measures Implementation Timeline. October 2010

[12] Supporting measures can be found at the following link: http://www.arb.ca.gov/cc/scopingplan/2013_update/appendix_b.pdf

Action	Supporting Measures[12]	Consistency
Light-Duty Vehicle Standards	T-1	Not applicable. While these are CARB-enforced measures that are not directly applicable to the proposed Project, vehicles that access the Project are required to comply with the standards and will comply with this strategy. EV charging stations are required to be installed on site per the 2019 Title 24 standards.
Energy Efficiency	E-1 E-2 CR-1 CR-2	Consistent. The Project will include a variety of building, water, and solid waste efficiencies consistent with the most current CALGreen requirements.
Renewables Portfolio Standard	E-3	Not applicable. Establishes the minimum statewide renewable energy mix.
Low Carbon Fuel Standard	T-2	Not applicable. Establishes reduced carbon intensity of transportation fuels.
Regional Transportation-Related GHG Targets	T-3	Not applicable. This is a statewide measure and is not within the purview of this Project.
Vehicle Efficiency Measures	T-4	Not applicable. Identifies measures such as minimum tire-fuel efficiency, lower friction oil, and reduction in air conditioning use.
Goods Movement	T-5 T-6	Not applicable. Identifies measures to improve goods movement efficiencies such as advanced combustion strategies, friction reduction, waste heat recovery, and electrification of accessories. While these measures are not directly applicable to the Project, any commercial activity associated with Goods Movement would be required to comply with these measures as adopted. As such, the proposed Project would not interfere with their implementation.
Million Solar Roofs (MSR) Program	E-4	Consistent. The MSR program sets a goal for use of solar systems throughout the state as a whole. While the Project currently does not include solar energy generation, the building roof structure will be designed to support solar panels in the future, consistent with Title 24 requirements.
Medium- & Heavy-Duty Vehicles	T-7	Not applicable. MD and HD trucks and trailers for industrial uses are be subject to aerodynamic and hybridization requirements as established by CARB; the

Action	Supporting Measures[12]	Consistency
	T-8	proposed Project would interfere with implementation of these requirements and programs.
Industrial Emissions	I-1	Not applicable. These measures are applicable to large industrial facilities (> 500,000 $MTCO_2e$/yr) and other intensive uses such as refineries.
	I-2	
	I-3	
	I-4	
	I-5	
High Speed Rail	T-9	Not applicable. Supports increased mobility choice.
Green Building Strategy	GB-1	Consistent. The Project will include a variety of building, water, and solid waste efficiencies consistent with the current CALGreen requirements.
High Global Warming Potential Gases	H-1	Not Applicable. The proposed Project is not a substantial source of high GWP emissions and will comply with any future changes in air conditioning, fire protection suppressant, and other requirements.
	H-2	
	H-3	
	H-4	
	H-5	
	H-6	
	H-7	
Recycling and Waste	RW-1	Consistent. The Project will be required recycle a minimum of 65 percent from construction activities and Project operations per State and City requirements.
	RW-2	
	RW-3	
Sustainable Forests	F-1	Consistent. The Project will increase carbon sequestration by increasing on-site trees per the project landscaping plan.
Water	W-1	Consistent. The Project will include use of low-flow fixtures and efficient landscaping per State requirements.
	W-2	
	W-3	
	W-4	
	W-5	
	W-6	
Agriculture	A-1	Not applicable. The Project is not an agricultural use.

SB 32/2017 Scoping Plan Consistency

The 2017 Scoping Plan Update reflects the 2030 target of a 40 percent reduction below 1990 levels, set by Executive Order B-30-15 and codified by SB 32. Table 3-6 summarizes the project's consistency with the 2017 Scoping Plan. As summarized, the project will not conflict with any of the provisions of the Scoping Plan and in fact supports seven of the action categories.

TABLE 3-6: 2017 SCOPING PLAN CONSISTENCY SUMMARY[13]

Action	Responsible Parties	Consistency
Implement SB 350 by 2030		
Increase the Renewables Portfolio Standard to 50 percent of retail sales by 2030 and ensure grid reliability.	CPUC, CEC, CARB	Consistent. This measure is not directly applicable to development projects, but the proposed Project would use energy from Southern California Edison, which has committed to diversify its portfolio of energy sources by increasing energy from wind and solar sources.
Establish annual targets for statewide energy efficiency savings and demand reduction that will achieve a cumulative doubling of statewide energy efficiency savings in electricity and natural gas end uses by 2030.		Consistent. Although this measure is directed towards policymakers, the proposed Project would be designed and constructed to implement the energy efficiency measures for new commercial developments and would include several measures designed to reduce energy consumption.
Reduce GHG emissions in the electricity sector through the implementation of the above measures and other actions as modeled in Integrated Resource Planning (IRP) to meet GHG emissions reductions planning targets in the IRP process. Load-serving entities and publicly- owned utilities meet GHG emissions reductions planning targets through a combination of measures as described in IRPs.		Consistent. The proposed Project would be designed and constructed to implement the energy efficiency measures, where applicable by including several measures designed to reduce energy consumption. The proposed Project includes energy efficient field lighting and fixtures that meet the current Title 24 Standards throughout the Project Site and would be a modern development with energy efficient boilers, heaters, and air conditioning systems.
Implement Mobile Source Strategy (Cleaner Technology and Fuels)		
At least 1.5 million zero emission and plug-in hybrid light-duty electric vehicles by 2025.	CARB, California State Transportation Agency (CalSTA), Strategic Growth Council (SGC), California Department of Transportation (Caltrans), CEC, OPR, Local Agencies	Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
At least 4.2 million zero emission and plug-in hybrid light-duty electric vehicles by 2030.		Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Further increase GHG stringency on all light-duty vehicles beyond existing Advanced Clean cars regulations.		Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.

[13] Measures can be found at the following link: https://www.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf

Action	Responsible Parties	Consistency
Medium- and Heavy-Duty GHG Phase 2.		Consistent. These are CARB enforced standards; vehicles that access the project that are required to comply with the standards will comply with the strategy.
Innovative Clean Transit: Transition to a suite of to-be-determined innovative clean transit options. Assumed 20 percent of new urban buses purchased beginning in 2018 will be zero emission buses with the penetration of zero-emission technology ramped up to 100 percent of new sales in 2030. Also, new natural gas buses, starting in 2018, and diesel buses, starting in 2020, meet the optional heavy-duty low-NO_X standard.		Not applicable. This measure is not within the purview of this Project.
Last Mile Delivery: New regulation that would result in the use of low NO_X or cleaner engines and the deployment of increasing numbers of zero-emission trucks primarily for class 3-7 last mile delivery trucks in California. This measure assumes ZEVs comprise 2.5 percent of new Class 3–7 truck sales in local fleets starting in 2020, increasing to 10 percent in 2025 and remaining flat through 2030.		Not applicable. This Project is not responsible for implementation of SB 375 and would therefore not conflict with this measure.
Further reduce VMT through continued implementation of SB 375 and regional Sustainable Communities Strategies; forthcoming statewide implementation of SB 743; and potential additional VMT reduction strategies not specified in the Mobile Source Strategy but included in the document "Potential VMT Reduction Strategies for Discussion."		Not applicable. This Project is not responsible for implementation of SB 375 and would therefore not conflict with this measure.
Increase stringency of SB 375 Sustainable Communities Strategy (2035 targets).	CARB	Not applicable. The Project is not within the purview of SB 375 and would therefore not conflict with this measure.
By 2019, adjust performance measures used to select and design transportation facilities		
Harmonize project performance with emissions reductions and increase competitiveness of transit and active transportation modes (e.g. via guideline documents, funding programs, project selection, etc.).	CalSTA, SGC, OPR, CARB, Governor's Office of Business and Economic Development (GO-Biz),	Not applicable. Although this is directed towards CARB and Caltrans, the proposed Project would be designed to promote and support pedestrian activity on-site and in the Project Site area.

Action	Responsible Parties	Consistency
	California Infrastructure and Economic Development Bank (IBank), Department of Finance (DOF), California Transportation Commission (CTC), Caltrans	
By 2019, develop pricing policies to support low-GHG transportation (e.g. low-emission vehicle zones for heavy duty, road user, parking pricing, transit discounts).	CalSTA, Caltrans, CTC, OPR, SGC, CARB	Not applicable. Although this measure is directed towards policymakers, the proposed Project would comply with AB 939, which sets a statewide policy that not less than 65 percent of solid waste generated be source reduced, recycled, or composted. Additionally, the proposed Project would be required to have a recycling program and recycling collection. During construction, the proposed Project shall recycle and reuse construction and demolition waste per City Solid Waste procedures.
Implement California Sustainable Freight Action Plan		
Improve freight system efficiency.	CalSTA, CalEPA, CNRA, CARB, Caltrans, CEC, GO-Biz	When adopted, this measure would apply to all trucks accessing the Project site, this may include existing trucks or new trucks that are part of the statewide goods movement sector.
Deploy over 100,000 freight vehicles and equipment capable of zero emission operation and maximize both zero and near-zero emission freight vehicles and equipment powered by renewable energy by 2030.		Not applicable. This measure is not within the purview of this Project.
Adopt a LCFS with a Carbon Intensity reduction of 18 percent.	CARB	LCFS, with an increased stringency (18 percent by 2030). When adopted, this measure would apply to all fuel purchased and used by the Project in the state.
Implement the Short-Lived Climate Pollutant Strategy by 2030		

Action	Responsible Parties	Consistency
40 percent reduction in methane and hydrofluorocarbon emissions below 2013 levels.	CARB, CalRecycle, CDFA, SWRCB, Local Air Districts	When adopted, the Project would be required to comply with this measure and reduce SLPS accordingly.
50 percent reduction in black carbon emissions below 2013 levels.		Not applicable. This measure is not within the purview of this Project.
By 2019, develop regulations and programs to support organic waste landfill reduction goals in the SLCP and SB 1383.	CARB, CalRecycle, CDFA SWRCB, Local Air Districts	Not applicable. This measure is not within the purview of this Project.
Implement the post-2020 Cap-and-Trade Program with declining annual caps.	CARB	When adopted, the Project would be required to comply with the Cap-and-Trade Program if it generates emissions from sectors covered by Cap-and-Trade.
By 2018, develop Integrated Natural and Working Lands Implementation Plan to secure California's land base as a net carbon sink		
Protect land from conversion through conservation easements and other incentives.	CNRA, Departments Within CDFA, CalEPA, CARB	Not applicable. This measure is not within the purview of this Project.
Increase the long-term resilience of carbon storage in the land base and enhance sequestration capacity		Not applicable. This measure is not within the purview of this Project.
Utilize wood and agricultural products to increase the amount of carbon stored in the natural and built environments		Not applicable. This measure is not within the purview of this Project.
Establish scenario projections to serve as the foundation for the Implementation Plan		Not applicable. This measure is not within the purview of this Project.
Establish a carbon accounting framework for natural and working lands as described in SB 859 by 2018	CARB	Not applicable. This measure is not within the purview of this Project.
Implement Forest Carbon Plan	CNRA,	Not applicable. This measure is not within the purview of this Project.

Action	Responsible Parties	Consistency
	California Department of Forestry and Fire Protection (CAL FIRE), CalEPA and Departments Within	
Identify and expand funding and financing mechanisms to support GHG reductions across all sectors.	State Agencies & Local Agencies	Not applicable. This measure is not within the purview of this Project.

As shown above, the Project would not conflict with any of the 2017 Scoping Plan elements as any regulations adopted would apply directly or indirectly to the Project. Further, recent studies show that the State's existing and proposed regulatory framework will allow the State to reduce its GHG emissions level to 40 percent below 1990 levels by 2030 (35).

Less than significant impact.

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5 CERTIFICATIONS

The contents of this GHG study report represent an accurate depiction of the GHG impacts associated with the proposed Estes Banning Project. The information contained in this GHG report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at (949) 336-5987.

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Master of Science in Environmental Studies
California State University, Fullerton • May, 2010

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PROFESSIONAL AFFILIATIONS

AEP – Association of Environmental Planners
AWMA – Air and Waste Management Association
ASTM – American Society for Testing and Materials

PROFESSIONAL CERTIFICATIONS

Planned Communities and Urban Infill – Urban Land Institute • June, 2011
Indoor Air Quality and Industrial Hygiene – EMSL Analytical • April, 2008
Principles of Ambient Air Monitoring – California Air Resources Board • August, 2007
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APPENDIX 3.1:

CALEEMOD ANNUAL CONSTRUCTION EMISSIONS MODEL OUTPUTS

Estes Banning (Construction - Unmitigated)

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	97.40	1000sqft	2.24	97,400.00	0
Other Asphalt Surfaces	1,605.80	1000sqft	36.86	1,605,796.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2021
Utility Company	Statewide Average				
CO2 Intensity (lb/MWhr)	1001.57	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Estes Banning (Construction - Unmitigated) - Riverside-South Coast County, Annual

Project Characteristics - Electricty will be provided to the Project by Banning Electric Utility (BEU). CalEEMod does not provided Intensity Factors for BEU, as such, the Statewide Average will be used.

Land Use - Total Project Area is 36.86 acres. Truck Terminal is 97,400 sf. Remaning area will be modeled as 1,605,796 sf of Other Apshalt Surfaces.

Construction Phase - Based on the Summary Schedule provided by the Project applicant.

Off-road Equipment - Hours are based on an 8-hour workday.

Off-road Equipment - Crawler Tractors used in lieu of Tractor/Loader/Backhoes.

Off-road Equipment - Crawler Tractors used in lieu of Tractor/Loader/Backhoes.

Off-road Equipment -

Off-road Equipment - Crawler Tractors used in lieu of Tractor/Loader/Backhoes.

Off-road Equipment - Crawler Tractors used in lieu of Tractor/Loader/Backhoes.

Grading - For purposes of analysis, total acres graded per day is based on the equipment specific grading rates (CalEEMod Appendix A) and the equipment list.

Architectural Coating - Rule 1113

Vehicle Trips - Construction Run Only.

Energy Use - Construction Run Only.

Water And Wastewater - Construction Run Only.

Solid Waste - Construction Run Only.

Construction Off-road Equipment Mitigation - Rule 403

Vehicle Emission Factors - EMFAC2017

Vehicle Emission Factors - EMFAC2017

Vehicle Emission Factors - EMFAC2017

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblConstructionPhase	NumDays	75.00	40.00
tblConstructionPhase	NumDays	30.00	45.00
tblConstructionPhase	NumDays	75.00	20.00

Estes Banning (Construction - Unmitigated) - Riverside-South Coast County, Annual

tblConstructionPhase	NumDays	740.00	105.00
tblEnergyUse	LightingElect	1.17	0.00
tblEnergyUse	NT24E	0.82	0.00
tblEnergyUse	NT24NG	0.03	0.00
tblEnergyUse	T24E	0.37	0.00
tblEnergyUse	T24NG	2.00	0.00
tblGrading	AcresOfGrading	140.00	160.00
tblGrading	AcresOfGrading	70.00	80.00
tblGrading	AcresOfGrading	90.00	157.50
tblLandUse	LandUseSquareFeet	1,605,800.00	1,605,796.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	4.00	0.00
tblOffRoadEquipment	UsageHours	6.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblOffRoadEquipment	UsageHours	7.00	8.00
tblSolidWaste	SolidWasteGenerationRate	91.56	0.00
tblVehicleEF	HHD	1.43	0.03
tblVehicleEF	HHD	0.03	0.02
tblVehicleEF	HHD	0.10	0.00
tblVehicleEF	HHD	3.28	7.55
tblVehicleEF	HHD	0.46	0.36
tblVehicleEF	HHD	1.46	2.9270e-003
tblVehicleEF	HHD	6,485.38	1,409.07
tblVehicleEF	HHD	1,461.92	1,350.00
tblVehicleEF	HHD	4.62	0.03

tblVehicleEF	HHD	26.41	7.34
tblVehicleEF	HHD	2.69	3.05
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	3.8000e-005	0.00
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8680e-003	8.8980e-003
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	3.5000e-005	0.00
tblVehicleEF	HHD	8.4000e-005	4.0000e-006
tblVehicleEF	HHD	2.5800e-003	1.0300e-004
tblVehicleEF	HHD	0.85	0.58
tblVehicleEF	HHD	4.8000e-005	2.0000e-006
tblVehicleEF	HHD	0.07	0.07
tblVehicleEF	HHD	1.8000e-004	5.3700e-004
tblVehicleEF	HHD	0.05	1.0000e-006
tblVehicleEF	HHD	0.06	0.01
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	7.1000e-005	0.00
tblVehicleEF	HHD	8.4000e-005	4.0000e-006
tblVehicleEF	HHD	2.5800e-003	1.0300e-004
tblVehicleEF	HHD	0.97	0.66
tblVehicleEF	HHD	4.8000e-005	2.0000e-006
tblVehicleEF	HHD	0.11	0.09

tblVehicleEF	HHD	1.8000e-004	5.3700e-004
tblVehicleEF	HHD	0.05	1.0000e-006
tblVehicleEF	HHD	1.35	0.03
tblVehicleEF	HHD	0.03	0.02
tblVehicleEF	HHD	0.10	0.00
tblVehicleEF	HHD	2.39	7.39
tblVehicleEF	HHD	0.46	0.36
tblVehicleEF	HHD	1.39	2.7700e-003
tblVehicleEF	HHD	6,867.98	1,402.59
tblVehicleEF	HHD	1,461.92	1,350.00
tblVehicleEF	HHD	4.62	0.03
tblVehicleEF	HHD	27.25	7.10
tblVehicleEF	HHD	2.54	2.88
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	3.8000e-005	0.00
tblVehicleEF	HHD	0.01	9.7680e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8680e-003	8.8980e-003
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	3.5000e-005	0.00
tblVehicleEF	HHD	1.6300e-004	8.0000e-006
tblVehicleEF	HHD	2.9560e-003	1.1800e-004
tblVehicleEF	HHD	0.80	0.60
tblVehicleEF	HHD	9.2000e-005	4.0000e-006

tblVehicleEF	HHD	0.07	0.07
tblVehicleEF	HHD	1.8400e-004	5.5600e-004
tblVehicleEF	HHD	0.04	1.0000e-006
tblVehicleEF	HHD	0.06	0.01
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	6.9000e-005	0.00
tblVehicleEF	HHD	1.6300e-004	8.0000e-006
tblVehicleEF	HHD	2.9560e-003	1.1800e-004
tblVehicleEF	HHD	0.92	0.69
tblVehicleEF	HHD	9.2000e-005	4.0000e-006
tblVehicleEF	HHD	0.11	0.09
tblVehicleEF	HHD	1.8400e-004	5.5600e-004
tblVehicleEF	HHD	0.05	1.0000e-006
tblVehicleEF	HHD	1.54	0.03
tblVehicleEF	HHD	0.03	3.2330e-003
tblVehicleEF	HHD	0.10	0.00
tblVehicleEF	HHD	4.51	7.76
tblVehicleEF	HHD	0.45	0.32
tblVehicleEF	HHD	1.47	2.9120e-003
tblVehicleEF	HHD	5,957.03	1,414.57
tblVehicleEF	HHD	1,461.92	1,340.32
tblVehicleEF	HHD	4.62	0.03
tblVehicleEF	HHD	25.25	7.65
tblVehicleEF	HHD	2.67	3.02
tblVehicleEF	HHD	0.02	0.01
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04

tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	3.8000e-005	0.00
tblVehicleEF	HHD	0.02	0.01
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8680e-003	8.8710e-003
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	3.5000e-005	0.00
tblVehicleEF	HHD	6.7000e-005	4.0000e-006
tblVehicleEF	HHD	2.7490e-003	1.2100e-004
tblVehicleEF	HHD	0.91	0.54
tblVehicleEF	HHD	4.1000e-005	2.0000e-006
tblVehicleEF	HHD	0.07	0.07
tblVehicleEF	HHD	1.9200e-004	5.6500e-004
tblVehicleEF	HHD	0.05	1.0000e-006
tblVehicleEF	HHD	0.06	0.01
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	7.1000e-005	0.00
tblVehicleEF	HHD	6.7000e-005	4.0000e-006
tblVehicleEF	HHD	2.7490e-003	1.2100e-004
tblVehicleEF	HHD	1.05	0.62
tblVehicleEF	HHD	4.1000e-005	2.0000e-006
tblVehicleEF	HHD	0.11	0.08
tblVehicleEF	HHD	1.9200e-004	5.6500e-004
tblVehicleEF	HHD	0.05	1.0000e-006
tblVehicleEF	LDA	4.0430e-003	2.4680e-003
tblVehicleEF	LDA	5.4670e-003	0.05
tblVehicleEF	LDA	0.58	0.66

tblVehicleEF	LDA	1.16	2.12
tblVehicleEF	LDA	255.91	265.87
tblVehicleEF	LDA	58.81	54.73
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	1.6140e-003	1.4470e-003
tblVehicleEF	LDA	2.2650e-003	1.9190e-003
tblVehicleEF	LDA	1.4880e-003	1.3330e-003
tblVehicleEF	LDA	2.0830e-003	1.7640e-003
tblVehicleEF	LDA	0.05	0.07
tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.01	9.5180e-003
tblVehicleEF	LDA	0.04	0.21
tblVehicleEF	LDA	0.07	0.23
tblVehicleEF	LDA	2.5630e-003	2.6300e-003
tblVehicleEF	LDA	6.0800e-004	5.4200e-004
tblVehicleEF	LDA	0.05	0.07
tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.21
tblVehicleEF	LDA	0.08	0.25
tblVehicleEF	LDA	4.5900e-003	2.8100e-003
tblVehicleEF	LDA	4.7470e-003	0.05
tblVehicleEF	LDA	0.71	0.81
tblVehicleEF	LDA	1.02	1.87
tblVehicleEF	LDA	278.73	289.14

tblVehicleEF	LDA	58.81	54.24
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	1.6140e-003	1.4470e-003
tblVehicleEF	LDA	2.2650e-003	1.9190e-003
tblVehicleEF	LDA	1.4880e-003	1.3330e-003
tblVehicleEF	LDA	2.0830e-003	1.7640e-003
tblVehicleEF	LDA	0.10	0.14
tblVehicleEF	LDA	0.12	0.12
tblVehicleEF	LDA	0.07	0.10
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.21
tblVehicleEF	LDA	0.06	0.20
tblVehicleEF	LDA	2.7930e-003	2.8600e-003
tblVehicleEF	LDA	6.0500e-004	5.3700e-004
tblVehicleEF	LDA	0.10	0.14
tblVehicleEF	LDA	0.12	0.12
tblVehicleEF	LDA	0.07	0.10
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.04	0.21
tblVehicleEF	LDA	0.07	0.22
tblVehicleEF	LDA	3.8980e-003	2.3810e-003
tblVehicleEF	LDA	5.6140e-003	0.05
tblVehicleEF	LDA	0.54	0.62
tblVehicleEF	LDA	1.19	2.17
tblVehicleEF	LDA	249.57	259.47
tblVehicleEF	LDA	58.81	54.82
tblVehicleEF	LDA	0.05	0.04

tblVehicleEF	LDA	1.6140e-003	1.4470e-003
tblVehicleEF	LDA	2.2650e-003	1.9190e-003
tblVehicleEF	LDA	1.4880e-003	1.3330e-003
tblVehicleEF	LDA	2.0830e-003	1.7640e-003
tblVehicleEF	LDA	0.04	0.06
tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	9.8140e-003	9.1880e-003
tblVehicleEF	LDA	0.04	0.24
tblVehicleEF	LDA	0.08	0.23
tblVehicleEF	LDA	2.4990e-003	2.5670e-003
tblVehicleEF	LDA	6.0800e-004	5.4200e-004
tblVehicleEF	LDA	0.04	0.06
tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.24
tblVehicleEF	LDA	0.08	0.26
tblVehicleEF	LDT1	0.01	8.0140e-003
tblVehicleEF	LDT1	0.02	0.09
tblVehicleEF	LDT1	1.46	1.62
tblVehicleEF	LDT1	3.40	2.43
tblVehicleEF	LDT1	315.98	317.00
tblVehicleEF	LDT1	72.28	66.64
tblVehicleEF	LDT1	0.14	0.14
tblVehicleEF	LDT1	2.5300e-003	2.2930e-003
tblVehicleEF	LDT1	3.6970e-003	2.9510e-003

tblVehicleEF	LDT1	2.3290e-003	2.1110e-003
tblVehicleEF	LDT1	3.4000e-003	2.7140e-003
tblVehicleEF	LDT1	0.21	0.23
tblVehicleEF	LDT1	0.35	0.27
tblVehicleEF	LDT1	0.14	0.15
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.20	0.87
tblVehicleEF	LDT1	0.24	0.44
tblVehicleEF	LDT1	3.1780e-003	3.1370e-003
tblVehicleEF	LDT1	7.8300e-004	6.5900e-004
tblVehicleEF	LDT1	0.21	0.23
tblVehicleEF	LDT1	0.35	0.27
tblVehicleEF	LDT1	0.14	0.15
tblVehicleEF	LDT1	0.04	0.05
tblVehicleEF	LDT1	0.20	0.87
tblVehicleEF	LDT1	0.26	0.48
tblVehicleEF	LDT1	0.01	9.0560e-003
tblVehicleEF	LDT1	0.02	0.08
tblVehicleEF	LDT1	1.76	1.96
tblVehicleEF	LDT1	2.99	2.15
tblVehicleEF	LDT1	343.19	341.79
tblVehicleEF	LDT1	72.28	66.01
tblVehicleEF	LDT1	0.13	0.13
tblVehicleEF	LDT1	2.5300e-003	2.2930e-003
tblVehicleEF	LDT1	3.6970e-003	2.9510e-003
tblVehicleEF	LDT1	2.3290e-003	2.1110e-003
tblVehicleEF	LDT1	3.4000e-003	2.7140e-003

tblVehicleEF	LDT1	0.41	0.44
tblVehicleEF	LDT1	0.43	0.34
tblVehicleEF	LDT1	0.27	0.29
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.20	0.88
tblVehicleEF	LDT1	0.21	0.38
tblVehicleEF	LDT1	3.4550e-003	3.3820e-003
tblVehicleEF	LDT1	7.7500e-004	6.5300e-004
tblVehicleEF	LDT1	0.41	0.44
tblVehicleEF	LDT1	0.43	0.34
tblVehicleEF	LDT1	0.27	0.29
tblVehicleEF	LDT1	0.05	0.06
tblVehicleEF	LDT1	0.20	0.88
tblVehicleEF	LDT1	0.23	0.42
tblVehicleEF	LDT1	0.01	7.7080e-003
tblVehicleEF	LDT1	0.02	0.09
tblVehicleEF	LDT1	1.37	1.51
tblVehicleEF	LDT1	3.46	2.48
tblVehicleEF	LDT1	307.88	309.49
tblVehicleEF	LDT1	72.28	66.77
tblVehicleEF	LDT1	0.14	0.14
tblVehicleEF	LDT1	2.5300e-003	2.2930e-003
tblVehicleEF	LDT1	3.6970e-003	2.9510e-003
tblVehicleEF	LDT1	2.3290e-003	2.1110e-003
tblVehicleEF	LDT1	3.4000e-003	2.7140e-003
tblVehicleEF	LDT1	0.18	0.19
tblVehicleEF	LDT1	0.39	0.30

tblVehicleEF	LDT1	0.12	0.13
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.23	1.01
tblVehicleEF	LDT1	0.25	0.45
tblVehicleEF	LDT1	3.0960e-003	3.0630e-003
tblVehicleEF	LDT1	7.8400e-004	6.6100e-004
tblVehicleEF	LDT1	0.18	0.19
tblVehicleEF	LDT1	0.39	0.30
tblVehicleEF	LDT1	0.12	0.13
tblVehicleEF	LDT1	0.04	0.05
tblVehicleEF	LDT1	0.23	1.01
tblVehicleEF	LDT1	0.27	0.50
tblVehicleEF	LDT2	5.6080e-003	4.2470e-003
tblVehicleEF	LDT2	7.2840e-003	0.07
tblVehicleEF	LDT2	0.76	0.98
tblVehicleEF	LDT2	1.53	2.73
tblVehicleEF	LDT2	355.02	338.79
tblVehicleEF	LDT2	81.24	71.51
tblVehicleEF	LDT2	0.08	0.09
tblVehicleEF	LDT2	1.6030e-003	1.4980e-003
tblVehicleEF	LDT2	2.3320e-003	1.9580e-003
tblVehicleEF	LDT2	1.4740e-003	1.3790e-003
tblVehicleEF	LDT2	2.1450e-003	1.8010e-003
tblVehicleEF	LDT2	0.07	0.11
tblVehicleEF	LDT2	0.12	0.14
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.01	0.02

tblVehicleEF	LDT2	0.06	0.44
tblVehicleEF	LDT2	0.10	0.33
tblVehicleEF	LDT2	3.5560e-003	3.3520e-003
tblVehicleEF	LDT2	8.3800e-004	7.0800e-004
tblVehicleEF	LDT2	0.07	0.11
tblVehicleEF	LDT2	0.12	0.14
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.06	0.44
tblVehicleEF	LDT2	0.11	0.37
tblVehicleEF	LDT2	6.3630e-003	4.8280e-003
tblVehicleEF	LDT2	6.3270e-003	0.06
tblVehicleEF	LDT2	0.93	1.20
tblVehicleEF	LDT2	1.35	2.42
tblVehicleEF	LDT2	386.34	362.86
tblVehicleEF	LDT2	81.24	70.86
tblVehicleEF	LDT2	0.07	0.08
tblVehicleEF	LDT2	1.6030e-003	1.4980e-003
tblVehicleEF	LDT2	2.3320e-003	1.9580e-003
tblVehicleEF	LDT2	1.4740e-003	1.3790e-003
tblVehicleEF	LDT2	2.1450e-003	1.8010e-003
tblVehicleEF	LDT2	0.14	0.22
tblVehicleEF	LDT2	0.14	0.17
tblVehicleEF	LDT2	0.10	0.17
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.44
tblVehicleEF	LDT2	0.09	0.29

tblVehicleEF	LDT2	3.8710e-003	3.5900e-003
tblVehicleEF	LDT2	8.3500e-004	7.0100e-004
tblVehicleEF	LDT2	0.14	0.22
tblVehicleEF	LDT2	0.14	0.17
tblVehicleEF	LDT2	0.10	0.17
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.06	0.44
tblVehicleEF	LDT2	0.09	0.32
tblVehicleEF	LDT2	5.3900e-003	4.0760e-003
tblVehicleEF	LDT2	7.4940e-003	0.07
tblVehicleEF	LDT2	0.71	0.91
tblVehicleEF	LDT2	1.57	2.80
tblVehicleEF	LDT2	345.65	331.49
tblVehicleEF	LDT2	81.24	71.65
tblVehicleEF	LDT2	0.08	0.09
tblVehicleEF	LDT2	1.6030e-003	1.4980e-003
tblVehicleEF	LDT2	2.3320e-003	1.9580e-003
tblVehicleEF	LDT2	1.4740e-003	1.3790e-003
tblVehicleEF	LDT2	2.1450e-003	1.8010e-003
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.13	0.15
tblVehicleEF	LDT2	0.05	0.07
tblVehicleEF	LDT2	0.01	0.02
tblVehicleEF	LDT2	0.07	0.51
tblVehicleEF	LDT2	0.10	0.34
tblVehicleEF	LDT2	3.4620e-003	3.2800e-003
tblVehicleEF	LDT2	8.3900e-004	7.0900e-004

tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.13	0.15
tblVehicleEF	LDT2	0.05	0.07
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.51
tblVehicleEF	LDT2	0.11	0.38
tblVehicleEF	LHD1	5.4460e-003	4.8820e-003
tblVehicleEF	LHD1	0.01	5.3310e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	0.96	0.72
tblVehicleEF	LHD1	2.41	0.96
tblVehicleEF	LHD1	9.26	9.44
tblVehicleEF	LHD1	607.95	639.95
tblVehicleEF	LHD1	30.36	10.54
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	2.21	1.60
tblVehicleEF	LHD1	9.7200e-004	9.7000e-004
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.7100e-004	2.3300e-004
tblVehicleEF	LHD1	9.3000e-004	9.2800e-004
tblVehicleEF	LHD1	2.5390e-003	2.5010e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.0100e-004	2.1400e-004
tblVehicleEF	LHD1	3.8710e-003	3.1780e-003
tblVehicleEF	LHD1	0.10	0.08

tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.9010e-003	1.5570e-003
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.31	0.50
tblVehicleEF	LHD1	0.26	0.08
tblVehicleEF	LHD1	9.3000e-005	9.1000e-005
tblVehicleEF	LHD1	5.9620e-003	6.2250e-003
tblVehicleEF	LHD1	3.4900e-004	1.0400e-004
tblVehicleEF	LHD1	3.8710e-003	3.1780e-003
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.9010e-003	1.5570e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.31	0.50
tblVehicleEF	LHD1	0.28	0.08
tblVehicleEF	LHD1	5.4460e-003	4.8940e-003
tblVehicleEF	LHD1	0.01	5.4200e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	0.97	0.73
tblVehicleEF	LHD1	2.29	0.92
tblVehicleEF	LHD1	9.26	9.44
tblVehicleEF	LHD1	607.95	639.97
tblVehicleEF	LHD1	30.36	10.46
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	2.08	1.51
tblVehicleEF	LHD1	9.7200e-004	9.7000e-004

tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.7100e-004	2.3300e-004
tblVehicleEF	LHD1	9.3000e-004	9.2800e-004
tblVehicleEF	LHD1	2.5390e-003	2.5010e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.0100e-004	2.1400e-004
tblVehicleEF	LHD1	7.2450e-003	5.9530e-003
tblVehicleEF	LHD1	0.12	0.09
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	3.6380e-003	2.9980e-003
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.32	0.50
tblVehicleEF	LHD1	0.25	0.07
tblVehicleEF	LHD1	9.3000e-005	9.1000e-005
tblVehicleEF	LHD1	5.9620e-003	6.2250e-003
tblVehicleEF	LHD1	3.4700e-004	1.0300e-004
tblVehicleEF	LHD1	7.2450e-003	5.9530e-003
tblVehicleEF	LHD1	0.12	0.09
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	3.6380e-003	2.9980e-003
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.32	0.50
tblVehicleEF	LHD1	0.27	0.08
tblVehicleEF	LHD1	5.4460e-003	4.8810e-003
tblVehicleEF	LHD1	0.01	5.3180e-003
tblVehicleEF	LHD1	0.02	0.02

tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	0.96	0.72
tblVehicleEF	LHD1	2.41	0.96
tblVehicleEF	LHD1	9.26	9.44
tblVehicleEF	LHD1	607.95	639.95
tblVehicleEF	LHD1	30.36	10.54
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	2.18	1.59
tblVehicleEF	LHD1	9.7200e-004	9.7000e-004
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.7100e-004	2.3300e-004
tblVehicleEF	LHD1	9.3000e-004	9.2800e-004
tblVehicleEF	LHD1	2.5390e-003	2.5010e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.0100e-004	2.1400e-004
tblVehicleEF	LHD1	3.4570e-003	2.8250e-003
tblVehicleEF	LHD1	0.11	0.09
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.7350e-003	1.4150e-003
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.33	0.53
tblVehicleEF	LHD1	0.26	0.08
tblVehicleEF	LHD1	9.3000e-005	9.1000e-005
tblVehicleEF	LHD1	5.9620e-003	6.2250e-003
tblVehicleEF	LHD1	3.4900e-004	1.0400e-004
tblVehicleEF	LHD1	3.4570e-003	2.8250e-003

tblVehicleEF	LHD1	0.11	0.09
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.7350e-003	1.4150e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.33	0.53
tblVehicleEF	LHD1	0.28	0.08
tblVehicleEF	LHD2	3.6660e-003	3.1720e-003
tblVehicleEF	LHD2	4.5290e-003	3.8570e-003
tblVehicleEF	LHD2	8.3110e-003	9.0280e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.50	0.53
tblVehicleEF	LHD2	1.15	0.56
tblVehicleEF	LHD2	14.48	14.86
tblVehicleEF	LHD2	604.20	638.83
tblVehicleEF	LHD2	23.56	7.29
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.71	1.77
tblVehicleEF	LHD2	1.3360e-003	1.4390e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.8700e-004	1.1400e-004
tblVehicleEF	LHD2	1.2780e-003	1.3770e-003
tblVehicleEF	LHD2	2.6970e-003	2.7110e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5600e-004	1.0500e-004
tblVehicleEF	LHD2	1.4980e-003	1.6870e-003
tblVehicleEF	LHD2	0.04	0.04

tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	7.7800e-004	8.4200e-004
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.4100e-004	1.4200e-004
tblVehicleEF	LHD2	5.8740e-003	6.1550e-003
tblVehicleEF	LHD2	2.5700e-004	7.2000e-005
tblVehicleEF	LHD2	1.4980e-003	1.6870e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	7.7800e-004	8.4200e-004
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	3.6660e-003	3.1790e-003
tblVehicleEF	LHD2	4.5800e-003	3.8860e-003
tblVehicleEF	LHD2	8.0210e-003	8.7250e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.51	0.53
tblVehicleEF	LHD2	1.10	0.53
tblVehicleEF	LHD2	14.48	14.86
tblVehicleEF	LHD2	604.20	638.83
tblVehicleEF	LHD2	23.56	7.25
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.62	1.67
tblVehicleEF	LHD2	1.3360e-003	1.4390e-003

tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.8700e-004	1.1400e-004
tblVehicleEF	LHD2	1.2780e-003	1.3770e-003
tblVehicleEF	LHD2	2.6970e-003	2.7110e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5600e-004	1.0500e-004
tblVehicleEF	LHD2	2.8320e-003	3.1830e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.4720e-003	1.6130e-003
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.4100e-004	1.4200e-004
tblVehicleEF	LHD2	5.8740e-003	6.1560e-003
tblVehicleEF	LHD2	2.5600e-004	7.2000e-005
tblVehicleEF	LHD2	2.8320e-003	3.1830e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.4720e-003	1.6130e-003
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	3.6660e-003	3.1700e-003
tblVehicleEF	LHD2	4.5170e-003	3.8490e-003
tblVehicleEF	LHD2	8.3600e-003	9.0930e-003

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tblVehicleEF	LHD2	0.50	0.53
tblVehicleEF	LHD2	1.16	0.56
tblVehicleEF	LHD2	14.48	14.86
tblVehicleEF	LHD2	604.20	638.83
tblVehicleEF	LHD2	23.56	7.30
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.70	1.75
tblVehicleEF	LHD2	1.3360e-003	1.4390e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.8700e-004	1.1400e-004
tblVehicleEF	LHD2	1.2780e-003	1.3770e-003
tblVehicleEF	LHD2	2.6970e-003	2.7110e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5600e-004	1.0500e-004
tblVehicleEF	LHD2	1.1910e-003	1.3290e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	6.6000e-004	7.0100e-004
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.4100e-004	1.4200e-004
tblVehicleEF	LHD2	5.8740e-003	6.1550e-003
tblVehicleEF	LHD2	2.5700e-004	7.2000e-005
tblVehicleEF	LHD2	1.1910e-003	1.3290e-003

tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	6.6000e-004	7.0100e-004
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	MCY	0.42	0.32
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	19.52	19.61
tblVehicleEF	MCY	9.67	8.55
tblVehicleEF	MCY	165.74	208.30
tblVehicleEF	MCY	46.23	60.73
tblVehicleEF	MCY	1.13	1.13
tblVehicleEF	MCY	1.7750e-003	1.7570e-003
tblVehicleEF	MCY	3.4010e-003	2.8660e-003
tblVehicleEF	MCY	1.6600e-003	1.6440e-003
tblVehicleEF	MCY	3.2060e-003	2.7000e-003
tblVehicleEF	MCY	1.69	1.66
tblVehicleEF	MCY	0.85	0.84
tblVehicleEF	MCY	0.92	0.90
tblVehicleEF	MCY	2.15	2.16
tblVehicleEF	MCY	0.57	1.87
tblVehicleEF	MCY	2.08	1.83
tblVehicleEF	MCY	2.0380e-003	2.0610e-003
tblVehicleEF	MCY	6.8100e-004	6.0100e-004
tblVehicleEF	MCY	1.69	1.66
tblVehicleEF	MCY	0.85	0.84

tblVehicleEF	MCY	0.92	0.90
tblVehicleEF	MCY	2.65	2.65
tblVehicleEF	MCY	0.57	1.87
tblVehicleEF	MCY	2.26	1.99
tblVehicleEF	MCY	0.42	0.32
tblVehicleEF	MCY	0.14	0.22
tblVehicleEF	MCY	20.23	20.27
tblVehicleEF	MCY	9.11	8.00
tblVehicleEF	MCY	165.74	209.26
tblVehicleEF	MCY	46.23	59.19
tblVehicleEF	MCY	0.98	0.98
tblVehicleEF	MCY	1.7750e-003	1.7570e-003
tblVehicleEF	MCY	3.4010e-003	2.8660e-003
tblVehicleEF	MCY	1.6600e-003	1.6440e-003
tblVehicleEF	MCY	3.2060e-003	2.7000e-003
tblVehicleEF	MCY	3.35	3.28
tblVehicleEF	MCY	1.24	1.23
tblVehicleEF	MCY	2.10	2.05
tblVehicleEF	MCY	2.13	2.13
tblVehicleEF	MCY	0.57	1.86
tblVehicleEF	MCY	1.86	1.63
tblVehicleEF	MCY	2.0490e-003	2.0710e-003
tblVehicleEF	MCY	6.6500e-004	5.8600e-004
tblVehicleEF	MCY	3.35	3.28
tblVehicleEF	MCY	1.24	1.23
tblVehicleEF	MCY	2.10	2.05
tblVehicleEF	MCY	2.62	2.63

tblVehicleEF	MCY	0.57	1.86
tblVehicleEF	MCY	2.02	1.77
tblVehicleEF	MCY	0.42	0.32
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	19.04	19.14
tblVehicleEF	MCY	9.62	8.49
tblVehicleEF	MCY	165.74	207.52
tblVehicleEF	MCY	46.23	60.64
tblVehicleEF	MCY	1.12	1.12
tblVehicleEF	MCY	1.7750e-003	1.7570e-003
tblVehicleEF	MCY	3.4010e-003	2.8660e-003
tblVehicleEF	MCY	1.6600e-003	1.6440e-003
tblVehicleEF	MCY	3.2060e-003	2.7000e-003
tblVehicleEF	MCY	1.60	1.59
tblVehicleEF	MCY	1.05	1.04
tblVehicleEF	MCY	0.74	0.73
tblVehicleEF	MCY	2.15	2.15
tblVehicleEF	MCY	0.65	2.12
tblVehicleEF	MCY	2.08	1.83
tblVehicleEF	MCY	2.0310e-003	2.0540e-003
tblVehicleEF	MCY	6.8100e-004	6.0000e-004
tblVehicleEF	MCY	1.60	1.59
tblVehicleEF	MCY	1.05	1.04
tblVehicleEF	MCY	0.74	0.73
tblVehicleEF	MCY	2.64	2.65
tblVehicleEF	MCY	0.65	2.12
tblVehicleEF	MCY	2.27	1.99

tblVehicleEF	MDV	0.01	5.7580e-003
tblVehicleEF	MDV	0.02	0.09
tblVehicleEF	MDV	1.42	1.20
tblVehicleEF	MDV	3.18	3.27
tblVehicleEF	MDV	488.89	421.49
tblVehicleEF	MDV	110.15	88.73
tblVehicleEF	MDV	0.17	0.12
tblVehicleEF	MDV	1.7110e-003	1.5730e-003
tblVehicleEF	MDV	2.4630e-003	2.0550e-003
tblVehicleEF	MDV	1.5780e-003	1.4510e-003
tblVehicleEF	MDV	2.2660e-003	1.8910e-003
tblVehicleEF	MDV	0.11	0.13
tblVehicleEF	MDV	0.20	0.17
tblVehicleEF	MDV	0.09	0.11
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.25	0.45
tblVehicleEF	MDV	4.9000e-003	4.1680e-003
tblVehicleEF	MDV	1.1570e-003	8.7800e-004
tblVehicleEF	MDV	0.11	0.13
tblVehicleEF	MDV	0.20	0.17
tblVehicleEF	MDV	0.09	0.11
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.27	0.49
tblVehicleEF	MDV	0.01	6.5120e-003
tblVehicleEF	MDV	0.02	0.08

tblVehicleEF	MDV	1.73	1.46
tblVehicleEF	MDV	2.81	2.88
tblVehicleEF	MDV	530.71	447.07
tblVehicleEF	MDV	110.15	87.92
tblVehicleEF	MDV	0.16	0.11
tblVehicleEF	MDV	1.7110e-003	1.5730e-003
tblVehicleEF	MDV	2.4630e-003	2.0550e-003
tblVehicleEF	MDV	1.5780e-003	1.4510e-003
tblVehicleEF	MDV	2.2660e-003	1.8910e-003
tblVehicleEF	MDV	0.22	0.26
tblVehicleEF	MDV	0.23	0.20
tblVehicleEF	MDV	0.17	0.21
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.21	0.39
tblVehicleEF	MDV	5.3230e-003	4.4210e-003
tblVehicleEF	MDV	1.1510e-003	8.7000e-004
tblVehicleEF	MDV	0.22	0.26
tblVehicleEF	MDV	0.23	0.20
tblVehicleEF	MDV	0.17	0.21
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.23	0.43
tblVehicleEF	MDV	0.01	5.5370e-003
tblVehicleEF	MDV	0.02	0.09
tblVehicleEF	MDV	1.33	1.12
tblVehicleEF	MDV	3.24	3.34

tblVehicleEF	MDV	476.42	413.84
tblVehicleEF	MDV	110.15	88.88
tblVehicleEF	MDV	0.16	0.12
tblVehicleEF	MDV	1.7110e-003	1.5730e-003
tblVehicleEF	MDV	2.4630e-003	2.0550e-003
tblVehicleEF	MDV	1.5780e-003	1.4510e-003
tblVehicleEF	MDV	2.2660e-003	1.8910e-003
tblVehicleEF	MDV	0.09	0.10
tblVehicleEF	MDV	0.21	0.18
tblVehicleEF	MDV	0.08	0.10
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.13	0.57
tblVehicleEF	MDV	0.25	0.46
tblVehicleEF	MDV	4.7750e-003	4.0920e-003
tblVehicleEF	MDV	1.1590e-003	8.8000e-004
tblVehicleEF	MDV	0.09	0.10
tblVehicleEF	MDV	0.21	0.18
tblVehicleEF	MDV	0.08	0.10
tblVehicleEF	MDV	0.05	0.03
tblVehicleEF	MDV	0.13	0.57
tblVehicleEF	MDV	0.28	0.50
tblVehicleEF	MH	0.03	3.3370e-003
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	2.70	0.34
tblVehicleEF	MH	5.98	0.00
tblVehicleEF	MH	1,002.10	941.76
tblVehicleEF	MH	57.67	0.00

tblVehicleEF	MH	1.67	4.43
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	1.0860e-003	0.00
tblVehicleEF	MH	3.2460e-003	4.0000e-003
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	9.9800e-004	0.00
tblVehicleEF	MH	1.56	0.00
tblVehicleEF	MH	0.08	0.00
tblVehicleEF	MH	0.54	0.00
tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.35	0.00
tblVehicleEF	MH	9.9460e-003	8.9030e-003
tblVehicleEF	MH	6.8100e-004	0.00
tblVehicleEF	MH	1.56	0.00
tblVehicleEF	MH	0.08	0.00
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tblVehicleEF	MH	0.13	0.08
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.39	0.00
tblVehicleEF	MH	0.03	3.3370e-003
tblVehicleEF	MH	0.02	0.00
tblVehicleEF	MH	2.78	0.34
tblVehicleEF	MH	5.56	0.00
tblVehicleEF	MH	1,002.10	941.76
tblVehicleEF	MH	57.67	0.00

tblVehicleEF	MH	1.55	4.18
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	1.0860e-003	0.00
tblVehicleEF	MH	3.2460e-003	4.0000e-003
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	9.9800e-004	0.00
tblVehicleEF	MH	2.87	0.00
tblVehicleEF	MH	0.10	0.00
tblVehicleEF	MH	1.06	0.00
tblVehicleEF	MH	0.10	0.07
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.34	0.00
tblVehicleEF	MH	9.9470e-003	8.9030e-003
tblVehicleEF	MH	6.7400e-004	0.00
tblVehicleEF	MH	2.87	0.00
tblVehicleEF	MH	0.10	0.00
tblVehicleEF	MH	1.06	0.00
tblVehicleEF	MH	0.13	0.08
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.37	0.00
tblVehicleEF	MH	0.03	3.3370e-003
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	2.70	0.34
tblVehicleEF	MH	6.02	0.00
tblVehicleEF	MH	1,002.10	941.76
tblVehicleEF	MH	57.67	0.00

tblVehicleEF	MH	1.65	4.38
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	1.0860e-003	0.00
tblVehicleEF	MH	3.2460e-003	4.0000e-003
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	9.9800e-004	0.00
tblVehicleEF	MH	1.58	0.00
tblVehicleEF	MH	0.10	0.00
tblVehicleEF	MH	0.53	0.00
tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.35	0.00
tblVehicleEF	MH	9.9460e-003	8.9030e-003
tblVehicleEF	MH	6.8200e-004	0.00
tblVehicleEF	MH	1.58	0.00
tblVehicleEF	MH	0.10	0.00
tblVehicleEF	MH	0.53	0.00
tblVehicleEF	MH	0.13	0.08
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.39	0.00
tblVehicleEF	MHD	0.02	3.1500e-003
tblVehicleEF	MHD	3.7220e-003	5.9790e-003
tblVehicleEF	MHD	0.06	8.4870e-003
tblVehicleEF	MHD	0.35	0.34
tblVehicleEF	MHD	0.28	0.57
tblVehicleEF	MHD	6.06	1.01

tblVehicleEF	MHD	151.96	74.93
tblVehicleEF	MHD	1,066.63	1,001.03
tblVehicleEF	MHD	55.49	8.18
tblVehicleEF	MHD	0.65	0.69
tblVehicleEF	MHD	0.99	2.37
tblVehicleEF	MHD	1.0680e-003	2.4180e-003
tblVehicleEF	MHD	6.4490e-003	0.08
tblVehicleEF	MHD	7.8800e-004	9.6000e-005
tblVehicleEF	MHD	1.0220e-003	2.3130e-003
tblVehicleEF	MHD	6.1670e-003	0.08
tblVehicleEF	MHD	7.2400e-004	8.8000e-005
tblVehicleEF	MHD	1.7450e-003	7.1900e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	8.5800e-004	3.5500e-004
tblVehicleEF	MHD	0.03	0.11
tblVehicleEF	MHD	0.02	0.10
tblVehicleEF	MHD	0.37	0.05
tblVehicleEF	MHD	1.4610e-003	7.1000e-004
tblVehicleEF	MHD	0.01	9.5290e-003
tblVehicleEF	MHD	6.6100e-004	8.1000e-005
tblVehicleEF	MHD	1.7450e-003	7.1900e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	8.5800e-004	3.5500e-004
tblVehicleEF	MHD	0.04	0.12
tblVehicleEF	MHD	0.02	0.10

tblVehicleEF	MHD	0.40	0.05
tblVehicleEF	MHD	0.02	2.9880e-003
tblVehicleEF	MHD	3.7740e-003	6.0080e-003
tblVehicleEF	MHD	0.05	8.2030e-003
tblVehicleEF	MHD	0.26	0.28
tblVehicleEF	MHD	0.28	0.57
tblVehicleEF	MHD	5.78	0.96
tblVehicleEF	MHD	160.96	76.44
tblVehicleEF	MHD	1,066.63	1,001.04
tblVehicleEF	MHD	55.49	8.10
tblVehicleEF	MHD	0.67	0.70
tblVehicleEF	MHD	0.93	2.23
tblVehicleEF	MHD	9.0000e-004	2.0410e-003
tblVehicleEF	MHD	6.4490e-003	0.08
tblVehicleEF	MHD	7.8800e-004	9.6000e-005
tblVehicleEF	MHD	8.6100e-004	1.9530e-003
tblVehicleEF	MHD	6.1670e-003	0.08
tblVehicleEF	MHD	7.2400e-004	8.8000e-005
tblVehicleEF	MHD	3.3760e-003	1.3770e-003
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	1.6840e-003	7.0100e-004
tblVehicleEF	MHD	0.03	0.11
tblVehicleEF	MHD	0.02	0.11
tblVehicleEF	MHD	0.36	0.04
tblVehicleEF	MHD	1.5460e-003	7.2500e-004
tblVehicleEF	MHD	0.01	9.5290e-003

tblVehicleEF	MHD	6.5600e-004	8.0000e-005
tblVehicleEF	MHD	3.3760e-003	1.3770e-003
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	1.6840e-003	7.0100e-004
tblVehicleEF	MHD	0.04	0.12
tblVehicleEF	MHD	0.02	0.11
tblVehicleEF	MHD	0.39	0.05
tblVehicleEF	MHD	0.02	3.3820e-003
tblVehicleEF	MHD	3.6890e-003	5.9600e-003
tblVehicleEF	MHD	0.06	8.5610e-003
tblVehicleEF	MHD	0.49	0.43
tblVehicleEF	MHD	0.27	0.57
tblVehicleEF	MHD	6.14	1.02
tblVehicleEF	MHD	139.53	72.84
tblVehicleEF	MHD	1,066.63	1,001.03
tblVehicleEF	MHD	55.49	8.20
tblVehicleEF	MHD	0.62	0.67
tblVehicleEF	MHD	0.98	2.35
tblVehicleEF	MHD	1.2990e-003	2.9380e-003
tblVehicleEF	MHD	6.4490e-003	0.08
tblVehicleEF	MHD	7.8800e-004	9.6000e-005
tblVehicleEF	MHD	1.2430e-003	2.8110e-003
tblVehicleEF	MHD	6.1670e-003	0.08
tblVehicleEF	MHD	7.2400e-004	8.8000e-005
tblVehicleEF	MHD	1.3320e-003	5.6300e-004
tblVehicleEF	MHD	0.05	0.02

tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	6.7900e-004	2.8800e-004
tblVehicleEF	MHD	0.03	0.11
tblVehicleEF	MHD	0.02	0.11
tblVehicleEF	MHD	0.37	0.05
tblVehicleEF	MHD	1.3440e-003	6.9100e-004
tblVehicleEF	MHD	0.01	9.5290e-003
tblVehicleEF	MHD	6.6300e-004	8.1000e-005
tblVehicleEF	MHD	1.3320e-003	5.6300e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	6.7900e-004	2.8800e-004
tblVehicleEF	MHD	0.04	0.12
tblVehicleEF	MHD	0.02	0.11
tblVehicleEF	MHD	0.41	0.05
tblVehicleEF	OBUS	0.01	8.9240e-003
tblVehicleEF	OBUS	8.0950e-003	8.5070e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.27	0.50
tblVehicleEF	OBUS	0.54	0.93
tblVehicleEF	OBUS	6.17	2.58
tblVehicleEF	OBUS	75.04	73.28
tblVehicleEF	OBUS	1,098.07	1,407.22
tblVehicleEF	OBUS	70.10	20.86
tblVehicleEF	OBUS	0.35	0.44
tblVehicleEF	OBUS	1.12	1.70
tblVehicleEF	OBUS	1.2100e-004	1.7750e-003

tblVehicleEF	OBUS	6.0450e-003	0.04
tblVehicleEF	OBUS	8.2300e-004	1.9000e-004
tblVehicleEF	OBUS	1.1600e-004	1.6990e-003
tblVehicleEF	OBUS	5.7680e-003	0.04
tblVehicleEF	OBUS	7.5700e-004	1.7400e-004
tblVehicleEF	OBUS	2.1800e-003	2.5990e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	9.3000e-004	1.1120e-003
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.05	0.26
tblVehicleEF	OBUS	0.39	0.12
tblVehicleEF	OBUS	7.2800e-004	6.9900e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.0900e-004	2.0600e-004
tblVehicleEF	OBUS	2.1800e-003	2.5990e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	9.3000e-004	1.1120e-003
tblVehicleEF	OBUS	0.05	0.11
tblVehicleEF	OBUS	0.05	0.26
tblVehicleEF	OBUS	0.42	0.14
tblVehicleEF	OBUS	0.01	8.9470e-003
tblVehicleEF	OBUS	8.2540e-003	8.6370e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.26	0.48
tblVehicleEF	OBUS	0.55	0.94

tblVehicleEF	OBUS	5.76	2.41
tblVehicleEF	OBUS	78.48	73.81
tblVehicleEF	OBUS	1,098.07	1,407.25
tblVehicleEF	OBUS	70.10	20.57
tblVehicleEF	OBUS	0.36	0.45
tblVehicleEF	OBUS	1.04	1.59
tblVehicleEF	OBUS	1.0200e-004	1.5000e-003
tblVehicleEF	OBUS	6.0450e-003	0.04
tblVehicleEF	OBUS	8.2300e-004	1.9000e-004
tblVehicleEF	OBUS	9.8000e-005	1.4350e-003
tblVehicleEF	OBUS	5.7680e-003	0.04
tblVehicleEF	OBUS	7.5700e-004	1.7400e-004
tblVehicleEF	OBUS	4.0690e-003	4.7330e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	1.7890e-003	2.1320e-003
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.05	0.26
tblVehicleEF	OBUS	0.37	0.12
tblVehicleEF	OBUS	7.6100e-004	7.0400e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.0200e-004	2.0400e-004
tblVehicleEF	OBUS	4.0690e-003	4.7330e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	1.7890e-003	2.1320e-003
tblVehicleEF	OBUS	0.05	0.11

tblVehicleEF	OBUS	0.05	0.26
tblVehicleEF	OBUS	0.40	0.13
tblVehicleEF	OBUS	0.01	8.9200e-003
tblVehicleEF	OBUS	8.0660e-003	8.4690e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.28	0.53
tblVehicleEF	OBUS	0.54	0.92
tblVehicleEF	OBUS	6.22	2.60
tblVehicleEF	OBUS	70.30	72.56
tblVehicleEF	OBUS	1,098.07	1,407.21
tblVehicleEF	OBUS	70.10	20.90
tblVehicleEF	OBUS	0.34	0.44
tblVehicleEF	OBUS	1.11	1.68
tblVehicleEF	OBUS	1.4700e-004	2.1560e-003
tblVehicleEF	OBUS	6.0450e-003	0.04
tblVehicleEF	OBUS	8.2300e-004	1.9000e-004
tblVehicleEF	OBUS	1.4100e-004	2.0620e-003
tblVehicleEF	OBUS	5.7680e-003	0.04
tblVehicleEF	OBUS	7.5700e-004	1.7400e-004
tblVehicleEF	OBUS	1.8870e-003	2.3830e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	8.5400e-004	1.0620e-003
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.05	0.27
tblVehicleEF	OBUS	0.39	0.13
tblVehicleEF	OBUS	6.8300e-004	6.9200e-004

tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.1000e-004	2.0700e-004
tblVehicleEF	OBUS	1.8870e-003	2.3830e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	8.5400e-004	1.0620e-003
tblVehicleEF	OBUS	0.05	0.11
tblVehicleEF	OBUS	0.05	0.27
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tblVehicleEF	SBUS	0.84	0.08
tblVehicleEF	SBUS	0.01	6.6110e-003
tblVehicleEF	SBUS	0.06	6.9670e-003
tblVehicleEF	SBUS	7.83	3.03
tblVehicleEF	SBUS	0.64	0.53
tblVehicleEF	SBUS	6.66	0.94
tblVehicleEF	SBUS	1,146.29	366.87
tblVehicleEF	SBUS	1,103.40	1,115.27
tblVehicleEF	SBUS	53.92	6.06
tblVehicleEF	SBUS	10.00	3.57
tblVehicleEF	SBUS	4.65	4.82
tblVehicleEF	SBUS	0.01	4.0660e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.5700e-004	4.0000e-005
tblVehicleEF	SBUS	0.01	3.8900e-003
tblVehicleEF	SBUS	2.6950e-003	2.6510e-003
tblVehicleEF	SBUS	0.02	0.03

tblVehicleEF	SBUS	4.2000e-004	3.6000e-005
tblVehicleEF	SBUS	4.6830e-003	1.3080e-003
tblVehicleEF	SBUS	0.03	8.6250e-003
tblVehicleEF	SBUS	0.94	0.36
tblVehicleEF	SBUS	2.1770e-003	6.2500e-004
tblVehicleEF	SBUS	0.11	0.10
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	0.37	0.04
tblVehicleEF	SBUS	0.01	3.5040e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.5500e-004	6.0000e-005
tblVehicleEF	SBUS	4.6830e-003	1.3080e-003
tblVehicleEF	SBUS	0.03	8.6250e-003
tblVehicleEF	SBUS	1.35	0.52
tblVehicleEF	SBUS	2.1770e-003	6.2500e-004
tblVehicleEF	SBUS	0.13	0.11
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	0.40	0.04
tblVehicleEF	SBUS	0.84	0.08
tblVehicleEF	SBUS	0.01	6.6860e-003
tblVehicleEF	SBUS	0.05	5.8380e-003
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tblVehicleEF	SBUS	1,103.40	1,115.28
tblVehicleEF	SBUS	53.92	5.63

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tblVehicleEF	SBUS	9.1190e-003	3.4340e-003
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tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.5700e-004	4.0000e-005
tblVehicleEF	SBUS	8.7240e-003	3.2850e-003
tblVehicleEF	SBUS	2.6950e-003	2.6510e-003
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	4.2000e-004	3.6000e-005
tblVehicleEF	SBUS	8.4640e-003	2.3620e-003
tblVehicleEF	SBUS	0.03	9.1440e-003
tblVehicleEF	SBUS	0.93	0.36
tblVehicleEF	SBUS	4.0830e-003	1.1650e-003
tblVehicleEF	SBUS	0.11	0.10
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.31	0.03
tblVehicleEF	SBUS	0.01	3.6000e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.2400e-004	5.6000e-005
tblVehicleEF	SBUS	8.4640e-003	2.3620e-003
tblVehicleEF	SBUS	0.03	9.1440e-003
tblVehicleEF	SBUS	1.35	0.52
tblVehicleEF	SBUS	4.0830e-003	1.1650e-003
tblVehicleEF	SBUS	0.13	0.11
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.34	0.04

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tblVehicleEF	SBUS	0.63	0.53
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tblVehicleEF	SBUS	1,074.07	352.76
tblVehicleEF	SBUS	1,103.40	1,115.26
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tblVehicleEF	SBUS	4.2000e-004	3.6000e-005
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tblVehicleEF	SBUS	2.1000e-003	6.0300e-004
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tblVehicleEF	SBUS	0.02	0.06
tblVehicleEF	SBUS	0.38	0.04
tblVehicleEF	SBUS	0.01	3.3710e-003

tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.6100e-004	6.1000e-005
tblVehicleEF	SBUS	4.1680e-003	1.1480e-003
tblVehicleEF	SBUS	0.03	8.8290e-003
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tblVehicleEF	SBUS	0.41	0.05
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tblVehicleEF	UBUS	0.09	0.02
tblVehicleEF	UBUS	8.45	26.05
tblVehicleEF	UBUS	15.26	1.50
tblVehicleEF	UBUS	1,822.40	1,617.71
tblVehicleEF	UBUS	153.45	18.08
tblVehicleEF	UBUS	4.95	0.32
tblVehicleEF	UBUS	0.50	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.06	2.9340e-003
tblVehicleEF	UBUS	1.4200e-003	1.6100e-004
tblVehicleEF	UBUS	0.21	0.04
tblVehicleEF	UBUS	3.0000e-003	5.4780e-003
tblVehicleEF	UBUS	0.05	2.7920e-003
tblVehicleEF	UBUS	1.3060e-003	1.4800e-004
tblVehicleEF	UBUS	9.7430e-003	1.6370e-003
tblVehicleEF	UBUS	0.11	9.7740e-003
tblVehicleEF	UBUS	4.7860e-003	7.1300e-004

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tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.17	0.07
tblVehicleEF	UBUS	9.9960e-003	4.8690e-003
tblVehicleEF	UBUS	1.8100e-003	1.7900e-004
tblVehicleEF	UBUS	9.7430e-003	1.6370e-003
tblVehicleEF	UBUS	0.11	9.7740e-003
tblVehicleEF	UBUS	4.7860e-003	7.1300e-004
tblVehicleEF	UBUS	2.08	3.43
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.28	0.08
tblVehicleEF	UBUS	1.52	3.35
tblVehicleEF	UBUS	0.08	0.02
tblVehicleEF	UBUS	8.53	26.06
tblVehicleEF	UBUS	13.06	1.28
tblVehicleEF	UBUS	1,822.40	1,617.72
tblVehicleEF	UBUS	153.45	17.70
tblVehicleEF	UBUS	4.62	0.31
tblVehicleEF	UBUS	0.50	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.06	2.9340e-003
tblVehicleEF	UBUS	1.4200e-003	1.6100e-004
tblVehicleEF	UBUS	0.21	0.04
tblVehicleEF	UBUS	3.0000e-003	5.4780e-003
tblVehicleEF	UBUS	0.05	2.7920e-003
tblVehicleEF	UBUS	1.3060e-003	1.4800e-004
tblVehicleEF	UBUS	0.02	2.9250e-003

tblVehicleEF	UBUS	0.14	0.01
tblVehicleEF	UBUS	9.6600e-003	1.4550e-003
tblVehicleEF	UBUS	0.53	0.05
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.06	0.07
tblVehicleEF	UBUS	9.9970e-003	4.8690e-003
tblVehicleEF	UBUS	1.7720e-003	1.7500e-004
tblVehicleEF	UBUS	0.02	2.9250e-003
tblVehicleEF	UBUS	0.14	0.01
tblVehicleEF	UBUS	9.6600e-003	1.4550e-003
tblVehicleEF	UBUS	2.09	3.43
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.17	0.07
tblVehicleEF	UBUS	1.51	3.35
tblVehicleEF	UBUS	0.09	0.02
tblVehicleEF	UBUS	8.44	26.05
tblVehicleEF	UBUS	15.44	1.49
tblVehicleEF	UBUS	1,822.40	1,617.71
tblVehicleEF	UBUS	153.45	18.06
tblVehicleEF	UBUS	4.92	0.31
tblVehicleEF	UBUS	0.50	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.06	2.9340e-003
tblVehicleEF	UBUS	1.4200e-003	1.6100e-004
tblVehicleEF	UBUS	0.21	0.04
tblVehicleEF	UBUS	3.0000e-003	5.4780e-003
tblVehicleEF	UBUS	0.05	2.7920e-003

tblVehicleEF	UBUS	1.3060e-003	1.4800e-004
tblVehicleEF	UBUS	8.9770e-003	1.7200e-003
tblVehicleEF	UBUS	0.13	0.01
tblVehicleEF	UBUS	4.3820e-003	7.5400e-004
tblVehicleEF	UBUS	0.52	0.05
tblVehicleEF	UBUS	0.03	0.05
tblVehicleEF	UBUS	1.18	0.07
tblVehicleEF	UBUS	9.9960e-003	4.8690e-003
tblVehicleEF	UBUS	1.8130e-003	1.7900e-004
tblVehicleEF	UBUS	8.9770e-003	1.7200e-003
tblVehicleEF	UBUS	0.13	0.01
tblVehicleEF	UBUS	4.3820e-003	7.5400e-004
tblVehicleEF	UBUS	2.08	3.43
tblVehicleEF	UBUS	0.03	0.05
tblVehicleEF	UBUS	1.29	0.08
tblVehicleTrips	CC_TL	8.40	0.00
tblVehicleTrips	CC_TL	8.40	0.00
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tblVehicleTrips	CNW_TL	6.90	0.00
tblVehicleTrips	CNW_TTP	41.00	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TL	16.60	0.00
tblVehicleTrips	CW_TTP	59.00	0.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	0.00
tblVehicleTrips	ST_TR	1.68	0.00

tblVehicleTrips	SU_TR	1.68	0.00
tblVehicleTrips	WD_TR	1.68	0.00
tblWater	IndoorWaterUseRate	22,523,750.00	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.4564	4.8289	2.6349	7.8400e-003	1.0303	0.1794	1.2097	0.4081	0.1657	0.5738	0.0000	705.3222	705.3222	0.1376	0.0000	708.7618
2021	0.6488	2.2542	1.9548	6.6000e-003	0.3316	0.0688	0.4004	0.0892	0.0642	0.1534	0.0000	601.4391	601.4391	0.0690	0.0000	603.1649
Maximum	**0.6488**	**4.8289**	**2.6349**	**7.8400e-003**	**1.0303**	**0.1794**	**1.2097**	**0.4081**	**0.1657**	**0.5738**	**0.0000**	**705.3222**	**705.3222**	**0.1376**	**0.0000**	**708.7618**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.4564	4.8289	2.6349	7.8400e-003	0.5435	0.1794	0.7229	0.1974	0.1657	0.3631	0.0000	705.3218	705.3218	0.1376	0.0000	708.7614
2021	0.6488	2.2542	1.9548	6.6000e-003	0.3316	0.0688	0.4004	0.0892	0.0642	0.1534	0.0000	601.4389	601.4389	0.0690	0.0000	603.1647
Maximum	**0.6488**	**4.8289**	**2.6349**	**7.8400e-003**	**0.5435**	**0.1794**	**0.7229**	**0.1974**	**0.1657**	**0.3631**	**0.0000**	**705.3218**	**705.3218**	**0.1376**	**0.0000**	**708.7614**

	ROG	NOx	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**	**35.74**	**0.00**	**30.23**	**42.37**	**0.00**	**28.98**	**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	6-4-2020	9-3-2020	2.2181	2.2181
2	9-4-2020	12-3-2020	2.2993	2.2993
3	12-4-2020	3-3-2021	2.9071	2.9071
4	3-4-2021	6-3-2021	0.7530	0.7530
		Highest	2.9071	2.9071

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	0.5253	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0423	0.0423	1.1000e-004	0.0000	0.0451
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	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.5253**	**2.0000e-004**	**0.0218**	**0.0000**	**0.0000**	**8.0000e-005**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0423**	**0.0423**	**1.1000e-004**	**0.0000**	**0.0451**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5253	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0423	0.0423	1.1000e-004	0.0000	0.0451
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	0.0000
Mobile	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Waste						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Water						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.5253**	**2.0000e-004**	**0.0218**	**0.0000**	**0.0000**	**8.0000e-005**	**8.0000e-005**	**0.0000**	**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0423**	**0.0423**	**1.1000e-004**	**0.0000**	**0.0451**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Estes Banning (Construction - Unmitigated) - Riverside-South Coast County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Rough Grading	Grading	6/4/2020	7/29/2020	5	40	
2	Site Preparation	Site Preparation	7/30/2020	9/30/2020	5	45	
3	Fine Grading	Grading	10/1/2020	10/28/2020	5	20	
4	Building Construction	Building Construction	10/29/2020	3/24/2021	5	105	
5	Paving	Paving	1/7/2021	3/24/2021	5	55	
6	Architectural Coating	Architectural Coating	1/7/2021	3/24/2021	5	55	

Acres of Grading (Site Preparation Phase): 157.5

Acres of Grading (Grading Phase): 0

Acres of Paving: 36.86

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 146,100; Non-Residential Outdoor: 48,700; Striped Parking Area: 96,348 (Architectural Coating – sqft)

OffRoad Equipment

Estes Banning (Construction - Unmitigated) - Riverside-South Coast County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Rough Grading	Crawler Tractors	2	8.00	212	0.43
Rough Grading	Excavators	2	8.00	158	0.38
Rough Grading	Graders	1	8.00	187	0.41
Rough Grading	Rubber Tired Dozers	1	8.00	247	0.40
Rough Grading	Scrapers	2	8.00	367	0.48
Rough Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Site Preparation	Crawler Tractors	4	8.00	212	0.43
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Fine Grading	Crawler Tractors	2	8.00	212	0.43
Fine Grading	Excavators	2	8.00	158	0.38
Fine Grading	Graders	1	8.00	187	0.41
Fine Grading	Rubber Tired Dozers	1	8.00	247	0.40
Fine Grading	Scrapers	2	8.00	367	0.48
Fine Grading	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Cranes	1	8.00	231	0.29
Building Construction	Crawler Tractors	3	8.00	212	0.43
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	0	8.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	8.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Rough Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Fine Grading	8	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	715.00	279.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	143.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Water Exposed Area

3.2 Rough Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.2053	0.0000	0.2053	0.0754	0.0000	0.0754	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1038	1.2177	0.6480	1.4300e-003		0.0494	0.0494		0.0454	0.0454	0.0000	125.6470	125.6470	0.0406	0.0000	126.6629
Total	**0.1038**	**1.2177**	**0.6480**	**1.4300e-003**	**0.2053**	**0.0494**	**0.2547**	**0.0754**	**0.0454**	**0.1208**	**0.0000**	**125.6470**	**125.6470**	**0.0406**	**0.0000**	**126.6629**

3.2 Rough Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8400e-003	1.2900e-003	0.0138	4.0000e-005	4.4000e-003	3.0000e-005	4.4200e-003	1.1700e-003	2.0000e-005	1.1900e-003	0.0000	3.6784	3.6784	9.0000e-005	0.0000	3.6807
Total	**1.8400e-003**	**1.2900e-003**	**0.0138**	**4.0000e-005**	**4.4000e-003**	**3.0000e-005**	**4.4200e-003**	**1.1700e-003**	**2.0000e-005**	**1.1900e-003**	**0.0000**	**3.6784**	**3.6784**	**9.0000e-005**	**0.0000**	**3.6807**

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					0.0801	0.0000	0.0801	0.0294	0.0000	0.0294	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1038	1.2177	0.6480	1.4300e-003		0.0494	0.0494		0.0454	0.0454	0.0000	125.6468	125.6468	0.0406	0.0000	126.6628
Total	**0.1038**	**1.2177**	**0.6480**	**1.4300e-003**	**0.0801**	**0.0494**	**0.1294**	**0.0294**	**0.0454**	**0.0748**	**0.0000**	**125.6468**	**125.6468**	**0.0406**	**0.0000**	**126.6628**

3.2 Rough Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8400e-003	1.2900e-003	0.0138	4.0000e-005	4.4000e-003	3.0000e-005	4.4200e-003	1.1700e-003	2.0000e-005	1.1900e-003	0.0000	3.6784	3.6784	9.0000e-005	0.0000	3.6807
Total	**1.8400e-003**	**1.2900e-003**	**0.0138**	**4.0000e-005**	**4.4000e-003**	**3.0000e-005**	**4.4200e-003**	**1.1700e-003**	**2.0000e-005**	**1.1900e-003**	**0.0000**	**3.6784**	**3.6784**	**9.0000e-005**	**0.0000**	**3.6807**

3.3 Site Preparation - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.4900	0.0000	0.4900	0.2325	0.0000	0.2325	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1250	1.4352	0.5039	1.2800e-003		0.0627	0.0627		0.0577	0.0577	0.0000	112.7454	112.7454	0.0365	0.0000	113.6571
Total	**0.1250**	**1.4352**	**0.5039**	**1.2800e-003**	**0.4900**	**0.0627**	**0.5527**	**0.2325**	**0.0577**	**0.2902**	**0.0000**	**112.7454**	**112.7454**	**0.0365**	**0.0000**	**113.6571**

3.3 Site Preparation - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8600e-003	1.3000e-003	0.0139	4.0000e-005	4.4500e-003	3.0000e-005	4.4800e-003	1.1800e-003	3.0000e-005	1.2100e-003	0.0000	3.7244	3.7244	9.0000e-005	0.0000	3.7267
Total	**1.8600e-003**	**1.3000e-003**	**0.0139**	**4.0000e-005**	**4.4500e-003**	**3.0000e-005**	**4.4800e-003**	**1.1800e-003**	**3.0000e-005**	**1.2100e-003**	**0.0000**	**3.7244**	**3.7244**	**9.0000e-005**	**0.0000**	**3.7267**

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					0.1911	0.0000	0.1911	0.0907	0.0000	0.0907	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.1250	1.4352	0.5039	1.2800e-003		0.0627	0.0627		0.0577	0.0577	0.0000	112.7453	112.7453	0.0365	0.0000	113.6569
Total	**0.1250**	**1.4352**	**0.5039**	**1.2800e-003**	**0.1911**	**0.0627**	**0.2538**	**0.0907**	**0.0577**	**0.1484**	**0.0000**	**112.7453**	**112.7453**	**0.0365**	**0.0000**	**113.6569**

3.3 Site Preparation - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.8600e-003	1.3000e-003	0.0139	4.0000e-005	4.4500e-003	3.0000e-005	4.4800e-003	1.1800e-003	3.0000e-005	1.2100e-003	0.0000	3.7244	3.7244	9.0000e-005	0.0000	3.7267
Total	**1.8600e-003**	**1.3000e-003**	**0.0139**	**4.0000e-005**	**4.4500e-003**	**3.0000e-005**	**4.4800e-003**	**1.1800e-003**	**3.0000e-005**	**1.2100e-003**	**0.0000**	**3.7244**	**3.7244**	**9.0000e-005**	**0.0000**	**3.7267**

3.4 Fine Grading - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1026	0.0000	0.1026	0.0377	0.0000	0.0377	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0519	0.6088	0.3240	7.1000e-004		0.0247	0.0247		0.0227	0.0227	0.0000	62.8235	62.8235	0.0203	0.0000	63.3315
Total	**0.0519**	**0.6088**	**0.3240**	**7.1000e-004**	**0.1026**	**0.0247**	**0.1273**	**0.0377**	**0.0227**	**0.0604**	**0.0000**	**62.8235**	**62.8235**	**0.0203**	**0.0000**	**63.3315**

3.4 Fine Grading - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.2000e-004	6.4000e-004	6.8800e-003	2.0000e-005	2.2000e-003	1.0000e-005	2.2100e-003	5.8000e-004	1.0000e-005	6.0000e-004	0.0000	1.8392	1.8392	5.0000e-005	0.0000	1.8403
Total	**9.2000e-004**	**6.4000e-004**	**6.8800e-003**	**2.0000e-005**	**2.2000e-003**	**1.0000e-005**	**2.2100e-003**	**5.8000e-004**	**1.0000e-005**	**6.0000e-004**	**0.0000**	**1.8392**	**1.8392**	**5.0000e-005**	**0.0000**	**1.8403**

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					0.0400	0.0000	0.0400	0.0147	0.0000	0.0147	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0519	0.6088	0.3240	7.1000e-004		0.0247	0.0247		0.0227	0.0227	0.0000	62.8234	62.8234	0.0203	0.0000	63.3314
Total	**0.0519**	**0.6088**	**0.3240**	**7.1000e-004**	**0.0400**	**0.0247**	**0.0647**	**0.0147**	**0.0227**	**0.0374**	**0.0000**	**62.8234**	**62.8234**	**0.0203**	**0.0000**	**63.3314**

3.4 Fine Grading - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.2000e-004	6.4000e-004	6.8800e-003	2.0000e-005	2.2000e-003	1.0000e-005	2.2100e-003	5.8000e-004	1.0000e-005	6.0000e-004	0.0000	1.8392	1.8392	5.0000e-005	0.0000	1.8403
Total	**9.2000e-004**	**6.4000e-004**	**6.8800e-003**	**2.0000e-005**	**2.2000e-003**	**1.0000e-005**	**2.2100e-003**	**5.8000e-004**	**1.0000e-005**	**6.0000e-004**	**0.0000**	**1.8392**	**1.8392**	**5.0000e-005**	**0.0000**	**1.8403**

3.5 Building Construction - 2020

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0774	0.8436	0.4285	9.9000e-004		0.0377	0.0377		0.0352	0.0352	0.0000	85.8513	85.8513	0.0235	0.0000	86.4397
Total	**0.0774**	**0.8436**	**0.4285**	**9.9000e-004**		**0.0377**	**0.0377**		**0.0352**	**0.0352**	**0.0000**	**85.8513**	**85.8513**	**0.0235**	**0.0000**	**86.4397**

3.5 Building Construction - 2020

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0182	0.6674	0.1306	1.6500e-003	0.0405	3.7700e-003	0.0443	0.0117	3.6100e-003	0.0153	0.0000	157.7861	157.7861	0.0126	0.0000	158.1014
Worker	0.0756	0.0530	0.5655	1.6700e-003	0.1808	1.1100e-003	0.1819	0.0480	1.0200e-003	0.0490	0.0000	151.2270	151.2270	3.7900e-003	0.0000	151.3216
Total	**0.0938**	**0.7204**	**0.6960**	**3.3200e-003**	**0.2213**	**4.8800e-003**	**0.2262**	**0.0597**	**4.6300e-003**	**0.0643**	**0.0000**	**309.0131**	**309.0131**	**0.0164**	**0.0000**	**309.4231**

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	0.0774	0.8436	0.4285	9.9000e-004		0.0377	0.0377		0.0352	0.0352	0.0000	85.8512	85.8512	0.0235	0.0000	86.4395
Total	**0.0774**	**0.8436**	**0.4285**	**9.9000e-004**		**0.0377**	**0.0377**		**0.0352**	**0.0352**	**0.0000**	**85.8512**	**85.8512**	**0.0235**	**0.0000**	**86.4395**

3.5 Building Construction - 2020

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0182	0.6674	0.1306	1.6500e-003	0.0405	3.7700e-003	0.0443	0.0117	3.6100e-003	0.0153	0.0000	157.7861	157.7861	0.0126	0.0000	158.1014
Worker	0.0756	0.0530	0.5655	1.6700e-003	0.1808	1.1100e-003	0.1819	0.0480	1.0200e-003	0.0490	0.0000	151.2270	151.2270	3.7900e-003	0.0000	151.3216
Total	**0.0938**	**0.7204**	**0.6960**	**3.3200e-003**	**0.2213**	**4.8800e-003**	**0.2262**	**0.0597**	**4.6300e-003**	**0.0643**	**0.0000**	**309.0131**	**309.0131**	**0.0164**	**0.0000**	**309.4231**

3.5 Building Construction - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0919	1.0020	0.5368	1.2700e-003		0.0436	0.0436		0.0406	0.0406	0.0000	110.1102	110.1102	0.0300	0.0000	110.8601
Total	**0.0919**	**1.0020**	**0.5368**	**1.2700e-003**		**0.0436**	**0.0436**		**0.0406**	**0.0406**	**0.0000**	**110.1102**	**110.1102**	**0.0300**	**0.0000**	**110.8601**

3.5 Building Construction - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0196	0.7674	0.1477	2.1000e-003	0.0520	1.4700e-003	0.0535	0.0150	1.4000e-003	0.0164	0.0000	200.8021	200.8021	0.0153	0.0000	201.1851
Worker	0.0904	0.0609	0.6640	2.0700e-003	0.2318	1.3900e-003	0.2332	0.0616	1.2800e-003	0.0628	0.0000	187.4799	187.4799	4.3700e-003	0.0000	187.5891
Total	**0.1101**	**0.8284**	**0.8117**	**4.1700e-003**	**0.2838**	**2.8600e-003**	**0.2867**	**0.0766**	**2.6800e-003**	**0.0792**	**0.0000**	**388.2821**	**388.2821**	**0.0197**	**0.0000**	**388.7742**

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	0.0919	1.0020	0.5368	1.2700e-003		0.0436	0.0436		0.0406	0.0406	0.0000	110.1100	110.1100	0.0300	0.0000	110.8600
Total	**0.0919**	**1.0020**	**0.5368**	**1.2700e-003**		**0.0436**	**0.0436**		**0.0406**	**0.0406**	**0.0000**	**110.1100**	**110.1100**	**0.0300**	**0.0000**	**110.8600**

3.5 Building Construction - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0196	0.7674	0.1477	2.1000e-003	0.0520	1.4700e-003	0.0535	0.0150	1.4000e-003	0.0164	0.0000	200.8021	200.8021	0.0153	0.0000	201.1851
Worker	0.0904	0.0609	0.6640	2.0700e-003	0.2318	1.3900e-003	0.2332	0.0616	1.2800e-003	0.0628	0.0000	187.4799	187.4799	4.3700e-003	0.0000	187.5891
Total	**0.1101**	**0.8284**	**0.8117**	**4.1700e-003**	**0.2838**	**2.8600e-003**	**0.2867**	**0.0766**	**2.6800e-003**	**0.0792**	**0.0000**	**388.2821**	**388.2821**	**0.0197**	**0.0000**	**388.7742**

3.6 Paving - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0345	0.3553	0.4030	6.3000e-004		0.0186	0.0186		0.0172	0.0172	0.0000	55.0646	55.0646	0.0178	0.0000	55.5098
Paving	0.0483					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0828**	**0.3553**	**0.4030**	**6.3000e-004**		**0.0186**	**0.0186**		**0.0172**	**0.0172**	**0.0000**	**55.0646**	**55.0646**	**0.0178**	**0.0000**	**55.5098**

3.6 Paving - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7700e-003	1.1900e-003	0.0130	4.0000e-005	4.5300e-003	3.0000e-005	4.5600e-003	1.2000e-003	3.0000e-005	1.2300e-003	0.0000	3.6665	3.6665	9.0000e-005	0.0000	3.6686
Total	**1.7700e-003**	**1.1900e-003**	**0.0130**	**4.0000e-005**	**4.5300e-003**	**3.0000e-005**	**4.5600e-003**	**1.2000e-003**	**3.0000e-005**	**1.2300e-003**	**0.0000**	**3.6665**	**3.6665**	**9.0000e-005**	**0.0000**	**3.6686**

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	0.0345	0.3553	0.4030	6.3000e-004		0.0186	0.0186		0.0172	0.0172	0.0000	55.0645	55.0645	0.0178	0.0000	55.5097
Paving	0.0483					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0828**	**0.3553**	**0.4030**	**6.3000e-004**		**0.0186**	**0.0186**		**0.0172**	**0.0172**	**0.0000**	**55.0645**	**55.0645**	**0.0178**	**0.0000**	**55.5097**

3.6 Paving - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	1.7700e-003	1.1900e-003	0.0130	4.0000e-005	4.5300e-003	3.0000e-005	4.5600e-003	1.2000e-003	3.0000e-005	1.2300e-003	0.0000	3.6665	3.6665	9.0000e-005	0.0000	3.6686
Total	**1.7700e-003**	**1.1900e-003**	**0.0130**	**4.0000e-005**	**4.5300e-003**	**3.0000e-005**	**4.5600e-003**	**1.2000e-003**	**3.0000e-005**	**1.2300e-003**	**0.0000**	**3.6665**	**3.6665**	**9.0000e-005**	**0.0000**	**3.6686**

3.7 Architectural Coating - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.3374					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.0300e-003	0.0560	0.0666	1.1000e-004		3.4500e-003	3.4500e-003		3.4500e-003	3.4500e-003	0.0000	9.3619	9.3619	6.4000e-004	0.0000	9.3780
Total	**0.3454**	**0.0560**	**0.0666**	**1.1000e-004**		**3.4500e-003**	**3.4500e-003**		**3.4500e-003**	**3.4500e-003**	**0.0000**	**9.3619**	**9.3619**	**6.4000e-004**	**0.0000**	**9.3780**

3.7 Architectural Coating - 2021

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0169	0.0114	0.1238	3.9000e-004	0.0432	2.6000e-004	0.0435	0.0115	2.4000e-004	0.0117	0.0000	34.9539	34.9539	8.1000e-004	0.0000	34.9742
Total	**0.0169**	**0.0114**	**0.1238**	**3.9000e-004**	**0.0432**	**2.6000e-004**	**0.0435**	**0.0115**	**2.4000e-004**	**0.0117**	**0.0000**	**34.9539**	**34.9539**	**8.1000e-004**	**0.0000**	**34.9742**

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	0.3374					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	8.0300e-003	0.0560	0.0666	1.1000e-004		3.4500e-003	3.4500e-003		3.4500e-003	3.4500e-003	0.0000	9.3619	9.3619	6.4000e-004	0.0000	9.3780
Total	**0.3454**	**0.0560**	**0.0666**	**1.1000e-004**		**3.4500e-003**	**3.4500e-003**		**3.4500e-003**	**3.4500e-003**	**0.0000**	**9.3619**	**9.3619**	**6.4000e-004**	**0.0000**	**9.3780**

3.7 Architectural Coating - 2021

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0169	0.0114	0.1238	3.9000e-004	0.0432	2.6000e-004	0.0435	0.0115	2.4000e-004	0.0117	0.0000	34.9539	34.9539	8.1000e-004	0.0000	34.9742
Total	**0.0169**	**0.0114**	**0.1238**	**3.9000e-004**	**0.0432**	**2.6000e-004**	**0.0435**	**0.0115**	**2.4000e-004**	**0.0117**	**0.0000**	**34.9539**	**34.9539**	**8.1000e-004**	**0.0000**	**34.9742**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

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

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	0.00	0.00	0.00		
Total	0.00	0.00	0.00		

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
Other Asphalt Surfaces	0.00	0.00	0.00	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	0.00	0.00	0.00	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
Other Asphalt Surfaces	0.542116	0.037578	0.185203	0.118503	0.016241	0.005141	0.017392	0.068695	0.001383	0.001183	0.004582	0.000945	0.001038
Unrefrigerated Warehouse-No Rail	0.542116	0.037578	0.185203	0.118503	0.016241	0.005141	0.017392	0.068695	0.001383	0.001183	0.004582	0.000945	0.001038

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
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					
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
Unrefrigerated Warehouse-No Rail	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					
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
Unrefrigerated Warehouse-No Rail	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			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**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	tons/yr										MT/yr					
Mitigated	0.5253	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0423	0.0423	1.1000e-004	0.0000	0.0451
Unmitigated	0.5253	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0423	0.0423	1.1000e-004	0.0000	0.0451

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	0.0675					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4558					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0400e-003	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0423	0.0423	1.1000e-004	0.0000	0.0451
Total	**0.5253**	**2.0000e-004**	**0.0218**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0423**	**0.0423**	**1.1000e-004**	**0.0000**	**0.0451**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0675					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4558					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0400e-003	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0423	0.0423	1.1000e-004	0.0000	0.0451
Total	**0.5253**	**2.0000e-004**	**0.0218**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0423**	**0.0423**	**1.1000e-004**	**0.0000**	**0.0451**

7.0 Water Detail

7.1 Mitigation Measures Water

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

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

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

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	0	0.0000	0.0000	0.0000	0.0000
Total		**0.0000**	**0.0000**	**0.0000**	**0.0000**

9.0 Operational Offroad

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

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

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APPENDIX 3.2:

CALEEMOD ANNUAL OPERATIONAL (PASSENGER CARS) EMISSIONS MODEL OUTPUTS

Estes Banning (Operations - Passenger Cars)

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	97.40	1000sqft	2.24	97,400.00	0
Other Asphalt Surfaces	1,605.80	1000sqft	36.86	1,605,796.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2021
Utility Company	Statewide Average				
CO2 Intensity (lb/MWhr)	1001.57	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Estes Banning (Operations - Passenger Cars) - Riverside-South Coast County, Annual

Project Characteristics - Electricty will be provided to the Project by Banning Electric Utility (BEU). CalEEMod does not provided Intensity Factors for BEU, as such, the Statewide Average will be used.

Land Use - Total Project Area is 36.86 acres. Truck Terminal is 97,400 sf. Remaning area will be modeled as 1,605,796 sf of Other Apshalt Surfaces.

Construction Phase - Operations Run Only.

Off-road Equipment - Operations Run Only.

Trips and VMT - Operations Run Only.

Vehicle Trips - Trip Rates based on information provided in the TIA prepared by Urban Crossroads.

Energy Use - The project will design building shells and building components to meet 2019 Title 24 Standards which expects 30% less energy for nonresidential uses.

Water And Wastewater - The project includes the construction and operation of a 660 square foot automated truck wash. Water usage based on the assumption that 50% of incoming trucks will be washed and 30 gallons of water will be used per truck.

Fleet Mix - Fleet Mix is based on a proportional split utilizing the default CalEEMod percentages assigned to LDA, LDT1, LDT2, and MDV vehicles types.

Vehicle Emission Factors - EMFAC2017

Vehicle Emission Factors - EMFAC2017

Vehicle Emission Factors - EMFAC2017

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	1.17	0.82
tblEnergyUse	T24E	0.37	0.26
tblEnergyUse	T24NG	2.00	1.40
tblFleetMix	HHD	0.07	0.00
tblFleetMix	LDA	0.54	0.61
tblFleetMix	LDT1	0.04	0.04
tblFleetMix	LDT2	0.19	0.21
tblFleetMix	LHD1	0.02	0.00
tblFleetMix	LHD2	5.1410e-003	0.00
tblFleetMix	MCY	4.5820e-003	0.00
tblFleetMix	MDV	0.12	0.13
tblFleetMix	MH	1.0380e-003	0.00

tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	1.3830e-003	0.00
tblFleetMix	SBUS	9.4500e-004	0.00
tblFleetMix	UBUS	1.1830e-003	0.00
tblLandUse	LandUseSquareFeet	1,605,800.00	1,605,796.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
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tblVehicleEF	HHD	0.03	0.02
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tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8680e-003	8.8980e-003

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tblVehicleEF	HHD	3.5000e-005	0.00
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tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	7.1000e-005	0.00
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tblVehicleEF	HHD	4.8000e-005	2.0000e-006
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tblVehicleEF	HHD	1.8000e-004	5.3700e-004
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tblVehicleEF	LDA	0.08	0.23

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tblVehicleEF	LDT1	0.24	0.44
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tblVehicleEF	LDT1	7.8300e-004	6.5900e-004

tblVehicleEF	LDT1	0.21	0.23
tblVehicleEF	LDT1	0.35	0.27
tblVehicleEF	LDT1	0.14	0.15
tblVehicleEF	LDT1	0.04	0.05
tblVehicleEF	LDT1	0.20	0.87
tblVehicleEF	LDT1	0.26	0.48
tblVehicleEF	LDT1	0.01	9.0560e-003
tblVehicleEF	LDT1	0.02	0.08
tblVehicleEF	LDT1	1.76	1.96
tblVehicleEF	LDT1	2.99	2.15
tblVehicleEF	LDT1	343.19	341.79
tblVehicleEF	LDT1	72.28	66.01
tblVehicleEF	LDT1	0.13	0.13
tblVehicleEF	LDT1	2.5300e-003	2.2930e-003
tblVehicleEF	LDT1	3.6970e-003	2.9510e-003
tblVehicleEF	LDT1	2.3290e-003	2.1110e-003
tblVehicleEF	LDT1	3.4000e-003	2.7140e-003
tblVehicleEF	LDT1	0.41	0.44
tblVehicleEF	LDT1	0.43	0.34
tblVehicleEF	LDT1	0.27	0.29
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.20	0.88
tblVehicleEF	LDT1	0.21	0.38
tblVehicleEF	LDT1	3.4550e-003	3.3820e-003
tblVehicleEF	LDT1	7.7500e-004	6.5300e-004
tblVehicleEF	LDT1	0.41	0.44
tblVehicleEF	LDT1	0.43	0.34

tblVehicleEF	LDT1	0.27	0.29
tblVehicleEF	LDT1	0.05	0.06
tblVehicleEF	LDT1	0.20	0.88
tblVehicleEF	LDT1	0.23	0.42
tblVehicleEF	LDT1	0.01	7.7080e-003
tblVehicleEF	LDT1	0.02	0.09
tblVehicleEF	LDT1	1.37	1.51
tblVehicleEF	LDT1	3.46	2.48
tblVehicleEF	LDT1	307.88	309.49
tblVehicleEF	LDT1	72.28	66.77
tblVehicleEF	LDT1	0.14	0.14
tblVehicleEF	LDT1	2.5300e-003	2.2930e-003
tblVehicleEF	LDT1	3.6970e-003	2.9510e-003
tblVehicleEF	LDT1	2.3290e-003	2.1110e-003
tblVehicleEF	LDT1	3.4000e-003	2.7140e-003
tblVehicleEF	LDT1	0.18	0.19
tblVehicleEF	LDT1	0.39	0.30
tblVehicleEF	LDT1	0.12	0.13
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.23	1.01
tblVehicleEF	LDT1	0.25	0.45
tblVehicleEF	LDT1	3.0960e-003	3.0630e-003
tblVehicleEF	LDT1	7.8400e-004	6.6100e-004
tblVehicleEF	LDT1	0.18	0.19
tblVehicleEF	LDT1	0.39	0.30
tblVehicleEF	LDT1	0.12	0.13
tblVehicleEF	LDT1	0.04	0.05

tblVehicleEF	LDT1	0.23	1.01
tblVehicleEF	LDT1	0.27	0.50
tblVehicleEF	LDT2	5.6080e-003	4.2470e-003
tblVehicleEF	LDT2	7.2840e-003	0.07
tblVehicleEF	LDT2	0.76	0.98
tblVehicleEF	LDT2	1.53	2.73
tblVehicleEF	LDT2	355.02	338.79
tblVehicleEF	LDT2	81.24	71.51
tblVehicleEF	LDT2	0.08	0.09
tblVehicleEF	LDT2	1.6030e-003	1.4980e-003
tblVehicleEF	LDT2	2.3320e-003	1.9580e-003
tblVehicleEF	LDT2	1.4740e-003	1.3790e-003
tblVehicleEF	LDT2	2.1450e-003	1.8010e-003
tblVehicleEF	LDT2	0.07	0.11
tblVehicleEF	LDT2	0.12	0.14
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.01	0.02
tblVehicleEF	LDT2	0.06	0.44
tblVehicleEF	LDT2	0.10	0.33
tblVehicleEF	LDT2	3.5560e-003	3.3520e-003
tblVehicleEF	LDT2	8.3800e-004	7.0800e-004
tblVehicleEF	LDT2	0.07	0.11
tblVehicleEF	LDT2	0.12	0.14
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.06	0.44
tblVehicleEF	LDT2	0.11	0.37

tblVehicleEF	LDT2	6.3630e-003	4.8280e-003
tblVehicleEF	LDT2	6.3270e-003	0.06
tblVehicleEF	LDT2	0.93	1.20
tblVehicleEF	LDT2	1.35	2.42
tblVehicleEF	LDT2	386.34	362.86
tblVehicleEF	LDT2	81.24	70.86
tblVehicleEF	LDT2	0.07	0.08
tblVehicleEF	LDT2	1.6030e-003	1.4980e-003
tblVehicleEF	LDT2	2.3320e-003	1.9580e-003
tblVehicleEF	LDT2	1.4740e-003	1.3790e-003
tblVehicleEF	LDT2	2.1450e-003	1.8010e-003
tblVehicleEF	LDT2	0.14	0.22
tblVehicleEF	LDT2	0.14	0.17
tblVehicleEF	LDT2	0.10	0.17
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.44
tblVehicleEF	LDT2	0.09	0.29
tblVehicleEF	LDT2	3.8710e-003	3.5900e-003
tblVehicleEF	LDT2	8.3500e-004	7.0100e-004
tblVehicleEF	LDT2	0.14	0.22
tblVehicleEF	LDT2	0.14	0.17
tblVehicleEF	LDT2	0.10	0.17
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.06	0.44
tblVehicleEF	LDT2	0.09	0.32
tblVehicleEF	LDT2	5.3900e-003	4.0760e-003
tblVehicleEF	LDT2	7.4940e-003	0.07

tblVehicleEF	LDT2	0.71	0.91
tblVehicleEF	LDT2	1.57	2.80
tblVehicleEF	LDT2	345.65	331.49
tblVehicleEF	LDT2	81.24	71.65
tblVehicleEF	LDT2	0.08	0.09
tblVehicleEF	LDT2	1.6030e-003	1.4980e-003
tblVehicleEF	LDT2	2.3320e-003	1.9580e-003
tblVehicleEF	LDT2	1.4740e-003	1.3790e-003
tblVehicleEF	LDT2	2.1450e-003	1.8010e-003
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.13	0.15
tblVehicleEF	LDT2	0.05	0.07
tblVehicleEF	LDT2	0.01	0.02
tblVehicleEF	LDT2	0.07	0.51
tblVehicleEF	LDT2	0.10	0.34
tblVehicleEF	LDT2	3.4620e-003	3.2800e-003
tblVehicleEF	LDT2	8.3900e-004	7.0900e-004
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.13	0.15
tblVehicleEF	LDT2	0.05	0.07
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.51
tblVehicleEF	LDT2	0.11	0.38
tblVehicleEF	LHD1	5.4460e-003	4.8820e-003
tblVehicleEF	LHD1	0.01	5.3310e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	0.17

tblVehicleEF	LHD1	0.96	0.72
tblVehicleEF	LHD1	2.41	0.96
tblVehicleEF	LHD1	9.26	9.44
tblVehicleEF	LHD1	607.95	639.95
tblVehicleEF	LHD1	30.36	10.54
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	2.21	1.60
tblVehicleEF	LHD1	9.7200e-004	9.7000e-004
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.7100e-004	2.3300e-004
tblVehicleEF	LHD1	9.3000e-004	9.2800e-004
tblVehicleEF	LHD1	2.5390e-003	2.5010e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.0100e-004	2.1400e-004
tblVehicleEF	LHD1	3.8710e-003	3.1780e-003
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.9010e-003	1.5570e-003
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.31	0.50
tblVehicleEF	LHD1	0.26	0.08
tblVehicleEF	LHD1	9.3000e-005	9.1000e-005
tblVehicleEF	LHD1	5.9620e-003	6.2250e-003
tblVehicleEF	LHD1	3.4900e-004	1.0400e-004
tblVehicleEF	LHD1	3.8710e-003	3.1780e-003
tblVehicleEF	LHD1	0.10	0.08

tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.9010e-003	1.5570e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.31	0.50
tblVehicleEF	LHD1	0.28	0.08
tblVehicleEF	LHD1	5.4460e-003	4.8940e-003
tblVehicleEF	LHD1	0.01	5.4200e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	0.97	0.73
tblVehicleEF	LHD1	2.29	0.92
tblVehicleEF	LHD1	9.26	9.44
tblVehicleEF	LHD1	607.95	639.97
tblVehicleEF	LHD1	30.36	10.46
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	2.08	1.51
tblVehicleEF	LHD1	9.7200e-004	9.7000e-004
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.7100e-004	2.3300e-004
tblVehicleEF	LHD1	9.3000e-004	9.2800e-004
tblVehicleEF	LHD1	2.5390e-003	2.5010e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.0100e-004	2.1400e-004
tblVehicleEF	LHD1	7.2450e-003	5.9530e-003
tblVehicleEF	LHD1	0.12	0.09
tblVehicleEF	LHD1	0.02	0.02

tblVehicleEF	LHD1	3.6380e-003	2.9980e-003
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.32	0.50
tblVehicleEF	LHD1	0.25	0.07
tblVehicleEF	LHD1	9.3000e-005	9.1000e-005
tblVehicleEF	LHD1	5.9620e-003	6.2250e-003
tblVehicleEF	LHD1	3.4700e-004	1.0300e-004
tblVehicleEF	LHD1	7.2450e-003	5.9530e-003
tblVehicleEF	LHD1	0.12	0.09
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	3.6380e-003	2.9980e-003
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.32	0.50
tblVehicleEF	LHD1	0.27	0.08
tblVehicleEF	LHD1	5.4460e-003	4.8810e-003
tblVehicleEF	LHD1	0.01	5.3180e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	0.96	0.72
tblVehicleEF	LHD1	2.41	0.96
tblVehicleEF	LHD1	9.26	9.44
tblVehicleEF	LHD1	607.95	639.95
tblVehicleEF	LHD1	30.36	10.54
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	2.18	1.59
tblVehicleEF	LHD1	9.7200e-004	9.7000e-004
tblVehicleEF	LHD1	0.01	0.01

tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.7100e-004	2.3300e-004
tblVehicleEF	LHD1	9.3000e-004	9.2800e-004
tblVehicleEF	LHD1	2.5390e-003	2.5010e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.0100e-004	2.1400e-004
tblVehicleEF	LHD1	3.4570e-003	2.8250e-003
tblVehicleEF	LHD1	0.11	0.09
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.7350e-003	1.4150e-003
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.33	0.53
tblVehicleEF	LHD1	0.26	0.08
tblVehicleEF	LHD1	9.3000e-005	9.1000e-005
tblVehicleEF	LHD1	5.9620e-003	6.2250e-003
tblVehicleEF	LHD1	3.4900e-004	1.0400e-004
tblVehicleEF	LHD1	3.4570e-003	2.8250e-003
tblVehicleEF	LHD1	0.11	0.09
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.7350e-003	1.4150e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.33	0.53
tblVehicleEF	LHD1	0.28	0.08
tblVehicleEF	LHD2	3.6660e-003	3.1720e-003
tblVehicleEF	LHD2	4.5290e-003	3.8570e-003
tblVehicleEF	LHD2	8.3110e-003	9.0280e-003
tblVehicleEF	LHD2	0.12	0.13

tblVehicleEF	LHD2	0.50	0.53
tblVehicleEF	LHD2	1.15	0.56
tblVehicleEF	LHD2	14.48	14.86
tblVehicleEF	LHD2	604.20	638.83
tblVehicleEF	LHD2	23.56	7.29
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.71	1.77
tblVehicleEF	LHD2	1.3360e-003	1.4390e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.8700e-004	1.1400e-004
tblVehicleEF	LHD2	1.2780e-003	1.3770e-003
tblVehicleEF	LHD2	2.6970e-003	2.7110e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5600e-004	1.0500e-004
tblVehicleEF	LHD2	1.4980e-003	1.6870e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	7.7800e-004	8.4200e-004
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.4100e-004	1.4200e-004
tblVehicleEF	LHD2	5.8740e-003	6.1550e-003
tblVehicleEF	LHD2	2.5700e-004	7.2000e-005
tblVehicleEF	LHD2	1.4980e-003	1.6870e-003
tblVehicleEF	LHD2	0.04	0.04

tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	7.7800e-004	8.4200e-004
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	3.6660e-003	3.1790e-003
tblVehicleEF	LHD2	4.5800e-003	3.8860e-003
tblVehicleEF	LHD2	8.0210e-003	8.7250e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.51	0.53
tblVehicleEF	LHD2	1.10	0.53
tblVehicleEF	LHD2	14.48	14.86
tblVehicleEF	LHD2	604.20	638.83
tblVehicleEF	LHD2	23.56	7.25
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.62	1.67
tblVehicleEF	LHD2	1.3360e-003	1.4390e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.8700e-004	1.1400e-004
tblVehicleEF	LHD2	1.2780e-003	1.3770e-003
tblVehicleEF	LHD2	2.6970e-003	2.7110e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5600e-004	1.0500e-004
tblVehicleEF	LHD2	2.8320e-003	3.1830e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.01	0.02

tblVehicleEF	LHD2	1.4720e-003	1.6130e-003
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.4100e-004	1.4200e-004
tblVehicleEF	LHD2	5.8740e-003	6.1560e-003
tblVehicleEF	LHD2	2.5600e-004	7.2000e-005
tblVehicleEF	LHD2	2.8320e-003	3.1830e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.4720e-003	1.6130e-003
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	3.6660e-003	3.1700e-003
tblVehicleEF	LHD2	4.5170e-003	3.8490e-003
tblVehicleEF	LHD2	8.3600e-003	9.0930e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.50	0.53
tblVehicleEF	LHD2	1.16	0.56
tblVehicleEF	LHD2	14.48	14.86
tblVehicleEF	LHD2	604.20	638.83
tblVehicleEF	LHD2	23.56	7.30
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.70	1.75
tblVehicleEF	LHD2	1.3360e-003	1.4390e-003
tblVehicleEF	LHD2	0.01	0.01

tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.8700e-004	1.1400e-004
tblVehicleEF	LHD2	1.2780e-003	1.3770e-003
tblVehicleEF	LHD2	2.6970e-003	2.7110e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5600e-004	1.0500e-004
tblVehicleEF	LHD2	1.1910e-003	1.3290e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	6.6000e-004	7.0100e-004
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.4100e-004	1.4200e-004
tblVehicleEF	LHD2	5.8740e-003	6.1550e-003
tblVehicleEF	LHD2	2.5700e-004	7.2000e-005
tblVehicleEF	LHD2	1.1910e-003	1.3290e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	6.6000e-004	7.0100e-004
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	MCY	0.42	0.32
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	19.52	19.61
tblVehicleEF	MCY	9.67	8.55

tblVehicleEF	MCY	165.74	208.30
tblVehicleEF	MCY	46.23	60.73
tblVehicleEF	MCY	1.13	1.13
tblVehicleEF	MCY	1.7750e-003	1.7570e-003
tblVehicleEF	MCY	3.4010e-003	2.8660e-003
tblVehicleEF	MCY	1.6600e-003	1.6440e-003
tblVehicleEF	MCY	3.2060e-003	2.7000e-003
tblVehicleEF	MCY	1.69	1.66
tblVehicleEF	MCY	0.85	0.84
tblVehicleEF	MCY	0.92	0.90
tblVehicleEF	MCY	2.15	2.16
tblVehicleEF	MCY	0.57	1.87
tblVehicleEF	MCY	2.08	1.83
tblVehicleEF	MCY	2.0380e-003	2.0610e-003
tblVehicleEF	MCY	6.8100e-004	6.0100e-004
tblVehicleEF	MCY	1.69	1.66
tblVehicleEF	MCY	0.85	0.84
tblVehicleEF	MCY	0.92	0.90
tblVehicleEF	MCY	2.65	2.65
tblVehicleEF	MCY	0.57	1.87
tblVehicleEF	MCY	2.26	1.99
tblVehicleEF	MCY	0.42	0.32
tblVehicleEF	MCY	0.14	0.22
tblVehicleEF	MCY	20.23	20.27
tblVehicleEF	MCY	9.11	8.00
tblVehicleEF	MCY	165.74	209.26
tblVehicleEF	MCY	46.23	59.19

tblVehicleEF	MCY	0.98	0.98
tblVehicleEF	MCY	1.7750e-003	1.7570e-003
tblVehicleEF	MCY	3.4010e-003	2.8660e-003
tblVehicleEF	MCY	1.6600e-003	1.6440e-003
tblVehicleEF	MCY	3.2060e-003	2.7000e-003
tblVehicleEF	MCY	3.35	3.28
tblVehicleEF	MCY	1.24	1.23
tblVehicleEF	MCY	2.10	2.05
tblVehicleEF	MCY	2.13	2.13
tblVehicleEF	MCY	0.57	1.86
tblVehicleEF	MCY	1.86	1.63
tblVehicleEF	MCY	2.0490e-003	2.0710e-003
tblVehicleEF	MCY	6.6500e-004	5.8600e-004
tblVehicleEF	MCY	3.35	3.28
tblVehicleEF	MCY	1.24	1.23
tblVehicleEF	MCY	2.10	2.05
tblVehicleEF	MCY	2.62	2.63
tblVehicleEF	MCY	0.57	1.86
tblVehicleEF	MCY	2.02	1.77
tblVehicleEF	MCY	0.42	0.32
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	19.04	19.14
tblVehicleEF	MCY	9.62	8.49
tblVehicleEF	MCY	165.74	207.52
tblVehicleEF	MCY	46.23	60.64
tblVehicleEF	MCY	1.12	1.12
tblVehicleEF	MCY	1.7750e-003	1.7570e-003

tblVehicleEF	MCY	3.4010e-003	2.8660e-003
tblVehicleEF	MCY	1.6600e-003	1.6440e-003
tblVehicleEF	MCY	3.2060e-003	2.7000e-003
tblVehicleEF	MCY	1.60	1.59
tblVehicleEF	MCY	1.05	1.04
tblVehicleEF	MCY	0.74	0.73
tblVehicleEF	MCY	2.15	2.15
tblVehicleEF	MCY	0.65	2.12
tblVehicleEF	MCY	2.08	1.83
tblVehicleEF	MCY	2.0310e-003	2.0540e-003
tblVehicleEF	MCY	6.8100e-004	6.0000e-004
tblVehicleEF	MCY	1.60	1.59
tblVehicleEF	MCY	1.05	1.04
tblVehicleEF	MCY	0.74	0.73
tblVehicleEF	MCY	2.64	2.65
tblVehicleEF	MCY	0.65	2.12
tblVehicleEF	MCY	2.27	1.99
tblVehicleEF	MDV	0.01	5.7580e-003
tblVehicleEF	MDV	0.02	0.09
tblVehicleEF	MDV	1.42	1.20
tblVehicleEF	MDV	3.18	3.27
tblVehicleEF	MDV	488.89	421.49
tblVehicleEF	MDV	110.15	88.73
tblVehicleEF	MDV	0.17	0.12
tblVehicleEF	MDV	1.7110e-003	1.5730e-003
tblVehicleEF	MDV	2.4630e-003	2.0550e-003
tblVehicleEF	MDV	1.5780e-003	1.4510e-003

tblVehicleEF	MDV	2.2660e-003	1.8910e-003
tblVehicleEF	MDV	0.11	0.13
tblVehicleEF	MDV	0.20	0.17
tblVehicleEF	MDV	0.09	0.11
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.25	0.45
tblVehicleEF	MDV	4.9000e-003	4.1680e-003
tblVehicleEF	MDV	1.1570e-003	8.7800e-004
tblVehicleEF	MDV	0.11	0.13
tblVehicleEF	MDV	0.20	0.17
tblVehicleEF	MDV	0.09	0.11
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.27	0.49
tblVehicleEF	MDV	0.01	6.5120e-003
tblVehicleEF	MDV	0.02	0.08
tblVehicleEF	MDV	1.73	1.46
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tblVehicleEF	MDV	530.71	447.07
tblVehicleEF	MDV	110.15	87.92
tblVehicleEF	MDV	0.16	0.11
tblVehicleEF	MDV	1.7110e-003	1.5730e-003
tblVehicleEF	MDV	2.4630e-003	2.0550e-003
tblVehicleEF	MDV	1.5780e-003	1.4510e-003
tblVehicleEF	MDV	2.2660e-003	1.8910e-003
tblVehicleEF	MDV	0.22	0.26

tblVehicleEF	MDV	0.23	0.20
tblVehicleEF	MDV	0.17	0.21
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.21	0.39
tblVehicleEF	MDV	5.3230e-003	4.4210e-003
tblVehicleEF	MDV	1.1510e-003	8.7000e-004
tblVehicleEF	MDV	0.22	0.26
tblVehicleEF	MDV	0.23	0.20
tblVehicleEF	MDV	0.17	0.21
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.23	0.43
tblVehicleEF	MDV	0.01	5.5370e-003
tblVehicleEF	MDV	0.02	0.09
tblVehicleEF	MDV	1.33	1.12
tblVehicleEF	MDV	3.24	3.34
tblVehicleEF	MDV	476.42	413.84
tblVehicleEF	MDV	110.15	88.88
tblVehicleEF	MDV	0.16	0.12
tblVehicleEF	MDV	1.7110e-003	1.5730e-003
tblVehicleEF	MDV	2.4630e-003	2.0550e-003
tblVehicleEF	MDV	1.5780e-003	1.4510e-003
tblVehicleEF	MDV	2.2660e-003	1.8910e-003
tblVehicleEF	MDV	0.09	0.10
tblVehicleEF	MDV	0.21	0.18
tblVehicleEF	MDV	0.08	0.10

tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.13	0.57
tblVehicleEF	MDV	0.25	0.46
tblVehicleEF	MDV	4.7750e-003	4.0920e-003
tblVehicleEF	MDV	1.1590e-003	8.8000e-004
tblVehicleEF	MDV	0.09	0.10
tblVehicleEF	MDV	0.21	0.18
tblVehicleEF	MDV	0.08	0.10
tblVehicleEF	MDV	0.05	0.03
tblVehicleEF	MDV	0.13	0.57
tblVehicleEF	MDV	0.28	0.50
tblVehicleEF	MH	0.03	3.3370e-003
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	2.70	0.34
tblVehicleEF	MH	5.98	0.00
tblVehicleEF	MH	1,002.10	941.76
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tblVehicleEF	MH	0.04	0.14
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tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	9.9800e-004	0.00
tblVehicleEF	MH	1.56	0.00
tblVehicleEF	MH	0.08	0.00
tblVehicleEF	MH	0.54	0.00

tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.35	0.00
tblVehicleEF	MH	9.9460e-003	8.9030e-003
tblVehicleEF	MH	6.8100e-004	0.00
tblVehicleEF	MH	1.56	0.00
tblVehicleEF	MH	0.08	0.00
tblVehicleEF	MH	0.54	0.00
tblVehicleEF	MH	0.13	0.08
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.39	0.00
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tblVehicleEF	MH	0.10	0.00
tblVehicleEF	MH	1.06	0.00

tblVehicleEF	MH	0.10	0.07
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.34	0.00
tblVehicleEF	MH	9.9470e-003	8.9030e-003
tblVehicleEF	MH	6.7400e-004	0.00
tblVehicleEF	MH	2.87	0.00
tblVehicleEF	MH	0.10	0.00
tblVehicleEF	MH	1.06	0.00
tblVehicleEF	MH	0.13	0.08
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.37	0.00
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tblVehicleEF	MH	1.65	4.38
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tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	1.0860e-003	0.00
tblVehicleEF	MH	3.2460e-003	4.0000e-003
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tblVehicleEF	MH	1.58	0.00
tblVehicleEF	MH	0.10	0.00
tblVehicleEF	MH	0.53	0.00

tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.35	0.00
tblVehicleEF	MH	9.9460e-003	8.9030e-003
tblVehicleEF	MH	6.8200e-004	0.00
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tblVehicleEF	MH	0.10	0.00
tblVehicleEF	MH	0.53	0.00
tblVehicleEF	MH	0.13	0.08
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tblVehicleEF	MHD	1.0220e-003	2.3130e-003
tblVehicleEF	MHD	6.1670e-003	0.08

tblVehicleEF	MHD	7.2400e-004	8.8000e-005
tblVehicleEF	MHD	1.7450e-003	7.1900e-004
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tblVehicleEF	MHD	8.5800e-004	3.5500e-004
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tblVehicleEF	MHD	0.02	0.10
tblVehicleEF	MHD	0.37	0.05
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tblVehicleEF	MHD	0.01	9.5290e-003
tblVehicleEF	MHD	6.6100e-004	8.1000e-005
tblVehicleEF	MHD	1.7450e-003	7.1900e-004
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tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	8.5800e-004	3.5500e-004
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tblVehicleEF	MHD	0.02	2.9880e-003
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tblVehicleEF	MHD	0.05	8.2030e-003
tblVehicleEF	MHD	0.26	0.28
tblVehicleEF	MHD	0.28	0.57
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tblVehicleEF	MHD	6.4490e-003	0.08
tblVehicleEF	MHD	7.8800e-004	9.6000e-005
tblVehicleEF	MHD	8.6100e-004	1.9530e-003
tblVehicleEF	MHD	6.1670e-003	0.08
tblVehicleEF	MHD	7.2400e-004	8.8000e-005
tblVehicleEF	MHD	3.3760e-003	1.3770e-003
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tblVehicleEF	MHD	7.8800e-004	9.6000e-005
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tblVehicleEF	MHD	6.1670e-003	0.08
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tblVehicleEF	MHD	0.02	0.11
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tblVehicleEF	MHD	1.3320e-003	5.6300e-004
tblVehicleEF	MHD	0.05	0.02

tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	6.7900e-004	2.8800e-004
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tblVehicleEF	OBUS	6.0450e-003	0.04
tblVehicleEF	OBUS	8.2300e-004	1.9000e-004
tblVehicleEF	OBUS	1.1600e-004	1.6990e-003
tblVehicleEF	OBUS	5.7680e-003	0.04
tblVehicleEF	OBUS	7.5700e-004	1.7400e-004
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tblVehicleEF	OBUS	9.3000e-004	1.1120e-003
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tblVehicleEF	OBUS	8.2300e-004	1.9000e-004
tblVehicleEF	OBUS	9.8000e-005	1.4350e-003

tblVehicleEF	OBUS	5.7680e-003	0.04
tblVehicleEF	OBUS	7.5700e-004	1.7400e-004
tblVehicleEF	OBUS	4.0690e-003	4.7330e-003
tblVehicleEF	OBUS	0.02	0.03
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tblVehicleEF	OBUS	8.0200e-004	2.0400e-004
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tblVehicleEF	OBUS	1.4100e-004	2.0620e-003
tblVehicleEF	OBUS	5.7680e-003	0.04
tblVehicleEF	OBUS	7.5700e-004	1.7400e-004
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tblVehicleEF	OBUS	8.5400e-004	1.0620e-003
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tblVehicleEF	OBUS	0.05	0.27
tblVehicleEF	OBUS	0.39	0.13
tblVehicleEF	OBUS	6.8300e-004	6.9200e-004
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tblVehicleEF	OBUS	8.1000e-004	2.0700e-004
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tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	8.5400e-004	1.0620e-003
tblVehicleEF	OBUS	0.05	0.11
tblVehicleEF	OBUS	0.05	0.27
tblVehicleEF	OBUS	0.42	0.14
tblVehicleEF	SBUS	0.84	0.08

tblVehicleEF	SBUS	0.01	6.6110e-003
tblVehicleEF	SBUS	0.06	6.9670e-003
tblVehicleEF	SBUS	7.83	3.03
tblVehicleEF	SBUS	0.64	0.53
tblVehicleEF	SBUS	6.66	0.94
tblVehicleEF	SBUS	1,146.29	366.87
tblVehicleEF	SBUS	1,103.40	1,115.27
tblVehicleEF	SBUS	53.92	6.06
tblVehicleEF	SBUS	10.00	3.57
tblVehicleEF	SBUS	4.65	4.82
tblVehicleEF	SBUS	0.01	4.0660e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.5700e-004	4.0000e-005
tblVehicleEF	SBUS	0.01	3.8900e-003
tblVehicleEF	SBUS	2.6950e-003	2.6510e-003
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	4.2000e-004	3.6000e-005
tblVehicleEF	SBUS	4.6830e-003	1.3080e-003
tblVehicleEF	SBUS	0.03	8.6250e-003
tblVehicleEF	SBUS	0.94	0.36
tblVehicleEF	SBUS	2.1770e-003	6.2500e-004
tblVehicleEF	SBUS	0.11	0.10
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	0.37	0.04
tblVehicleEF	SBUS	0.01	3.5040e-003
tblVehicleEF	SBUS	0.01	0.01

tblVehicleEF	SBUS	6.5500e-004	6.0000e-005
tblVehicleEF	SBUS	4.6830e-003	1.3080e-003
tblVehicleEF	SBUS	0.03	8.6250e-003
tblVehicleEF	SBUS	1.35	0.52
tblVehicleEF	SBUS	2.1770e-003	6.2500e-004
tblVehicleEF	SBUS	0.13	0.11
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	0.40	0.04
tblVehicleEF	SBUS	0.84	0.08
tblVehicleEF	SBUS	0.01	6.6860e-003
tblVehicleEF	SBUS	0.05	5.8380e-003
tblVehicleEF	SBUS	7.71	2.99
tblVehicleEF	SBUS	0.65	0.54
tblVehicleEF	SBUS	4.83	0.68
tblVehicleEF	SBUS	1,198.60	377.09
tblVehicleEF	SBUS	1,103.40	1,115.28
tblVehicleEF	SBUS	53.92	5.63
tblVehicleEF	SBUS	10.32	3.66
tblVehicleEF	SBUS	4.37	4.53
tblVehicleEF	SBUS	9.1190e-003	3.4340e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.5700e-004	4.0000e-005
tblVehicleEF	SBUS	8.7240e-003	3.2850e-003
tblVehicleEF	SBUS	2.6950e-003	2.6510e-003
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	4.2000e-004	3.6000e-005

tblVehicleEF	SBUS	8.4640e-003	2.3620e-003
tblVehicleEF	SBUS	0.03	9.1440e-003
tblVehicleEF	SBUS	0.93	0.36
tblVehicleEF	SBUS	4.0830e-003	1.1650e-003
tblVehicleEF	SBUS	0.11	0.10
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.31	0.03
tblVehicleEF	SBUS	0.01	3.6000e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.2400e-004	5.6000e-005
tblVehicleEF	SBUS	8.4640e-003	2.3620e-003
tblVehicleEF	SBUS	0.03	9.1440e-003
tblVehicleEF	SBUS	1.35	0.52
tblVehicleEF	SBUS	4.0830e-003	1.1650e-003
tblVehicleEF	SBUS	0.13	0.11
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.34	0.04
tblVehicleEF	SBUS	0.84	0.08
tblVehicleEF	SBUS	0.01	6.6040e-003
tblVehicleEF	SBUS	0.07	7.2110e-003
tblVehicleEF	SBUS	8.00	3.09
tblVehicleEF	SBUS	0.63	0.53
tblVehicleEF	SBUS	7.02	0.98
tblVehicleEF	SBUS	1,074.07	352.76
tblVehicleEF	SBUS	1,103.40	1,115.26
tblVehicleEF	SBUS	53.92	6.14
tblVehicleEF	SBUS	9.56	3.44

tblVehicleEF	SBUS	4.60	4.78
tblVehicleEF	SBUS	0.01	4.9380e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.5700e-004	4.0000e-005
tblVehicleEF	SBUS	0.01	4.7240e-003
tblVehicleEF	SBUS	2.6950e-003	2.6510e-003
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	4.2000e-004	3.6000e-005
tblVehicleEF	SBUS	4.1680e-003	1.1480e-003
tblVehicleEF	SBUS	0.03	8.8290e-003
tblVehicleEF	SBUS	0.94	0.36
tblVehicleEF	SBUS	2.1000e-003	6.0300e-004
tblVehicleEF	SBUS	0.11	0.10
tblVehicleEF	SBUS	0.02	0.06
tblVehicleEF	SBUS	0.38	0.04
tblVehicleEF	SBUS	0.01	3.3710e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.6100e-004	6.1000e-005
tblVehicleEF	SBUS	4.1680e-003	1.1480e-003
tblVehicleEF	SBUS	0.03	8.8290e-003
tblVehicleEF	SBUS	1.35	0.52
tblVehicleEF	SBUS	2.1000e-003	6.0300e-004
tblVehicleEF	SBUS	0.13	0.11
tblVehicleEF	SBUS	0.02	0.06
tblVehicleEF	SBUS	0.41	0.05
tblVehicleEF	UBUS	1.51	3.35

tblVehicleEF	UBUS	0.09	0.02
tblVehicleEF	UBUS	8.45	26.05
tblVehicleEF	UBUS	15.26	1.50
tblVehicleEF	UBUS	1,822.40	1,617.71
tblVehicleEF	UBUS	153.45	18.08
tblVehicleEF	UBUS	4.95	0.32
tblVehicleEF	UBUS	0.50	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.06	2.9340e-003
tblVehicleEF	UBUS	1.4200e-003	1.6100e-004
tblVehicleEF	UBUS	0.21	0.04
tblVehicleEF	UBUS	3.0000e-003	5.4780e-003
tblVehicleEF	UBUS	0.05	2.7920e-003
tblVehicleEF	UBUS	1.3060e-003	1.4800e-004
tblVehicleEF	UBUS	9.7430e-003	1.6370e-003
tblVehicleEF	UBUS	0.11	9.7740e-003
tblVehicleEF	UBUS	4.7860e-003	7.1300e-004
tblVehicleEF	UBUS	0.52	0.05
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.17	0.07
tblVehicleEF	UBUS	9.9960e-003	4.8690e-003
tblVehicleEF	UBUS	1.8100e-003	1.7900e-004
tblVehicleEF	UBUS	9.7430e-003	1.6370e-003
tblVehicleEF	UBUS	0.11	9.7740e-003
tblVehicleEF	UBUS	4.7860e-003	7.1300e-004
tblVehicleEF	UBUS	2.08	3.43
tblVehicleEF	UBUS	0.02	0.05

tblVehicleEF	UBUS	1.28	0.08
tblVehicleEF	UBUS	1.52	3.35
tblVehicleEF	UBUS	0.08	0.02
tblVehicleEF	UBUS	8.53	26.06
tblVehicleEF	UBUS	13.06	1.28
tblVehicleEF	UBUS	1,822.40	1,617.72
tblVehicleEF	UBUS	153.45	17.70
tblVehicleEF	UBUS	4.62	0.31
tblVehicleEF	UBUS	0.50	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.06	2.9340e-003
tblVehicleEF	UBUS	1.4200e-003	1.6100e-004
tblVehicleEF	UBUS	0.21	0.04
tblVehicleEF	UBUS	3.0000e-003	5.4780e-003
tblVehicleEF	UBUS	0.05	2.7920e-003
tblVehicleEF	UBUS	1.3060e-003	1.4800e-004
tblVehicleEF	UBUS	0.02	2.9250e-003
tblVehicleEF	UBUS	0.14	0.01
tblVehicleEF	UBUS	9.6600e-003	1.4550e-003
tblVehicleEF	UBUS	0.53	0.05
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.06	0.07
tblVehicleEF	UBUS	9.9970e-003	4.8690e-003
tblVehicleEF	UBUS	1.7720e-003	1.7500e-004
tblVehicleEF	UBUS	0.02	2.9250e-003
tblVehicleEF	UBUS	0.14	0.01
tblVehicleEF	UBUS	9.6600e-003	1.4550e-003

tblVehicleEF	UBUS	2.09	3.43
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.17	0.07
tblVehicleEF	UBUS	1.51	3.35
tblVehicleEF	UBUS	0.09	0.02
tblVehicleEF	UBUS	8.44	26.05
tblVehicleEF	UBUS	15.44	1.49
tblVehicleEF	UBUS	1,822.40	1,617.71
tblVehicleEF	UBUS	153.45	18.06
tblVehicleEF	UBUS	4.92	0.31
tblVehicleEF	UBUS	0.50	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.06	2.9340e-003
tblVehicleEF	UBUS	1.4200e-003	1.6100e-004
tblVehicleEF	UBUS	0.21	0.04
tblVehicleEF	UBUS	3.0000e-003	5.4780e-003
tblVehicleEF	UBUS	0.05	2.7920e-003
tblVehicleEF	UBUS	1.3060e-003	1.4800e-004
tblVehicleEF	UBUS	8.9770e-003	1.7200e-003
tblVehicleEF	UBUS	0.13	0.01
tblVehicleEF	UBUS	4.3820e-003	7.5400e-004
tblVehicleEF	UBUS	0.52	0.05
tblVehicleEF	UBUS	0.03	0.05
tblVehicleEF	UBUS	1.18	0.07
tblVehicleEF	UBUS	9.9960e-003	4.8690e-003
tblVehicleEF	UBUS	1.8130e-003	1.7900e-004
tblVehicleEF	UBUS	8.9770e-003	1.7200e-003

tblVehicleEF	UBUS	0.13	0.01
tblVehicleEF	UBUS	4.3820e-003	7.5400e-004
tblVehicleEF	UBUS	2.08	3.43
tblVehicleEF	UBUS	0.03	0.05
tblVehicleEF	UBUS	1.29	0.08
tblVehicleTrips	CNW_TTP	41.00	0.00
tblVehicleTrips	CW_TTP	59.00	100.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	1.68	2.32
tblVehicleTrips	SU_TR	1.68	2.32
tblVehicleTrips	WD_TR	1.68	2.32
tblWater	IndoorWaterUseRate	22,523,750.00	22,770,125.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	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**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

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	0.5253	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0423	0.0423	1.1000e-004	0.0000	0.0451
Energy	7.5000e-004	6.8300e-003	5.7400e-003	4.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	91.4177	91.4177	2.5700e-003	6.4000e-004	91.6726
Mobile	0.1042	0.1093	1.4831	4.5800e-003	0.5100	2.4500e-003	0.5125	0.1354	2.2600e-003	0.1376	0.0000	419.8959	419.8959	9.9300e-003	0.0000	420.1440
Waste						0.0000	0.0000		0.0000	0.0000	18.5859	0.0000	18.5859	1.0984	0.0000	46.0457
Water						0.0000	0.0000		0.0000	0.0000	7.2239	134.6967	141.9206	0.7459	0.0183	166.0284
Total	**0.6302**	**0.1163**	**1.5107**	**4.6200e-003**	**0.5100**	**3.0500e-003**	**0.5131**	**0.1354**	**2.8600e-003**	**0.1382**	**25.8098**	**646.0525**	**671.8622**	**1.8569**	**0.0190**	**723.9358**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5253	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0423	0.0423	1.1000e-004	0.0000	0.0451
Energy	7.5000e-004	6.8300e-003	5.7400e-003	4.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	91.4177	91.4177	2.5700e-003	6.4000e-004	91.6726
Mobile	0.1042	0.1093	1.4831	4.5800e-003	0.5100	2.4500e-003	0.5125	0.1354	2.2600e-003	0.1376	0.0000	419.8959	419.8959	9.9300e-003	0.0000	420.1440
Waste						0.0000	0.0000		0.0000	0.0000	18.5859	0.0000	18.5859	1.0984	0.0000	46.0457
Water						0.0000	0.0000		0.0000	0.0000	7.2239	134.6967	141.9206	0.7459	0.0183	166.0284
Total	**0.6302**	**0.1163**	**1.5107**	**4.6200e-003**	**0.5100**	**3.0500e-003**	**0.5131**	**0.1354**	**2.8600e-003**	**0.1382**	**25.8098**	**646.0525**	**671.8622**	**1.8569**	**0.0190**	**723.9358**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/4/2020	8/12/2020	5	50	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 36.86

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	158	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2020

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

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

3.2 Demolition - 2020

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	0.0000	0.0000	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 Construction Off-Site

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

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	0.1042	0.1093	1.4831	4.5800e-003	0.5100	2.4500e-003	0.5125	0.1354	2.2600e-003	0.1376	0.0000	419.8959	419.8959	9.9300e-003	0.0000	420.1440
Unmitigated	0.1042	0.1093	1.4831	4.5800e-003	0.5100	2.4500e-003	0.5125	0.1354	2.2600e-003	0.1376	0.0000	419.8959	419.8959	9.9300e-003	0.0000	420.1440

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	225.97	225.97	225.97	1,365,389	1,365,389
Total	225.97	225.97	225.97	1,365,389	1,365,389

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
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	16.60	8.40	6.90	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.542116	0.037578	0.185203	0.118503	0.016241	0.005141	0.017392	0.068695	0.001383	0.001183	0.004582	0.000945	0.001038
Unrefrigerated Warehouse-No Rail	0.614000	0.043000	0.210000	0.133000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	83.9851	83.9851	2.4300e-003	5.0000e-004	84.1958
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	83.9851	83.9851	2.4300e-003	5.0000e-004	84.1958
NaturalGas Mitigated	7.5000e-004	6.8300e-003	5.7400e-003	4.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	7.4326	7.4326	1.4000e-004	1.4000e-004	7.4768
NaturalGas Unmitigated	7.5000e-004	6.8300e-003	5.7400e-003	4.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	7.4326	7.4326	1.4000e-004	1.4000e-004	7.4768

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					
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
Unrefrigerated Warehouse-No Rail	139282	7.5000e-004	6.8300e-003	5.7400e-003	4.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	7.4326	7.4326	1.4000e-004	1.4000e-004	7.4768
Total		**7.5000e-004**	**6.8300e-003**	**5.7400e-003**	**4.0000e-005**		**5.2000e-004**	**5.2000e-004**		**5.2000e-004**	**5.2000e-004**	**0.0000**	**7.4326**	**7.4326**	**1.4000e-004**	**1.4000e-004**	**7.4768**

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					
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
Unrefrigerated Warehouse-No Rail	139282	7.5000e-004	6.8300e-003	5.7400e-003	4.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	7.4326	7.4326	1.4000e-004	1.4000e-004	7.4768
Total		**7.5000e-004**	**6.8300e-003**	**5.7400e-003**	**4.0000e-005**		**5.2000e-004**	**5.2000e-004**		**5.2000e-004**	**5.2000e-004**	**0.0000**	**7.4326**	**7.4326**	**1.4000e-004**	**1.4000e-004**	**7.4768**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	184865	83.9851	2.4300e-003	5.0000e-004	84.1958
Total		**83.9851**	**2.4300e-003**	**5.0000e-004**	**84.1958**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	184865	83.9851	2.4300e-003	5.0000e-004	84.1958
Total		**83.9851**	**2.4300e-003**	**5.0000e-004**	**84.1958**

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	0.5253	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0423	0.0423	1.1000e-004	0.0000	0.0451
Unmitigated	0.5253	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0423	0.0423	1.1000e-004	0.0000	0.0451

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	0.0675					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4558					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0400e-003	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0423	0.0423	1.1000e-004	0.0000	0.0451
Total	**0.5253**	**2.0000e-004**	**0.0218**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0423**	**0.0423**	**1.1000e-004**	**0.0000**	**0.0451**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0675					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4558					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0400e-003	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0423	0.0423	1.1000e-004	0.0000	0.0451
Total	**0.5253**	**2.0000e-004**	**0.0218**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0423**	**0.0423**	**1.1000e-004**	**0.0000**	**0.0451**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	141.9206	0.7459	0.0183	166.0284
Unmitigated	141.9206	0.7459	0.0183	166.0284

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	22.7701 / 0	141.9206	0.7459	0.0183	166.0284
Total		**141.9206**	**0.7459**	**0.0183**	**166.0284**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	22.7701 / 0	141.9206	0.7459	0.0183	166.0284
Total		**141.9206**	**0.7459**	**0.0183**	**166.0284**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	18.5859	1.0984	0.0000	46.0457
Unmitigated	18.5859	1.0984	0.0000	46.0457

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	91.56	18.5859	1.0984	0.0000	46.0457
Total		**18.5859**	**1.0984**	**0.0000**	**46.0457**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	91.56	18.5859	1.0984	0.0000	46.0457
Total		**18.5859**	**1.0984**	**0.0000**	**46.0457**

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

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APPENDIX 3.3:

CALEEMOD ANNUAL OPERATIONAL (TRUCKS) EMISSIONS MODEL OUTPUTS

Estes Banning (Operations - Trucks)

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Unrefrigerated Warehouse-No Rail	97.40	1000sqft	2.24	97,400.00	0
Other Asphalt Surfaces	1,605.80	1000sqft	36.86	1,605,796.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2021
Utility Company	Statewide Average				
CO2 Intensity (lb/MWhr)	1001.57	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Estes Banning (Operations - Trucks) - Riverside-South Coast County, Annual

Project Characteristics - Electricty will be provided to the Project by Banning Electric Utility (BEU). CalEEMod does not provided Intensity Factors for BEU, as such, the Statewide Average will be used.

Land Use - Total Project Area is 36.86 acres. Truck Terminal is 97,400 sf. Remaning area will be modeled as 1,605,796 sf of Other Apshalt Surfaces.

Construction Phase - Operations Run Only.

Off-road Equipment - Operations Run Only.

Trips and VMT - Operations Run Only.

Vehicle Trips - Trip Rates based on information provided in the TIA prepared by Urban Crossroads.

Energy Use - The project will design building shells and building components to meet 2019 Title 24 Standards which expects 30% less energy for nonresidential uses.

Water And Wastewater - The project includes the construction and operation of a 660 square foot automated truck wash. Water usage based on the assumption that 50% of incoming trucks will be washed and 30 gallons of water will be used per truck.

Fleet Mix - Fleet Mix is based on the number of trips generated by each truck type (LHDT, MHDT, and HHDT) relative to the total number of truck trips

Vehicle Emission Factors - EMFAC2017

Vehicle Emission Factors - EMFAC2017

Vehicle Emission Factors - EMFAC2017

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	50.00	1.00
tblEnergyUse	LightingElect	1.17	0.82
tblEnergyUse	T24E	0.37	0.26
tblEnergyUse	T24NG	2.00	1.40
tblFleetMix	HHD	0.07	0.90
tblFleetMix	LDA	0.54	0.00
tblFleetMix	LDT1	0.04	0.00
tblFleetMix	LDT2	0.19	0.00
tblFleetMix	LHD1	0.02	0.10
tblFleetMix	LHD2	5.1410e-003	0.00
tblFleetMix	MCY	4.5820e-003	0.00
tblFleetMix	MDV	0.12	0.00

Estes Banning (Operations - Trucks) - Riverside-South Coast County, Annual

tblFleetMix	MH	1.0380e-003	0.00
tblFleetMix	MHD	0.02	0.00
tblFleetMix	OBUS	1.3830e-003	0.00
tblFleetMix	SBUS	9.4500e-004	0.00
tblFleetMix	UBUS	1.1830e-003	0.00
tblLandUse	LandUseSquareFeet	1,605,800.00	1,605,796.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblVehicleEF	HHD	1.43	0.03
tblVehicleEF	HHD	0.03	0.02
tblVehicleEF	HHD	0.10	0.00
tblVehicleEF	HHD	3.28	7.55
tblVehicleEF	HHD	0.46	0.36
tblVehicleEF	HHD	1.46	2.9270e-003
tblVehicleEF	HHD	6,485.38	1,409.07
tblVehicleEF	HHD	1,461.92	1,350.00
tblVehicleEF	HHD	4.62	0.03
tblVehicleEF	HHD	26.41	7.34
tblVehicleEF	HHD	2.69	3.05
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	3.8000e-005	0.00
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	0.03	0.03

tblVehicleEF	HHD	8.8680e-003	8.8980e-003
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	3.5000e-005	0.00
tblVehicleEF	HHD	8.4000e-005	4.0000e-006
tblVehicleEF	HHD	2.5800e-003	1.0300e-004
tblVehicleEF	HHD	0.85	0.58
tblVehicleEF	HHD	4.8000e-005	2.0000e-006
tblVehicleEF	HHD	0.07	0.07
tblVehicleEF	HHD	1.8000e-004	5.3700e-004
tblVehicleEF	HHD	0.05	1.0000e-006
tblVehicleEF	HHD	0.06	0.01
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	7.1000e-005	0.00
tblVehicleEF	HHD	8.4000e-005	4.0000e-006
tblVehicleEF	HHD	2.5800e-003	1.0300e-004
tblVehicleEF	HHD	0.97	0.66
tblVehicleEF	HHD	4.8000e-005	2.0000e-006
tblVehicleEF	HHD	0.11	0.09
tblVehicleEF	HHD	1.8000e-004	5.3700e-004
tblVehicleEF	HHD	0.05	1.0000e-006
tblVehicleEF	HHD	1.35	0.03
tblVehicleEF	HHD	0.03	0.02
tblVehicleEF	HHD	0.10	0.00
tblVehicleEF	HHD	2.39	7.39
tblVehicleEF	HHD	0.46	0.36
tblVehicleEF	HHD	1.39	2.7700e-003
tblVehicleEF	HHD	6,867.98	1,402.59

tblVehicleEF	HHD	1,461.92	1,350.00
tblVehicleEF	HHD	4.62	0.03
tblVehicleEF	HHD	27.25	7.10
tblVehicleEF	HHD	2.54	2.88
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	3.8000e-005	0.00
tblVehicleEF	HHD	0.01	9.7680e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8680e-003	8.8980e-003
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	3.5000e-005	0.00
tblVehicleEF	HHD	1.6300e-004	8.0000e-006
tblVehicleEF	HHD	2.9560e-003	1.1800e-004
tblVehicleEF	HHD	0.80	0.60
tblVehicleEF	HHD	9.2000e-005	4.0000e-006
tblVehicleEF	HHD	0.07	0.07
tblVehicleEF	HHD	1.8400e-004	5.5600e-004
tblVehicleEF	HHD	0.04	1.0000e-006
tblVehicleEF	HHD	0.06	0.01
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	6.9000e-005	0.00
tblVehicleEF	HHD	1.6300e-004	8.0000e-006
tblVehicleEF	HHD	2.9560e-003	1.1800e-004
tblVehicleEF	HHD	0.92	0.69

tblVehicleEF	HHD	9.2000e-005	4.0000e-006
tblVehicleEF	HHD	0.11	0.09
tblVehicleEF	HHD	1.8400e-004	5.5600e-004
tblVehicleEF	HHD	0.05	1.0000e-006
tblVehicleEF	HHD	1.54	0.03
tblVehicleEF	HHD	0.03	3.2330e-003
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tblVehicleEF	HHD	4.51	7.76
tblVehicleEF	HHD	0.45	0.32
tblVehicleEF	HHD	1.47	2.9120e-003
tblVehicleEF	HHD	5,957.03	1,414.57
tblVehicleEF	HHD	1,461.92	1,340.32
tblVehicleEF	HHD	4.62	0.03
tblVehicleEF	HHD	25.25	7.65
tblVehicleEF	HHD	2.67	3.02
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tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	3.8000e-005	0.00
tblVehicleEF	HHD	0.02	0.01
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8680e-003	8.8710e-003
tblVehicleEF	HHD	0.01	0.05
tblVehicleEF	HHD	3.5000e-005	0.00
tblVehicleEF	HHD	6.7000e-005	4.0000e-006
tblVehicleEF	HHD	2.7490e-003	1.2100e-004

tblVehicleEF	HHD	0.91	0.54
tblVehicleEF	HHD	4.1000e-005	2.0000e-006
tblVehicleEF	HHD	0.07	0.07
tblVehicleEF	HHD	1.9200e-004	5.6500e-004
tblVehicleEF	HHD	0.05	1.0000e-006
tblVehicleEF	HHD	0.06	0.01
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	7.1000e-005	0.00
tblVehicleEF	HHD	6.7000e-005	4.0000e-006
tblVehicleEF	HHD	2.7490e-003	1.2100e-004
tblVehicleEF	HHD	1.05	0.62
tblVehicleEF	HHD	4.1000e-005	2.0000e-006
tblVehicleEF	HHD	0.11	0.08
tblVehicleEF	HHD	1.9200e-004	5.6500e-004
tblVehicleEF	HHD	0.05	1.0000e-006
tblVehicleEF	LDA	4.0430e-003	2.4680e-003
tblVehicleEF	LDA	5.4670e-003	0.05
tblVehicleEF	LDA	0.58	0.66
tblVehicleEF	LDA	1.16	2.12
tblVehicleEF	LDA	255.91	265.87
tblVehicleEF	LDA	58.81	54.73
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	1.6140e-003	1.4470e-003
tblVehicleEF	LDA	2.2650e-003	1.9190e-003
tblVehicleEF	LDA	1.4880e-003	1.3330e-003
tblVehicleEF	LDA	2.0830e-003	1.7640e-003
tblVehicleEF	LDA	0.05	0.07

tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.01	9.5180e-003
tblVehicleEF	LDA	0.04	0.21
tblVehicleEF	LDA	0.07	0.23
tblVehicleEF	LDA	2.5630e-003	2.6300e-003
tblVehicleEF	LDA	6.0800e-004	5.4200e-004
tblVehicleEF	LDA	0.05	0.07
tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.21
tblVehicleEF	LDA	0.08	0.25
tblVehicleEF	LDA	4.5900e-003	2.8100e-003
tblVehicleEF	LDA	4.7470e-003	0.05
tblVehicleEF	LDA	0.71	0.81
tblVehicleEF	LDA	1.02	1.87
tblVehicleEF	LDA	278.73	289.14
tblVehicleEF	LDA	58.81	54.24
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	1.6140e-003	1.4470e-003
tblVehicleEF	LDA	2.2650e-003	1.9190e-003
tblVehicleEF	LDA	1.4880e-003	1.3330e-003
tblVehicleEF	LDA	2.0830e-003	1.7640e-003
tblVehicleEF	LDA	0.10	0.14
tblVehicleEF	LDA	0.12	0.12
tblVehicleEF	LDA	0.07	0.10

tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.21
tblVehicleEF	LDA	0.06	0.20
tblVehicleEF	LDA	2.7930e-003	2.8600e-003
tblVehicleEF	LDA	6.0500e-004	5.3700e-004
tblVehicleEF	LDA	0.10	0.14
tblVehicleEF	LDA	0.12	0.12
tblVehicleEF	LDA	0.07	0.10
tblVehicleEF	LDA	0.02	0.02
tblVehicleEF	LDA	0.04	0.21
tblVehicleEF	LDA	0.07	0.22
tblVehicleEF	LDA	3.8980e-003	2.3810e-003
tblVehicleEF	LDA	5.6140e-003	0.05
tblVehicleEF	LDA	0.54	0.62
tblVehicleEF	LDA	1.19	2.17
tblVehicleEF	LDA	249.57	259.47
tblVehicleEF	LDA	58.81	54.82
tblVehicleEF	LDA	0.05	0.04
tblVehicleEF	LDA	1.6140e-003	1.4470e-003
tblVehicleEF	LDA	2.2650e-003	1.9190e-003
tblVehicleEF	LDA	1.4880e-003	1.3330e-003
tblVehicleEF	LDA	2.0830e-003	1.7640e-003
tblVehicleEF	LDA	0.04	0.06
tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	9.8140e-003	9.1880e-003
tblVehicleEF	LDA	0.04	0.24

tblVehicleEF	LDA	0.08	0.23
tblVehicleEF	LDA	2.4990e-003	2.5670e-003
tblVehicleEF	LDA	6.0800e-004	5.4200e-004
tblVehicleEF	LDA	0.04	0.06
tblVehicleEF	LDA	0.11	0.11
tblVehicleEF	LDA	0.03	0.05
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.04	0.24
tblVehicleEF	LDA	0.08	0.26
tblVehicleEF	LDT1	0.01	8.0140e-003
tblVehicleEF	LDT1	0.02	0.09
tblVehicleEF	LDT1	1.46	1.62
tblVehicleEF	LDT1	3.40	2.43
tblVehicleEF	LDT1	315.98	317.00
tblVehicleEF	LDT1	72.28	66.64
tblVehicleEF	LDT1	0.14	0.14
tblVehicleEF	LDT1	2.5300e-003	2.2930e-003
tblVehicleEF	LDT1	3.6970e-003	2.9510e-003
tblVehicleEF	LDT1	2.3290e-003	2.1110e-003
tblVehicleEF	LDT1	3.4000e-003	2.7140e-003
tblVehicleEF	LDT1	0.21	0.23
tblVehicleEF	LDT1	0.35	0.27
tblVehicleEF	LDT1	0.14	0.15
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.20	0.87
tblVehicleEF	LDT1	0.24	0.44
tblVehicleEF	LDT1	3.1780e-003	3.1370e-003

tblVehicleEF	LDT1	7.8300e-004	6.5900e-004
tblVehicleEF	LDT1	0.21	0.23
tblVehicleEF	LDT1	0.35	0.27
tblVehicleEF	LDT1	0.14	0.15
tblVehicleEF	LDT1	0.04	0.05
tblVehicleEF	LDT1	0.20	0.87
tblVehicleEF	LDT1	0.26	0.48
tblVehicleEF	LDT1	0.01	9.0560e-003
tblVehicleEF	LDT1	0.02	0.08
tblVehicleEF	LDT1	1.76	1.96
tblVehicleEF	LDT1	2.99	2.15
tblVehicleEF	LDT1	343.19	341.79
tblVehicleEF	LDT1	72.28	66.01
tblVehicleEF	LDT1	0.13	0.13
tblVehicleEF	LDT1	2.5300e-003	2.2930e-003
tblVehicleEF	LDT1	3.6970e-003	2.9510e-003
tblVehicleEF	LDT1	2.3290e-003	2.1110e-003
tblVehicleEF	LDT1	3.4000e-003	2.7140e-003
tblVehicleEF	LDT1	0.41	0.44
tblVehicleEF	LDT1	0.43	0.34
tblVehicleEF	LDT1	0.27	0.29
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.20	0.88
tblVehicleEF	LDT1	0.21	0.38
tblVehicleEF	LDT1	3.4550e-003	3.3820e-003
tblVehicleEF	LDT1	7.7500e-004	6.5300e-004
tblVehicleEF	LDT1	0.41	0.44

tblVehicleEF	LDT1	0.43	0.34
tblVehicleEF	LDT1	0.27	0.29
tblVehicleEF	LDT1	0.05	0.06
tblVehicleEF	LDT1	0.20	0.88
tblVehicleEF	LDT1	0.23	0.42
tblVehicleEF	LDT1	0.01	7.7080e-003
tblVehicleEF	LDT1	0.02	0.09
tblVehicleEF	LDT1	1.37	1.51
tblVehicleEF	LDT1	3.46	2.48
tblVehicleEF	LDT1	307.88	309.49
tblVehicleEF	LDT1	72.28	66.77
tblVehicleEF	LDT1	0.14	0.14
tblVehicleEF	LDT1	2.5300e-003	2.2930e-003
tblVehicleEF	LDT1	3.6970e-003	2.9510e-003
tblVehicleEF	LDT1	2.3290e-003	2.1110e-003
tblVehicleEF	LDT1	3.4000e-003	2.7140e-003
tblVehicleEF	LDT1	0.18	0.19
tblVehicleEF	LDT1	0.39	0.30
tblVehicleEF	LDT1	0.12	0.13
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.23	1.01
tblVehicleEF	LDT1	0.25	0.45
tblVehicleEF	LDT1	3.0960e-003	3.0630e-003
tblVehicleEF	LDT1	7.8400e-004	6.6100e-004
tblVehicleEF	LDT1	0.18	0.19
tblVehicleEF	LDT1	0.39	0.30
tblVehicleEF	LDT1	0.12	0.13

tblVehicleEF	LDT1	0.04	0.05
tblVehicleEF	LDT1	0.23	1.01
tblVehicleEF	LDT1	0.27	0.50
tblVehicleEF	LDT2	5.6080e-003	4.2470e-003
tblVehicleEF	LDT2	7.2840e-003	0.07
tblVehicleEF	LDT2	0.76	0.98
tblVehicleEF	LDT2	1.53	2.73
tblVehicleEF	LDT2	355.02	338.79
tblVehicleEF	LDT2	81.24	71.51
tblVehicleEF	LDT2	0.08	0.09
tblVehicleEF	LDT2	1.6030e-003	1.4980e-003
tblVehicleEF	LDT2	2.3320e-003	1.9580e-003
tblVehicleEF	LDT2	1.4740e-003	1.3790e-003
tblVehicleEF	LDT2	2.1450e-003	1.8010e-003
tblVehicleEF	LDT2	0.07	0.11
tblVehicleEF	LDT2	0.12	0.14
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.01	0.02
tblVehicleEF	LDT2	0.06	0.44
tblVehicleEF	LDT2	0.10	0.33
tblVehicleEF	LDT2	3.5560e-003	3.3520e-003
tblVehicleEF	LDT2	8.3800e-004	7.0800e-004
tblVehicleEF	LDT2	0.07	0.11
tblVehicleEF	LDT2	0.12	0.14
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.06	0.44

tblVehicleEF	LDT2	0.11	0.37
tblVehicleEF	LDT2	6.3630e-003	4.8280e-003
tblVehicleEF	LDT2	6.3270e-003	0.06
tblVehicleEF	LDT2	0.93	1.20
tblVehicleEF	LDT2	1.35	2.42
tblVehicleEF	LDT2	386.34	362.86
tblVehicleEF	LDT2	81.24	70.86
tblVehicleEF	LDT2	0.07	0.08
tblVehicleEF	LDT2	1.6030e-003	1.4980e-003
tblVehicleEF	LDT2	2.3320e-003	1.9580e-003
tblVehicleEF	LDT2	1.4740e-003	1.3790e-003
tblVehicleEF	LDT2	2.1450e-003	1.8010e-003
tblVehicleEF	LDT2	0.14	0.22
tblVehicleEF	LDT2	0.14	0.17
tblVehicleEF	LDT2	0.10	0.17
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.44
tblVehicleEF	LDT2	0.09	0.29
tblVehicleEF	LDT2	3.8710e-003	3.5900e-003
tblVehicleEF	LDT2	8.3500e-004	7.0100e-004
tblVehicleEF	LDT2	0.14	0.22
tblVehicleEF	LDT2	0.14	0.17
tblVehicleEF	LDT2	0.10	0.17
tblVehicleEF	LDT2	0.02	0.03
tblVehicleEF	LDT2	0.06	0.44
tblVehicleEF	LDT2	0.09	0.32
tblVehicleEF	LDT2	5.3900e-003	4.0760e-003

tblVehicleEF	LDT2	7.4940e-003	0.07
tblVehicleEF	LDT2	0.71	0.91
tblVehicleEF	LDT2	1.57	2.80
tblVehicleEF	LDT2	345.65	331.49
tblVehicleEF	LDT2	81.24	71.65
tblVehicleEF	LDT2	0.08	0.09
tblVehicleEF	LDT2	1.6030e-003	1.4980e-003
tblVehicleEF	LDT2	2.3320e-003	1.9580e-003
tblVehicleEF	LDT2	1.4740e-003	1.3790e-003
tblVehicleEF	LDT2	2.1450e-003	1.8010e-003
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.13	0.15
tblVehicleEF	LDT2	0.05	0.07
tblVehicleEF	LDT2	0.01	0.02
tblVehicleEF	LDT2	0.07	0.51
tblVehicleEF	LDT2	0.10	0.34
tblVehicleEF	LDT2	3.4620e-003	3.2800e-003
tblVehicleEF	LDT2	8.3900e-004	7.0900e-004
tblVehicleEF	LDT2	0.06	0.09
tblVehicleEF	LDT2	0.13	0.15
tblVehicleEF	LDT2	0.05	0.07
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.51
tblVehicleEF	LDT2	0.11	0.38
tblVehicleEF	LHD1	5.4460e-003	4.8820e-003
tblVehicleEF	LHD1	0.01	5.3310e-003
tblVehicleEF	LHD1	0.02	0.02

tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	0.96	0.72
tblVehicleEF	LHD1	2.41	0.96
tblVehicleEF	LHD1	9.26	9.44
tblVehicleEF	LHD1	607.95	639.95
tblVehicleEF	LHD1	30.36	10.54
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	2.21	1.60
tblVehicleEF	LHD1	9.7200e-004	9.7000e-004
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.7100e-004	2.3300e-004
tblVehicleEF	LHD1	9.3000e-004	9.2800e-004
tblVehicleEF	LHD1	2.5390e-003	2.5010e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.0100e-004	2.1400e-004
tblVehicleEF	LHD1	3.8710e-003	3.1780e-003
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.9010e-003	1.5570e-003
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.31	0.50
tblVehicleEF	LHD1	0.26	0.08
tblVehicleEF	LHD1	9.3000e-005	9.1000e-005
tblVehicleEF	LHD1	5.9620e-003	6.2250e-003
tblVehicleEF	LHD1	3.4900e-004	1.0400e-004
tblVehicleEF	LHD1	3.8710e-003	3.1780e-003

tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.9010e-003	1.5570e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.31	0.50
tblVehicleEF	LHD1	0.28	0.08
tblVehicleEF	LHD1	5.4460e-003	4.8940e-003
tblVehicleEF	LHD1	0.01	5.4200e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	0.97	0.73
tblVehicleEF	LHD1	2.29	0.92
tblVehicleEF	LHD1	9.26	9.44
tblVehicleEF	LHD1	607.95	639.97
tblVehicleEF	LHD1	30.36	10.46
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	2.08	1.51
tblVehicleEF	LHD1	9.7200e-004	9.7000e-004
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.7100e-004	2.3300e-004
tblVehicleEF	LHD1	9.3000e-004	9.2800e-004
tblVehicleEF	LHD1	2.5390e-003	2.5010e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.0100e-004	2.1400e-004
tblVehicleEF	LHD1	7.2450e-003	5.9530e-003
tblVehicleEF	LHD1	0.12	0.09

tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	3.6380e-003	2.9980e-003
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.32	0.50
tblVehicleEF	LHD1	0.25	0.07
tblVehicleEF	LHD1	9.3000e-005	9.1000e-005
tblVehicleEF	LHD1	5.9620e-003	6.2250e-003
tblVehicleEF	LHD1	3.4700e-004	1.0300e-004
tblVehicleEF	LHD1	7.2450e-003	5.9530e-003
tblVehicleEF	LHD1	0.12	0.09
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	3.6380e-003	2.9980e-003
tblVehicleEF	LHD1	0.10	0.08
tblVehicleEF	LHD1	0.32	0.50
tblVehicleEF	LHD1	0.27	0.08
tblVehicleEF	LHD1	5.4460e-003	4.8810e-003
tblVehicleEF	LHD1	0.01	5.3180e-003
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	0.15	0.17
tblVehicleEF	LHD1	0.96	0.72
tblVehicleEF	LHD1	2.41	0.96
tblVehicleEF	LHD1	9.26	9.44
tblVehicleEF	LHD1	607.95	639.95
tblVehicleEF	LHD1	30.36	10.54
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	2.18	1.59
tblVehicleEF	LHD1	9.7200e-004	9.7000e-004

tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.7100e-004	2.3300e-004
tblVehicleEF	LHD1	9.3000e-004	9.2800e-004
tblVehicleEF	LHD1	2.5390e-003	2.5010e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	8.0100e-004	2.1400e-004
tblVehicleEF	LHD1	3.4570e-003	2.8250e-003
tblVehicleEF	LHD1	0.11	0.09
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.7350e-003	1.4150e-003
tblVehicleEF	LHD1	0.08	0.06
tblVehicleEF	LHD1	0.33	0.53
tblVehicleEF	LHD1	0.26	0.08
tblVehicleEF	LHD1	9.3000e-005	9.1000e-005
tblVehicleEF	LHD1	5.9620e-003	6.2250e-003
tblVehicleEF	LHD1	3.4900e-004	1.0400e-004
tblVehicleEF	LHD1	3.4570e-003	2.8250e-003
tblVehicleEF	LHD1	0.11	0.09
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.7350e-003	1.4150e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.33	0.53
tblVehicleEF	LHD1	0.28	0.08
tblVehicleEF	LHD2	3.6660e-003	3.1720e-003
tblVehicleEF	LHD2	4.5290e-003	3.8570e-003
tblVehicleEF	LHD2	8.3110e-003	9.0280e-003

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tblVehicleEF	LHD2	0.50	0.53
tblVehicleEF	LHD2	1.15	0.56
tblVehicleEF	LHD2	14.48	14.86
tblVehicleEF	LHD2	604.20	638.83
tblVehicleEF	LHD2	23.56	7.29
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.71	1.77
tblVehicleEF	LHD2	1.3360e-003	1.4390e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.8700e-004	1.1400e-004
tblVehicleEF	LHD2	1.2780e-003	1.3770e-003
tblVehicleEF	LHD2	2.6970e-003	2.7110e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5600e-004	1.0500e-004
tblVehicleEF	LHD2	1.4980e-003	1.6870e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	7.7800e-004	8.4200e-004
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.4100e-004	1.4200e-004
tblVehicleEF	LHD2	5.8740e-003	6.1550e-003
tblVehicleEF	LHD2	2.5700e-004	7.2000e-005
tblVehicleEF	LHD2	1.4980e-003	1.6870e-003

tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	7.7800e-004	8.4200e-004
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	3.6660e-003	3.1790e-003
tblVehicleEF	LHD2	4.5800e-003	3.8860e-003
tblVehicleEF	LHD2	8.0210e-003	8.7250e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.51	0.53
tblVehicleEF	LHD2	1.10	0.53
tblVehicleEF	LHD2	14.48	14.86
tblVehicleEF	LHD2	604.20	638.83
tblVehicleEF	LHD2	23.56	7.25
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.62	1.67
tblVehicleEF	LHD2	1.3360e-003	1.4390e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.8700e-004	1.1400e-004
tblVehicleEF	LHD2	1.2780e-003	1.3770e-003
tblVehicleEF	LHD2	2.6970e-003	2.7110e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5600e-004	1.0500e-004
tblVehicleEF	LHD2	2.8320e-003	3.1830e-003
tblVehicleEF	LHD2	0.04	0.05

tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	1.4720e-003	1.6130e-003
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.4100e-004	1.4200e-004
tblVehicleEF	LHD2	5.8740e-003	6.1560e-003
tblVehicleEF	LHD2	2.5600e-004	7.2000e-005
tblVehicleEF	LHD2	2.8320e-003	3.1830e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.4720e-003	1.6130e-003
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.25
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	LHD2	3.6660e-003	3.1700e-003
tblVehicleEF	LHD2	4.5170e-003	3.8490e-003
tblVehicleEF	LHD2	8.3600e-003	9.0930e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.50	0.53
tblVehicleEF	LHD2	1.16	0.56
tblVehicleEF	LHD2	14.48	14.86
tblVehicleEF	LHD2	604.20	638.83
tblVehicleEF	LHD2	23.56	7.30
tblVehicleEF	LHD2	0.12	0.12
tblVehicleEF	LHD2	1.70	1.75
tblVehicleEF	LHD2	1.3360e-003	1.4390e-003

tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.8700e-004	1.1400e-004
tblVehicleEF	LHD2	1.2780e-003	1.3770e-003
tblVehicleEF	LHD2	2.6970e-003	2.7110e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5600e-004	1.0500e-004
tblVehicleEF	LHD2	1.1910e-003	1.3290e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.01	0.02
tblVehicleEF	LHD2	6.6000e-004	7.0100e-004
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.11	0.04
tblVehicleEF	LHD2	1.4100e-004	1.4200e-004
tblVehicleEF	LHD2	5.8740e-003	6.1550e-003
tblVehicleEF	LHD2	2.5700e-004	7.2000e-005
tblVehicleEF	LHD2	1.1910e-003	1.3290e-003
tblVehicleEF	LHD2	0.04	0.05
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	6.6000e-004	7.0100e-004
tblVehicleEF	LHD2	0.07	0.07
tblVehicleEF	LHD2	0.09	0.27
tblVehicleEF	LHD2	0.12	0.05
tblVehicleEF	MCY	0.42	0.32
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	19.52	19.61

tblVehicleEF	MCY	9.67	8.55
tblVehicleEF	MCY	165.74	208.30
tblVehicleEF	MCY	46.23	60.73
tblVehicleEF	MCY	1.13	1.13
tblVehicleEF	MCY	1.7750e-003	1.7570e-003
tblVehicleEF	MCY	3.4010e-003	2.8660e-003
tblVehicleEF	MCY	1.6600e-003	1.6440e-003
tblVehicleEF	MCY	3.2060e-003	2.7000e-003
tblVehicleEF	MCY	1.69	1.66
tblVehicleEF	MCY	0.85	0.84
tblVehicleEF	MCY	0.92	0.90
tblVehicleEF	MCY	2.15	2.16
tblVehicleEF	MCY	0.57	1.87
tblVehicleEF	MCY	2.08	1.83
tblVehicleEF	MCY	2.0380e-003	2.0610e-003
tblVehicleEF	MCY	6.8100e-004	6.0100e-004
tblVehicleEF	MCY	1.69	1.66
tblVehicleEF	MCY	0.85	0.84
tblVehicleEF	MCY	0.92	0.90
tblVehicleEF	MCY	2.65	2.65
tblVehicleEF	MCY	0.57	1.87
tblVehicleEF	MCY	2.26	1.99
tblVehicleEF	MCY	0.42	0.32
tblVehicleEF	MCY	0.14	0.22
tblVehicleEF	MCY	20.23	20.27
tblVehicleEF	MCY	9.11	8.00
tblVehicleEF	MCY	165.74	209.26

tblVehicleEF	MCY	46.23	59.19
tblVehicleEF	MCY	0.98	0.98
tblVehicleEF	MCY	1.7750e-003	1.7570e-003
tblVehicleEF	MCY	3.4010e-003	2.8660e-003
tblVehicleEF	MCY	1.6600e-003	1.6440e-003
tblVehicleEF	MCY	3.2060e-003	2.7000e-003
tblVehicleEF	MCY	3.35	3.28
tblVehicleEF	MCY	1.24	1.23
tblVehicleEF	MCY	2.10	2.05
tblVehicleEF	MCY	2.13	2.13
tblVehicleEF	MCY	0.57	1.86
tblVehicleEF	MCY	1.86	1.63
tblVehicleEF	MCY	2.0490e-003	2.0710e-003
tblVehicleEF	MCY	6.6500e-004	5.8600e-004
tblVehicleEF	MCY	3.35	3.28
tblVehicleEF	MCY	1.24	1.23
tblVehicleEF	MCY	2.10	2.05
tblVehicleEF	MCY	2.62	2.63
tblVehicleEF	MCY	0.57	1.86
tblVehicleEF	MCY	2.02	1.77
tblVehicleEF	MCY	0.42	0.32
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	19.04	19.14
tblVehicleEF	MCY	9.62	8.49
tblVehicleEF	MCY	165.74	207.52
tblVehicleEF	MCY	46.23	60.64
tblVehicleEF	MCY	1.12	1.12

tblVehicleEF	MCY	1.7750e-003	1.7570e-003
tblVehicleEF	MCY	3.4010e-003	2.8660e-003
tblVehicleEF	MCY	1.6600e-003	1.6440e-003
tblVehicleEF	MCY	3.2060e-003	2.7000e-003
tblVehicleEF	MCY	1.60	1.59
tblVehicleEF	MCY	1.05	1.04
tblVehicleEF	MCY	0.74	0.73
tblVehicleEF	MCY	2.15	2.15
tblVehicleEF	MCY	0.65	2.12
tblVehicleEF	MCY	2.08	1.83
tblVehicleEF	MCY	2.0310e-003	2.0540e-003
tblVehicleEF	MCY	6.8100e-004	6.0000e-004
tblVehicleEF	MCY	1.60	1.59
tblVehicleEF	MCY	1.05	1.04
tblVehicleEF	MCY	0.74	0.73
tblVehicleEF	MCY	2.64	2.65
tblVehicleEF	MCY	0.65	2.12
tblVehicleEF	MCY	2.27	1.99
tblVehicleEF	MDV	0.01	5.7580e-003
tblVehicleEF	MDV	0.02	0.09
tblVehicleEF	MDV	1.42	1.20
tblVehicleEF	MDV	3.18	3.27
tblVehicleEF	MDV	488.89	421.49
tblVehicleEF	MDV	110.15	88.73
tblVehicleEF	MDV	0.17	0.12
tblVehicleEF	MDV	1.7110e-003	1.5730e-003
tblVehicleEF	MDV	2.4630e-003	2.0550e-003

tblVehicleEF	MDV	1.5780e-003	1.4510e-003
tblVehicleEF	MDV	2.2660e-003	1.8910e-003
tblVehicleEF	MDV	0.11	0.13
tblVehicleEF	MDV	0.20	0.17
tblVehicleEF	MDV	0.09	0.11
tblVehicleEF	MDV	0.03	0.03
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.25	0.45
tblVehicleEF	MDV	4.9000e-003	4.1680e-003
tblVehicleEF	MDV	1.1570e-003	8.7800e-004
tblVehicleEF	MDV	0.11	0.13
tblVehicleEF	MDV	0.20	0.17
tblVehicleEF	MDV	0.09	0.11
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.27	0.49
tblVehicleEF	MDV	0.01	6.5120e-003
tblVehicleEF	MDV	0.02	0.08
tblVehicleEF	MDV	1.73	1.46
tblVehicleEF	MDV	2.81	2.88
tblVehicleEF	MDV	530.71	447.07
tblVehicleEF	MDV	110.15	87.92
tblVehicleEF	MDV	0.16	0.11
tblVehicleEF	MDV	1.7110e-003	1.5730e-003
tblVehicleEF	MDV	2.4630e-003	2.0550e-003
tblVehicleEF	MDV	1.5780e-003	1.4510e-003
tblVehicleEF	MDV	2.2660e-003	1.8910e-003

tblVehicleEF	MDV	0.22	0.26
tblVehicleEF	MDV	0.23	0.20
tblVehicleEF	MDV	0.17	0.21
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.21	0.39
tblVehicleEF	MDV	5.3230e-003	4.4210e-003
tblVehicleEF	MDV	1.1510e-003	8.7000e-004
tblVehicleEF	MDV	0.22	0.26
tblVehicleEF	MDV	0.23	0.20
tblVehicleEF	MDV	0.17	0.21
tblVehicleEF	MDV	0.05	0.04
tblVehicleEF	MDV	0.11	0.50
tblVehicleEF	MDV	0.23	0.43
tblVehicleEF	MDV	0.01	5.5370e-003
tblVehicleEF	MDV	0.02	0.09
tblVehicleEF	MDV	1.33	1.12
tblVehicleEF	MDV	3.24	3.34
tblVehicleEF	MDV	476.42	413.84
tblVehicleEF	MDV	110.15	88.88
tblVehicleEF	MDV	0.16	0.12
tblVehicleEF	MDV	1.7110e-003	1.5730e-003
tblVehicleEF	MDV	2.4630e-003	2.0550e-003
tblVehicleEF	MDV	1.5780e-003	1.4510e-003
tblVehicleEF	MDV	2.2660e-003	1.8910e-003
tblVehicleEF	MDV	0.09	0.10
tblVehicleEF	MDV	0.21	0.18

tblVehicleEF	MDV	0.08	0.10
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.13	0.57
tblVehicleEF	MDV	0.25	0.46
tblVehicleEF	MDV	4.7750e-003	4.0920e-003
tblVehicleEF	MDV	1.1590e-003	8.8000e-004
tblVehicleEF	MDV	0.09	0.10
tblVehicleEF	MDV	0.21	0.18
tblVehicleEF	MDV	0.08	0.10
tblVehicleEF	MDV	0.05	0.03
tblVehicleEF	MDV	0.13	0.57
tblVehicleEF	MDV	0.28	0.50
tblVehicleEF	MH	0.03	3.3370e-003
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	2.70	0.34
tblVehicleEF	MH	5.98	0.00
tblVehicleEF	MH	1,002.10	941.76
tblVehicleEF	MH	57.67	0.00
tblVehicleEF	MH	1.67	4.43
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	1.0860e-003	0.00
tblVehicleEF	MH	3.2460e-003	4.0000e-003
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	9.9800e-004	0.00
tblVehicleEF	MH	1.56	0.00
tblVehicleEF	MH	0.08	0.00

tblVehicleEF	MH	0.54	0.00
tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.35	0.00
tblVehicleEF	MH	9.9460e-003	8.9030e-003
tblVehicleEF	MH	6.8100e-004	0.00
tblVehicleEF	MH	1.56	0.00
tblVehicleEF	MH	0.08	0.00
tblVehicleEF	MH	0.54	0.00
tblVehicleEF	MH	0.13	0.08
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.39	0.00
tblVehicleEF	MH	0.03	3.3370e-003
tblVehicleEF	MH	0.02	0.00
tblVehicleEF	MH	2.78	0.34
tblVehicleEF	MH	5.56	0.00
tblVehicleEF	MH	1,002.10	941.76
tblVehicleEF	MH	57.67	0.00
tblVehicleEF	MH	1.55	4.18
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	1.0860e-003	0.00
tblVehicleEF	MH	3.2460e-003	4.0000e-003
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	9.9800e-004	0.00
tblVehicleEF	MH	2.87	0.00
tblVehicleEF	MH	0.10	0.00

tblVehicleEF	MH	1.06	0.00
tblVehicleEF	MH	0.10	0.07
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.34	0.00
tblVehicleEF	MH	9.9470e-003	8.9030e-003
tblVehicleEF	MH	6.7400e-004	0.00
tblVehicleEF	MH	2.87	0.00
tblVehicleEF	MH	0.10	0.00
tblVehicleEF	MH	1.06	0.00
tblVehicleEF	MH	0.13	0.08
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.37	0.00
tblVehicleEF	MH	0.03	3.3370e-003
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	2.70	0.34
tblVehicleEF	MH	6.02	0.00
tblVehicleEF	MH	1,002.10	941.76
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tblVehicleEF	MH	1.65	4.38
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	1.0860e-003	0.00
tblVehicleEF	MH	3.2460e-003	4.0000e-003
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	9.9800e-004	0.00
tblVehicleEF	MH	1.58	0.00
tblVehicleEF	MH	0.10	0.00

tblVehicleEF	MH	0.53	0.00
tblVehicleEF	MH	0.09	0.07
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.35	0.00
tblVehicleEF	MH	9.9460e-003	8.9030e-003
tblVehicleEF	MH	6.8200e-004	0.00
tblVehicleEF	MH	1.58	0.00
tblVehicleEF	MH	0.10	0.00
tblVehicleEF	MH	0.53	0.00
tblVehicleEF	MH	0.13	0.08
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.39	0.00
tblVehicleEF	MHD	0.02	3.1500e-003
tblVehicleEF	MHD	3.7220e-003	5.9790e-003
tblVehicleEF	MHD	0.06	8.4870e-003
tblVehicleEF	MHD	0.35	0.34
tblVehicleEF	MHD	0.28	0.57
tblVehicleEF	MHD	6.06	1.01
tblVehicleEF	MHD	151.96	74.93
tblVehicleEF	MHD	1,066.63	1,001.03
tblVehicleEF	MHD	55.49	8.18
tblVehicleEF	MHD	0.65	0.69
tblVehicleEF	MHD	0.99	2.37
tblVehicleEF	MHD	1.0680e-003	2.4180e-003
tblVehicleEF	MHD	6.4490e-003	0.08
tblVehicleEF	MHD	7.8800e-004	9.6000e-005
tblVehicleEF	MHD	1.0220e-003	2.3130e-003

tblVehicleEF	MHD	6.1670e-003	0.08
tblVehicleEF	MHD	7.2400e-004	8.8000e-005
tblVehicleEF	MHD	1.7450e-003	7.1900e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	8.5800e-004	3.5500e-004
tblVehicleEF	MHD	0.03	0.11
tblVehicleEF	MHD	0.02	0.10
tblVehicleEF	MHD	0.37	0.05
tblVehicleEF	MHD	1.4610e-003	7.1000e-004
tblVehicleEF	MHD	0.01	9.5290e-003
tblVehicleEF	MHD	6.6100e-004	8.1000e-005
tblVehicleEF	MHD	1.7450e-003	7.1900e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	8.5800e-004	3.5500e-004
tblVehicleEF	MHD	0.04	0.12
tblVehicleEF	MHD	0.02	0.10
tblVehicleEF	MHD	0.40	0.05
tblVehicleEF	MHD	0.02	2.9880e-003
tblVehicleEF	MHD	3.7740e-003	6.0080e-003
tblVehicleEF	MHD	0.05	8.2030e-003
tblVehicleEF	MHD	0.26	0.28
tblVehicleEF	MHD	0.28	0.57
tblVehicleEF	MHD	5.78	0.96
tblVehicleEF	MHD	160.96	76.44
tblVehicleEF	MHD	1,066.63	1,001.04

tblVehicleEF	MHD	55.49	8.10
tblVehicleEF	MHD	0.67	0.70
tblVehicleEF	MHD	0.93	2.23
tblVehicleEF	MHD	9.0000e-004	2.0410e-003
tblVehicleEF	MHD	6.4490e-003	0.08
tblVehicleEF	MHD	7.8800e-004	9.6000e-005
tblVehicleEF	MHD	8.6100e-004	1.9530e-003
tblVehicleEF	MHD	6.1670e-003	0.08
tblVehicleEF	MHD	7.2400e-004	8.8000e-005
tblVehicleEF	MHD	3.3760e-003	1.3770e-003
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	1.6840e-003	7.0100e-004
tblVehicleEF	MHD	0.03	0.11
tblVehicleEF	MHD	0.02	0.11
tblVehicleEF	MHD	0.36	0.04
tblVehicleEF	MHD	1.5460e-003	7.2500e-004
tblVehicleEF	MHD	0.01	9.5290e-003
tblVehicleEF	MHD	6.5600e-004	8.0000e-005
tblVehicleEF	MHD	3.3760e-003	1.3770e-003
tblVehicleEF	MHD	0.06	0.02
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	1.6840e-003	7.0100e-004
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tblVehicleEF	MHD	0.02	0.11
tblVehicleEF	MHD	0.39	0.05
tblVehicleEF	MHD	0.02	3.3820e-003

tblVehicleEF	MHD	3.6890e-003	5.9600e-003
tblVehicleEF	MHD	0.06	8.5610e-003
tblVehicleEF	MHD	0.49	0.43
tblVehicleEF	MHD	0.27	0.57
tblVehicleEF	MHD	6.14	1.02
tblVehicleEF	MHD	139.53	72.84
tblVehicleEF	MHD	1,066.63	1,001.03
tblVehicleEF	MHD	55.49	8.20
tblVehicleEF	MHD	0.62	0.67
tblVehicleEF	MHD	0.98	2.35
tblVehicleEF	MHD	1.2990e-003	2.9380e-003
tblVehicleEF	MHD	6.4490e-003	0.08
tblVehicleEF	MHD	7.8800e-004	9.6000e-005
tblVehicleEF	MHD	1.2430e-003	2.8110e-003
tblVehicleEF	MHD	6.1670e-003	0.08
tblVehicleEF	MHD	7.2400e-004	8.8000e-005
tblVehicleEF	MHD	1.3320e-003	5.6300e-004
tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	6.7900e-004	2.8800e-004
tblVehicleEF	MHD	0.03	0.11
tblVehicleEF	MHD	0.02	0.11
tblVehicleEF	MHD	0.37	0.05
tblVehicleEF	MHD	1.3440e-003	6.9100e-004
tblVehicleEF	MHD	0.01	9.5290e-003
tblVehicleEF	MHD	6.6300e-004	8.1000e-005
tblVehicleEF	MHD	1.3320e-003	5.6300e-004

tblVehicleEF	MHD	0.05	0.02
tblVehicleEF	MHD	0.04	0.03
tblVehicleEF	MHD	6.7900e-004	2.8800e-004
tblVehicleEF	MHD	0.04	0.12
tblVehicleEF	MHD	0.02	0.11
tblVehicleEF	MHD	0.41	0.05
tblVehicleEF	OBUS	0.01	8.9240e-003
tblVehicleEF	OBUS	8.0950e-003	8.5070e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.27	0.50
tblVehicleEF	OBUS	0.54	0.93
tblVehicleEF	OBUS	6.17	2.58
tblVehicleEF	OBUS	75.04	73.28
tblVehicleEF	OBUS	1,098.07	1,407.22
tblVehicleEF	OBUS	70.10	20.86
tblVehicleEF	OBUS	0.35	0.44
tblVehicleEF	OBUS	1.12	1.70
tblVehicleEF	OBUS	1.2100e-004	1.7750e-003
tblVehicleEF	OBUS	6.0450e-003	0.04
tblVehicleEF	OBUS	8.2300e-004	1.9000e-004
tblVehicleEF	OBUS	1.1600e-004	1.6990e-003
tblVehicleEF	OBUS	5.7680e-003	0.04
tblVehicleEF	OBUS	7.5700e-004	1.7400e-004
tblVehicleEF	OBUS	2.1800e-003	2.5990e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	9.3000e-004	1.1120e-003

tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.05	0.26
tblVehicleEF	OBUS	0.39	0.12
tblVehicleEF	OBUS	7.2800e-004	6.9900e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.0900e-004	2.0600e-004
tblVehicleEF	OBUS	2.1800e-003	2.5990e-003
tblVehicleEF	OBUS	0.02	0.02
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	9.3000e-004	1.1120e-003
tblVehicleEF	OBUS	0.05	0.11
tblVehicleEF	OBUS	0.05	0.26
tblVehicleEF	OBUS	0.42	0.14
tblVehicleEF	OBUS	0.01	8.9470e-003
tblVehicleEF	OBUS	8.2540e-003	8.6370e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.26	0.48
tblVehicleEF	OBUS	0.55	0.94
tblVehicleEF	OBUS	5.76	2.41
tblVehicleEF	OBUS	78.48	73.81
tblVehicleEF	OBUS	1,098.07	1,407.25
tblVehicleEF	OBUS	70.10	20.57
tblVehicleEF	OBUS	0.36	0.45
tblVehicleEF	OBUS	1.04	1.59
tblVehicleEF	OBUS	1.0200e-004	1.5000e-003
tblVehicleEF	OBUS	6.0450e-003	0.04
tblVehicleEF	OBUS	8.2300e-004	1.9000e-004

tblVehicleEF	OBUS	9.8000e-005	1.4350e-003
tblVehicleEF	OBUS	5.7680e-003	0.04
tblVehicleEF	OBUS	7.5700e-004	1.7400e-004
tblVehicleEF	OBUS	4.0690e-003	4.7330e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	1.7890e-003	2.1320e-003
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.05	0.26
tblVehicleEF	OBUS	0.37	0.12
tblVehicleEF	OBUS	7.6100e-004	7.0400e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.0200e-004	2.0400e-004
tblVehicleEF	OBUS	4.0690e-003	4.7330e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	1.7890e-003	2.1320e-003
tblVehicleEF	OBUS	0.05	0.11
tblVehicleEF	OBUS	0.05	0.26
tblVehicleEF	OBUS	0.40	0.13
tblVehicleEF	OBUS	0.01	8.9200e-003
tblVehicleEF	OBUS	8.0660e-003	8.4690e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.28	0.53
tblVehicleEF	OBUS	0.54	0.92
tblVehicleEF	OBUS	6.22	2.60
tblVehicleEF	OBUS	70.30	72.56

tblVehicleEF	OBUS	1,098.07	1,407.21
tblVehicleEF	OBUS	70.10	20.90
tblVehicleEF	OBUS	0.34	0.44
tblVehicleEF	OBUS	1.11	1.68
tblVehicleEF	OBUS	1.4700e-004	2.1560e-003
tblVehicleEF	OBUS	6.0450e-003	0.04
tblVehicleEF	OBUS	8.2300e-004	1.9000e-004
tblVehicleEF	OBUS	1.4100e-004	2.0620e-003
tblVehicleEF	OBUS	5.7680e-003	0.04
tblVehicleEF	OBUS	7.5700e-004	1.7400e-004
tblVehicleEF	OBUS	1.8870e-003	2.3830e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.04	0.05
tblVehicleEF	OBUS	8.5400e-004	1.0620e-003
tblVehicleEF	OBUS	0.04	0.09
tblVehicleEF	OBUS	0.05	0.27
tblVehicleEF	OBUS	0.39	0.13
tblVehicleEF	OBUS	6.8300e-004	6.9200e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	8.1000e-004	2.0700e-004
tblVehicleEF	OBUS	1.8870e-003	2.3830e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.05	0.07
tblVehicleEF	OBUS	8.5400e-004	1.0620e-003
tblVehicleEF	OBUS	0.05	0.11
tblVehicleEF	OBUS	0.05	0.27
tblVehicleEF	OBUS	0.42	0.14

tblVehicleEF	SBUS	0.84	0.08
tblVehicleEF	SBUS	0.01	6.6110e-003
tblVehicleEF	SBUS	0.06	6.9670e-003
tblVehicleEF	SBUS	7.83	3.03
tblVehicleEF	SBUS	0.64	0.53
tblVehicleEF	SBUS	6.66	0.94
tblVehicleEF	SBUS	1,146.29	366.87
tblVehicleEF	SBUS	1,103.40	1,115.27
tblVehicleEF	SBUS	53.92	6.06
tblVehicleEF	SBUS	10.00	3.57
tblVehicleEF	SBUS	4.65	4.82
tblVehicleEF	SBUS	0.01	4.0660e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.5700e-004	4.0000e-005
tblVehicleEF	SBUS	0.01	3.8900e-003
tblVehicleEF	SBUS	2.6950e-003	2.6510e-003
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	4.2000e-004	3.6000e-005
tblVehicleEF	SBUS	4.6830e-003	1.3080e-003
tblVehicleEF	SBUS	0.03	8.6250e-003
tblVehicleEF	SBUS	0.94	0.36
tblVehicleEF	SBUS	2.1770e-003	6.2500e-004
tblVehicleEF	SBUS	0.11	0.10
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	0.37	0.04
tblVehicleEF	SBUS	0.01	3.5040e-003

tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.5500e-004	6.0000e-005
tblVehicleEF	SBUS	4.6830e-003	1.3080e-003
tblVehicleEF	SBUS	0.03	8.6250e-003
tblVehicleEF	SBUS	1.35	0.52
tblVehicleEF	SBUS	2.1770e-003	6.2500e-004
tblVehicleEF	SBUS	0.13	0.11
tblVehicleEF	SBUS	0.02	0.05
tblVehicleEF	SBUS	0.40	0.04
tblVehicleEF	SBUS	0.84	0.08
tblVehicleEF	SBUS	0.01	6.6860e-003
tblVehicleEF	SBUS	0.05	5.8380e-003
tblVehicleEF	SBUS	7.71	2.99
tblVehicleEF	SBUS	0.65	0.54
tblVehicleEF	SBUS	4.83	0.68
tblVehicleEF	SBUS	1,198.60	377.09
tblVehicleEF	SBUS	1,103.40	1,115.28
tblVehicleEF	SBUS	53.92	5.63
tblVehicleEF	SBUS	10.32	3.66
tblVehicleEF	SBUS	4.37	4.53
tblVehicleEF	SBUS	9.1190e-003	3.4340e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.5700e-004	4.0000e-005
tblVehicleEF	SBUS	8.7240e-003	3.2850e-003
tblVehicleEF	SBUS	2.6950e-003	2.6510e-003
tblVehicleEF	SBUS	0.02	0.03

tblVehicleEF	SBUS	4.2000e-004	3.6000e-005
tblVehicleEF	SBUS	8.4640e-003	2.3620e-003
tblVehicleEF	SBUS	0.03	9.1440e-003
tblVehicleEF	SBUS	0.93	0.36
tblVehicleEF	SBUS	4.0830e-003	1.1650e-003
tblVehicleEF	SBUS	0.11	0.10
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.31	0.03
tblVehicleEF	SBUS	0.01	3.6000e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.2400e-004	5.6000e-005
tblVehicleEF	SBUS	8.4640e-003	2.3620e-003
tblVehicleEF	SBUS	0.03	9.1440e-003
tblVehicleEF	SBUS	1.35	0.52
tblVehicleEF	SBUS	4.0830e-003	1.1650e-003
tblVehicleEF	SBUS	0.13	0.11
tblVehicleEF	SBUS	0.01	0.05
tblVehicleEF	SBUS	0.34	0.04
tblVehicleEF	SBUS	0.84	0.08
tblVehicleEF	SBUS	0.01	6.6040e-003
tblVehicleEF	SBUS	0.07	7.2110e-003
tblVehicleEF	SBUS	8.00	3.09
tblVehicleEF	SBUS	0.63	0.53
tblVehicleEF	SBUS	7.02	0.98
tblVehicleEF	SBUS	1,074.07	352.76
tblVehicleEF	SBUS	1,103.40	1,115.26
tblVehicleEF	SBUS	53.92	6.14

tblVehicleEF	SBUS	9.56	3.44
tblVehicleEF	SBUS	4.60	4.78
tblVehicleEF	SBUS	0.01	4.9380e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.03	0.03
tblVehicleEF	SBUS	4.5700e-004	4.0000e-005
tblVehicleEF	SBUS	0.01	4.7240e-003
tblVehicleEF	SBUS	2.6950e-003	2.6510e-003
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	4.2000e-004	3.6000e-005
tblVehicleEF	SBUS	4.1680e-003	1.1480e-003
tblVehicleEF	SBUS	0.03	8.8290e-003
tblVehicleEF	SBUS	0.94	0.36
tblVehicleEF	SBUS	2.1000e-003	6.0300e-004
tblVehicleEF	SBUS	0.11	0.10
tblVehicleEF	SBUS	0.02	0.06
tblVehicleEF	SBUS	0.38	0.04
tblVehicleEF	SBUS	0.01	3.3710e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.6100e-004	6.1000e-005
tblVehicleEF	SBUS	4.1680e-003	1.1480e-003
tblVehicleEF	SBUS	0.03	8.8290e-003
tblVehicleEF	SBUS	1.35	0.52
tblVehicleEF	SBUS	2.1000e-003	6.0300e-004
tblVehicleEF	SBUS	0.13	0.11
tblVehicleEF	SBUS	0.02	0.06
tblVehicleEF	SBUS	0.41	0.05

tblVehicleEF	UBUS	1.51	3.35
tblVehicleEF	UBUS	0.09	0.02
tblVehicleEF	UBUS	8.45	26.05
tblVehicleEF	UBUS	15.26	1.50
tblVehicleEF	UBUS	1,822.40	1,617.71
tblVehicleEF	UBUS	153.45	18.08
tblVehicleEF	UBUS	4.95	0.32
tblVehicleEF	UBUS	0.50	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.06	2.9340e-003
tblVehicleEF	UBUS	1.4200e-003	1.6100e-004
tblVehicleEF	UBUS	0.21	0.04
tblVehicleEF	UBUS	3.0000e-003	5.4780e-003
tblVehicleEF	UBUS	0.05	2.7920e-003
tblVehicleEF	UBUS	1.3060e-003	1.4800e-004
tblVehicleEF	UBUS	9.7430e-003	1.6370e-003
tblVehicleEF	UBUS	0.11	9.7740e-003
tblVehicleEF	UBUS	4.7860e-003	7.1300e-004
tblVehicleEF	UBUS	0.52	0.05
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.17	0.07
tblVehicleEF	UBUS	9.9960e-003	4.8690e-003
tblVehicleEF	UBUS	1.8100e-003	1.7900e-004
tblVehicleEF	UBUS	9.7430e-003	1.6370e-003
tblVehicleEF	UBUS	0.11	9.7740e-003
tblVehicleEF	UBUS	4.7860e-003	7.1300e-004
tblVehicleEF	UBUS	2.08	3.43

tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.28	0.08
tblVehicleEF	UBUS	1.52	3.35
tblVehicleEF	UBUS	0.08	0.02
tblVehicleEF	UBUS	8.53	26.06
tblVehicleEF	UBUS	13.06	1.28
tblVehicleEF	UBUS	1,822.40	1,617.72
tblVehicleEF	UBUS	153.45	17.70
tblVehicleEF	UBUS	4.62	0.31
tblVehicleEF	UBUS	0.50	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.06	2.9340e-003
tblVehicleEF	UBUS	1.4200e-003	1.6100e-004
tblVehicleEF	UBUS	0.21	0.04
tblVehicleEF	UBUS	3.0000e-003	5.4780e-003
tblVehicleEF	UBUS	0.05	2.7920e-003
tblVehicleEF	UBUS	1.3060e-003	1.4800e-004
tblVehicleEF	UBUS	0.02	2.9250e-003
tblVehicleEF	UBUS	0.14	0.01
tblVehicleEF	UBUS	9.6600e-003	1.4550e-003
tblVehicleEF	UBUS	0.53	0.05
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.06	0.07
tblVehicleEF	UBUS	9.9970e-003	4.8690e-003
tblVehicleEF	UBUS	1.7720e-003	1.7500e-004
tblVehicleEF	UBUS	0.02	2.9250e-003
tblVehicleEF	UBUS	0.14	0.01

tblVehicleEF	UBUS	9.6600e-003	1.4550e-003
tblVehicleEF	UBUS	2.09	3.43
tblVehicleEF	UBUS	0.02	0.05
tblVehicleEF	UBUS	1.17	0.07
tblVehicleEF	UBUS	1.51	3.35
tblVehicleEF	UBUS	0.09	0.02
tblVehicleEF	UBUS	8.44	26.05
tblVehicleEF	UBUS	15.44	1.49
tblVehicleEF	UBUS	1,822.40	1,617.71
tblVehicleEF	UBUS	153.45	18.06
tblVehicleEF	UBUS	4.92	0.31
tblVehicleEF	UBUS	0.50	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.06	2.9340e-003
tblVehicleEF	UBUS	1.4200e-003	1.6100e-004
tblVehicleEF	UBUS	0.21	0.04
tblVehicleEF	UBUS	3.0000e-003	5.4780e-003
tblVehicleEF	UBUS	0.05	2.7920e-003
tblVehicleEF	UBUS	1.3060e-003	1.4800e-004
tblVehicleEF	UBUS	8.9770e-003	1.7200e-003
tblVehicleEF	UBUS	0.13	0.01
tblVehicleEF	UBUS	4.3820e-003	7.5400e-004
tblVehicleEF	UBUS	0.52	0.05
tblVehicleEF	UBUS	0.03	0.05
tblVehicleEF	UBUS	1.18	0.07
tblVehicleEF	UBUS	9.9960e-003	4.8690e-003
tblVehicleEF	UBUS	1.8130e-003	1.7900e-004

tblVehicleEF	UBUS	8.9770e-003	1.7200e-003
tblVehicleEF	UBUS	0.13	0.01
tblVehicleEF	UBUS	4.3820e-003	7.5400e-004
tblVehicleEF	UBUS	2.08	3.43
tblVehicleEF	UBUS	0.03	0.05
tblVehicleEF	UBUS	1.29	0.08
tblVehicleTrips	CNW_TTP	41.00	0.00
tblVehicleTrips	CW_TL	16.60	40.00
tblVehicleTrips	CW_TTP	59.00	100.00
tblVehicleTrips	DV_TP	5.00	0.00
tblVehicleTrips	PB_TP	3.00	0.00
tblVehicleTrips	PR_TP	92.00	100.00
tblVehicleTrips	ST_TR	1.68	0.92
tblVehicleTrips	SU_TR	1.68	0.92
tblVehicleTrips	WD_TR	1.68	0.92
tblWater	IndoorWaterUseRate	22,523,750.00	22,770,125.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**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

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2020	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Maximum	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**	**0.0000**

	ROG	NOx	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**

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
		Highest		

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	0.5253	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0423	0.0423	1.1000e-004	0.0000	0.0451
Energy	7.5000e-004	6.8300e-003	5.7400e-003	4.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	91.4177	91.4177	2.5700e-003	6.4000e-004	91.6726
Mobile	0.1212	5.0925	0.8223	0.0178	0.5629	0.0725	0.6354	0.1549	0.0693	0.2243	0.0000	1,715.5206	1,715.5206	0.0222	0.0000	1,716.0761
Waste						0.0000	0.0000		0.0000	0.0000	18.5859	0.0000	18.5859	1.0984	0.0000	46.0457
Water						0.0000	0.0000		0.0000	0.0000	7.2239	134.6967	141.9206	0.7459	0.0183	166.0284
Total	**0.6473**	**5.0995**	**0.8499**	**0.0178**	**0.5629**	**0.0731**	**0.6360**	**0.1549**	**0.0699**	**0.2249**	**25.8098**	**1,941.6773**	**1,967.4870**	**1.8692**	**0.0190**	**2,019.8679**

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.5253	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0423	0.0423	1.1000e-004	0.0000	0.0451
Energy	7.5000e-004	6.8300e-003	5.7400e-003	4.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	91.4177	91.4177	2.5700e-003	6.4000e-004	91.6726
Mobile	0.1212	5.0925	0.8223	0.0178	0.5629	0.0725	0.6354	0.1549	0.0693	0.2243	0.0000	1,715.5206	1,715.5206	0.0222	0.0000	1,716.0761
Waste						0.0000	0.0000		0.0000	0.0000	18.5859	0.0000	18.5859	1.0984	0.0000	46.0457
Water						0.0000	0.0000		0.0000	0.0000	7.2239	134.6967	141.9206	0.7459	0.0183	166.0284
Total	**0.6473**	**5.0995**	**0.8499**	**0.0178**	**0.5629**	**0.0731**	**0.6360**	**0.1549**	**0.0699**	**0.2249**	**25.8098**	**1,941.6773**	**1,967.4870**	**1.8692**	**0.0190**	**2,019.8679**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	6/4/2020	6/4/2020	5	1	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 0

Acres of Paving: 36.86

Residential Indoor: 0; Residential Outdoor: 0; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	0	8.00	81	0.73
Demolition	Excavators	0	8.00	158	0.38
Demolition	Rubber Tired Dozers	0	8.00	247	0.40

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	0	0.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 2020

Unmitigated Construction On-Site

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

Unmitigated Construction Off-Site

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

3.2 Demolition - 2020

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	0.0000	0.0000	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 Construction Off-Site

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

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	0.1212	5.0925	0.8223	0.0178	0.5629	0.0725	0.6354	0.1549	0.0693	0.2243	0.0000	1,715.5206	1,715.5206	0.0222	0.0000	1,716.0761
Unmitigated	0.1212	5.0925	0.8223	0.0178	0.5629	0.0725	0.6354	0.1549	0.0693	0.2243	0.0000	1,715.5206	1,715.5206	0.0222	0.0000	1,716.0761

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Other Asphalt Surfaces	0.00	0.00	0.00		
Unrefrigerated Warehouse-No Rail	90.00	90.00	90.00	1,310,365	1,310,365
Total	90.00	90.00	90.00	1,310,365	1,310,365

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
Other Asphalt Surfaces	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0
Unrefrigerated Warehouse-No	40.00	8.40	6.90	100.00	0.00	0.00	100	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Other Asphalt Surfaces	0.542116	0.037578	0.185203	0.118503	0.016241	0.005141	0.017392	0.068695	0.001383	0.001183	0.004582	0.000945	0.001038
Unrefrigerated Warehouse-No Rail	0.000000	0.000000	0.000000	0.000000	0.100000	0.000000	0.000000	0.900000	0.000000	0.000000	0.000000	0.000000	0.000000

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	83.9851	83.9851	2.4300e-003	5.0000e-004	84.1958
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	83.9851	83.9851	2.4300e-003	5.0000e-004	84.1958
NaturalGas Mitigated	7.5000e-004	6.8300e-003	5.7400e-003	4.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	7.4326	7.4326	1.4000e-004	1.4000e-004	7.4768
NaturalGas Unmitigated	7.5000e-004	6.8300e-003	5.7400e-003	4.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	7.4326	7.4326	1.4000e-004	1.4000e-004	7.4768

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					
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
Unrefrigerated Warehouse-No Rail	139282	7.5000e-004	6.8300e-003	5.7400e-003	4.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	7.4326	7.4326	1.4000e-004	1.4000e-004	7.4768
Total		**7.5000e-004**	**6.8300e-003**	**5.7400e-003**	**4.0000e-005**		**5.2000e-004**	**5.2000e-004**		**5.2000e-004**	**5.2000e-004**	**0.0000**	**7.4326**	**7.4326**	**1.4000e-004**	**1.4000e-004**	**7.4768**

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					
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
Unrefrigerated Warehouse-No Rail	139282	7.5000e-004	6.8300e-003	5.7400e-003	4.0000e-005		5.2000e-004	5.2000e-004		5.2000e-004	5.2000e-004	0.0000	7.4326	7.4326	1.4000e-004	1.4000e-004	7.4768
Total		**7.5000e-004**	**6.8300e-003**	**5.7400e-003**	**4.0000e-005**		**5.2000e-004**	**5.2000e-004**		**5.2000e-004**	**5.2000e-004**	**0.0000**	**7.4326**	**7.4326**	**1.4000e-004**	**1.4000e-004**	**7.4768**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	184865	83.9851	2.4300e-003	5.0000e-004	84.1958
Total		**83.9851**	**2.4300e-003**	**5.0000e-004**	**84.1958**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	184865	83.9851	2.4300e-003	5.0000e-004	84.1958
Total		**83.9851**	**2.4300e-003**	**5.0000e-004**	**84.1958**

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	0.5253	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0423	0.0423	1.1000e-004	0.0000	0.0451
Unmitigated	0.5253	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0423	0.0423	1.1000e-004	0.0000	0.0451

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	0.0675					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4558					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0400e-003	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0423	0.0423	1.1000e-004	0.0000	0.0451
Total	**0.5253**	**2.0000e-004**	**0.0218**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0423**	**0.0423**	**1.1000e-004**	**0.0000**	**0.0451**

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0675					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.4558					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0400e-003	2.0000e-004	0.0218	0.0000		8.0000e-005	8.0000e-005		8.0000e-005	8.0000e-005	0.0000	0.0423	0.0423	1.1000e-004	0.0000	0.0451
Total	**0.5253**	**2.0000e-004**	**0.0218**	**0.0000**		**8.0000e-005**	**8.0000e-005**		**8.0000e-005**	**8.0000e-005**	**0.0000**	**0.0423**	**0.0423**	**1.1000e-004**	**0.0000**	**0.0451**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	141.9206	0.7459	0.0183	166.0284
Unmitigated	141.9206	0.7459	0.0183	166.0284

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	22.7701 / 0	141.9206	0.7459	0.0183	166.0284
Total		**141.9206**	**0.7459**	**0.0183**	**166.0284**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Other Asphalt Surfaces	0 / 0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	22.7701 / 0	141.9206	0.7459	0.0183	166.0284
Total		**141.9206**	**0.7459**	**0.0183**	**166.0284**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	18.5859	1.0984	0.0000	46.0457
Unmitigated	18.5859	1.0984	0.0000	46.0457

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	91.56	18.5859	1.0984	0.0000	46.0457
Total		**18.5859**	**1.0984**	**0.0000**	**46.0457**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Other Asphalt Surfaces	0	0.0000	0.0000	0.0000	0.0000
Unrefrigerated Warehouse-No Rail	91.56	18.5859	1.0984	0.0000	46.0457
Total		**18.5859**	**1.0984**	**0.0000**	**46.0457**

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

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APPENDIX 3.4:

EMFAC2017 OUTPUTS

EMFAC2017 Derived CalEEMod Annual Emission Rates: Year 2021[1,2]

Season	Pollutant	LDA	LDT1	LDT2	MDV	LHDT1	LHDT2	MHDT	HHDT	OBUS	UBUS	MCY	SBUS	MH
Annual	CH4_IDLEX	0	0	0	0	0.0048817	0.003171878	0.00314956	0.028025082	0.0089241	0	0	0.0775364	0
Annual	CH4_RUNEX	0.0024679	0.0080137	0.0042469	0.0057582	0.0053307	0.00385685	0.005979459	0.017512358	0.0085068	3.3499927	0.3189586	0.006611	0.0033366
Annual	CH4_STREX	0.0514349	0.0864427	0.0721015	0.0901226	0.0155417	0.00902796	0.008486959	1.50966E-07	0.0241173	0.0189454	0.2419601	0.0069668	0
Annual	CO_IDLEX	0	0	0	0	0.1715443	0.133002634	0.344301802	7.554755782	0.4983972	0	0	3.0314681	0
Annual	CO_RUNEX	0.6607706	1.6174892	0.9809246	1.2008452	0.7233436	0.527547956	0.567530032	0.360830925	0.9268618	26.053818	19.614979	0.5278349	0.3389262
Annual	CO_STREX	2.1231898	2.4262418	2.7332893	3.2694856	0.9612367	0.557999679	1.005578025	0.002927257	2.5764261	1.5036633	8.5534027	0.935991	0
Annual	CO2_NBIO_IDLEX	0	0	0	0	9.4389441	14.85812264	74.92942657	1409.071939	73.2813	0	0	366.87062	0
Annual	CO2_NBIO_RUNEX	265.87247	317.00231	338.79394	421.49284	639.94809	638.8286233	1001.029746	1350.003042	1407.2197	1617.7136	208.29751	1115.2653	941.75894
Annual	CO2_NBIO_STREX	54.732988	66.641424	71.50512	88.726879	10.536933	7.29205499	8.176871766	0.025645885	20.859105	18.079918	60.732649	6.0622481	0
Annual	NOX_IDLEX	0	0	0	0	0.0839942	0.12326671	0.687040104	7.340848513	0.4448801	0	0	3.5677378	0
Annual	NOX_RUNEX	0.0397214	0.1439049	0.0890651	0.1204502	1.6040949	1.771993189	2.371331761	3.049249417	1.6964151	0.3156396	1.1278435	4.815332	4.4260188
Annual	NOX_STREX[3]	0.1881326	0.3057199	0.3075781	0.3916808	0.3098001	0.190995667	1.157977191	1.987942919	0.5901894	0.1827289	0.2611474	0.6951168	0
Annual	PM10_IDLEX	0	0	0	0	0.0009698	0.001439396	0.002417777	0.010735771	0.0017754	0	0	0.0040656	0
Annual	PM10_PMBW	0.03675	0.03675	0.03675	0.03675	0.07644	0.089180026	0.130340037	0.061044808	0.13034	0.0878825	0.01176	0.7448002	0.13034
Annual	PM10_PMTW	0.008	0.008	0.008	0.008	0.0100045	0.010844691	0.012000003	0.035591932	0.012	0.0219127	0.004	0.0106038	0.016
Annual	PM10_RUNEX	0.001447	0.0022935	0.0014983	0.0015727	0.0110719	0.014058285	0.081902383	0.054300292	0.0388422	0.0029342	0.0017573	0.0289399	0.1440902
Annual	PM10_STREX	0.001919	0.0029511	0.0019584	0.0020549	0.0002325	0.00011436	9.60687E-05	4.78955E-07	0.0001895	0.0001614	0.0028664	3.969E-05	0
Annual	PM25_IDLEX	0	0	0	0	0.0009278	0.001377128	0.002313185	0.010271347	0.0016986	0	0	0.0038897	0
Annual	PM25_PMBW	0.01575	0.01575	0.01575	0.01575	0.03276	0.038220011	0.055860016	0.026162061	0.05586	0.0376639	0.00504	0.3192001	0.05586
Annual	PM25_PMTW	0.002	0.002	0.002	0.002	0.0025011	0.002711173	0.003000001	0.008897983	0.003	0.0054782	0.001	0.0026509	0.004
Annual	PM25_RUNEX	0.0013331	0.002111	0.0013791	0.0014511	0.0105729	0.013440271	0.078355878	0.051951277	0.0371485	0.0027923	0.0016442	0.0276784	0.1378569
Annual	PM25_STREX	0.0017645	0.0027136	0.0018008	0.0018907	0.0002138	0.00010515	8.83317E-05	4.40381E-07	0.0001743	0.0001484	0.0026999	3.649E-05	0
Annual	ROG_DIURN	0.0709615	0.2279058	0.1115534	0.1328241	0.0031777	0.001686647	0.000719125	3.88846E-06	0.0025989	0.0016373	1.6562081	0.0013084	0
Annual	ROG_HTSK	0.10305	0.2749462	0.141202	0.1703815	0.0801093	0.04271725	0.020519462	0.000102787	0.0237258	0.0097745	0.8409595	0.0086252	0
Annual	ROG_IDLEX	0	0	0	0	0.0208492	0.01614729	0.020404549	0.578945413	0.0541252	0	0	0.3592209	0
Annual	ROG_RESTL	0.0538996	0.152895	0.0893091	0.1117212	0.001557	0.000842264	0.000355368	2.04116E-06	0.0011123	0.0007132	0.9014079	0.0006249	0
Annual	ROG_RUNEX	0.0095181	0.0353936	0.0172993	0.0255161	0.0610474	0.061254748	0.105165502	0.070102456	0.085283	0.0536982	2.1573849	0.0955117	0.0718344
Annual	ROG_RUNLS	0.2124948	0.8718373	0.4423822	0.4988996	0.4976668	0.24843085	0.103094312	0.000537301	0.2580837	0.0467565	1.8670626	0.0531627	0
Annual	ROG_STREX	0.2274477	0.4409655	0.3337808	0.4453538	0.0770784	0.044248995	0.045754898	7.74755E-07	0.12495	0.0737709	1.8284645	0.0401038	0
Annual	SO2_IDLEX	0	0	0	0	9.124E-05	0.000141875	0.000710428	0.013279669	0.000699	0	0	0.0035039	0
Annual	SO2_RUNEX	0.0026302	0.0031369	0.0033519	0.0041675	0.006225	0.00615548	0.009529146	0.012662863	0.013687	0.0048688	0.0020613	0.0106759	0.008903
Annual	SO2_STREX	0.0005416	0.0006595	0.0007076	0.000878	0.0001043	7.21608E-05	8.09168E-05	2.53787E-07	0.0002064	0.0001789	0.000601	5.999E-05	0
Annual	TOG_DIURN	0.0709615	0.2279058	0.1115534	0.1328241	0.0031777	0.001686647	0.000719125	3.88846E-06	0.0025989	0.0016373	1.6562081	0.0013084	0
Annual	TOG_HTSK	0.10305	0.2749462	0.141202	0.1703815	0.0801093	0.04271725	0.020519462	0.000102787	0.0237258	0.0097745	0.8409595	0.0086252	0
Annual	TOG_IDLEX	0	0	0	0	0.0291719	0.021706067	0.026541318	0.660227184	0.0709457	0	0	0.5173855	0
Annual	TOG_RESTL	0.0538996	0.152895	0.0893091	0.1117212	0.001557	0.000842264	0.000355368	2.04116E-06	0.0011123	0.0007132	0.9014079	0.0006249	0
Annual	TOG_RUNEX	0.0138377	0.0515808	0.025197	0.03609	0.0743573	0.071514189	0.121900381	0.094181826	0.105849	3.4254029	2.6533125	0.1131323	0.0817787
Annual	TOG_RUNLS	0.2124948	0.8718373	0.4423822	0.4988996	0.4976668	0.24843085	0.103094312	0.000537301	0.2580837	0.0467565	1.8670626	0.0531627	0
Annual	TOG_STREX	0.2490251	0.4827987	0.3654467	0.4875656	0.0843911	0.04844708	0.050095854	8.48259E-07	0.1368045	0.0807698	1.9896031	0.0439086	0
Summer	CH4_IDLEX	0	0	0	0	0.0048943	0.003179398	0.002988132	0.029267582	0.008947	0	0	0.0776239	0
Summer	CH4_RUNEX	0.0028102	0.0090557	0.0048283	0.0065116	0.0054195	0.003886277	0.006008402	0.017512845	0.0086371	3.3500273	0.3167895	0.0066861	0.0033366
Summer	CH4_STREX	0.0452848	0.0756767	0.0634946	0.079235	0.0149963	0.008724699	0.008203165	1.44785E-07	0.0230917	0.0172223	0.2167882	0.0058384	0
Summer	CO_IDLEX	0	0	0	0	0.1715443	0.133002634	0.283248392	7.394529068	0.4770626	0	0	2.9913957	0
Summer	CO_RUNEX	0.8095887	1.9589316	1.199991	1.4565661	0.7336795	0.53078633	0.571044996	0.360990515	0.9423481	26.055433	20.271718	0.5359658	0.3389262
Summer	CO_STREX	1.8735032	2.1462811	2.4181512	2.8823192	0.9160369	0.533118914	0.958793231	0.002769899	2.4081525	1.2787351	8.000177	0.6769998	0
Summer	CO2_NBIO_IDLEX	0	0	0	0	9.4389441	14.85812264	76.43648013	1402.585729	73.806182	0	0	377.08981	0
Summer	CO2_NBIO_RUNEX	289.13788	341.78981	362.86398	447.07104	639.96646	638.8343162	1001.035914	1350.003309	1407.2469	1617.7166	209.25596	1115.2798	941.75894
Summer	CO2_NBIO_STREX	54.240717	66.007334	70.864914	87.923788	10.455453	7.247216262	8.097078623	0.02539636	20.57343	17.70055	59.192684	5.6297242	0
Summer	NOX_IDLEX	0	0	0	0	0.0839942	0.12326671	0.696369233	7.102104354	0.4452295	0	0	3.6596149	0
Summer	NOX_RUNEX	0.0370269	0.1337085	0.0834295	0.1123006	1.5099261	1.672640909	2.234535358	2.878739583	1.5861138	0.3092297	0.9796707	4.5295242	4.176671
Summer	NOX_STREX[3]	0.1810222	0.2943185	0.2969376	0.3769864	0.2989911	0.184713864	1.155237738	1.987922245	0.5808405	0.1737617	0.2471217	0.690535	0
Summer	PM10_IDLEX	0	0	0	0	0.0009698	0.001439396	0.002040822	0.010209832	0.0015001	0	0	0.003434	0
Summer	PM10_PMBW	0.03675	0.03675	0.03675	0.03675	0.07644	0.089180026	0.130340037	0.061044808	0.13034	0.0878825	0.01176	0.7448002	0.13034
Summer	PM10_PMTW	0.008	0.008	0.008	0.008	0.0100045	0.010844691	0.012000003	0.035591932	0.012	0.0219127	0.004	0.0106038	0.016
Summer	PM10_RUNEX	0.001447	0.0022935	0.0014983	0.0015727	0.0110719	0.014058285	0.081902383	0.054300292	0.0388422	0.0029342	0.0017573	0.0289399	0.1440902
Summer	PM10_STREX	0.001919	0.0029511	0.0019584	0.0020549	0.0002325	0.00011436	9.60687E-05	4.78955E-07	0.0001895	0.0001614	0.0028664	3.969E-05	0
Summer	PM25_IDLEX	0	0	0	0	0.0009278	0.001377128	0.001952537	0.009768159	0.0014352	0	0	0.0032854	0
Summer	PM25_PMBW	0.01575	0.01575	0.01575	0.01575	0.03276	0.038220011	0.055860016	0.026162061	0.05586	0.0376639	0.00504	0.3192001	0.05586
Summer	PM25_PMTW	0.002	0.002	0.002	0.002	0.0025011	0.002711173	0.003000001	0.008897983	0.003	0.0054782	0.001	0.0026509	0.004
Summer	PM25_RUNEX	0.0013331	0.002111	0.0013791	0.0014511	0.0105729	0.013440271	0.078355878	0.051951277	0.0371485	0.0027923	0.0016442	0.0276784	0.1378569
Summer	PM25_STREX	0.0017645	0.0027136	0.0018008	0.0018907	0.0002138	0.00010515	8.83317E-05	4.40381E-07	0.0001743	0.0001484	0.0026999	3.649E-05	0
Summer	ROG_DIURN	0.137536	0.4434368	0.2165836	0.2567996	0.0059534	0.003183337	0.001376531	7.88812E-06	0.0047328	0.0029254	3.2774295	0.0023624	0
Summer	ROG_HTSK	0.1212164	0.3404269	0.1671912	0.1969378	0.0944687	0.051107885	0.024778962	0.000118453	0.0262292	0.011705	1.2342664	0.0091436	0
Summer	ROG_IDLEX	0	0	0	0	0.0208492	0.01614729	0.019550437	0.604825315	0.05414	0	0	0.3587863	0
Summer	ROG_RESTL	0.1018073	0.2943259	0.166327	0.2058512	0.0029976	0.001613042	0.000700753	4.21702E-06	0.0021323	0.001455	2.0451252	0.0011653	0
Summer	ROG_RUNEX	0.010761	0.0399861	0.0196003	0.0285498	0.0615085	0.061384554	0.10530363	0.070105668	0.0859015	0.0537965	2.1335495	0.095879	0.0718344
Summer	ROG_RUNLS	0.2122531	0.8752207	0.4439328	0.5004052	0.5029376	0.251952182	0.105360765	0.000555876	0.2593192	0.0452861	1.8628508	0.0490392	0
Summer	ROG_STREX	0.1986978	0.3842606	0.2918661	0.3889196	0.0741484	0.042639957	0.044075897	7.4502E-07	0.1193048	0.0669665	1.6289296	0.0335486	0
Summer	SO2_IDLEX	0	0	0	0	9.124E-05	0.000141875	0.000724773	0.013218475	0.000704	0	0	0.0036004	0
Summer	SO2_RUNEX	0.0028604	0.0033822	0.0035901	0.0044206	0.0062252	0.006155536	0.009529207	0.012662865	0.0136873	0.0048688	0.0020708	0.010676	0.008903
Summer	SO2_STREX	0.0005368	0.0006532	0.0007013	0.0008701	0.0001035	7.17171E-05	8.01272E-05	2.51318E-07	0.0002036	0.0001752	0.0005858	5.571E-05	0
Summer	TOG_DIURN	0.137536	0.4434368	0.2165836	0.2567996	0.0059534	0.003183337	0.001376531	7.88812E-06	0.0047328	0.0029254	3.2774295	0.0023624	0
Summer	TOG_HTSK	0.1212164	0.3404269	0.1671912	0.1969378	0.0944687	0.051107885	0.024778962	0.000118453	0.0262292	0.011705	1.2342664	0.0091436	0
Summer	TOG_IDLEX	0	0	0	0	0.0291719	0.021706067	0.025370251	0.689730027	0.0709625	0	0	0.5168907	0
Summer	TOG_RESTL	0.1018073	0.2943259	0.166327	0.2058512	0.0029976	0.001613042	0.000700753	4.21702E-06	0.0021323	0.001455	2.0451252	0.0011653	0
Summer	TOG_RUNEX	0.0156493	0.0582714	0.02855	0.0405174	0.07503	0.071703602	0.122101937	0.094186513	0.1067517	3.4255463	2.6255922	0.1136682	0.0817787
Summer	TOG_RUNLS	0.2122531	0.8752207	0.4439328	0.5004052	0.5029376	0.251952182	0.105360765	0.000555876	0.2593192	0.0452861	1.8628508	0.0490392	0
Summer	TOG_STREX	0.2175478	0.4207143	0.3195555	0.4257816	0.0811832	0.046685386	0.04825756	8.15703E-07	0.1306237	0.0733198	1.7725315	0.0367315	0

Winter	CH4_IDLEX	0	0	0	0	0.0048811	0.00317031	0.003381722	0.025228032	0.0089201	0	0	0.0775394	0
Winter	CH4_RUNEX	0.0023814	0.007708	0.0040761	0.0055367	0.0053184	0.003848875	0.005959861	0.003232688	0.0084688	3.3499957	0.3182082	0.0066036	0.0033366
Winter	CH4_STREX	0.0526493	0.088744	0.074077	0.0923982	0.0155664	0.009093446	0.008560718	1.51684E-07	0.0242904	0.0188577	0.2425357	0.0072109	0
Winter	CO_IDLEX	0	0	0	0	0.1715443	0.133002634	0.429382205	7.756122349	0.5278592	0	0	3.0868062	0
Winter	CO_RUNEX	0.6198191	1.5141815	0.9146277	1.1225458	0.7219481	0.526656248	0.565245032	0.320407657	0.9227247	26.05396	19.135571	0.5273069	0.3389262
Winter	CO_STREX	2.1658884	2.4841853	2.8021442	3.3410887	0.9632652	0.563047222	1.018642479	0.002911678	2.6028825	1.491325	8.4887644	0.9807025	0
Winter	CO2_NBIO_IDLEX	0	0	0	0	9.4389441	14.85812264	72.84369844	1414.571988	72.556463	0	0	352.75841	0
Winter	CO2_NBIO_RUNEX	259.46754	309.48741	331.49217	413.84023	639.94558	638.8270537	1001.025731	1340.32292	1407.2124	1617.7139	207.51768	1115.2644	941.75894
Winter	CO2_NBIO_STREX	54.820223	66.77205	71.645988	88.87887	10.540527	7.301210775	8.199176884	0.025621202	20.903802	18.059132	60.638256	6.1376482	0
Winter	NOX_IDLEX	0	0	0	0	0.0839942	0.12326671	0.674156402	7.64970751	0.4443975	0	0	3.4408599	0
Winter	NOX_RUNEX	0.0382367	0.1395305	0.0862178	0.1165071	1.5854252	1.75413213	2.348928423	3.020777526	1.684904	0.3142026	1.1206265	4.7774211	4.3807012
Winter	NOX_STREX[3]	0.1884477	0.3066245	0.3085042	0.3924958	0.308695	0.191593617	1.158503587	1.987941183	0.5898865	0.1811328	0.261731	0.6959657	0
Winter	PM10_IDLEX	0	0	0	0	0.0009698	0.001439396	0.002938334	0.011416509	0.0021556	0	0	0.0049379	0
Winter	PM10_PMBW	0.03675	0.03675	0.03675	0.03675	0.07644	0.089180026	0.130340037	0.060862657	0.13034	0.0878825	0.01176	0.7448002	0.13034
Winter	PM10_PMTW	0.008	0.008	0.008	0.008	0.0100045	0.010844691	0.012000003	0.035485721	0.012	0.0219127	0.004	0.0106038	0.016
Winter	PM10_RUNEX	0.001447	0.0022935	0.0014983	0.0015727	0.0110719	0.014058285	0.081902383	0.054282899	0.0388422	0.0029342	0.0017573	0.0289399	0.1440902
Winter	PM10_STREX	0.001919	0.0029511	0.0019584	0.0020549	0.0002325	0.00011436	9.60687E-05	4.78955E-07	0.0001895	0.0001614	0.0028664	3.969E-05	0
Winter	PM25_IDLEX	0	0	0	0	0.0009278	0.001377128	0.002811223	0.010922636	0.0020624	0	0	0.0047243	0
Winter	PM25_PMBW	0.01575	0.01575	0.01575	0.01575	0.03276	0.038220011	0.055860016	0.026083996	0.05586	0.0376639	0.00504	0.3192001	0.05586
Winter	PM25_PMTW	0.002	0.002	0.002	0.002	0.0025011	0.002711173	0.003000001	0.00887143	0.003	0.0054782	0.001	0.0026509	0.004
Winter	PM25_RUNEX	0.0013331	0.002111	0.0013791	0.0014511	0.0105729	0.013440271	0.078355878	0.051934636	0.0371485	0.0027923	0.0016442	0.0276784	0.1378569
Winter	PM25_STREX	0.0017645	0.0027136	0.0018008	0.0018907	0.0002138	0.00010515	8.83317E-05	4.40381E-07	0.0001743	0.0001484	0.0026999	3.649E-05	0
Winter	ROG_DIURN	0.0575855	0.1922037	0.0879547	0.104066	0.0028253	0.001328755	0.000562608	3.84032E-06	0.0023832	0.0017197	1.5870396	0.0011476	0
Winter	ROG_HTSK	0.1098539	0.3036326	0.1506629	0.1802055	0.090976	0.046544016	0.021526123	0.00012145	0.0250943	0.0111926	1.0360126	0.0088293	0
Winter	ROG_IDLEX	0	0	0	0	0.0208492	0.01614729	0.021595838	0.543152606	0.0541049	0	0	0.3598211	0
Winter	ROG_RESTL	0.0454037	0.1280078	0.0748932	0.0953197	0.0014146	0.000700507	0.000287901	2.13248E-06	0.0010621	0.000754	0.7337523	0.0006032	0
Winter	ROG_RUNEX	0.0091883	0.0340143	0.0166024	0.0245582	0.0609781	0.061218527	0.105074288	0.069280131	0.0851064	0.0537077	2.1519258	0.0954855	0.0718344
Winter	ROG_RUNLS	0.2382144	1.0088513	0.5066292	0.5680498	0.5332963	0.266504162	0.111093974	0.000565077	0.274238	0.0549047	2.1198495	0.0646936	0
Winter	ROG_STREX	0.2332732	0.4525194	0.3432333	0.4568216	0.0771912	0.044593111	0.04623067	7.78033E-07	0.1257727	0.0734048	1.8308597	0.0414531	0
Winter	SO2_IDLEX	0	0	0	0	9.124E-05	0.000141875	0.000690573	0.013364175	0.0006922	0	0	0.0033706	0
Winter	SO2_RUNEX	0.0025668	0.0030626	0.0032797	0.0040918	0.006225	0.006155465	0.009529106	0.012662862	0.013687	0.0048688	0.0020536	0.0106759	0.008903
Winter	SO2_STREX	0.0005425	0.0006608	0.000709	0.0008795	0.0001043	7.22514E-05	8.11375E-05	2.53543E-07	0.0002069	0.0001787	0.0006001	6.074E-05	0
Winter	TOG_DIURN	0.0575855	0.1922037	0.0879547	0.104066	0.0028253	0.001328755	0.000562608	3.84032E-06	0.0023832	0.0017197	1.5870396	0.0011476	0
Winter	TOG_HTSK	0.1098539	0.3036326	0.1506629	0.1802055	0.090976	0.046544016	0.021526123	0.00012145	0.0250943	0.0111926	1.0360126	0.0088293	0
Winter	TOG_IDLEX	0	0	0	0	0.0291719	0.021706067	0.028175725	0.618337897	0.0709225	0	0	0.5180688	0
Winter	TOG_RESTL	0.0454037	0.1280078	0.0748932	0.0953197	0.0014146	0.000700507	0.000287901	2.13248E-06	0.0010621	0.000754	0.7337523	0.0006032	0
Winter	TOG_RUNEX	0.0133572	0.0495718	0.0241816	0.0347133	0.0742561	0.071461335	0.121767281	0.078903864	0.1055914	3.4254167	2.6466033	0.1130941	0.0817787
Winter	TOG_RUNLS	0.2382144	1.0088513	0.5066292	0.5680498	0.5332963	0.266504162	0.111093974	0.000565077	0.274238	0.0549047	2.1198495	0.0646936	0
Winter	TOG_STREX	0.2554034	0.4954488	0.375796	0.5001219	0.0845147	0.048823844	0.050616765	8.51848E-07	0.1377052	0.080369	1.9922304	0.0453859	0

1 Source: California Air Resources Board. EMFAC2017 Web Database. https://www.arb.ca.gov/emfac/2017/; 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 using the EMFAC2017 Web Database for the Los Angeles (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.

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Appendix G

Estes Banning

NOISE IMPACT ANALYSIS

CITY OF BANNING

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SEPTEMBER 14, 2019

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LIST OF ABBREVIATED TERMS

(1)	Reference
ADT	Average Daily Traffic
ANSI	American National Standards Institute
Calveno	California Vehicle Noise
CEQA	California Environmental Quality Act
CNEL	Community Noise Equivalent Level
dBA	A-weighted decibels
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
I-10	Interstate 10
IEC	International Electrotechnical Commission
INCE	Institute of Noise Control Engineering
L_{eq}	Equivalent continuous (average) sound level
L_{max}	Maximum level measured over the time interval
L_{min}	Minimum level measured over the time interval
mph	Miles per hour
PPV	Peak Particle Velocity
Project	Estes Banning
REMEL	Reference Energy Mean Emission Level
RMS	Root-mean-square
VdB	Vibration Decibels

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EXECUTIVE SUMMARY

Urban Crossroads, Inc. has prepared this noise study to determine the potential noise impacts and the necessary noise mitigation measures, if any, for the proposed Estes Banning development ("Project"). The Project site is located on the northwest corner of Westward Avenue and Scott Street in the City of Banning. The proposed Project consists of approximately 97,400 square-feet (SF) of Truck Terminal use to include a 134-door cross-dock (this includes future expansion), a two-story office building, a line-haul building, a truck maintenance building, and a fuel station for project trucks. The Project is anticipated to be built and occupied in 2021. This study has been prepared to satisfy applicable City of Banning standards and thresholds of significance based on guidance provided by Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (1)

OFF-SITE TRAFFIC NOISE ANALYSIS

Traffic generated by the operation of the proposed Project will influence the traffic noise levels in surrounding off-site areas. To quantify the traffic noise increases on the surrounding off-site areas, the changes in traffic noise levels on 7 roadway segments surrounding the Project site were calculated based on the change in the average daily traffic (ADT) volumes. The traffic noise levels provided in this analysis are based on the traffic forecasts found in *Estes Banning Traffic Impact Analysis.* (2) To assess the off-site noise level impacts associated with the proposed Project, noise contour boundaries were developed for Existing traffic conditions. The analysis shows that the unmitigated Project-related traffic noise level increases under Existing with Project traffic conditions will be *less than significant*.

OPERATIONAL NOISE ANALYSIS

Using reference noise levels to represent the potential noise sources within Estes Banning site, this analysis estimates the Project-related operational (stationary-source) noise levels at the nearby noise-sensitive receiver locations. The Project-related operational noise sources are expected to include idling trucks, delivery truck activities, backup alarms, as well as loading and unloading of dry goods, roof-top air conditioning units, and parking lot vehicle movements. The analysis shows that the Project-related operational noise levels will satisfy the City of Banning exterior noise level standards at all the off-site receiver locations in the Project study area. Further, this analysis demonstrates that the Project will contribute a *less than significant* operational noise level impact to the existing ambient noise environment at all the nearby sensitive receiver locations during the daytime and nighttime hours. Therefore, the operational noise level impacts associated with the proposed Project activities, such as the idling trucks, delivery truck activities, backup alarms, as well as loading and unloading of dry goods, roof-top air conditioning units, and parking lot vehicle movements will be *less than significant*.

CONSTRUCTION NOISE ANALYSIS

The construction noise analysis shows that the highest construction noise levels will occur when construction activities take place at the closest point from the edge of primary construction activity to each of the nearby receiver locations. The unmitigated exterior construction noise levels are expected to range from 49.4 to 73.0 dBA L_{eq} at the receiver locations in the City of Banning. To evaluate whether the Project will generate potentially significant short-term noise levels at off-site sensitive receiver locations, the City of Banning Municipal Code interior construction noise level limit for residential uses of 55 dBA L_{eq} is used as the acceptable threshold for construction noise at the nearby sensitive receiver locations. The results of the analysis show that the highest construction noise levels with the estimated interior noise reduction of the existing residential homes of 25 dBA L_{eq} will range from 24.4 to 48.0 dBA L_{eq} and will satisfy the 55 dBA L_{eq} City of Banning interior construction noise level standard. The noise impact due to unmitigated Project construction noise levels is, therefore, considered a *less than significant* impact at all nearby sensitive receiver locations.

CONSTRUCTION VIBRATION ANALYSIS

At distances ranging from 107 to 1,616 feet from Project construction activity, construction vibration velocity levels are shown to range from 0.000 to 0.010 in/sec PPV at the nearby sensitive receiver locations, which will remain below the Caltrans 0.3 in/sec PPV building damage threshold for older residential structures. Therefore, the vibration impacts due to Project construction will be *less than significant.*

Further, vibration levels at the site of the closest sensitive receiver are unlikely to be sustained during the entire construction period but will occur rather only during the times that heavy construction equipment is operating simultaneously adjacent to the Project site perimeter. Moreover, construction at the Project site will be restricted to daytime hours consistent with City requirements thereby eliminating potential vibration impacts during the sensitive nighttime hours.

SUMMARY OF CEQA SIGNIFICANCE FINDINGS

The results of this Estes Banning Noise Impact Analysis are summarized below based on the significance criteria in Section 4 of this report consistent with Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (1). Table ES-1 shows the findings of significance for each potential noise and/or vibration impact under CEQA before and after any required mitigation measures described below.

TABLE ES-1: SUMMARY OF CEQA SIGNIFICANCE FINDINGS

Analysis	Report Section	Significance Findings	
		Unmitigated	Mitigated
Off-Site Traffic Noise	7	*Less Than Significant*	*n/a*
Operational Noise	9	*Less Than Significant*	*n/a*
Construction Noise	10	*Less Than Significant*	*n/a*
Construction Vibration		*Less Than Significant*	*n/a*

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1 INTRODUCTION

This noise analysis has prepared this noise study to determine the noise impacts associated with the development of the proposed Estes Banning ("Project"). This noise study briefly describes the proposed Project, provides information regarding noise fundamentals, describes the local regulatory setting, provides the study methods and procedures for transportation noise analysis, and evaluates the future exterior noise environment. In addition, this study includes an analysis of the potential Project-related long-term operational and short-term construction noise and vibration impacts.

1.1 SITE LOCATION

The proposed Estes Banning Project is located on the northwest corner of Westward Avenue and Scott Street in the City of Banning as shown on Exhibit 1-A. Existing residential land uses in the Project study area are located west and south of the Project site. The Interstate 10 (I-10) Freeway is located approximately 0.25 miles north of the Project site. In addition, the Banning Municipal Airport is located just north of the Project site.

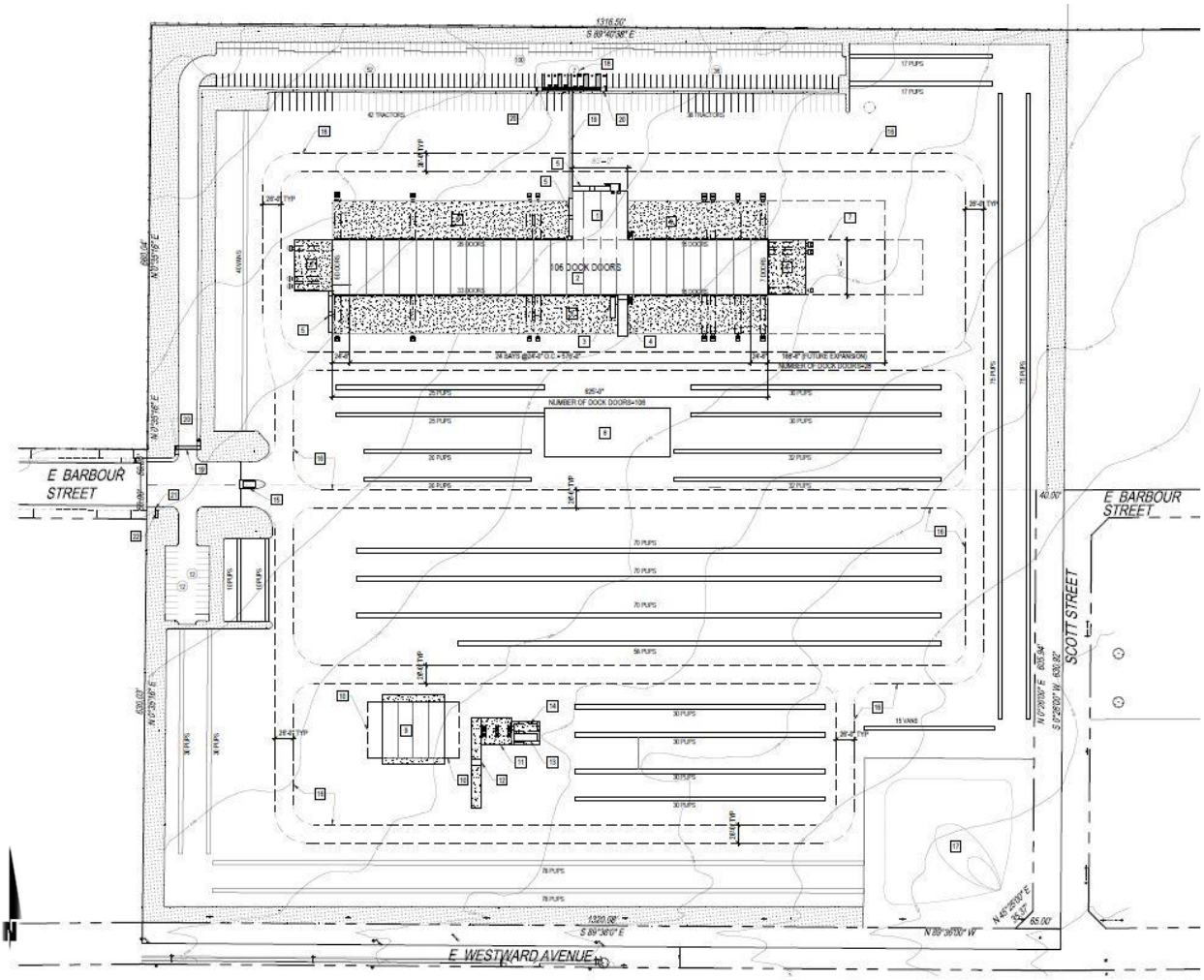
1.2 PROJECT DESCRIPTION

The proposed Project consists of approximately 97,400 square-feet (SF) of Truck Terminal use to include a 134-door cross-dock (this includes future expansion), a two-story office building, a line-haul building, a truck maintenance building, and a fuel station for project trucks. The Project is anticipated to be built and occupied in 2021. The Project site plan is shown on Exhibit 1-B. The on-site Project-only operational noise sources are expected to include: idling trucks, delivery truck activities, backup alarms, as well as loading and unloading of dry goods, roof-top air conditioning units, and parking lot vehicle movements.

EXHIBIT 1-A: LOCATION MAP



EXHIBIT 1-B: SITE PLAN



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2 FUNDAMENTALS

Noise has been simply defined as "unwanted sound." Sound becomes unwanted when it interferes with normal activities, when it causes actual physical harm or when it has adverse effects on health. Noise is measured on a logarithmic scale of sound pressure level known as a decibel (dB). A-weighted decibels (dBA) approximate the subjective response of the human ear to broad frequency noise source by discriminating against very low and very high frequencies of the audible spectrum. They are adjusted to reflect only those frequencies which are audible to the human ear. Exhibit 2-A presents a summary of the typical noise levels and their subjective loudness and effects that are described in more detail below.

EXHIBIT 2-A: TYPICAL NOISE LEVELS

COMMON OUTDOOR ACTIVITIES	COMMON INDOOR ACTIVITIES	A - WEIGHTED SOUND LEVEL dBA	SUBJECTIVE LOUDNESS	EFFECTS OF NOISE
THRESHOLD OF PAIN		140	INTOLERABLE OR DEAFENING	HEARING LOSS
NEAR JET ENGINE		130		
		120		
JET FLY-OVER AT 300m (1000 ft)	ROCK BAND	110		
LOUD AUTO HORN		100	VERY NOISY	
GAS LAWN MOWER AT 1m (3 ft)		90		
DIESEL TRUCK AT 15m (50 ft), at 80 km/hr (50 mph)	FOOD BLENDER AT 1m (3 ft)	80		SPEECH INTERFERENCE
NOISY URBAN AREA, DAYTIME	VACUUM CLEANER AT 3m (10 ft)	70	LOUD	
HEAVY TRAFFIC AT 90m (300 ft)	NORMAL SPEECH AT 1m (3 ft)	60		
QUIET URBAN DAYTIME	LARGE BUSINESS OFFICE	50	MODERATE	SLEEP DISTURBANCE
QUIET URBAN NIGHTTIME	THEATER, LARGE CONFERENCE ROOM (BACKGROUND)	40		
QUIET SUBURBAN NIGHTTIME	LIBRARY	30	FAINT	NO EFFECT
QUIET RURAL NIGHTTIME	BEDROOM AT NIGHT, CONCERT HALL (BACKGROUND)	20		
	BROADCAST/RECORDING STUDIO	10	VERY FAINT	
LOWEST THRESHOLD OF HUMAN HEARING	LOWEST THRESHOLD OF HUMAN HEARING	0		

Source: Environmental Protection Agency Office of Noise Abatement and Control, Information on Levels of Environmental Noise Requisite to Protect Public Health and Welfare with an Adequate Margin of Safety (EPA/ONAC 550/9-74-004) March 1974.

2.1 RANGE OF NOISE

Since the range of intensities that the human ear can detect is so large, the scale frequently used to measure intensity is a scale based on multiples of 10, the logarithmic scale. The scale for measuring intensity is the decibel scale. Each interval of 10 decibels indicates a sound energy ten times greater than before, which is perceived by the human ear as being roughly twice as loud. (4) The most common sounds vary between 40 dBA (very quiet) to 100 dBA (very loud). Normal conversation at three feet is roughly at 60 dBA, while loud jet engine noises equate to 110 dBA

at approximately 100 feet, which can cause serious discomfort. (5) Another important aspect of noise is the duration of the sound and the way it is described and distributed in time.

2.2 NOISE DESCRIPTORS

Environmental noise descriptors are generally based on averages, rather than instantaneous, noise levels. The most commonly used figure is the equivalent level (L_{eq}). Equivalent sound levels are not measured directly but are calculated from sound pressure levels typically measured in A-weighted decibels (dBA). The equivalent sound level (L_{eq}) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period and is commonly used to describe the "average" noise levels within the environment.

Peak hour or average noise levels, while useful, do not completely describe a given noise environment. Noise levels lower than peak hour may be disturbing if they occur during times when quiet is most desirable, namely evening and nighttime (sleeping) hours. To account for this, the Community Noise Equivalent Level (CNEL), representing a composite 24-hour noise level is utilized. The CNEL is the weighted average of the intensity of a sound, with corrections for time of day, and averaged over 24 hours. The time of day corrections require the addition of 5 decibels to dBA L_{eq} sound levels in the evening from 7:00 p.m. to 10:00 p.m., and the addition of 10 decibels to dBA L_{eq} sound levels at night between 10:00 p.m. and 7:00 a.m. These additions are made to account for the noise sensitive time periods during the evening and night hours when sound appears louder. CNEL does not represent the actual sound level heard at any time, but rather represents the total sound exposure. The City of Banning relies on the 24-hour CNEL level to assess land use compatibility with transportation-related noise sources.

2.3 SOUND PROPAGATION

When sound propagates over a distance, it changes in level and frequency content. The way noise reduces with distance depends on the following factors.

2.3.1 GEOMETRIC SPREADING

Sound from a localized source (i.e., a stationary point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 dB for each doubling of distance from a point source. Highways consist of several localized noise sources on a defined path and hence can be treated as a line source, which approximates the effect of several point sources. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of 3 dB for each doubling of distance from a line source. (4)

2.3.2 GROUND ABSORPTION

The propagation path of noise from a highway to a receptor is usually very close to the ground. Noise attenuation from ground absorption and reflective wave canceling adds to the attenuation associated with geometric spreading. Traditionally, the excess attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually

sufficiently accurate for distances of less than 200 ft. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receptor, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receptor such as soft dirt, grass, or scattered bushes and trees), an excess ground attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the cylindrical spreading, the excess ground attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance from a line source. (6)

2.3.3 ATMOSPHERIC EFFECTS

Receptors located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels. Sound levels can be increased at large distances (e.g., more than 500 feet) due to atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also have significant effects. (4)

2.3.4 SHIELDING

A large object or barrier in the path between a noise source and a receptor can substantially attenuate noise levels at the receptor. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Shielding by trees and other such vegetation typically only has an "out of sight, out of mind" effect. That is, the perception of noise impact tends to decrease when vegetation blocks the line-of-sight to nearby resident. However, for vegetation to provide a substantial, or even noticeable, noise reduction, the vegetation area must be at least 15 feet in height, 100 feet wide and dense enough to completely obstruct the line-of sight between the source and the receiver. This size of vegetation may provide up to 5 dBA of noise reduction. The FHWA does not consider the planting of vegetation to be a noise abatement measure. (6)

2.4 NOISE CONTROL

Noise control is the process of obtaining an acceptable noise environment for an observation point or receptor by controlling the noise source, transmission path, receptor, or all three. This concept is known as the source-path-receptor concept. In general, noise control measures can be applied to these three elements.

2.5 NOISE BARRIER ATTENUATION

Effective noise barriers can reduce noise levels by 10 to 15 dBA, cutting the loudness of traffic noise in half. A noise barrier is most effective when placed close to the noise source or receptor. Noise barriers, however, do have limitations. For a noise barrier to work, it must be high enough and long enough to block the path of the noise source. (6)

2.6 LAND USE COMPATIBILITY WITH NOISE

Some land uses are more tolerant of noise than others. For example, schools, hospitals, churches, and residences are more sensitive to noise intrusion than are commercial or industrial developments and related activities. As ambient noise levels affect the perceived amenity or livability of a development, so too can the mismanagement of noise impacts impair the economic health and growth potential of a community by reducing the area's desirability as a place to live, shop and work. For this reason, land use compatibility with the noise environment is an important consideration in the planning and design process. The FHWA encourages State and Local government to regulate land development in such a way that noise-sensitive land uses are either prohibited from being located adjacent to a highway, or that the developments are planned, designed, and constructed in such a way that noise impacts are minimized. (7)

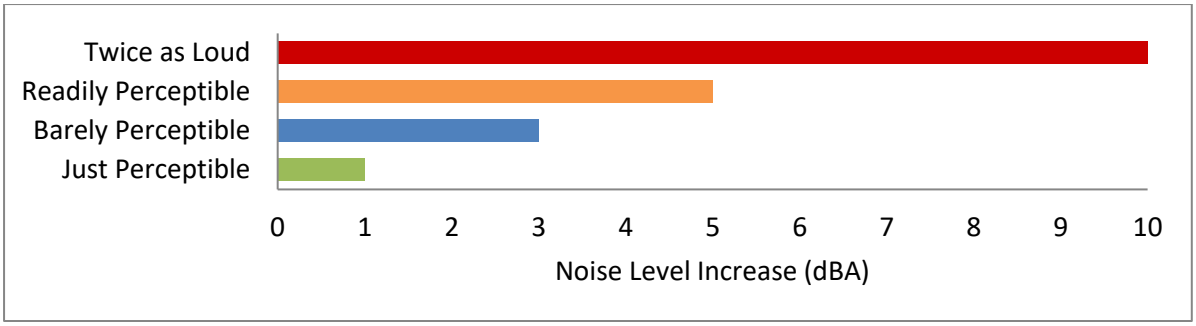
2.7 COMMUNITY RESPONSE TO NOISE

Community responses to noise may range from registering a complaint by telephone or letter, to initiating court action, depending upon everyone's susceptibility to noise and personal attitudes about noise. Several factors are related to the level of community annoyance including:

- Fear associated with noise producing activities;
- Socio-economic status and educational level;
- Perception that those affected are being unfairly treated;
- Attitudes regarding the usefulness of the noise-producing activity;
- Belief that the noise source can be controlled.

Approximately ten percent of the population has a very low tolerance for noise and will object to any noise not of their making. Consequently, even in the quietest environment, some complaints will occur. Another twenty-five percent of the population will not complain even in very severe noise environments. Thus, a variety of reactions can be expected from people exposed to any given noise environment. (8) Surveys have shown that about ten percent of the people exposed to traffic noise of 60 dBA will report being highly annoyed with the noise, and each increase of one dBA is associated with approximately two percent more people being highly annoyed. When traffic noise exceeds 60 dBA or aircraft noise exceeds 55 dBA, people may begin to complain. (8) Despite this variability in behavior on an individual level, the population can be expected to exhibit the following responses to changes in noise levels as shown on Exhibit 2-B. An increase or decrease of 1 dBA cannot be perceived except in carefully controlled laboratory experiments, a change of 3 dBA are considered *barely perceptible*, and changes of 5 dBA are considered *readily perceptible*. (6)

EXHIBIT 2-B: NOISE LEVEL INCREASE PERCEPTION



2.8 EXPOSURE TO HIGH NOISE LEVELS

The Occupational Safety and Health Administration (OSHA) sets legal limits on noise exposure in the workplace. The permissible exposure limit (PEL) for a worker over an eight-hour day is 90 dBA. The OSHA standard uses a 5 dBA exchange rate. This means that when the noise level is increased by 5 dBA, the amount of time a person can be exposed to a certain noise level to receive the same dose is cut in half. The National Institute for Occupational Safety and Health (NIOSH) has recommended that all worker exposures to noise should be controlled below a level equivalent to 85 dBA for eight hours to minimize occupational noise induced hearing loss. NIOSH also recommends a 3 dBA exchange rate so that every increase by 3 dBA doubles the amount of the noise and halves the recommended amount of exposure time. (9)

OSHA has implemented requirements to protect all workers in general industry (e.g. the manufacturing and the service sectors) for employers to implement a Hearing Conservation Program where workers are exposed to a time weighted average noise level of 85 dBA or higher over an eight-hour work shift. Hearing Conservation Programs require employers to measure noise levels, provide free annual hearing exams and free hearing protection, provide training, and conduct evaluations of the adequacy of the hearing protectors in use unless changes to tools, equipment and schedules are made so that they are less noisy and worker exposure to noise is less than the 85 dBA. This noise study does not evaluate the noise exposure of workers within a project or construction site based on CEQA requirements, and instead, evaluates Project-related operational and construction noise levels at the nearby sensitive receiver locations in the Project study area. Further, periodic exposure to high noise levels in short duration, such as Project construction, is typically considered an annoyance and not impactful to human health. It would take several years of exposure to high noise levels to result in hearing impairment. (10)

2.9 VIBRATION

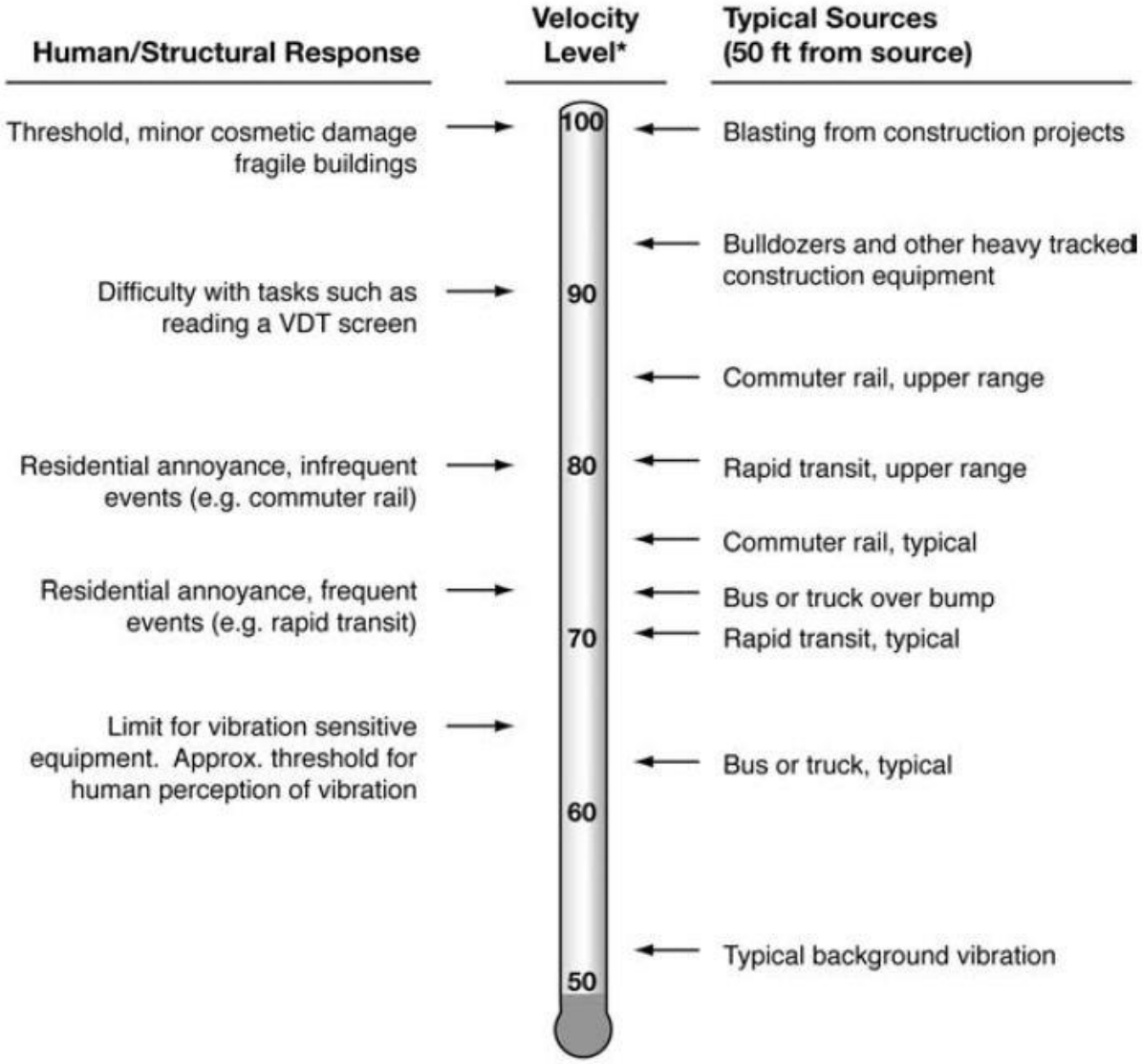
Per the Federal Transit Administration (FTA) *Transit Noise Impact and Vibration Assessment* (11), vibration is the periodic oscillation of a medium or object. The rumbling sound caused by the vibration of room surfaces is called structure-borne noise. Sources of ground-borne vibrations include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) or human-made causes (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous, such as factory machinery, or transient, such as explosions.

As is the case with airborne sound, ground-borne vibrations may be described by amplitude and frequency.

There are several different methods that are used to quantify vibration. The peak particle velocity (PPV) is defined as the maximum instantaneous peak of the vibration signal. The PPV is most frequently used to describe vibration impacts to buildings, but is not always suitable for evaluating human response (annoyance) because it takes some time for the human body to respond to vibration signals. Instead, the human body responds to average vibration amplitude often described as the root mean square (RMS). The RMS amplitude is defined as the average of the squared amplitude of the signal, and is most frequently used to describe the effect of vibration on the human body. Decibel notation (VdB) is commonly used to measure RMS. Decibel notation (VdB) serves to reduce the range of numbers used to describe human response to vibration. Typically, ground-borne vibration generated by man-made activities attenuates rapidly with distance from the source of the vibration. Sensitive receivers for vibration include structures (especially older masonry structures), people (especially residents, the elderly, and sick), and vibration-sensitive equipment.

The background vibration-velocity level in residential areas is generally 50 VdB. Ground-borne vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels. Typical outdoor sources of perceptible ground-borne vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground-borne vibration is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration-velocity level, to 100 VdB, which is the general threshold where minor damage can occur in fragile buildings. Exhibit 2-C illustrates common vibration sources and the human and structural response to ground-borne vibration.

EXHIBIT 2-C: TYPICAL LEVELS OF GROUND-BORNE VIBRATION



** RMS Vibration Velocity Level in VdB relative to 10^{-6} inches/second*

Source: Federal Transit Administration (FTA) Transit Noise Impact and Vibration Assessment.

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3 REGULATORY SETTING

To limit population exposure to physically and/or psychologically damaging as well as intrusive noise levels, the federal government, the State of California, various county governments, and most municipalities in the state have established standards and ordinances to control noise. In most areas, automobile and truck traffic is the major source of environmental noise. Traffic activity generally produces an average sound level that remains constant with time. Air and rail traffic, and commercial and industrial activities are also major sources of noise in some areas. Federal, state, and local agencies regulate different aspects of environmental noise. Federal and state agencies generally set noise standards for mobile sources such as aircraft and motor vehicles, while regulation of stationary sources is left to local agencies.

3.1 STATE OF CALIFORNIA NOISE REQUIREMENTS

The State of California regulates freeway noise, sets standards for sound transmission, provides occupational noise control criteria, identifies noise standards, and provides guidance for local land use compatibility. State law requires that each county and city adopt a General Plan that includes a Noise Element which is to be prepared per guidelines adopted by the Governor's Office of Planning and Research. (12) The purpose of the Noise Element is to *limit the exposure of the community to excessive noise levels*. In addition, the California Environmental Quality Act (CEQA) requires that all known environmental effects of a project be analyzed, including environmental noise impacts.

3.2 CITY OF BANNING GENERAL PLAN NOISE ELEMENT

The City of Banning General Plan Noise Element coordinates the community's land uses with the existing and future noise environment, and provides design measures that are intended to minimize or avoid community exposure to excessive noise levels. (13) The implementation of policies and programs set forth in the Noise Element are used to reduce or even avoid current and future noise impacts and land use conflicts. The goal of the City of Banning General Plan Noise Element is *a noise environment that complements the community's residential character and its land uses*. (13) The nine policies of the Noise Element which are used pursue this goal are presented below:

Policy 1 *The City shall protect noise sensitive land uses, including residential neighborhoods, schools, hospitals, libraries, churches, resorts and community open space, from potentially significant sources of community noise.*

Policy 2 *The relationship between land use designations in the Land Use Element and changes in the circulation pattern of the City, as well as individual developments, shall be monitored and mitigated.*

Policy 3 *Private sector project proposals shall include measures that assure that noise exposures levels comply with State of California noise insulation standards as defined in Title 25 (California Noise Insulation Standards) and/or Banning Ordinances 1138 and 1234, whichever is more restrictive.*

Policy 4 *The City shall maintain a General Plan Circulation Map and assure low levels of traffic within neighborhoods by assigning truck routes to major roadways only.*

Policy 5 *The City shall ensure that flight paths and airport improvements adhere to all local, state and federal noise regulations.*

Policy 6 *All development proposals within the noise impact area of the Interstate and the railroad shall mitigate both noise levels and vibration to acceptable levels through the preparation of focused studies and analysis in the development review and environmental review process.*

Policy 7 *The City shall coordinate with adjoining jurisdictions to assure noise-compatible land uses across jurisdictional boundaries.*

Policy 8 *The City shall impose and integrate special design features into proposed development that minimize impacts associated with the operation of air conditioning and heating equipment, onsite traffic, and use of parking, loading and trash storage facilities.*

Policy 9 *The City shall support development that results in grade separated railroad tracks.*

The noise criteria identified in the City of Banning Noise Element (Table V-4) are guidelines to evaluate the land use compatibility of transportation-related noise. The compatibility criteria, shown on Exhibit 3-A, provides the City with a planning tool to gauge the compatibility of land uses relative to existing and future exterior noise levels. The *Land Use Compatibility for Community Noise Environments* guidelines indicate that industrial land uses, such as the Project, are considered both *normally acceptable* with noise levels approaching 70 dBA CNEL. (13)

EXHIBIT 3-A: LAND USE COMPATIBILITY FOR COMMUNITY NOISE ENVIRONMENTS

Land Uses	CNEL (dBA)						
	50	55	60	65	70	75	80
Residential - Single Family Dwellings, Duplex, Mobile Homes	A	B	B	C	C	D	D
Residential – Multiple Family	A	A	B	B	C	D	D
Transient Lodging: Hotels and Motels	A	A	B	B	C	C	D
School Classrooms, Libraries, Churches, Hospitals, Nursing Homes and Convalescent Hospitals	A	A	B	B	C	C	D
Auditoriums, Concert Halls, Amphitheaters	B	B	B	C	C	C	C
Sports Arenas, Outdoor Spectator Sports	B	B	B	B	C	C	C
Playgrounds, Neighborhood Parks	A	A	A	C	C	D	D
Golf Courses, Riding Stables, Water Recreation, Cemeteries	A	A	A	A	C	C	D
Office Buildings, Business, Commercial and Professional	A	A	A	B	B	D	D
Industrial, Manufacturing, Utilities, Agriculture	A	A	A	A	B	D	D

Source: *California Department of Health Services, "Guidelines for the Preparation and Content of the Noise Element of the General Plan," 1990*

A **Normally Acceptable**: With no special noise reduction requirements assuming standard construction.

B **Conditionally Acceptable**: New construction or development should be undertaken only after a detailed analysis of the noise reduction requirement is made and needed noise insulation features included in the design

C **Normally Unacceptable**: New construction is discouraged. If new construction does proceed, a detailed analysis of the noise reduction requirements must be made and needed noise insulation features included in the design.

D **Clearly Unacceptable**: New construction or development should generally not be undertaken.

Source: City of Banning General Plan Noise Element, Table V-4.

3.3 OPERATIONAL NOISE STANDARDS

To analyze noise impacts originating from a designated fixed location or private property such as the Estes Banning, operational noise that may include idling trucks, delivery truck activities, backup alarms, as well as loading and unloading of dry goods, roof-top air conditioning units, and parking lot vehicle movements are typically evaluated against standards established under a City's Municipal Code.

The City of Banning Municipal Code, Section 8.44.050, provides base noise level standards for determining and mitigating non-transportation or stationary-source noise impacts from operations at private properties. For noise-sensitive residential properties, the Municipal Code identifies operational noise level limits for the daytime (7:00 a.m. to 10:00 p.m.) hours of 55 dBA L_{50} and 45 dBA L_{50} during the nighttime (10:00 p.m. to 7:00 a.m.) hours. (3) For industrial and commercial land uses, the Municipal Code identifies an operational noise level limit of 75 dBA L_{50} for any period of time. Section 8.44.070 indicates that these standards shall apply for a cumulative period of 30 minutes in any hour, as well as plus 5 dBA cannot be exceeded for a cumulative period of more than 15 minutes in any hour (L_{25}), or the standard plus 10 dBA for a cumulative period of more than 5 minutes in any hour (L_8), or the standard plus 15 dBA for a cumulative period of more than 1 minute in any hour (L_2), or the standard plus 20 dBA for any period of time (L_{max}). The City of Banning Municipal Code noise standards are shown on Table 3-1, and included in Appendix 3.1.

TABLE 3-1: OPERATIONAL NOISE STANDARDS

Jurisdiction	Land Use	Time Period	Exterior Noise Level Standards (dBA)[2]				
			L_{50} (30 mins)	L_{25} (15 mins)	L_8 (5 mins)	L_2 (1 min)	L_{max} (Anytime)
City of Banning[1]	Residential	Daytime	55	60	65	70	75
		Nighttime	45	50	55	60	65
	Industrial & Commercial	Anytime	75	-	-	-	-

[1] Source: City of Banning Municipal Code, Sections 8.44.050 & 8.44.070 (Appendix 3.1).
[2] The percent noise level is the level exceeded "n" percent of the time during the measurement period. L_{25} is the noise level exceeded 25% of the time.
"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

3.4 CONSTRUCTION NOISE STANDARDS

To control noise impacts associated with the construction of the proposed Project, the City has established limits to the hours of operation. Section 8.44.090 of the City's Municipal Code indicates that construction activity is considered exempt from the noise level limits of the Municipal Code if activity is limited to the hours of 7:00 a.m. to 6:00 p.m. (3) However, the Municipal Code further indicates that *nothing contained herein shall permit any person to cause sound levels to at any time exceed fifty-five dB(A) for intervals of more than fifteen minutes per hour as measured in the interior of the nearest occupied residence or school.* Therefore, the analysis presented in this noise study evaluates Project-related construction noise levels based on the interior noise level limit of 55 dBA at the nearest sensitive receiver locations (e.g., residential homes). The 55 dBA interior construction noise level limit is used in this noise study based on the energy-average equivalent (L_{eq}) noise level to determine potential impacts since the analysis assumes a worst-case duration of Project construction activity, averaged over the any time period, and is therefore, more conservative than the interval of 15 minutes or more as identified in the Municipal Code.

3.5 CONSTRUCTION VIBRATION STANDARDS

The City of Banning has not identified or adopted vibration standards. To assess the potential for building damage from Project construction activities, the Caltrans vibration level standard for building damage is used in this analysis. For older residential structures, a building damage threshold of 0.3 in/sec peak-particle-velocity (PPV) is identified. Therefore, the Caltrans vibration level threshold of 0.3 in/sec PPV is used in this analysis to evaluate the potential building damage impacts due to Project construction equipment activities. (14)

Construction activity can result in varying degrees of ground-borne vibration, depending on the equipment and methods used, distance to the affected structures and soil type. Construction vibration is generally associated with pile driving and rock blasting. Other construction equipment such as air compressors, light trucks, hydraulic loaders, etc., generates little or no ground vibration. Occasionally large bulldozers and loaded trucks can cause perceptible vibration levels at when close to sensitive receiver locations. While not enforceable regulations within the City of Banning, the Caltrans building damage threshold of 0.3 in/sec PPV provides a basis for determining the relative significance of potential Project-related vibration impacts.

3.6 BANNING MUNICIPAL AIRPORT LAND USE COMPATIBILITY

The Banning Municipal Airport is located just north of the Project site. The *Riverside County Airport Land Use Compatibility Plan Policy Document* (RC ALUCP) includes the policies for determining the land use compatibility of the Project since it is located within 2 miles of an airport runway. Policy 4.1.5 *Noise Exposure for Other Land Uses* of the RC ALUCP requires that non-noise-sensitive land uses, such as the industrial land use of the Project site, must demonstrate compatibility with the acceptable noise levels on Table 2B. The Table 2B *Supporting Compatibility Criteria: Noise* matrix is shown on Exhibit 3-B and indicates that *clearly compatible* industrial land uses experience noise levels below 65 dBA CNEL. For *clearly compatible* noise levels, *the activities*

associated with the specified land use can be carried out with essentially no interference from the noise exposure. (15)

Based on Exhibit BN-5 of the RC ALUCP, the Project site is mostly located outside of the 65 dBA CNEL noise level contour boundary of the Banning Municipal Airport, as shown on Exhibit 3-C of this report. Therefore, the Project site is considered *clearly acceptable* land use based on the Table 2B noise level compatibility criteria, with noise levels due to aircraft activity of less than 65 dBA CNEL, and no noise mitigation is required.

EXHIBIT 3-B: RC ALUCP SUPPORTING COMPATIBILITY CRITERIA: NOISE

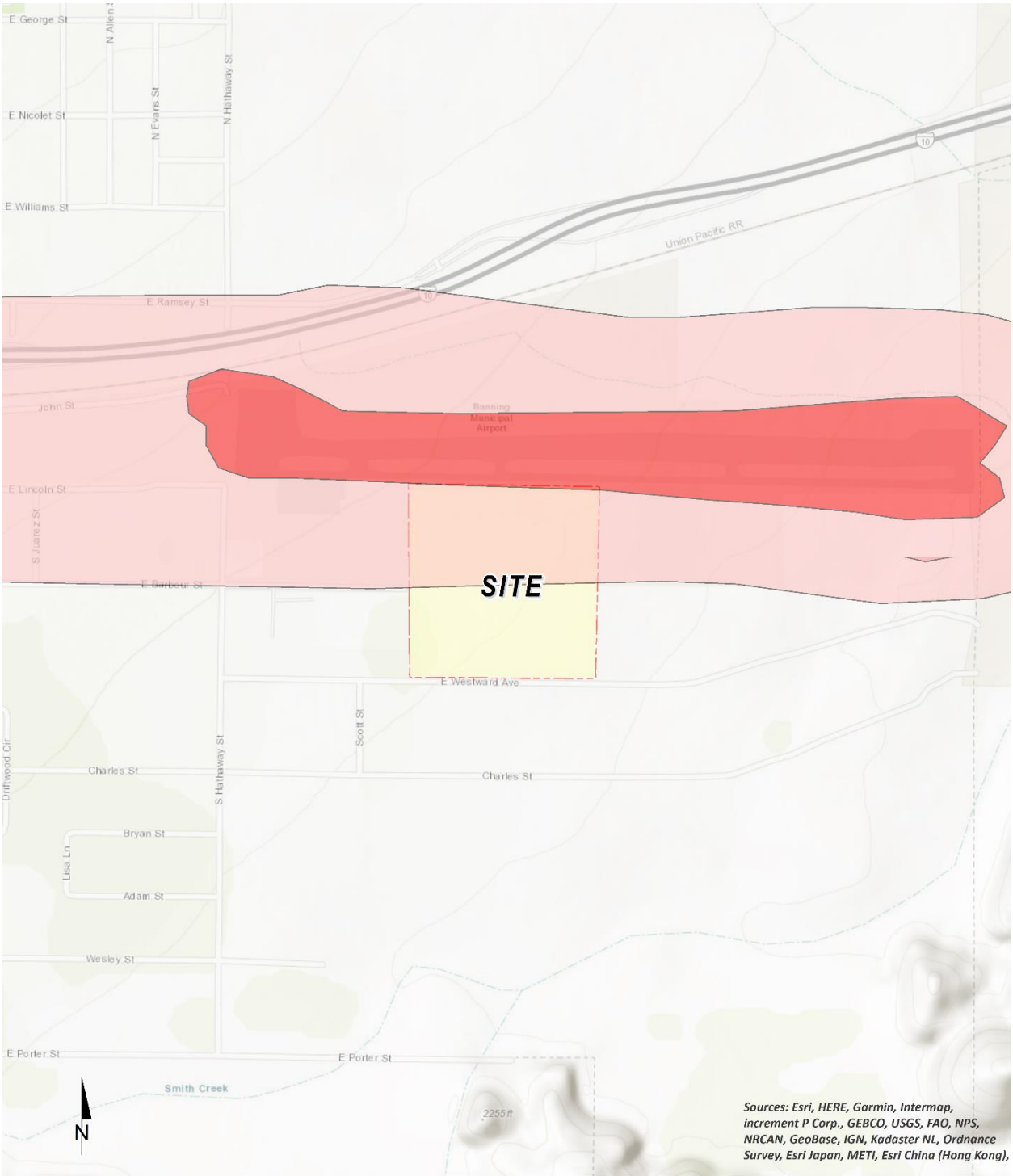
	CNEL (dB)				
Land Use Category	**50–55**	**55–60**	**60–65**	**65–70**	**70–75**
Residential *					
single-family, nursing homes, mobile homes	++	o	–	– –	– –
multi-family, apartments, condominiums	++	+	o	– –	– –
Public					
schools, libraries, hospitals	+	o	–	– –	– –
churches, auditoriums, concert halls	+	o	o	–	– –
transportation, parking, cemeteries	++	++	++	+	o
Commercial and Industrial					
offices, retail trade	++	+	o	o	–
service commercial, wholesale trade, warehousing, light industrial	++	++	+	o	o
general manufacturing, utilities, extractive industry	++	++	++	+	+
Agricultural and Recreational					
cropland	++	++	++	++	+
livestock breeding	++	+	o	o	–
parks, playgrounds, zoos	++	+	+	o	–
golf courses, riding stables, water recreation	++	++	+	o	o
outdoor spectator sports	++	+	+	o	–
amphitheaters	+	o	–	– –	– –

Land Use Acceptability		**Interpretation/Comments**
++	*Clearly Acceptable*	The activities associated with the specified land use can be carried out with essentially no interference from the noise exposure.
+	*Normally Acceptable*	Noise is a factor to be considered in that slight interference with outdoor activities may occur. Conventional construction methods will eliminate most noise intrusions upon indoor activities.
o	*Marginally Acceptable*	The indicated noise exposure will cause moderate interference with outdoor activities and with indoor activities when windows are open. The land use is acceptable on the conditions that outdoor activities are minimal and construction features which provide sufficient noise attenuation are used (e.g., installation of air conditioning so that windows can be kept closed). Under other circumstances, the land use should be discouraged.
–	*Normally Unacceptable*	Noise will create substantial interference with both outdoor and indoor activities. Noise intrusion upon indoor activities can be mitigated by requiring special noise insulation construction. Land uses which have conventionally constructed structures and/or involve outdoor activities which would be disrupted by noise should generally be avoided.
– –	*Clearly Unacceptable*	Unacceptable noise intrusion upon land use activities will occur. Adequate structural noise insulation is not practical under most circumstances. The indicated land use should be avoided unless strong overriding factors prevail and it should be prohibited if outdoor activities are involved.

* Subtract 5 dB for low-activity outlying airports (Chiriaco Summit and Desert Center)

Source: Riverside County Airport Land Use Compatibility Plan, Table 2B.

EXHIBIT 3-C: BANNING MUNICIPAL AIRPORT NOISE LEVEL CONTOUR BOUNDARIES



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4 SIGNIFICANCE CRITERIA

The following significance criteria are based on currently adopted guidance provided by Appendix G of the California Environmental Quality Act (CEQA) Guidelines. (16) For the purposes of this report, impacts would be potentially significant if the Project results in or causes:

A. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

B. Generation of excessive ground-borne vibration or ground-borne noise levels?

C. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

While the City of Banning General Plan Guidelines provide direction on noise compatibility and establish noise standards by land use type that are sufficient to assess the significance of noise impacts, they do not define the levels at which increases are considered substantial for use under Guideline A. CEQA Appendix G Guideline C applies to nearby public and private airports, if any, and the Project's land use compatibility.

The closest airport which would require additional noise analysis under CEQA guidelines C is the Banning Municipal Airport. As previously shown on Exhibit 3-C, the Project site is located outside of the 65 dBA CNEL noise level contour boundary of the airport. Therefore, the Project site is considered *clearly acceptable* land use based on the Table 2B noise level compatibility criteria of the RC ALUCP, previously discussed in Section 3.5, with noise levels due to aircraft activity of less than 65 dBA CNEL, and no noise mitigation is required. Since the Project is considered *clearly acceptable*, the potential impacts under CEQA are *less than significant*, and are not further analyzed in this noise study.

4.1 NOISE-SENSITIVE RECEIVERS

Noise level increases resulting from the Project are evaluated based on the Appendix G CEQA Guidelines described above at the closest sensitive receiver locations. Under CEQA, consideration must be given to the magnitude of the increase, the existing ambient noise levels, and the location of noise-sensitive receivers to determine if a noise increase represents a significant adverse environmental impact. This approach recognizes *that there is no single noise increase that renders the noise impact significant.* (16) Unfortunately, there is no completely satisfactory way to measure the subjective effects of noise or of the corresponding human reactions of annoyance and dissatisfaction. This is primarily because of the wide variation in individual thresholds of annoyance and differing individual experiences with noise. Thus, an important way of determining a person's subjective reaction to a new noise is the comparison of it to the existing environment to which one has adapted—the so-called *ambient* environment.

In general, the more a new noise exceeds the previously existing ambient noise level, the less acceptable the new noise will typically be judged. The Federal Interagency Committee on Noise

(FICON) (17) developed guidance to be used for the assessment of project-generated increases in noise levels that consider the ambient noise level. The FICON recommendations are based on studies that relate aircraft noise levels to the percentage of persons highly annoyed by aircraft noise. Although the FICON recommendations were specifically developed to assess aircraft noise impacts, these recommendations are often used in environmental noise impact assessments involving the use of cumulative noise exposure metrics, such as the average-daily noise level (i.e., CNEL).

For example, if the ambient noise environment is quiet (<60 dBA) and the new noise source greatly increases the noise levels, an impact may occur if the noise criteria may be exceeded. Therefore, for this analysis, FICON identifies a *readily perceptible* 5 dBA or greater project-related noise level increase is considered a significant impact when the noise criteria for a given land use is exceeded. Per FICON, in areas where the without project noise levels range from 60 to 65 dBA, a 3 dBA *barely perceptible* noise level increase appears to be appropriate for most people. When the without project noise levels already exceed 65 dBA, any increase in community noise louder than 1.5 dBA or greater is considered a significant impact if the noise criteria for a given land use is exceeded, since it likely contributes to an existing noise exposure exceedance. Table 4-1 below provides a summary of the potential noise impact significance criteria, based on guidance from FICON.

TABLE 4-1: SIGNIFICANCE OF NOISE IMPACTS AT NOISE-SENSITIVE RECEIVERS

Without Project Noise Level	Potential Significant Impact
< 60 dBA	5 dBA or more
60 - 65 dBA	3 dBA or more
> 65 dBA	1.5 dBA or more

Federal Interagency Committee on Noise (FICON), 1992.

4.2 SIGNIFICANCE CRITERIA SUMMARY

Noise impacts shall be considered significant if any of the following occur as a direct result of the proposed development. Table 4-2 shows the significance criteria summary matrix.

OFF-SITE TRAFFIC NOISE

- When the noise levels at existing and future noise-sensitive land uses (e.g. residential, etc.):
    - are less than 60 dBA CNEL and the Project creates a *readily perceptible* 5 dBA CNEL or greater Project-related noise level increase; or
    - range from 60 to 65 dBA CNEL and the Project creates a *barely perceptible* 3 dBA CNEL or greater Project-related noise level increase; or
    - already exceed 65 dBA CNEL, and the Project creates a community noise level increase of greater than 1.5 dBA CNEL (FICON, 1992).

OPERATIONAL NOISE

- If Project-related operational (stationary source) noise levels exceed the exterior 55 dBA L_{50} daytime or 45 dBA L_{50} nighttime noise level standards for sensitive residential land uses. These standards shall not be exceeded for a cumulative period of 30 minutes (L_{50}), or plus 5 dBA cannot be exceeded for a cumulative period of more than 15 minutes (L_{25}) in any hour, or the standard plus 10 dBA for a cumulative period of more than 5 minutes (L_8) in any hour, or the standard plus 15 dBA for a cumulative period of more than 1 minute (L_2) in any hour, or the standard plus 20 dBA at any time (L_{max}) (City of Banning Municipal Code, Sections 8.44.050 & 8.44.070); or
- If the existing ambient noise levels at the nearby noise-sensitive receivers near the Project site:
    - are less than 60 dBA L_{50} and the Project creates a *readily perceptible* 5 dBA L_{50} or greater Project-related noise level increase; or
    - range from 60 to 65 dBA L_{50} and the Project creates a *barely perceptible* 3 dBA L_{50} or greater Project-related noise level increase; or
    - already exceed 65 dBA L_{50}, and the Project creates a community noise level impact of greater than 1.5 dBA L_{50} (FICON, 1992).

CONSTRUCTION NOISE AND VIBRATION

- If Project-related construction activities:
    - occur at any time other than the permitted hours of 7:00 a.m. and 6:00 p.m. (City of Banning Municipal Code, Section 8.44.090);
    - create noise levels which exceed the 55 dBA L_{eq} interior construction noise level threshold at the nearby sensitive receiver locations in the City of Banning (City of Banning Municipal Code, Sections 8.44.090 (E)).
- If short-term Project generated construction vibration levels exceed the Caltrans building damage threshold for older residential buildings of 0.3 in/sec PPV (Caltrans Transportation and Construction Vibration Guidance Manual, Table 19).

TABLE 4-2: SIGNIFICANCE CRITERIA SUMMARY

Analysis	Land Use	Condition(s)	Significance Criteria	
			Daytime	**Nighttime**
Off-Site Traffic Noise	Noise-Sensitive[1]	if ambient is < 60 dBA CNEL	≥ 5 dBA CNEL Project increase	
		if ambient is 60 - 65 dBA CNEL	≥ 3 dBA CNEL Project increase	
		if ambient is > 65 dBA CNEL	≥ 1.5 dBA CNEL Project increase	
Operational Noise	Noise-Sensitive	Exterior Noise Level Standards[2]	See Table 3-1	
		if ambient is < 60 dBA L_{50}[1]	≥ 5 dBA L_{50} Project increase	
		if ambient is 60 - 65 dBA L_{50}[1]	≥ 3 dBA L_{50} Project increase	
		if ambient is > 65 dBA L_{50}[1]	≥ 1.5 dBA L_{50} Project increase	
Construction Noise & Vibration	Noise-Sensitive	Permitted hours of 7:00 a.m. and 6:00 p.m.[3]		
		Interior Noise Level Threshold[3]	55 dBA L_{eq}	n/a
		Vibration Level Threshold (Building Damage)[4]	0.3 in/sec PPV	

[1] Source: FICON, 1992.
[3] Source: City of Banning Municipal Code, Sections 8.44.050 & 8.44.070 (Appendix 3.1).
[4] Source: City of Banning Municipal Code, Sections 8.44.090 (E) (Appendix 3.1).
[5] Source: Caltrans Transportation and Construction Vibration Guidance Manual, Table 19.
"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.; "n/a" = No nighttime construction activity is permitted, so no nighttime construction noise level limits are identified.

5 EXISTING NOISE LEVEL MEASUREMENTS

To assess the existing noise level environment, four 24-hour noise level measurements were taken at sensitive receiver locations in the Project study area. The receiver locations were selected to describe and document the existing noise environment within the Project study area. Exhibit 5-A provides the boundaries of the Project study area and the noise level measurement locations. To fully describe the existing noise conditions, noise level measurements were collected by Urban Crossroads, Inc. on Friday, August 2nd 2019. Appendix 5.1 includes study area photos.

5.1 MEASUREMENT PROCEDURE AND CRITERIA

To describe the existing noise environment, the hourly noise levels were measured during typical weekday conditions over a 24-hour period. By collecting individual hourly noise level measurements, it is possible to describe the daytime and nighttime hourly noise levels and calculate the 24-hour CNEL. The long-term noise readings were recorded using Piccolo Type 2 integrating sound level meter and dataloggers. The Piccolo sound level meters were calibrated using a Larson-Davis calibrator, Model CAL 150. All noise meters were programmed in "slow" mode to record noise levels in "A" weighted form. The sound level meters and microphones were equipped with a windscreen during all measurements. All noise level measurement equipment satisfies the American National Standards Institute (ANSI) standard specifications for sound level meters ANSI S1.4-2014/IEC 61672-1:2013. (18)

5.2 NOISE MEASUREMENT LOCATIONS

The long-term noise level measurements were positioned as close to the nearest sensitive receiver locations as possible to assess the existing ambient hourly noise levels surrounding the Project site. Both Caltrans and the FTA recognize that it is not reasonable to collect noise level measurements that can fully represent any part of a private yard, patio, deck, or balcony normally used for human activity when estimating impacts for new development projects. This is demonstrated in the Caltrans general site location guidelines which indicate that, *sites must be free of noise contamination by sources other than sources of interest. Avoid sites located near sources such as barking dogs, lawnmowers, pool pumps, and air conditioners unless it is the express intent of the analyst to measure these sources*. (4) Further, FTA guidance states, t*hat it is not necessary nor recommended that existing noise exposure be determined by measuring at every noise-sensitive location in the project area. Rather, the recommended approach is to characterize the noise environment for clusters of sites based on measurements or estimates at representative locations in the community*. (11)

Based on recommendations of Caltrans and the FTA, it is not necessary to collect measurements at each individual building or residence, because each receiver measurement represents a group of buildings that share acoustical equivalence. (11) In other words, the area represented by the receiver shares similar shielding, terrain, and geometric relationship to the reference noise source. Receivers represent a location of noise sensitive areas and are used to estimate the future noise level impacts. Collecting reference ambient noise level measurements at the nearby

sensitive receiver locations allows for a comparison of the before and after Project noise levels and is necessary to assess potential noise impacts due to the Project's contribution to the ambient noise levels.

5.3 NOISE MEASUREMENT RESULTS

The noise measurements presented below focus on the average or equivalent sound levels (L_{eq}). The equivalent sound level (L_{eq}) represents a steady state sound level containing the same total energy as a time varying signal over a given sample period. Table 5-1 identifies the hourly daytime (7:00 a.m. to 10:00 p.m.) and nighttime (10:00 p.m. to 7:00 a.m.) noise levels at each noise level measurement location. Appendix 5.2 provides a summary of the existing hourly ambient noise levels described below:

- Location L1 represents the noise levels within the southeast quadrant of the project site near a large shed. The noise level measurements collected show an overall 24-hour exterior noise level of 59.7 dBA CNEL. The hourly noise levels measured at location L1 ranged from 47.6 to 53.8 dBA L_{eq} during the daytime hours and from 48.9 to 55.5 dBA L_{eq} during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 51.5 dBA L_{eq} with an average nighttime noise level of 53.2 dBA L_{eq}.
- Location L2 represents the noise levels south of the project site along East Westward Avenue near a couple residential homes. The noise level measurements collected show an overall 24-hour exterior noise level of 60.0 dBA CNEL. The hourly noise levels measured at location L2 ranged from 48.1 to 56.2 dBA L_{eq} during the daytime hours and from 50.4 to 55.5 dBA L_{eq} during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 51.2 dBA L_{eq} with an average nighttime noise level of 53.7 dBA L_{eq}.
- Location L3 represents the noise levels Located on the southwest corner of the project site along East Westward Avenue near a few commercial buildings. The 24-hour CNEL indicates that the overall exterior noise level is 60.9 dBA CNEL. At location L3 the background ambient noise levels ranged from 50.5 to 61.6 dBA L_{eq} during the daytime hours to levels of 50.7 to 57.2 dBA L_{eq} during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 54.1 dBA L_{eq} with an average nighttime noise level of 54.4 dBA L_{eq}.
- Location L4 represents the noise levels west of the project site near East Barbour Street. The noise level measurements collected show an overall 24-hour exterior noise level of 63.8 dBA CNEL. The hourly noise levels measured at location L4 ranged from 49.4 to 60.1 dBA L_{eq} during the daytime hours and from 54.1 to 59.9 dBA L_{eq} during the nighttime hours. The energy (logarithmic) average daytime noise level was calculated at 54.5 dBA L_{eq} with an average nighttime noise level of 57.5 dBA L_{eq}.

Table 5-1 provides the (energy average) noise levels used to describe the daytime and nighttime ambient conditions. These daytime and nighttime energy average noise levels represent the average of all hourly noise levels observed during these time periods expressed as a single number. Appendix 5.2 provides summary worksheets of the noise levels for each hour as well as the minimum, maximum, L_1, L_2, L_5, L_8, L_{25}, L_{50}, L_{90}, L_{95}, and L_{99} percentile noise levels observed during the daytime and nighttime periods.

The background ambient noise levels in the Project study area are dominated by the transportation-related noise associated with the arterial roadway network. The 24-hour existing noise level measurements shown on Table 5-1 present the existing ambient noise conditions.

TABLE 5-1: 24-HOUR AMBIENT NOISE LEVEL MEASUREMENTS

Location[1]	Description	Energy Average Hourly Noise Level (dBA L_{eq})[2]		Average Median Noise Level (dBA L_{50})[2]		CNEL
		Daytime	Nighttime	Daytime	Nighttime	
L1	Located within the southeast quadrant of the project site near a large shed.	51.5	53.2	47.4	50.9	59.7
L2	Located south of the project site along East Westward Avenue near a couple residential homes.	51.2	53.7	47.7	51.8	60.0
L3	Located on the southwest corner of the project site along East Westward Avenue near a few commercial buildings.	54.1	54.4	48.7	51.6	60.9
L4	Located west of the project site near East Barbour Street	54.5	57.5	50.7	55.7	63.8

[1] See Exhibit 5-A for the noise level measurement locations.
[2] The long-term 24-hour measurement worksheets are included in Appendix 5.2.
"Daytime" = 7:00 a.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

EXHIBIT 5-A: NOISE MEASUREMENT LOCATIONS



LEGEND:

Noise Measurement Locations

6 METHODS AND PROCEDURES

The following section outlines the methods and procedures used to model and analyze the future traffic noise environment.

6.1 FHWA TRAFFIC NOISE PREDICTION MODEL

The estimated roadway noise impacts from vehicular traffic were calculated using a computer program that replicates the Federal Highway Administration (FHWA) Traffic Noise Prediction Model- FHWA-RD-77-108. (19) The FHWA Model arrives at a predicted noise level through a series of adjustments to the Reference Energy Mean Emission Level (REMEL). In California the national REMELs are substituted with the California Vehicle Noise (Calveno) Emission Levels. (20) Adjustments are then made to the REMEL to account for: the roadway classification (e.g., collector, secondary, major or arterial), the roadway active width (i.e., the distance between the center of the outermost travel lanes on each side of the roadway), the total average daily traffic (ADT), the travel speed, the percentages of automobiles, medium trucks, and heavy trucks in the traffic volume, the roadway grade, the angle of view (e.g., whether the roadway view is blocked), the site conditions ("hard" or "soft" relates to the absorption of the ground, pavement, or landscaping), and the percentage of total ADT which flows each hour throughout a 24-hour period.

6.2 OFF-SITE TRAFFIC NOISE PREDICTION MODEL INPUTS

Table 6-1 presents the roadway parameters used to assess the Project's off-site transportation noise impacts. Table 6-1 identifies the 6 study area roadway segments, the distance from the centerline to adjacent land use based on the functional roadway classifications per the City of Banning General Plan Circulation Element, and the posted vehicle speeds. For this analysis, soft site conditions are used to analyze the traffic noise impacts within the Project study area. Soft site conditions account for the sound propagation loss over natural surfaces such as normal earth and ground vegetation. Caltrans' research has shown that the use of soft site conditions is appropriate for the application of the FHWA traffic noise prediction model as used in this off-site traffic noise analysis. (21)

The Existing average daily traffic volumes (ADT) used for this study are presented on Table 6-2 and are provided by *Estes Banning Traffic Impact Analysis*. (2) Table 6-3 presents the time of day vehicle splits and Table 6-4 presents the traffic flow distributions (vehicle mix) used for this analysis. The vehicle mix provides the hourly distribution percentages of automobile, medium trucks, and heavy trucks for input into the FHWA noise prediction model.

TABLE 6-1: OFF-SITE ROADWAY PARAMETERS

ID	Roadway	Segment	Adjacent Land Use[1]	Distance From Centerline To Nearest Adjacent Land Use (Feet)[2]
1	Hargrave St.	n/o I-10 Fwy. WB Ramps	Commercial/Business Park	50'
2	Hargrave St.	s/o I-10 Fwy. EB Ramps	Industrial/Airport Industrial	50'
3	Hargrave St.	n/o Lincoln St.	Industrial/Airport Industrial	50'
4	Hargrave St.	s/o Lincoln St.	Industrial/Airport Industrial	44'
5	Hathaway St.	n/o Barbour St.	Airport Industrial	44'
6	Lincoln St.	e/o Hargrave St.	Airport Industrial	50'
7	Barbour St.	e/o Hargrave St.	Airport Industrial	50'

[1] Source: City of Banning General Plan Map.
[2] Distance to adjacent land use is based upon the right-of-way distances for each functional roadway classification provided in the City of Banning General Plan Circulation Element.

TABLE 6-2: AVERAGE DAILY TRAFFIC VOLUMES

ID	Roadway	Segment	Average Daily Traffic Volumes[1]			
			Existing 2019		Opening Year Cumulative (2021)	
			Without Project	With Project	Without Project	With Project
1	Hargrave St.	n/o I-10 Fwy. WB Ramps	10.9	11.0	12.0	12.1
2	Hargrave St.	s/o I-10 Fwy. EB Ramps	5.8	6.2	6.5	6.9
3	Hargrave St.	n/o Lincoln St.	5.8	6.2	6.4	6.8
4	Hargrave St.	s/o Lincoln St.	4.6	5.0	5.0	5.4
5	Hathaway St.	n/o Barbour St.	0.9	1.0	0.9	1.0
6	Lincoln St.	e/o Hargrave St.	1.1	1.2	1.3	1.4
7	Barbour St.	e/o Hargrave St.	0.4	0.8	0.5	0.9

[1] Source: Estes Banning Traffic Impact Analysis, August 2019.

TABLE 6-3: TIME OF DAY VEHICLE SPLITS

Vehicle Type	Time of Day Splits[1]			Total of Time of Day Splits
	Daytime	Evening	Nighttime	
Autos	77.50%	12.90%	9.60%	100.00%
Medium Trucks	84.80%	4.90%	10.30%	100.00%
Heavy Trucks	86.50%	2.70%	10.80%	100.00%

[1] Source: Typical Southern California vehicle mix.
"Daytime" = 7:00 a.m. to 7:00 p.m.; "Evening" = 7:00 p.m. to 10:00 p.m.; "Nighttime" = 10:00 p.m. to 7:00 a.m.

TABLE 6-4: DISTRIBUTION OF TRAFFIC FLOW BY VEHICLE TYPE (VEHICLE MIX)

Classification	Total % Traffic Flow[1]			Total
	Autos	Medium Trucks	Heavy Trucks	
All Roadways	97.42%	1.84%	0.74%	100.00%

[1] Source: Typical Southern California vehicle mix.

6.3 CONSTRUCTION VIBRATION ASSESSMENT METHODOLOGY

This analysis focuses on the potential ground-borne vibration associated with vehicular traffic and construction activities. Ground-borne vibration levels from automobile traffic are generally overshadowed by vibration generated by heavy trucks that roll over the same uneven roadway surfaces. However, due to the rapid drop-off rate of ground-borne vibration and the short duration of the associated events, vehicular traffic-induced ground-borne vibration is rarely perceptible beyond the roadway right-of-way, and rarely results in vibration levels that cause damage to buildings in the vicinity.

However, while vehicular traffic is rarely perceptible, construction has the potential to result in varying degrees of temporary ground vibration, depending on the specific construction activities and equipment used. Ground vibration levels associated with various types of construction equipment are summarized on Table 6-5. Based on the representative vibration levels presented for various construction equipment types, it is possible to estimate the human response (annoyance) using the following vibration assessment method defined by the FTA. (11)

- To describe the potential vibration levels capable of causing building damage the FTA provides the following equation: $PPV_{equip} = PPV_{ref} \times (25/D)^{1.5}$

TABLE 6-5: VIBRATION SOURCE LEVELS FOR CONSTRUCTION EQUIPMENT

Equipment	PPV (in/sec) at 25 feet
Small bulldozer	0.003
Jackhammer	0.035
Loaded Trucks	0.076
Large bulldozer	0.089

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

7 OFF-SITE TRANSPORTATION NOISE IMPACTS

To assess the off-site transportation CNEL noise level impacts associated with development of the proposed Project, noise contours were developed based on *Estes Banning Traffic Impact Analysis*. (2) Noise contour boundaries represent the equal levels of noise exposure and are measured in CNEL from the center of the roadway. Noise contours were developed for the following traffic scenarios:

- Existing Conditions Without / With Project: This scenario refers to the existing present-day noise conditions without and with the proposed Project.
- Opening Year Cumulative (2021) Without / With Project: This scenario refers to future Year 2021 without and with the proposed Project plus ambient growth.

7.1 TRAFFIC NOISE CONTOURS

To quantify the Project's traffic noise impacts on the surrounding areas, the changes in traffic noise levels on roadway segments surrounding the Project were calculated based on the changes in the average daily traffic volumes. Based on the noise impact significance criteria described in Section 4 and shown on Table 4-2, a significant off-site traffic noise level impact occurs:

- When the noise levels at existing and future noise-sensitive land uses (e.g. residential, etc.):
    - are less than 60 dBA CNEL and the Project creates a *readily perceptible* 5 dBA CNEL or greater Project-related noise level increase; or
    - range from 60 to 65 dBA CNEL and the Project creates a *barely perceptible* 3 dBA CNEL or greater Project-related noise level increase; or
    - already exceed 65 dBA CNEL, and the Project creates a community noise level increase of greater than 1.5 dBA CNEL (FICON, 1992).

Noise contours were used to assess the Project's incremental traffic-related noise impacts at land uses adjacent to roadways conveying Project traffic. The noise contours represent the distance to noise levels of a constant value and are measured from the center of the roadway for the 70, 65, and 60 dBA noise levels. The noise contours do not consider the effect of any existing noise barriers or topography that may attenuate ambient noise levels. In addition, because the noise contours reflect modeling of vehicular noise on area roadways, they appropriately do not reflect noise contributions from the surrounding stationary noise sources within the Project study area. Tables 7-1 through 7-4 present a summary of the exterior traffic noise levels, without barrier attenuation, for the 7 study area roadway segments analyzed from the without Project to the with Project conditions under Existing conditions. Appendix 7.1 includes a summary of the traffic noise level contours for each of the traffic scenarios.

TABLE 7-1: EXISTING WITHOUT PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Hargrave St.	n/o I-10 Fwy. WB Ramps	Commercial/Business Park	65.0	RW	50	107
2	Hargrave St.	s/o I-10 Fwy. EB Ramps	Industrial/Airport Industrial	62.2	RW	RW	70
3	Hargrave St.	n/o Lincoln St.	Industrial/Airport Industrial	62.2	RW	RW	70
4	Hargrave St.	s/o Lincoln St.	Industrial/Airport Industrial	63.2	RW	RW	72
5	Hathaway St.	n/o Barbour St.	Airport Industrial	56.1	RW	RW	RW
6	Lincoln St.	e/o Hargrave St.	Airport Industrial	55.0	RW	RW	RW
7	Barbour St.	e/o Hargrave St.	Airport Industrial	50.6	RW	RW	RW

[1] Source: City of Banning General Plan Map.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-2: EXISTING WITH PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Hargrave St.	n/o I-10 Fwy. WB Ramps	Commercial/Business Park	65.0	RW	50	108
2	Hargrave St.	s/o I-10 Fwy. EB Ramps	Industrial/Airport Industrial	62.5	RW	RW	74
3	Hargrave St.	n/o Lincoln St.	Industrial/Airport Industrial	62.5	RW	RW	74
4	Hargrave St.	s/o Lincoln St.	Industrial/Airport Industrial	63.6	RW	RW	76
5	Hathaway St.	n/o Barbour St.	Airport Industrial	56.6	RW	RW	RW
6	Lincoln St.	e/o Hargrave St.	Airport Industrial	55.4	RW	RW	RW
7	Barbour St.	e/o Hargrave St.	Airport Industrial	53.6	RW	RW	RW

[1] Source: City of Banning General Plan Map.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-3: OPENING YEAR CUMULATIVE 2021 WITHOUT PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Hargrave St.	n/o I-10 Fwy. WB Ramps	Commercial/Business Park	65.4	RW	53	114
2	Hargrave St.	s/o I-10 Fwy. EB Ramps	Industrial/Airport Industrial	62.7	RW	RW	76
3	Hargrave St.	n/o Lincoln St.	Industrial/Airport Industrial	62.7	RW	RW	75
4	Hargrave St.	s/o Lincoln St.	Industrial/Airport Industrial	63.6	RW	RW	76
5	Hathaway St.	n/o Barbour St.	Airport Industrial	56.1	RW	RW	RW
6	Lincoln St.	e/o Hargrave St.	Airport Industrial	55.7	RW	RW	RW
7	Barbour St.	e/o Hargrave St.	Airport Industrial	51.6	RW	RW	RW

[1] Source: City of Banning General Plan Map.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

TABLE 7-4: OPENING YEAR CUMULATIVE 2021 WITH PROJECT CONDITIONS NOISE CONTOURS

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Nearest Adjacent Land Use (dBA)[2]	Distance to Contour from Centerline (Feet)		
					70 dBA CNEL	65 dBA CNEL	60 dBA CNEL
1	Hargrave St.	n/o I-10 Fwy. WB Ramps	Commercial/Business Park	65.4	RW	53	115
2	Hargrave St.	s/o I-10 Fwy. EB Ramps	Industrial/Airport Industrial	63.0	RW	RW	79
3	Hargrave St.	n/o Lincoln St.	Industrial/Airport Industrial	62.9	RW	RW	78
4	Hargrave St.	s/o Lincoln St.	Industrial/Airport Industrial	63.9	RW	RW	80
5	Hathaway St.	n/o Barbour St.	Airport Industrial	56.6	RW	RW	RW
6	Lincoln St.	e/o Hargrave St.	Airport Industrial	56.1	RW	RW	RW
7	Barbour St.	e/o Hargrave St.	Airport Industrial	54.1	RW	RW	RW

[1] Source: City of Banning General Plan Map.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
"RW" = Location of the respective noise contour falls within the right-of-way of the road.

7.2 EXISTING CONDITION PROJECT TRAFFIC NOISE LEVEL CONTRIBUTIONS

Table 7-1 presents the Existing without Project conditions CNEL noise levels. The without Project exterior noise levels are expected to range from 50.6 to 65.0 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography. Table 7-2 shows the Existing with Project conditions will range from 53.6 to 65.0 dBA CNEL. As shown on Table 7-5 the Project will generate a noise level increase of up to 3.0 dBA CNEL on the study area roadway segments. Based on the significance criteria in Section 4, the Project-related noise level increases are

considered *less than significant* under Existing with Project conditions at the land uses adjacent to roadways conveying Project traffic.

TABLE 7-5: EXISTING CONDITION OFF-SITE PROJECT-RELATED TRAFFIC NOISE IMPACTS

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Adjacent Land Use (dBA)[2]			Noise-Sensitive Land Use?	Threshold Exceeded?[3]
				No Project	With Project	Project Addition		
1	Hargrave St.	n/o I-10 Fwy. WB Ramps	Commercial/Business Park	65.0	65.0	0.0	No	No
2	Hargrave St.	s/o I-10 Fwy. EB Ramps	Industrial/Airport Industrial	62.2	62.5	0.3	No	No
3	Hargrave St.	n/o Lincoln St.	Industrial/Airport Industrial	62.2	62.5	0.3	No	No
4	Hargrave St.	s/o Lincoln St.	Industrial/Airport Industrial	63.2	63.6	0.4	No	No
5	Hathaway St.	n/o Barbour St.	Airport Industrial	56.1	56.6	0.5	No	No
6	Lincoln St.	e/o Hargrave St.	Airport Industrial	55.0	55.4	0.4	No	No
7	Barbour St.	e/o Hargrave St.	Airport Industrial	50.6	53.6	3.0	No	No

[1] Source: City of Banning General Plan Map.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
[3] Significance Criteria (Section 4).

7.3 OPENING YEAR CUMULATIVE 2021 PROJECT TRAFFIC NOISE LEVEL CONTRIBUTIONS

Table 7-3 presents the Opening Year Cumulative 2021 without Project conditions CNEL noise levels. The Opening Year Cumulative 2021 without Project exterior noise levels are expected to range from 51.6 to 65.4 dBA CNEL, without accounting for any noise attenuation features such as noise barriers or topography.

Table 7-4 shows the Opening Year Cumulative 2021 with Project conditions will range from 54.1 to 65.4 dBA CNEL. Table 7-6 shows that the Project off-site traffic noise level increases will approach 2.6 dBA CNEL. Based on the significance criteria for off-site traffic noise presented in Table 4-2, land uses adjacent to the study area roadway segments would experience *less than significant* noise level impacts due to unmitigated Project-related traffic noise levels.

TABLE 7-6: OPENING YEAR CUMULATIVE 2021 WITH PROJECT TRAFFIC NOISE IMPACTS

ID	Road	Segment	Adjacent Land Use[1]	CNEL at Adjacent Land Use (dBA)[2]			Noise-Sensitive Land Use?	Threshold Exceeded?[3]
				No Project	With Project	Project Addition		
1	Hargrave St.	n/o I-10 Fwy. WB Ramps	Commercial/Business Park	65.4	65.4	0.0	No	No
2	Hargrave St.	s/o I-10 Fwy. EB Ramps	Industrial/Airport Industrial	62.7	63.0	0.3	No	No
3	Hargrave St.	n/o Lincoln St.	Industrial/Airport Industrial	62.7	62.9	0.3	No	No
4	Hargrave St.	s/o Lincoln St.	Industrial/Airport Industrial	63.6	63.9	0.3	No	No
5	Hathaway St.	n/o Barbour St.	Airport Industrial	56.1	56.6	0.5	No	No
6	Lincoln St.	e/o Hargrave St.	Airport Industrial	55.7	56.1	0.3	No	No
7	Barbour St.	e/o Hargrave St.	Airport Industrial	51.6	54.1	2.6	No	No

[1] Source: City of Banning General Plan Map.
[2] The CNEL is calculated at the boundary of the right-of-way of each roadway and the property line of the nearest adjacent land use.
[3] Significance Criteria (Section 4).

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8 RECEIVER LOCATIONS

To assess the potential for long-term operational and short-term construction noise impacts, the following four receiver locations as shown on Exhibit 8-A were identified as representative locations for focused analysis. Sensitive receivers are generally defined as locations where people reside or where the presence of unwanted sound could otherwise adversely affect the use of the land. Noise-sensitive land uses are generally considered to include: schools, hospitals, single-family dwellings, mobile home parks, churches, libraries, and recreation areas. Moderately noise-sensitive land uses typically include: multi-family dwellings, hotels, motels, dormitories, out-patient clinics, cemeteries, golf courses, country clubs, athletic/tennis clubs, and equestrian clubs. Land uses that are considered relatively insensitive to noise include business, commercial, and professional developments. Land uses that are typically not affected by noise include: industrial, manufacturing, utilities, agriculture, natural open space, undeveloped land, parking lots, warehousing, liquid and solid waste facilities, salvage yards, and transit terminals.

Sensitive receivers near the Project site include existing residential homes, as described below. Other sensitive land uses in the Project study area that are located at greater distances than those identified in this noise study will experience lower noise levels than those presented in this report due to the additional attenuation from distance and the shielding of intervening structures.

R1: Located approximately 87 feet southwest of the Project site, R1 represents existing residential homes on East Westward Avenue. A 24-hour noise level measurement was taken near this location, L3, to describe the existing ambient noise environment.

R2: Location R2 represents existing residential homes located approximately 701 feet southwest of the Project site on Charles Street.

R3: Location R3 represents the existing residential homes located roughly 1,596 feet southwest of the Project site on Charles Street.

R4: Location R4 represents the existing residential homes located roughly 1,369 feet west of the Project site on South Hathaway Street.

EXHIBIT 8-A: RECEIVER LOCATIONS



LEGEND:

Receiver Locations
Distance from receiver to Project site boundary (in feet)
6' Existing Barrier Height (in feet)
Existing Barrier

9 OPERATIONAL IMPACTS

This section analyzes the potential operational noise impacts due to the Project's stationary noise sources on the off-site sensitive receiver locations identified in Section 8. Exhibit 9-A identifies the receiver locations and noise source locations used to assess the Project-related operational noise levels.

9.1 REFERENCE NOISE LEVELS

To estimate the Project operational noise impacts, reference noise level measurements were collected from similar types of activities to represent the noise levels expected with the development of the proposed Project. This section provides a detailed description of the reference noise level measurements shown on Table 9-1 used to estimate the Project operational noise impacts. It is important to note that the following projected noise levels assume the worst-case noise environment with the idling trucks, delivery truck activities, backup alarms, as well as loading and unloading of dry goods, roof-top air conditioning units, and parking lot vehicle movements all operating continuously. These noise level impacts will likely vary throughout the day.

TABLE 9-1: REFERENCE NOISE LEVEL MEASUREMENTS

Noise Source	Duration (hh:mm:ss)	Ref. Distance (Feet)	Noise Source Height (Feet)	Reference Noise Level (dBA L_{50})		
				@ Ref. Dist.	Distance Attenuation to 50 Feet	@ 50 Feet
Truck Unloading/Docking Activity[1]	00:15:00	30'	8'	64.2	-4.4	59.8
Roof-Top Air Conditioning Units[2]	96:00:00	5'	5'	74.4	-20.0	54.4
Parking Lot Vehicle Movements[3]	01:00:00	10'	5'	49.0	-10.5	38.5
Trash Compactor[4]	00:02:22	5'	5'	70.5	-20.0	50.5

[1] Reference noise level measurements were collected from the existing operations of the Motivational Fulfillment & Logistics Services distribution facility located at 6810 Bickmore Avenue in the City of Chino on Wednesday, January 7, 2015.
[2] As measured by Urban Crossroads, Inc. on 7/27/2015 at the Santee Walmart located at 170 Town Center Parkway.
[3] As measured by Urban Crossroads, Inc. on 5/17/2017 at the Panasonic Avionics Corporation parking lot in the City of Lake Forest.
[4] As measured at the Irvine Walmart located at 16555 Von Karman Avenue by Urban Crossroads, Inc. on 1/23/2014.
[5] Anticipated duration (minutes within the hour) of noise activity during typical hourly conditions expected at the Project site based on the reference noise level measurement activity.

9.1.1 TRUCK UNLOADING/DOCKING ACTIVITY

A single, short-term reference noise level measurement was collected on Wednesday, January 7th, 2015, by Urban Crossroads, Inc. at the Motivational Fulfillment & Logistics Services distribution facility located at 6810 Bickmore Avenue in the City of Chino. The noise level measurement represents the typical weekday dry goods logistics warehouse operation in a single building, of roughly 285,000 square feet, with a loading dock area on the western side of the building façade. The noise sources observed in the truck court area included a combination of

Heavy Trucks (tractor trailer semi-trucks), Medium Trucks (two-axle delivery trucks), container loading/unloading, background truck idle, unloading, and movements, and background forklift operations.

The unloading/docking activity noise level measurement was taken over a fifteen-minute period and represents multiple noise sources, as described above, taken from the center of loading dock activities generating a reference noise level of 62.8 dBA L_{eq} at a uniform reference distance of 50 feet. The noise sources associated with employees unloading a docked truck container included the squeaking of the truck's shocks when weight was removed from the truck, employees playing music over a radio, as well as a forklift horn and backup alarm.

9.1.2 ROOF-TOP AIR CONDITIONING UNITS

To assess the impacts created by the roof-top air conditioning units at the Project buildings, reference noise levels measurements were taken over a four-day total duration at the Santee Walmart on July 27th, 2015. Located at 170 Town Center Parkway in the City of Santee, the noise level measurements describe mechanical roof-top air conditioning units on the roof of an existing Walmart store, with additional roof-top units operating in the background. The reference noise level represents Lennox SCA120 series 10-ton model packaged air conditioning units. At 5 feet from the closest roof-top air conditioning unit, the highest exterior noise level from all four days of the measurement period was measured at 77.2 dBA L_{eq}. Using the uniform reference distance of 50 feet, the noise level is 57.2 dBA L_{eq}. The operating conditions of the reference noise level measurement reflect peak summer cooling requirements with measured temperatures approaching 96 degrees Fahrenheit (°F) with average daytime temperatures of 82°F. The roof-top air condition units were observed to operate the most during the daytime hours for a total of 39 minutes per hour. The noise attenuation provided by a parapet wall is not reflected in this reference noise level measurement.

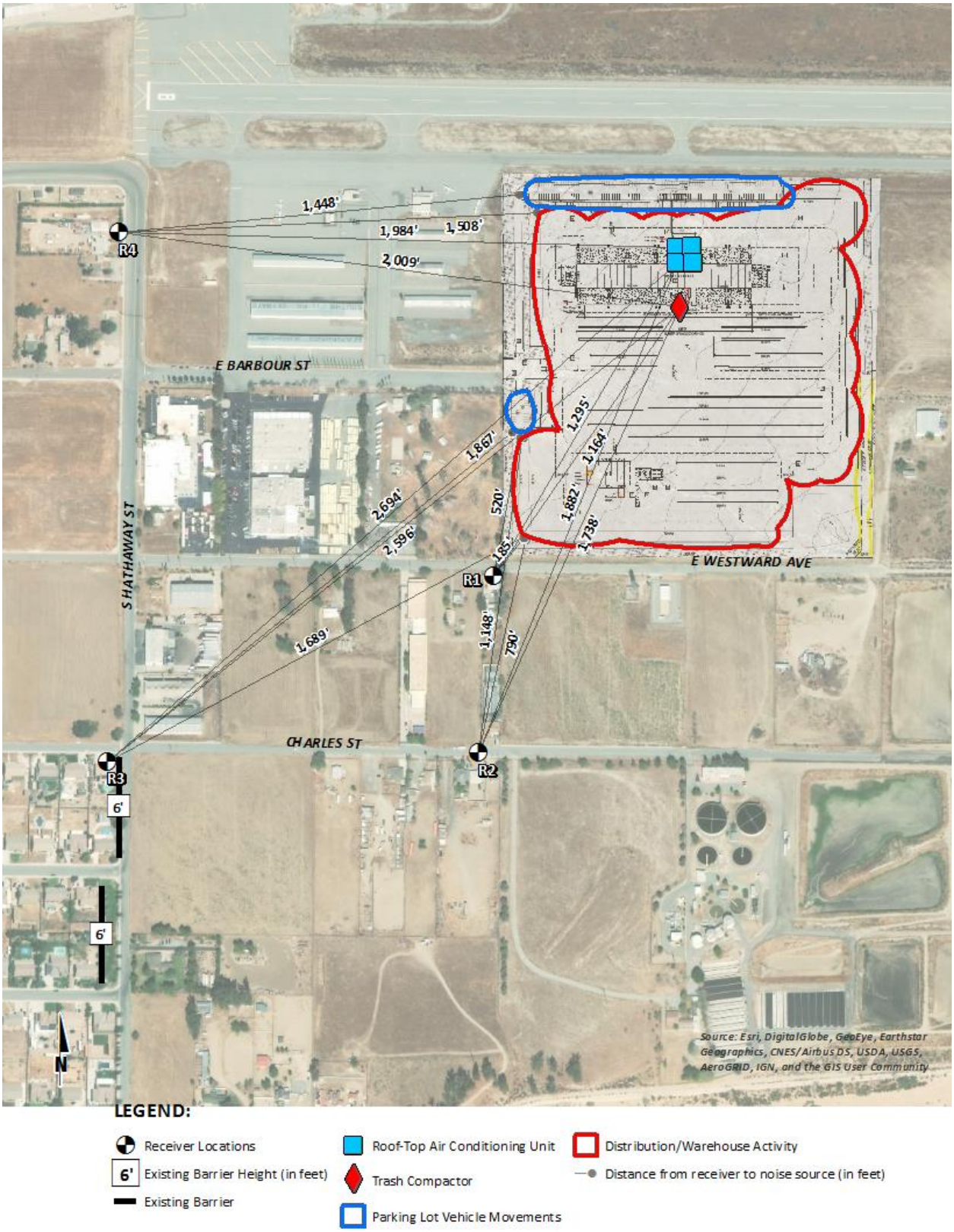
9.1.3 PARKING LOT VEHICLE MOVEMENTS

To determine the noise levels associated with parking lot vehicle movements, Urban Crossroads collected reference noise level measurements over a 24-hour period on May 17th, 2017 at the parking lot for the Panasonic Avionics Corporation in the City of Lake Forest. The peak hour of activity measured over the 24-hour noise level measurement period occurred between 12:00 p.m. to 1:00 p.m., or the typical lunch hour for employees working in the area. The measured reference noise level at 50 feet from parking lot vehicle movements was measured at 41.7 dBA L_{eq}. The parking lot noise levels are mainly due to cars pulling in and out of spaces during peak lunch hour activity and employees talking. Noise associated with parking lot vehicle movements is expected to operate for the entire hour (60 minutes).

9.1.4 TRASH COMPACTORS

In order to assess the impacts created by the trash compactor planned on the Project site, reference noise levels were gathered from the Irvine Walmart Supercenter located on 16555 Von Karman Avenue, by Urban Crossroads Inc. on Thursday, January 23rd, 2014. The unmitigated exterior noise levels were measured at 55.5 dBA Leq at a distance of 50 feet from the compactor.

EXHIBIT 9-A: OPERATIONAL NOISE SOURCE AND RECEIVER LOCATIONS



9.2 OPERATIONAL NOISE LEVELS

Based upon the reference noise levels, it is possible to estimate the Project operational stationary-source noise levels at each of the sensitive receiver locations. The operational noise level calculations shown on Table 9-2 account for the distance attenuation provided due to geometric spreading, when sound from a localized stationary source (i.e., a point source) propagates uniformly outward in a spherical pattern. Hard site conditions are used in the operational noise analysis which result in noise levels that attenuate (or decrease) at a rate of 6 dBA for each doubling of distance from a point source. The basic noise attenuation equation shown below is used to calculate the distance attenuation based on a reference noise level (SPL_1):

$$SPL_2 = SPL_1 - 20\log(D_2/D_1)$$

Where SPL_2 is the resulting noise level after attenuation, SPL_1 is the source noise level, D_2 is the distance to the reference sound pressure level (SPL_1), and D_1 is the distance to the receiver location. Table 9-2 indicates that the hourly noise levels associated with the idling trucks, delivery truck activities, backup alarms, as well as loading and unloading of dry goods, roof-top air conditioning units, and parking lot vehicle movements are expected to range from 33.1 to 51.5 dBA L_{50} at the sensitive off-site receiver locations. The operational noise level calculation worksheets are included in Appendix 9.1.

TABLE 9-2: UNMITIGATED PROJECT OPERATIONAL NOISE LEVELS

Receiver Location[1]	Noise Source[2]	Project Operational Noise Levels (dBA)[3]				
		L_{50} (30 mins)	L_{25} (15 mins)	L_8 (5 mins)	L_2 (1 min)	L_{max} (<1 min)
R1	Truck Unloading/Docking Activity	51.4	48.4	51.4	56.0	59.8
	Roof-Top Air Conditioning Units	28.9	26.1	27.8	29.1	29.4
	Parking Lot Vehicle Movements	26.5	23.3	24.3	29.3	35.3
	Trash Compactor	28.2	23.2	24.5	32.8	38.0
	Combined Noise Level:	51.5	48.5	51.4	56.0	59.8
R2	Truck Unloading/Docking Activity	38.8	35.8	38.8	43.4	47.2
	Roof-Top Air Conditioning Units	25.7	22.9	24.6	25.9	26.2
	Parking Lot Vehicle Movements	21.3	18.1	19.1	24.1	30.1
	Trash Compactor	24.7	19.7	21.0	29.3	34.5
	Combined Noise Level:	39.2	36.2	39.1	43.7	47.5
R3	Truck Unloading/Docking Activity	32.2	29.2	32.2	36.8	40.6
	Roof-Top Air Conditioning Units	22.6	19.8	21.5	22.8	23.1
	Parking Lot Vehicle Movements	18.1	14.9	15.9	20.9	26.9
	Trash Compactor	21.2	16.2	17.5	25.8	31.0
	Combined Noise Level:	33.1	30.0	32.8	37.4	41.3
R4	Truck Unloading/Docking Activity	33.2	30.2	33.2	37.8	41.6
	Roof-Top Air Conditioning Units	25.2	22.4	24.1	25.4	25.7
	Parking Lot Vehicle Movements	19.8	16.6	17.6	22.6	28.6
	Trash Compactor	23.4	18.4	19.7	28.0	33.2
	Combined Noise Level:	34.4	31.3	34.0	38.6	42.5

[1] See Exhibit 9-A for the receiver and noise source locations.
[2] Reference noise sources as shown on Table 9-1.
[3] Operational noise level calculations are provided in Appendix 9.1.

9.3 OPERATIONAL NOISE LEVEL COMPLIANCE

To demonstrate compliance with local noise regulations, the Project-only operational noise levels are evaluated against exterior noise level threshold based on the City of Banning exterior noise level standards. Table 9-3 shows the operational noise levels associated with Estes Banning Project will satisfy the City of Banning Municipal Code exterior noise level standards at all receiver locations.

TABLE 9-3: UNMITIGATED OPERATIONAL NOISE LEVEL COMPLIANCE

Receiver Location[1]	Land Use	Jurisdiction	Noise Level at Receiver Locations (dBA)[2]					Threshold Exceeded?[3]
			L_{50} (30 mins)	L_{25} (15 mins)	L_8 (5 mins)	L_2 (1 min)	L_{max} (<1 min)	
Banning	**Residential**	**Daytime**	**55**	**60**	**65**	**70**	**75**	**-**
		Nighttime	**45**	**50**	**55**	**60**	**65**	**-**
R1	Residential	Banning	51.5	48.5	51.4	56.0	59.8	No
R2	Residential	Banning	39.2	36.2	39.1	43.7	47.5	No
R3	Residential	Banning	33.1	30.0	32.8	37.4	41.3	No
R4	Residential	Banning	34.4	31.3	34.0	38.6	42.5	No

[1] See Exhibit 9-A for the receiver and noise source locations.
[2] Estimated Project operational noise levels as shown on Table 9-2.
[3] Do the estimated Project operational noise levels meet the operational noise level standards (Table 3-1)?

9.4 PROJECT OPERATIONAL NOISE CONTRIBUTION

To describe the Project operational noise level contributions, the Project operational noise levels were combined with the existing ambient noise levels measurements for the off-site receiver locations potentially impacted by Project operational noise sources. Since the units used to measure noise, decibels (dB), are logarithmic units, the Project-operational and existing ambient noise levels cannot be combined using standard arithmetic equations. (4) Instead, they must be logarithmically added using the following base equation:

$$SPL_{Total} = 10\log_{10}[10^{SPL1/10} + 10^{SPL2/10} + \ldots 10^{SPLn/10}]$$

Where "SPL1," "SPL2," etc. are equal to the sound pressure levels being combined, or in this case, the Project-operational and existing ambient noise levels. The difference between the combined Project and ambient noise levels describe the Project noise level contributions. Noise levels that would be experienced at receiver locations when Project-source noise is added to the ambient daytime and nighttime conditions are presented on Tables 9-4 and 9-5, respectively.

As indicated on Tables 9-4 and 9-5, the Project will contribute an operational noise level increase during the daytime hours of up to 4.6 dBA L_{50} and during the nighttime hours of up to 2.9 dBA L_{50}. The Project-related operational noise level contributions of up to 4.6 dBA L_{50} on the existing ambient noise environment are shown to satisfy the significance criteria discussed in Section 4, and the increases at the sensitive receiver locations will be *less than significant*. On this basis, Project operational stationary-source noise would not result in a substantial temporary/periodic, or permanent increase in ambient noise levels in the Project vicinity above levels existing without the Project, and impacts in these regards will be *less than significant*.

TABLE 9-4: DAYTIME OPERATIONAL NOISE LEVEL CONTRIBUTIONS

Receiver Location[1]	Total Project Operational Noise Level (dBA L_{50})[2]	Measurement Location[3]	Reference Ambient Noise Levels (dBA L_{50})[4]	Combined Project and Ambient (dBA L_{50})[5]	Project Contribution (dBA L_{50})[6]	Threshold Exceeded?[7]
R1	51.5	L3	48.7	53.3	4.6	No
R2	39.2	L3	48.7	49.2	0.5	No
R3	33.1	L3	48.7	48.8	0.1	No
R4	34.4	L4	50.7	50.8	0.1	No

[1] See Exhibit 9-A for the sensitive receiver locations.
[2] Total Project operational noise levels as shown on Table 9-3.
[3] Reference noise level measurement locations as shown on Exhibit 5-A.
[4] Observed daytime ambient noise levels as shown on Table 5-1.
[5] Represents the combined ambient conditions plus the Project activities.
[6] The noise level increase expected with the addition of the proposed Project activities.
[7] Significance Criteria as defined in Section 4.

TABLE 9-5: NIGHTTIME OPERATIONAL NOISE LEVEL CONTRIBUTIONS

Receiver Location[1]	Total Project Operational Noise Level (dBA L_{50})[2]	Measurement Location[3]	Reference Ambient Noise Levels (dBA L_{50})[4]	Combined Project and Ambient (dBA L_{50})[5]	Project Contribution (dBA L_{50})[6]	Threshold Exceeded?[7]
R1	51.5	L3	51.6	54.5	2.9	No
R2	39.2	L3	51.6	51.8	0.2	No
R3	33.1	L3	51.6	51.7	0.1	No
R4	34.4	L4	55.7	55.7	0.0	No

[1] See Exhibit 9-A for the sensitive receiver locations.
[2] Total Project operational noise levels as shown on Table 9-3.
[3] Reference noise level measurement locations as shown on Exhibit 5-A.
[4] Observed nighttime ambient noise levels as shown on Table 5-1.
[5] Represents the combined ambient conditions plus the Project activities.
[6] The noise level increase expected with the addition of the proposed Project activities.
[7] Significance Criteria as defined in Section 4.

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10 CONSTRUCTION IMPACTS

This section analyzes potential impacts resulting from the short-term construction activities associated with the development of the Project. Exhibit 10-A shows the construction activity boundaries in relation to the nearby sensitive receiver locations.

10.1 CONSTRUCTION NOISE LEVELS

Noise generated by the Project construction equipment will include a combination of trucks, power tools, concrete mixers, and portable generators that when combined can reach high levels. The number and mix of construction equipment is expected to occur in the following stages, based on similar projects in the City of Banning and information provided by the Project team:

- Rough Grading
- Site Preparation
- Fine Grading
- Building Construction
- Paving
- Architectural Coating

This construction noise analysis was prepared using reference noise level measurements taken by Urban Crossroads, Inc. to describe the typical construction activity noise levels for each stage of Project construction. The construction reference noise level measurements represent a list of typical construction activity noise levels. Noise levels generated by heavy construction equipment can range from approximately 68 dBA to more than 80 dBA when measured at 50 feet. However, these noise levels diminish with distance from the construction site at a rate of 6 dBA per doubling of distance. For example, a noise level of 80 dBA measured at 50 feet from the noise source to the receiver would be reduced to 74 dBA at 100 feet from the source to the receiver and would be further reduced to 68 dBA at 200 feet from the source to the receiver.

10.2 CONSTRUCTION REFERENCE NOISE LEVELS

To describe the Project construction noise levels, measurements were collected for similar activities at several construction sites. Table 10-1 provides a summary of the construction reference noise level measurements. Since the reference noise levels were collected at varying distances, all construction noise level measurements presented on Table 10-1 have been adjusted to describe a common reference distance of 50 feet.

EXHIBIT 10-A: CONSTRUCTION ACTIVITY AND RECEIVER LOCATIONS



LEGEND:

- Receiver Locations
- Construction Activity
- 6' Existing Barrier Height (in feet)
- Distance from receiver to construction activity (in feet)
- Existing Barrier

TABLE 10-1: CONSTRUCTION REFERENCE NOISE LEVELS

ID	Noise Source	Duration (h:mm:ss)	Reference Distance From Source (Feet)	Reference Noise Levels @ Reference Distance (dBA L_{eq})	Reference Noise Levels @ 50 Feet (dBA L_{eq})[8]
1	Rubber Tired Dozers[1]	0:01:00	30'	68.6	64.2
2	Excavators[2]	0:01:01	30'	72.6	68.2
3	Grading[2]	0:05:00	30'	77.9	73.5
4	Forklifts[2]	0:02:00	30'	66.7	62.3
5	Pavers[3]	0:01:00	30'	70.0	65.6
6	Rollers[3]	0:01:00	30'	70.3	65.9
7	Paving Equipment[3]	0:00:20	50'	71.6	71.6
8	Crawler Tractors[4]	0:00:32	30'	84.0	79.6
9	Scrapers[5]	0:00:14	15'	83.1	72.6
10	Air Compressors[6]	0:02:00	10'	79.2	65.2
11	Generator Sets[7]	0:15:00	50'	64.9	64.9
12	Crane[8]	0:01:08	30'	66.7	62.3

[1] As measured by Urban Crossroads, Inc. on 10/14/15 at a business park construction site located at the northwest corner of Barranca Parkway and Alton Parkway in the City of Irvine.
[2] As measured by Urban Crossroads, Inc. on 10/20/15 at a construction site located in Rancho Mission Viejo.
[3] Reference noise level measurements were collected from a nighttime concrete pour at an industrial construction site, located at 27334 San Bernardino Avenue in the City of Redlands, between 1:00 a.m. to 2:00 a.m. on 7/1/15.
[4] As measured by Urban Crossroads, Inc. on 10/30/15 during grading operations within an industrial construction site located in the City of Ontario.
[5] As measured by Urban Crossroads, Inc. on 6/19/2019 during construction noise testing at Meadowlark construction site in the City of Murrieta.
[6] As measured by Urban Crossroads, Inc. on 9/16/2015 at the Giant RV located at 41150 Juniper Street in the City of Murrieta.
[7] As measured by Urban Crossroads, Inc. on 7/14/2012 at the Dollar General Store at 700 South San Jacinto Avenue in the City of San Jacinto.
[8] As measured by Urban Crossroads, Inc. on 5/18/2017 at the 260 E. Baker Street in the City of Costa Mesa.
[9] Reference noise levels are calculated at 50 feet using a drop off rate of 6 dBA per doubling of distance (point source).

10.3 CONSTRUCTION NOISE ANALYSIS

Using the reference construction equipment noise levels, calculations of the Project construction noise level impacts at the nearby sensitive receiver locations were completed. Tables 10-2 to 10-7 present the short-term construction noise levels for each stage of construction. Table 10-8 provides a summary of the construction noise levels by stage at the nearby noise-sensitive receiver locations. Based on the stages of construction, the noise impacts associated with the proposed Project are expected to create temporarily high noise levels at the nearby receiver locations. To assess the worst-case construction noise levels, this analysis shows the highest noise impacts when the equipment with the highest reference noise level is operating at the closest point from the edge of primary construction activity to each receiver location.

TABLE 10-2: ROUGH GRADING EQUIPMENT NOISE LEVELS

Reference Construction Activity[1]	Reference Noise Level @ 50 Feet (dBA L_{eq})
Crawler Tractors	79.6
Excavators	68.2
Grading	73.5
Rubber Tired Dozers	64.2
Scrapers	72.6
Highest Reference Noise Level at 50 Feet (dBA L_{eq}):	79.6

Receiver Location	Distance to Construction Activity (Feet)[2]	Distance Attenuation (dBA L_{eq})[3]	Estimated Noise Barrier Attenuation (dBA L_{eq})[4]	Construction Noise Level (dBA L_{eq})
R1	107'	-6.6	0.0	73.0
R2	722'	-23.2	0.0	56.4
R3	1,616'	-30.2	0.0	49.4
R4	1,389'	-28.9	0.0	50.7

[1] Reference construction noise level measurements taken by Urban Crossroads, Inc.
[2] Distance from the nearest point of construction activity to the nearest receiver.
[3] Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.
[4] Estimated barrier attenuation from existing barriers/berms in the Project study area.

TABLE 10-3: SITE PREPARATION EQUIPMENT NOISE LEVELS

Reference Construction Activity[1]	Reference Noise Level @ 50 Feet (dBA L_{eq})
Crawler Tractors	79.6
Rubber Tired Dozers	64.2
Highest Reference Noise Level at 50 Feet (dBA L_{eq}):	79.6

Receiver Location	Distance to Construction Activity (Feet)[2]	Distance Attenuation (dBA L_{eq})[3]	Estimated Noise Barrier Attenuation (dBA L_{eq})[4]	Construction Noise Level (dBA L_{eq})
R1	107'	-6.6	0.0	73.0
R2	722'	-23.2	0.0	56.4
R3	1,616'	-30.2	0.0	49.4
R4	1,389'	-28.9	0.0	50.7

[1] Reference construction noise level measurements taken by Urban Crossroads, Inc.
[2] Distance from the nearest point of construction activity to the nearest receiver.
[3] Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.
[4] Estimated barrier attenuation from existing barriers/berms in the Project study area.

TABLE 10-4: FINE GRADING CONSTRUCTION EQUIPMENT NOISE LEVELS

Reference Construction Activity[1]	Reference Noise Level @ 50 Feet (dBA L_{eq})
Crawler Tractors	79.6
Excavators	68.2
Grading	73.5
Rubber Tired Dozers	64.2
Scrapers	72.6
Highest Reference Noise Level at 50 Feet (dBA L_{eq}):	79.6

Receiver Location	Distance to Construction Activity (Feet)[2]	Distance Attenuation (dBA L_{eq})[3]	Estimated Noise Barrier Attenuation (dBA L_{eq})[4]	Construction Noise Level (dBA L_{eq})
R1	107'	-6.6	0.0	73.0
R2	722'	-23.2	0.0	56.4
R3	1,616'	-30.2	0.0	49.4
R4	1,389'	-28.9	0.0	50.7

[1] Reference construction noise level measurements taken by Urban Crossroads, Inc.
[2] Distance from the nearest point of construction activity to the nearest receiver.
[3] Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.
[4] Estimated barrier attenuation from existing barriers/berms in the Project study area.

TABLE 10-5: BUILDING CONSTRUCTION EQUIPMENT NOISE LEVELS

Reference Construction Activity[1]	Reference Noise Level @ 50 Feet (dBA L_{eq})
Crane	62.3
Crawler Tractors	76.7
Forklifts	62.3
Generator Sets	64.9
Highest Reference Noise Level at 50 Feet (dBA L_{eq}):	76.7

Receiver Location	Distance to Construction Activity (Feet)[2]	Distance Attenuation (dBA L_{eq})[3]	Estimated Noise Barrier Attenuation (dBA L_{eq})[4]	Construction Noise Level (dBA L_{eq})
R1	107'	-6.6	0.0	70.1
R2	722'	-23.2	0.0	53.5
R3	1,616'	-30.2	0.0	46.5
R4	1,389'	-28.9	0.0	47.8

[1] Reference construction noise level measurements taken by Urban Crossroads, Inc.
[2] Distance from the nearest point of construction activity to the nearest receiver.
[3] Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.
[4] Estimated barrier attenuation from existing barriers/berms in the Project study area.

TABLE 10-6: PAVING EQUIPMENT NOISE LEVELS

Reference Construction Activity[1]	Reference Noise Level @ 50 Feet (dBA L_{eq})
Pavers	65.6
Paving Equipment	71.6
Rollers	65.9
Highest Reference Noise Level at 50 Feet (dBA L_{eq}):	71.6

Receiver Location	Distance to Construction Activity (Feet)[2]	Distance Attenuation (dBA L_{eq})[3]	Estimated Noise Barrier Attenuation (dBA L_{eq})[4]	Construction Noise Level (dBA L_{eq})
R1	107'	-6.6	0.0	65.0
R2	722'	-23.2	0.0	48.4
R3	1,616'	-30.2	0.0	41.4
R4	1,389'	-28.9	0.0	42.7

[1] Reference construction noise level measurements taken by Urban Crossroads, Inc.
[2] Distance from the nearest point of construction activity to the nearest receiver.
[3] Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.
[4] Estimated barrier attenuation from existing barriers/berms in the Project study area.

TABLE 10-7: ARCHITECTURAL COATING EQUIPMENT NOISE LEVELS

Reference Construction Activity[1]	Reference Noise Level @ 50 Feet (dBA L_{eq})
Air Compressors	65.2
Highest Reference Noise Level at 50 Feet (dBA L_{eq}):	65.2

Receiver Location	Distance to Construction Activity (Feet)[2]	Distance Attenuation (dBA L_{eq})[3]	Estimated Noise Barrier Attenuation (dBA L_{eq})[4]	Construction Noise Level (dBA L_{eq})
R1	107'	-6.6	0.0	58.6
R2	722'	-23.2	0.0	42.0
R3	1,616'	-30.2	0.0	35.0
R4	1,389'	-28.9	0.0	36.3

[1] Reference construction noise level measurements taken by Urban Crossroads, Inc.
[2] Distance from the nearest point of construction activity to the nearest receiver.
[3] Point (stationary) source drop off rate of 6.0 dBA per doubling of distance.
[4] Estimated barrier attenuation from existing barriers/berms in the Project study area.

10.4 CONSTRUCTION NOISE LEVEL COMPLIANCE

The construction noise analysis shows that the highest construction noise levels will occur when construction activities take place at the closest point from primary Project construction activity to each of the nearby receiver locations. As shown on Table 10-7, the unmitigated construction noise levels are expected to range from 35.0 to 73.0 dBA L_{eq} at the nearby receiver locations.

TABLE 10-8: UNMITIGATED CONSTRUCTION EQUIPMENT NOISE LEVEL SUMMARY (DBA L_{EQ})

Receiver Location[1]	Construction Noise Level (dBA L_{eq})						
	Rough Grading	Site Preparation	Fine Grading	Building Construction	Paving	Architectural Coating	Highest Activity Noise Levels[2]
R1	73.0	73.0	73.0	70.1	65.0	58.6	73.0
R2	56.4	56.4	56.4	53.5	48.4	42.0	56.4
R3	49.4	49.4	49.4	46.5	41.4	35.0	49.4
R4	50.7	50.7	50.7	47.8	42.7	36.3	50.7

[1] Noise receiver locations are shown on Exhibit 10-A.
[2] Estimated construction noise levels during peak operating conditions.

10.5 CONSTRUCTION NOISE THRESHOLDS OF SIGNIFICANCE

The construction noise analysis shows that the highest construction noise levels will occur when construction activities take place at the closest point from the edge of primary construction activity to each of the nearby receiver locations. To evaluate whether the Project will generate potentially significant short-term noise levels at off-site sensitive receiver locations, the City of Banning interior construction noise level limit for residential uses of 55 dBA L_{eq}, previously described in Section 3, is used as the acceptable threshold for construction noise at the nearby sensitive receiver locations.

The interior noise level is the difference between the predicted exterior noise level at the building facade and the noise reduction of the structure. Typical building construction will provide a Noise Reduction (NR) of approximately 12 dBA with "windows open" and a minimum 25 dBA noise reduction with "windows closed." (9; 28) However, sound leaks, cracks and openings within the window assembly can greatly diminish its effectiveness in reducing noise. Several methods are used to improve interior noise reduction, including: (1) weather-stripped solid core exterior doors; (2) upgraded dual glazed windows; (3) mechanical ventilation/air conditioning; and (4) exterior wall/roof assembles free of cut outs or openings.

Table 10-9 shows the highest construction noise levels with the estimated interior noise reduction of the existing residential homes of 25 dBA L_{eq}, will range from 24.4 to 48.0 dBA L_{eq}, and will satisfy the 55 dBA L_{eq} City of Banning interior construction noise level standard. The noise impact due to unmitigated Project construction noise levels is, therefore, considered a *less than significant* impact at all nearby sensitive receiver locations.

TABLE 10-9: CONSTRUCTION EQUIPMENT NOISE LEVEL COMPLIANCE

Receiver Location[1]	Construction Noise Levels (dBA L_{eq})				
	Highest Construction Noise Level[2]	Interior Noise Reduction	Estimated Interior Construction Noise Levels	City of Banning Interior Const. Noise Level Threshold[3]	Threshold Exceeded?[4]
R1	73.0	-25	48.0	55	No
R2	56.4	-25	31.4	55	No
R3	49.4	-25	24.4	55	No
R4	50.7	-25	25.7	55	No

[1] Noise receiver locations are shown on Exhibit 10-A.
[2] Highest reference construction noise levels, as shown on Table 10-2.
[3] Construction noise level threshold as shown on Table 4-2.
[4] Do the estimated Project construction noise levels exceed the construction noise level threshold?

10.5 CONSTRUCTION VIBRATION IMPACTS

Construction activity can result in varying degrees of ground vibration, depending on the equipment and methods used, distance to the affected structures and soil type. It is expected that ground-borne vibration from Project construction activities would cause only intermittent, localized intrusion. The proposed Project's construction activities most likely to cause vibration impacts are:

- Heavy Construction Equipment: Although all heavy mobile construction equipment has the potential of causing at least some perceptible vibration while operating close to building, the vibration is usually short-term and is not of sufficient magnitude to cause building damage. It is not expected that heavy equipment such as large bulldozers would operate close enough to any residences to cause a vibration impact.
- Trucks: Trucks hauling building materials to construction sites can be sources of vibration intrusion if the haul routes pass through residential neighborhoods on streets with bumps or potholes. Repairing the bumps and potholes generally eliminates the problem.

Ground-borne vibration levels resulting from construction activities occurring within the Project site were estimated by data published by the Federal Transit Administration (FTA). Construction activities that would have the potential to generate low levels of ground-borne vibration within the Project site include grading. Using the vibration source level of construction equipment provided on Table 6-5 and the construction vibration assessment methodology published by the FTA, it is possible to estimate the Project vibration impacts. Table 10-4 presents the expected Project related vibration levels at each of the sensitive receiver locations based on the Caltrans building damage threshold of 0.3 in/sec PPV for older residential structures.

At distances ranging from 107 to 1,616 feet from Project construction activity, construction vibration velocity levels are shown to range from 0.000 to 0.010 in/sec PPV at the nearby sensitive receiver locations, which will remain below the Caltrans 0.3 in/sec PPV building damage threshold for older residential structures, as shown on Table 10-11. Therefore, the vibration impacts due to Project construction will be *less than significant.*

Further, vibration levels at the site of the closest sensitive receiver are unlikely to be sustained during the entire construction period, but will occur rather only during the times that heavy construction equipment is operating simultaneously adjacent to the Project site perimeter. Moreover, construction at the Project site will be restricted to daytime hours consistent with City requirements thereby eliminating potential vibration impacts during the sensitive nighttime hours.

TABLE 10-11: CONSTRUCTION EQUIPMENT VIBRATION LEVELS

Receiver[1]	Distance to Const. Activity (Feet)	Receiver PPV Levels (in/sec)[2]					RMS Velocity Levels (in/sec)[3]	Threshold	Threshold Exceeded?[4]
		Small Bulldozer	Jack-hammer	Loaded Trucks	Large Bulldozer	Peak Vibration			
R1	107'	0.000	0.004	0.009	0.010	0.010	0.007	0.01	No
R2	722'	0.000	0.000	0.000	0.001	0.001	0.000	0.01	No
R3	1,616'	0.000	0.000	0.000	0.000	0.000	0.000	0.01	No
R4	1,389'	0.000	0.000	0.000	0.000	0.000	0.000	0.01	No

[1] Receiver locations are shown on Exhibit 10-A.
[2] Based on the Vibration Source Levels of Construction Equipment included on Table 6-8.
[3] Vibration levels in PPV are converted to RMS velocity using a 0.71 conversion factor identified in the Caltrans Transportation and Construction Vibration Guidance Manual, September 2013.
[4] Does the vibration level exceed the maximum acceptable vibration threshold?

11 REFERENCES

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25. **Sespe Consulting, Inc.** *Banning Heavy Equipment List.* September 2017.

12 CERTIFICATION

The contents of this noise study report represent an accurate depiction of the noise environment and impacts associated with the proposed Estes Banning Project. The information contained in this noise study report is based on the best available data at the time of preparation. If you have any questions, please contact me directly at (949) 336-5979.

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EDUCATION

Master of Science in Civil and Environmental Engineering
California Polytechnic State University, San Luis Obispo • December, 1993

Bachelor of Science in City and Regional Planning
California Polytechnic State University, San Luis Obispo • June, 1992

PROFESSIONAL REGISTRATIONS

PE – Registered Professional Traffic Engineer – TR 2537 • January, 2009
AICP – American Institute of Certified Planners – 013011 • June, 1997–January 1, 2012
PTP – Professional Transportation Planner • May, 2007 – May, 2013
INCE – Institute of Noise Control Engineering • March, 2004

PROFESSIONAL AFFILIATIONS

ASA – Acoustical Society of America
ITE – Institute of Transportation Engineers

PROFESSIONAL CERTIFICATIONS

Certified Acoustical Consultant – County of Orange • February, 2011
FHWA-NHI-142051 Highway Traffic Noise Certificate of Training • February, 2013

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APPENDIX 3.1:

CITY OF BANNING MUNICIPAL CODE

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Chapter 8.44 - NOISE

Sections:

8.44.010 - Purpose.

The purpose of this chapter is to establish criteria and standards for the regulation of noise levels within the city and to implement the noise provisions contained in the city's General Plan.

(Code 1965, § 11D-01.)

8.44.020 - Findings.

It is hereby found and declared that:

A. The making, creation or maintenance of excessive, unnecessary, unnatural or unusually loud noises which are prolonged, unusual and unnatural in their time, place and use, affect and are a detriment to public health, comfort, convenience, safety, welfare and prosperity of the residents of the city; and

B. The necessity for the provisions and prohibitions hereinafter contained and enacted is hereby declared as a matter of legislative determination and public policy. It is further declared that the provisions and prohibitions hereinafter contained and enacted are in pursuance of and for the purpose of securing and promoting the public health, comfort, convenience, safety, welfare and prosperity and the peace and quiet of the city.

(Code 1965, § 11D-02.)

8.44.030 - Definitions.

"Ambient noise" shall mean the all-encompassing noise level associated with a given environment, being a composite of sounds from all sources, excluding any intrusive noise.

"Capital Improvement" shall mean major construction, acquisition or maintenance/repair projects. Typical examples of major construction would include new street improvements, park development and construction of public buildings or structures, treatment plants. Structures include lighting, sewer and water pipelines and other related utility structures including treatment plants, gas, electric and other infrastructure, landscaping and drainage facilities and all other public infrastructure. "Acquisitions" include the acquisition of land or interest in land. Major maintenance/repairs may include street resurfacing and modifications to public buildings and structures.

"Commercial purpose" shall mean the use, operation or maintenance of any sound-amplifying equipment for the purpose of advertising any business, goods or services and/or for the purpose of advertising or attracting the attention of the public to or soliciting patronage for any performance, entertainment, exhibition or event, or for the purpose of demonstrating any such sound equipment.

"Cumulative time period" shall mean a period of time composed of individual time segments which may be continuous or interrupted.

"Decibel (dB)" shall mean a measurement unit of sound pressure level which denotes the ratio between two quantities which are proportional to power; the number of decibels corresponding to the ratio of two amounts of power is ten times the logarithm to the base ten of this ratio.

"Governmental agency" shall mean the United States (federal government), the State of California, Riverside County, the City of Banning, the school district and any special district within Riverside County or any combination of these agencies.

"Impact noise" shall mean the sound produced by the impact or collision of one moving object or mass with a second object or mass that is stationary or moving.

"Intrusive noise" shall mean a sound which intrudes over and above the existing ambient noise level at a given location.

"Motor-driven vehicle" shall include, but not be limited to, any automobile, truck, van, bus, motorcycle, minibike, go-cart or other self-propelled vehicle, on or off road, and aircraft.

"Noise" shall mean any sound that is loud or disturbing or that interferes with one's ability to hear some other sound.

"Noise level" shall mean the "A" weighted sound pressure level in decibels audible to humans obtained by using a sound level meter. The unit of noise level measurement shall be designated as dB(A).

"Person" shall mean a person, firm, association, copartnership, joint venture, corporation or any entity, public or private in nature.

"Public property" shall mean property that is owned by any governmental agency as indicated in this section or held by the public, including, but not limited to, parks, streets, sidewalks, and alleys.

"Simple tone noise" shall mean a noise characterized by a predominant frequency or frequencies so that other frequencies cannot be readily distinguished.

"Sound pressure level of a sound, in decibels" shall mean twenty times the logarithm to the base ten of the ratio of the pressure of this sound to the reference pressure, which reference pressure shall be explicitly stated.

As used in Section 8.44.090(H), "person of normal hearing sensitivity" means a person who has a hearing threshold level of between zero decibels and twenty-five decibels HL averaged over frequencies 500, 1000, and 2000 Hertz.

(Code 1965, § 11D-03.)

(Ord. No. 1454, § 4, 10-9-12)

8.44.040 - Noise level measurement criteria.

A. Any noise level measurement, made pursuant to the provisions of this chapter, shall be determined by using a sound level meter that meets the minimum requirements of the American National Standard Institute for sound level meters, or by using an instrument with associated recording and analyzing equipment that will provide equivalent data.

B. The factors which shall be considered in determining whether a violation of the provisions of this section exists shall include, but not be limited to, the following:

1. The sound level of the objectionable noise;

2. The sound level of the ambient noise;

3. The proximity of the noise to residential sleeping facilities;
4. The nature and zoning of the area within which the noise emanates;
5. The number of persons affected by the noise source;
6. The time of day or night the noise occurs;
7. The duration of the noise and its tonal, informational or musical content;
8. Whether the noise is produced by a commercial or noncommercial activity;

C. The above factors shall be considered in addition to the noise levels set forth in this section in determining a violation. However, noises do not necessarily need to exceed those noise level limits to be considered unnecessary or unusual so as to cause discomfort or annoyance to persons in the area.

(Code 1965, § 11D-04.)

8.44.050 - Base ambient noise level.

All ambient noise measurements shall commence at the base ambient noise levels in decibels within the respective times and zones as follows:

Decibels	Time	Zone Use
45 dB(A)	10:00 p.m. — 7:00 a.m.	Residential
55 dB(A)	7:00 a.m. — 10:00 p.m.	Residential
75 dB(A)	Anytime	Industrial and commercial

Actual decibel measurements exceeding the levels set forth hereinabove at the times and within the zones corresponding thereto shall be employed as the "base ambient noise level" referred to in this chapter. Otherwise, no ambient noise shall be deemed to be less than the above specified levels.

(Code 1965, § 11D-05.)

8.44.060 - Exterior noise level measurement.

Except as otherwise specifically provided herein, all reference to "exterior noise" or "exterior noise levels" as used in this chapter shall be as measured at any point relative to the closest point of the source of the noise at the property line of the complaining party. Measurements will not be made during extraordinary times, such as during the movement of a nearby train or airplane.

(Code 1965, § 11D-06.)

8.44.070 - Maximum residential noise levels.

No noise level shall exceed the following for the duration periods specified:

Noise Level Exceeded	Maximum Duration Period
5 dB(A) above BANL	15 minutes any hour
10 dB(A) above BANL	5 minutes any hour
15 dB(A) above BANL	1 minute any hour
20 dB(A) above BANL	Not permitted

(Code 1965, § 11D-07.)

8.44.080 - Maximum nonresidential noise levels.

Any provision contained herein to the contrary notwithstanding, no exterior noise level shall exceed the base ambient noise levels (BANL) for nonresidential land uses set forth in any development agreement applicable to such development or as otherwise specifically set forth in any development standard which is by its terms enforceable by the city against the noise maker.

(Code 1965, § 11D-08.)

8.44.085 - Noise from public/governmental services exempt.

Sound emanating from the following sources is exempt from the provisions of this chapter:

A. Capital improvement projects of a governmental agency.
B. Maintenance and repair of public properties by a governmental agency.
C. Public safety personnel in the course of executing their official duties, including, but not limited to, sworn peace officers, emergency personnel, and public utility personnel. This exemption includes, without limitation, sound emanating from all equipment used by such personnel, whether stationary or mobile, so long as such sound is reasonably related to, and necessary for, the undertaking of official public safety duties.

(Ord. No. 1454, § 2, 10-9-12)

8.44.090 - Noises prohibited—Unnecessary noise standard.

Any other provision of this chapter notwithstanding, the following acts are expressly prohibited as a violation of this chapter. Such acts are hereby expressly declared to be loud, unusual and unnecessary noises in violation of this chapter. namely:

A. Horns, signaling devices, etc. The sounding of any horn or signaling device on any automobile, motorcycle, streetcar or other vehicle on any street or public place of the city, except as a danger warning. Back-up beepers may be sounded consistent with the maximum duration periods set forth in Section 8.44.080 of this chapter. The creation by means of any such signaling device of any unreasonably loud or harsh sound and, the sounding of any such device for an unnecessary and unreasonable period of time. For the purposes of establishing an unnecessary and unreasonable period of time with respect to automobile anti-theft alarm devices, such alarm shall not sound in excess of fifteen minutes.

B. Radios, televisions and stereos, etc. It shall be unlawful for any person, without special permit or as may otherwise be provided in this ordinance code, to play, use, operate or permit to be played, used or operated, any radio, television set, musical instrument, phonograph, stereophonic equipment, jukebox or other machine or device, for producing, reproducing or amplifying sound at such sound levels as to cause the sound level to exceed forty dB(A) as measured within the residence of any complaining person.

C. Loudspeakers, amplifiers for advertising. The using, operating or permitting to be played, used or operated of any radio receiving set, musical instrument, phonograph, loudspeaker, sound amplifier or other machine or device for the producing or reproducing of sound which is cast upon the public streets in such manner as to exceed the maximum exterior noise level permitted under this chapter.

D. Animals, fowl, etc. It is unlawful for any person to keep or allow to be kept, or suffer or permit any animal to remain upon the premises under the control of such a person, when such animal habitually barks, whines or makes loud and unusual noises in such a manner as to disturb the peace and quiet of the neighbors surrounding or in the vicinity of such premises, or whose barking or howling or other sound or cry interferes with any person of ordinary sensitiveness in the reasonable and comfortable enjoyment of life and property. This provision shall not apply to farm animals within any zone where such farm animals are permitted by this ordinance code.

E. Construction, landscape maintenance or repair.

1. It shall be unlawful for any person to engage in or permit the generation of noise related to landscape maintenance, construction including erection, excavation, demolition, alteration or repair of any structure or improvement, at such sound levels, as measured at the property line of the nearest adjacent occupied property, as to be in excess of the sound levels permitted under this chapter, at other times than between the hours of 7:00 A.M. and 6:00 P.M. The person engaged in such activity is hereby permitted to exceed sound levels otherwise set forth in this chapter for the duration of the activity during the above described hours for purposes of construction. However, nothing contained herein shall permit any person to cause sound levels to at any time exceed fifty-five dB(A) for intervals of more than fifteen minutes per hour as measured in the interior of the nearest occupied residence or school.
2. Construction related noise as defined in subsection (E)(1) immediately above, may take place outside the time period set forth in subsection (E)(1) and above the relative sound levels in case of urgent necessity in the interest of public health and safety, and then only with the prior permission of the building inspector. Such permit may be granted for a period not to exceed three days or until the emergency ends, whichever is less. The permit may be renewed for periods of three days while the emergency continues.
3. Unless exempted by this chapter, if the building official should determine that the public health and safety will not be impaired by the construction related noise, the building inspector may issue a permit for construction within the hours of 6:00 P.M. and 7:00 A.M., upon application being made at the time the permit for the work is awarded or during the progress of the work. The building official may place such conditions on the issuance of the permit as to him or her shall seem appropriate to maintain the public health and safety.

F. Machinery, equipment, fans and air conditioning. It shall be unlawful for any person to operate, cause to operate or permit the operation of any machinery, equipment, device, pump, fan, compressor, air conditioning apparatus or similar mechanical device, including the use of any steam shovel, pneumatic hammer, derrick, steam or electric hoist, blower or power fan, or any internal combustion engine, the operation of which causes noise due to the explosion of operating gases or fluids, or other appliance, in any manner so as to create any noise which would cause the noise level at the property line of the property upon which the equipment or machinery is operated to exceed the base ambient noise level by five dB(A).

G. Motor driven vehicles. It shall be unlawful for any person to operate any motor driven vehicle within the city that, due to the nature of the operation of the vehicle, or due to the operating condition of the vehicle, or due to any modification made to the vehicle, in such manner as to exceed noise levels set forth in Section 8.44.050 hereof.

1. Exhaust. It shall be unlawful for any person to discharge into the open air the exhaust of any steam engine, stationary internal combustion engine, motorboat or motor driven vehicle except through a muffler or other device which will effectively prevent loud or explosive noises therefrom.

H. Notwithstanding any other provisions of this chapter and in addition thereto, it shall be unlawful for any person to willfully make or continue, or cause to be made or continued, any loud, unnecessary and unusual noise which disturbs the peace or quiet of any neighborhood or which causes discomfort or annoyance to any reasonable person of normal hearing sensitivity residing in the area. The standard which may be considered in determining whether a violation of the provisions of this section exists may include, but not be limited to, the following:

1. The level of noise;
2. Whether the nature of the noise is usual or unusual;
3. Whether the origin of the noise is natural or unnatural;
4. The level and intensity of the background noise, if any;
5. The proximity of the noise to residential sleeping facilities;
6. The nature of the zoning of the area within which the noise emanates;
7. The density of the inhabitation of the area within which the noise emanates;
8. The time of the day and night the noise occurs;
9. Whether the noise is recurrent, intermittent, or constant;
10. The duration of the noise; and
11. Whether the noise is produced by a commercial or noncommercial activity.

I. No person shall use or operate a radio, tape player, tape recorder, record player, television or similar device in a vehicle on a street, which is audible to a person of normal hearing sensitivity, more than twenty-five feet from said vehicle.

(Code 1965, § 11D-09.)

(Ord. No. 1454, § 3, 10-9-12)

8.44.100 - Application between zones.

In applying the regulations set forth in this chapter, each source of noise shall be subject only to such regulation as shall apply to the zone, including any designated truck route, within which it is located. A use lying adjacent to a zone with a more restrictive noise requirement hereunder shall not be required to conform to that more restrictive requirement. For purposes of this subsection, "zone" shall be as utilized in Title 17 of the Banning Ordinance Code.

(Code 1965, § 11D-10.)

8.44.110 - Manner of enforcement.

A. Upon the occurrence of an alleged violation of this chapter or any provision contained herein, the alleged violator shall be issued a written notice to appear before the abatement hearing officer described in Chapter 8.48 of this Code. Such notice may be issued by any person authorized to issue a notice for violation of any provision of this Code.

B. The notice shall set forth the section alleged to have been violated, the manner of the violation and the date and time of such violation. The notice shall otherwise be in the form and served in the manner and within the time set forth in Chapter 8.48 of this Code. The alleged violator shall be given notice and the opportunity to appear at the hearing and there show cause why the alleged violation should not be found to constitute a nuisance.

C. The abatement hearing officer shall hear the matter and shall make a determination of the existence of a nuisance as for any matter heard pursuant to Chapter 8.48. The alleged violator shall thereafter be given notice of the determination of the abatement hearing officer in the manner provided by this chapter.

D. An appeal from a determination of the abatement hearing officer shall be taken in the manner provided in chapter 8.48 of this Code.

E. The police department shall have the power and duty to enforce the following noise control provisions of this Code: Section 8.44.090(H) and section 8.44.090(I) of this Code. Any person found to be in violation of section 8.44.090(H) and section 8.44.090(I), shall be deemed guilty of a misdemeanor and, upon conviction thereof, shall be fined in an amount not exceeding one thousand dollars, or be imprisoned in the county jail for a period of not exceeding six months, or by both fine and imprisonment. Each day such violation is committed or permitted to continue shall constitute a separate offense and shall be punishable as such hereunder.

(Code 1965, § 11D-11.)

8.44.120 - Violation a misdemeanor.

Any person violating any determination of the nuisance abatement board issued under this chapter shall be deemed guilty of a misdemeanor and, upon conviction thereof, shall be fined in an amount not exceeding one thousand dollars, or be imprisoned in the city or county jail for a period not exceeding six months, or by both such fine and imprisonment. Each day such violation is committed or permitted to continue shall constitute a separate offense and shall be punishable as such hereunder.

(Code 1965, § 11D-12.)

8.44.130 - Additional remedy—Injunction.

As an additional remedy, the operation or maintenance of any device, instrument, vehicle or machinery in violation of any provision hereof and which causes discomfort or annoyance to reasonable persons of normal sensitiveness or which endangers the comfort, repose, health or peace of residents in the area shall be deemed, and is declared to be a public nuisance and may be subject to abatement summarily by a restraining order or injunction issued by a court of competent jurisdiction.

(Code 1965, § 11D-13.)

8.44.140 - Fees.

A fee shall be set as determined by resolution of the city council.

(Code 1965, § 11D-14.)

APPENDIX 5.1:

STUDY AREA PHOTOS

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L1
33, 55' 7.740000"116, 51' 2.110000"



L1_E
33, 55' 7.820000"116, 51' 2.250000"



L1_N
33, 55' 4.850000"116, 51' 1.070000"



L1_S
33, 55' 7.710000"116, 51' 2.190000"



L1_W
33, 55' 7.630000"116, 51' 2.080000"



L2
33, 55' 4.510000"116, 51' 3.240000"



L2_E
33, 55' 4.630000"116, 51' 3.240000"



L2_N
33, 55' 4.590000"116, 51' 3.700000"



L2_S
33, 55' 4.500000"116, 51' 3.210000"



L2_W
33, 55' 4.610000"116, 51' 3.260000"



L3
33, 55' 4.670000"116, 51' 17.870000"



L3_E
33, 55' 4.660000"116, 51' 17.850000"



L3_N
33, 55' 4.690000"116, 51' 17.870000"



L3_S
33, 55' 4.660000"116, 51' 17.850000"



L3_W
33, 55' 4.670000"116, 51' 17.870000"



L4



L4_E
33, 55' 11.400000"116, 51' 19.280000"



L4_N
33, 55' 11.650000"116, 51' 19.060000"



L4_S
33, 55' 11.200000"116, 51' 19.330000"



L4_W
33, 55' 11.140000"116, 51' 19.300000"

APPENDIX 5.2:

NOISE LEVEL MEASUREMENT WORKSHEETS

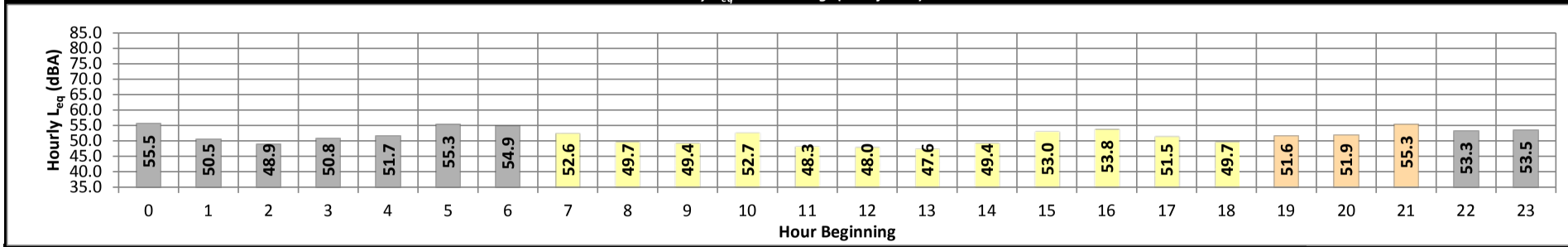
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24-Hour Noise Level Measurement Summary

Date: Friday, August 02, 2019 *Location:* L1 - Located within the southeast quadrant of the project site near a large shed. *Meter:* Piccolo I *JN:* 12369

Project: East Banning *Analyst:* P. Mara

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	55.5	74.9	46.0	63.0	62.0	60.0	59.0	54.0	51.0	48.0	47.0	46.0	55.5	10.0	65.5
	1	50.5	59.3	44.6	57.0	56.0	54.0	53.0	51.0	49.0	46.0	46.0	45.0	50.5	10.0	60.5
	2	48.9	57.3	44.6	52.0	52.0	51.0	50.0	49.0	48.0	46.0	46.0	45.0	48.9	10.0	58.9
	3	50.8	65.8	45.0	55.0	54.0	53.0	52.0	51.0	50.0	48.0	48.0	46.0	50.8	10.0	60.8
	4	51.7	57.6	47.2	55.0	55.0	54.0	54.0	52.0	51.0	49.0	49.0	48.0	51.7	10.0	61.7
	5	55.3	70.4	49.5	61.0	60.0	59.0	58.0	54.0	53.0	52.0	51.0	50.0	55.3	10.0	65.3
	6	54.9	71.1	49.0	62.0	61.0	59.0	57.0	54.0	53.0	51.0	51.0	50.0	54.9	10.0	64.9
Day	7	52.6	72.3	44.6	58.0	57.0	56.0	55.0	53.0	51.0	47.0	46.0	45.0	52.6	0.0	52.6
	8	49.7	71.1	43.4	55.0	54.0	52.0	51.0	48.0	46.0	45.0	44.0	44.0	49.7	0.0	49.7
	9	49.4	66.3	42.5	59.0	56.0	53.0	52.0	48.0	46.0	44.0	44.0	43.0	49.4	0.0	49.4
	10	52.7	78.2	41.5	58.0	56.0	53.0	51.0	48.0	46.0	43.0	43.0	42.0	52.7	0.0	52.7
	11	48.3	63.7	41.6	55.0	53.0	51.0	50.0	48.0	46.0	44.0	43.0	42.0	48.3	0.0	48.3
	12	48.0	62.1	41.5	53.0	52.0	51.0	50.0	48.0	47.0	44.0	43.0	42.0	48.0	0.0	48.0
	13	47.6	58.2	41.3	53.0	52.0	51.0	50.0	48.0	46.0	44.0	43.0	42.0	47.6	0.0	47.6
	14	49.4	64.5	42.8	56.0	55.0	53.0	52.0	49.0	47.0	44.0	44.0	43.0	49.4	0.0	49.4
	15	53.0	72.6	42.3	64.0	63.0	59.0	56.0	49.0	47.0	44.0	43.0	43.0	53.0	0.0	53.0
	16	53.8	69.6	42.9	65.0	63.0	60.0	58.0	50.0	47.0	45.0	44.0	44.0	53.8	0.0	53.8
	17	51.5	73.2	42.3	63.0	62.0	54.0	52.0	49.0	47.0	44.0	44.0	43.0	51.5	0.0	51.5
	18	49.7	68.3	42.1	62.0	59.0	54.0	51.0	47.0	45.0	43.0	43.0	42.0	49.7	0.0	49.7
Evening	19	51.6	68.4	43.5	61.0	58.0	55.0	54.0	51.0	49.0	46.0	45.0	44.0	51.6	5.0	56.6
	20	51.9	76.1	45.9	59.0	57.0	54.0	53.0	51.0	50.0	48.0	47.0	47.0	51.9	5.0	56.9
	21	55.3	82.5	48.5	61.0	58.0	55.0	54.0	52.0	51.0	50.0	49.0	49.0	55.3	5.0	60.3
Night	22	53.3	65.5	46.8	59.0	58.0	57.0	56.0	53.0	52.0	49.0	49.0	47.0	53.3	10.0	63.3
	23	53.5	69.7	46.3	61.0	60.0	57.0	56.0	53.0	51.0	49.0	49.0	47.0	53.5	10.0	63.5

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	47.6	58.2	41.3	53.0	52.0	51.0	50.0	47.0	45.0	43.0	43.0	42.0
	Max	53.8	78.2	44.6	65.0	63.0	60.0	58.0	53.0	51.0	47.0	46.0	45.0
Energy Average		51.0	Average:		58.4	56.8	53.9	52.3	48.8	46.8	44.3	43.7	42.9
Evening	Min	51.6	68.4	43.5	59.0	57.0	54.0	53.0	51.0	49.0	46.0	45.0	44.0
	Max	55.3	82.5	48.5	61.0	58.0	55.0	54.0	52.0	51.0	50.0	49.0	49.0
Energy Average		53.3	Average:		60.3	57.7	54.7	53.7	51.3	50.0	48.0	47.0	46.7
Night	Min	48.9	57.3	44.6	52.0	52.0	51.0	50.0	49.0	48.0	46.0	46.0	45.0
	Max	55.5	74.9	49.5	63.0	62.0	60.0	59.0	54.0	53.0	52.0	51.0	50.0
Energy Average		53.2	Average:		58.3	57.6	56.0	55.0	52.3	50.9	48.7	48.4	47.1

L_{eq} (dBA)		
24-Hour	Daytime	Nighttime
52.3	51.5	53.2

24-Hour CNEL (dBA)
59.7

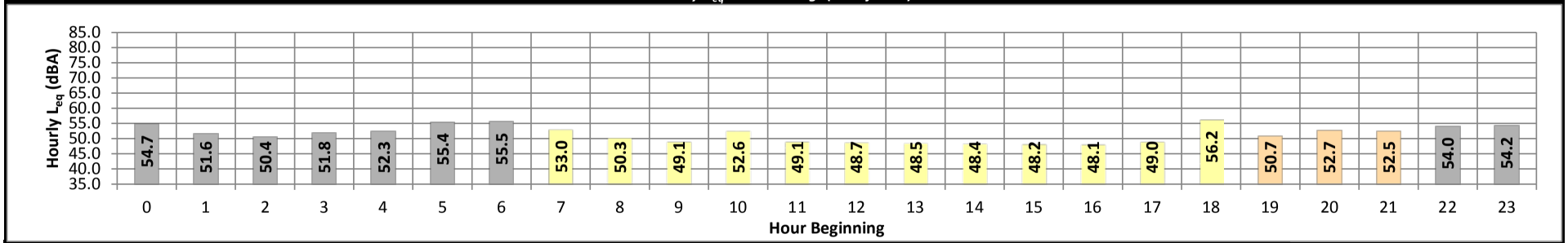
URBAN CROSSROADS

24-Hour Noise Level Measurement Summary

Date: Friday, August 02, 2019 *Location:* L2 - Located south of the project site along E Westward Ave near a couple residential homes *Meter:* Piccolo I *JN:* 12369

Project: East Banning *Analyst:* P. Mara

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	54.7	71.1	47.0	61.0	60.0	59.0	58.0	54.0	52.0	49.0	49.0	48.0	54.7	10.0	64.7
	1	51.6	62.4	45.9	57.0	56.0	54.0	54.0	52.0	50.0	48.0	47.0	47.0	51.6	10.0	61.6
	2	50.4	59.8	45.3	54.0	54.0	53.0	52.0	51.0	49.0	48.0	47.0	47.0	50.4	10.0	60.4
	3	51.8	65.2	46.3	56.0	55.0	54.0	53.0	52.0	51.0	49.0	49.0	48.0	51.8	10.0	61.8
	4	52.3	58.6	47.4	55.0	55.0	54.0	54.0	53.0	51.0	50.0	49.0	48.0	52.3	10.0	62.3
	5	55.4	69.3	50.2	60.0	59.0	58.0	57.0	55.0	54.0	52.0	52.0	51.0	55.4	10.0	65.4
	6	55.5	68.4	49.8	62.0	61.0	58.0	57.0	55.0	54.0	52.0	52.0	51.0	55.5	10.0	65.5
Day	7	53.0	69.0	45.6	59.0	57.0	56.0	55.0	53.0	51.0	48.0	47.0	46.0	53.0	0.0	53.0
	8	50.3	68.2	43.5	57.0	55.0	53.0	52.0	49.0	48.0	45.0	45.0	44.0	50.3	0.0	50.3
	9	49.1	64.5	42.2	56.0	54.0	52.0	51.0	49.0	47.0	45.0	44.0	43.0	49.1	0.0	49.1
	10	52.6	73.9	41.0	62.0	56.0	53.0	52.0	50.0	47.0	44.0	43.0	42.0	52.6	0.0	52.6
	11	49.1	64.1	42.2	56.0	54.0	52.0	51.0	49.0	48.0	44.0	44.0	43.0	49.1	0.0	49.1
	12	48.7	59.9	42.2	55.0	53.0	52.0	51.0	49.0	48.0	44.0	43.0	42.0	48.7	0.0	48.7
	13	48.5	68.3	40.9	57.0	56.0	51.0	50.0	47.0	46.0	44.0	43.0	41.0	48.5	0.0	48.5
	14	48.4	65.3	41.8	56.0	54.0	51.0	50.0	48.0	46.0	44.0	43.0	42.0	48.4	0.0	48.4
	15	48.2	65.8	41.0	57.0	54.0	51.0	50.0	48.0	46.0	43.0	43.0	42.0	48.2	0.0	48.2
	16	48.1	67.4	42.2	55.0	53.0	51.0	50.0	47.0	46.0	44.0	43.0	42.0	48.1	0.0	48.1
	17	49.0	71.1	42.4	56.0	53.0	51.0	51.0	48.0	46.0	44.0	44.0	43.0	49.0	0.0	49.0
	18	56.2	80.2	41.8	70.0	59.0	52.0	50.0	48.0	46.0	43.0	43.0	42.0	56.2	0.0	56.2
Evening	19	50.7	67.5	43.2	56.0	55.0	54.0	53.0	51.0	49.0	46.0	45.0	44.0	50.7	5.0	55.7
	20	52.7	73.6	47.8	55.0	55.0	54.0	54.0	52.0	51.0	49.0	49.0	48.0	52.7	5.0	57.7
	21	52.5	70.6	48.0	56.0	55.0	54.0	54.0	52.0	51.0	49.0	49.0	48.0	52.5	5.0	57.5
Night	22	54.0	73.1	47.3	59.0	58.0	56.0	56.0	54.0	53.0	50.0	50.0	48.0	54.0	10.0	64.0
	23	54.2	68.8	48.7	61.0	60.0	57.0	56.0	54.0	52.0	50.0	50.0	49.0	54.2	10.0	64.2

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	48.1	59.9	40.9	55.0	53.0	51.0	50.0	47.0	46.0	43.0	43.0	41.0
	Max	56.2	80.2	45.6	70.0	59.0	56.0	55.0	53.0	51.0	48.0	47.0	46.0
Energy Average		50.9	Average:		58.0	54.8	52.1	51.1	48.8	47.1	44.3	43.8	42.7
Evening	Min	50.7	67.5	43.2	55.0	55.0	54.0	53.0	51.0	49.0	46.0	45.0	44.0
	Max	52.7	73.6	48.0	56.0	55.0	54.0	54.0	52.0	51.0	49.0	49.0	48.0
Energy Average		52.1	Average:		55.7	55.0	54.0	53.7	51.7	50.3	48.0	47.7	46.7
Night	Min	50.4	58.6	45.3	54.0	54.0	53.0	52.0	51.0	49.0	48.0	47.0	47.0
	Max	55.5	73.1	50.2	62.0	61.0	59.0	58.0	55.0	54.0	52.0	52.0	51.0
Energy Average		53.7	Average:		58.3	57.6	55.9	55.2	53.3	51.8	49.8	49.4	48.6

L_{eq} (dBA)		
24-Hour	Daytime	Nighttime
52.3	51.2	53.7

24-Hour CNEL (dBA)
60.0

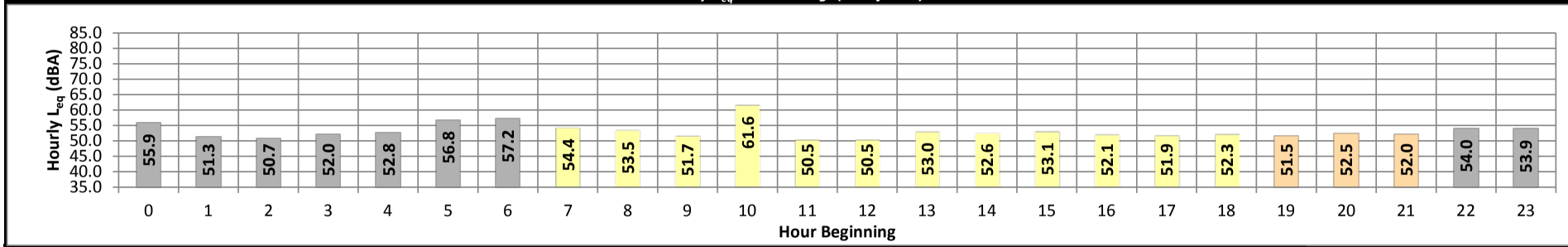
URBAN CROSSROADS

24-Hour Noise Level Measurement Summary

Date: Friday, August 02, 2019 *Location:* L3 - Located on the southwest corner of the project site along E Westward Ave near a few commercial buildings *Meter:* Piccolo I *JN:* 12369

Project: East Banning *Analyst:* P. Mara

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	55.9	74.0	47.3	65.0	63.0	61.0	59.0	55.0	51.0	49.0	49.0	48.0	55.9	10.0	65.9
	1	51.3	65.0	46.0	58.0	57.0	54.0	53.0	51.0	50.0	48.0	48.0	47.0	51.3	10.0	61.3
	2	50.7	60.0	46.5	54.0	53.0	52.0	52.0	51.0	50.0	48.0	48.0	47.0	50.7	10.0	60.7
	3	52.0	65.8	47.3	56.0	55.0	54.0	53.0	52.0	51.0	49.0	49.0	48.0	52.0	10.0	62.0
	4	52.8	60.4	48.5	56.0	56.0	55.0	55.0	53.0	52.0	50.0	50.0	49.0	52.8	10.0	62.8
	5	56.8	78.5	50.2	63.0	62.0	60.0	59.0	56.0	54.0	53.0	52.0	51.0	56.8	10.0	66.8
	6	57.2	80.9	49.9	65.0	63.0	60.0	58.0	55.0	54.0	52.0	52.0	51.0	57.2	10.0	67.2
Day	7	54.4	80.7	45.7	61.0	59.0	57.0	56.0	54.0	51.0	48.0	48.0	47.0	54.4	0.0	54.4
	8	53.5	78.9	45.6	62.0	57.0	53.0	52.0	50.0	49.0	47.0	46.0	46.0	53.5	0.0	53.5
	9	51.7	67.2	44.5	60.0	58.0	56.0	54.0	51.0	49.0	46.0	46.0	45.0	51.7	0.0	51.7
	10	61.6	90.0	43.2	72.0	63.0	56.0	54.0	50.0	48.0	45.0	45.0	44.0	61.6	0.0	61.6
	11	50.5	69.7	43.8	57.0	55.0	52.0	52.0	50.0	48.0	46.0	45.0	44.0	50.5	0.0	50.5
	12	50.5	70.7	43.8	55.0	54.0	52.0	52.0	50.0	49.0	46.0	45.0	44.0	50.5	0.0	50.5
	13	53.0	81.9	42.8	57.0	54.0	52.0	51.0	49.0	48.0	45.0	45.0	43.0	53.0	0.0	53.0
	14	52.6	80.1	42.1	60.0	56.0	54.0	53.0	50.0	48.0	45.0	45.0	43.0	52.6	0.0	52.6
	15	53.1	80.0	43.1	59.0	55.0	53.0	52.0	50.0	48.0	46.0	45.0	44.0	53.1	0.0	53.1
	16	52.1	73.9	44.5	60.0	57.0	56.0	55.0	50.0	49.0	47.0	46.0	45.0	52.1	0.0	52.1
	17	51.9	75.7	43.9	59.0	56.0	53.0	52.0	50.0	48.0	46.0	46.0	45.0	51.9	0.0	51.9
	18	52.3	78.8	42.2	60.0	57.0	52.0	50.0	47.0	46.0	44.0	44.0	43.0	52.3	0.0	52.3
Evening	19	51.5	68.9	43.1	60.0	57.0	55.0	54.0	51.0	49.0	46.0	45.0	44.0	51.5	5.0	56.5
	20	52.5	77.6	46.8	55.0	54.0	53.0	53.0	52.0	51.0	49.0	48.0	48.0	52.5	5.0	57.5
	21	52.0	76.7	45.5	55.0	54.0	53.0	53.0	51.0	50.0	48.0	48.0	47.0	52.0	5.0	57.0
Night	22	54.0	70.7	47.5	62.0	60.0	58.0	57.0	53.0	51.0	49.0	49.0	48.0	54.0	10.0	64.0
	23	53.9	70.2	47.5	63.0	60.0	58.0	56.0	52.0	51.0	49.0	49.0	48.0	53.9	10.0	63.9

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	50.5	67.2	42.1	55.0	54.0	52.0	50.0	47.0	46.0	44.0	44.0	43.0
	Max	61.6	90.0	45.7	72.0	63.0	57.0	56.0	54.0	51.0	48.0	48.0	47.0
Energy Average		54.5	Average:		60.2	56.8	53.8	52.8	50.1	48.4	45.9	45.5	44.4
Evening	Min	51.5	68.9	43.1	55.0	54.0	53.0	53.0	51.0	49.0	46.0	45.0	44.0
	Max	52.5	77.6	46.8	60.0	57.0	55.0	54.0	52.0	51.0	49.0	48.0	48.0
Energy Average		52.0	Average:		56.7	55.0	53.7	53.3	51.3	50.0	47.7	47.0	46.3
Night	Min	50.7	60.0	46.0	54.0	53.0	52.0	52.0	51.0	50.0	48.0	48.0	47.0
	Max	57.2	80.9	50.2	65.0	63.0	61.0	59.0	56.0	54.0	53.0	52.0	51.0
Energy Average		54.4	Average:		60.2	58.8	56.9	55.8	53.1	51.6	49.7	49.6	48.6

L_{eq} (dBA)		
24-Hour	Daytime	Nighttime
54.2	54.1	54.4

24-Hour CNEL (dBA)
60.9

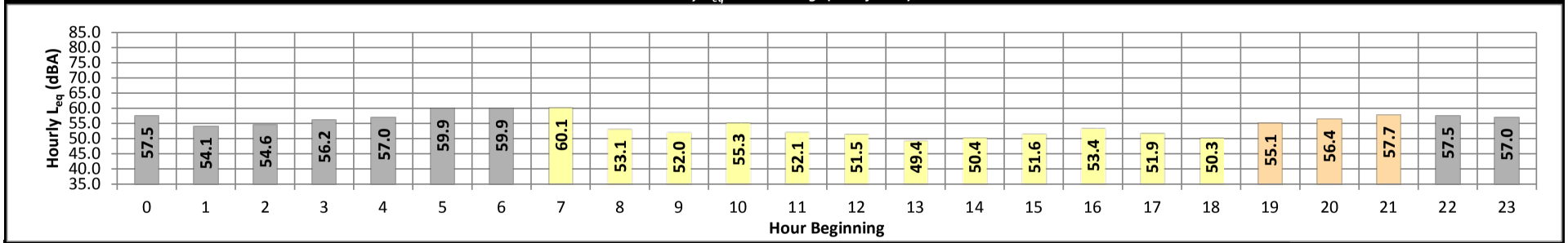
URBAN CROSSROADS

24-Hour Noise Level Measurement Summary

Date: Friday, August 02, 2019 *Location:* L4 - Located west of the project site near F Barbour St *Meter:* Piccolo I *JN:* 12369

Project: East Banning *Analyst:* P. Mara

Hourly L_{eq} dBA Readings (unadjusted)



Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%	L_{eq}	Adj.	Adj. L_{eq}
Night	0	57.5	75.4	46.7	65.0	63.0	61.0	60.0	57.0	55.0	52.0	51.0	49.0	57.5	10.0	67.5
	1	54.1	67.6	46.2	60.0	59.0	57.0	56.0	54.0	53.0	50.0	49.0	48.0	54.1	10.0	64.1
	2	54.6	62.4	48.3	59.0	58.0	57.0	56.0	55.0	54.0	51.0	50.0	49.0	54.6	10.0	64.6
	3	56.2	69.8	50.1	60.0	59.0	58.0	58.0	56.0	55.0	53.0	53.0	51.0	56.2	10.0	66.2
	4	57.0	64.0	50.7	60.0	60.0	59.0	59.0	57.0	56.0	54.0	53.0	52.0	57.0	10.0	67.0
	5	59.9	71.1	53.7	65.0	64.0	62.0	62.0	60.0	59.0	57.0	56.0	56.0	59.9	10.0	69.9
	6	59.9	78.3	53.6	67.0	65.0	62.0	61.0	59.0	58.0	57.0	56.0	55.0	59.9	10.0	69.9
Day	7	60.1	75.4	48.1	70.0	69.0	68.0	67.0	57.0	54.0	52.0	51.0	50.0	60.1	0.0	60.1
	8	53.1	73.9	46.4	59.0	56.0	54.0	53.0	52.0	50.0	48.0	48.0	47.0	53.1	0.0	53.1
	9	52.0	67.2	45.9	58.0	57.0	55.0	54.0	52.0	51.0	48.0	47.0	47.0	52.0	0.0	52.0
	10	55.3	80.6	43.6	59.0	56.0	54.0	53.0	51.0	49.0	47.0	46.0	45.0	55.3	0.0	55.3
	11	52.1	68.9	45.2	57.0	55.0	54.0	54.0	52.0	50.0	48.0	47.0	46.0	52.1	0.0	52.1
	12	51.5	60.3	44.3	56.0	55.0	54.0	54.0	52.0	50.0	46.0	46.0	45.0	51.5	0.0	51.5
	13	49.4	65.4	42.7	56.0	54.0	52.0	51.0	49.0	48.0	45.0	45.0	43.0	49.4	0.0	49.4
	14	50.4	68.5	43.6	58.0	56.0	54.0	53.0	50.0	48.0	46.0	45.0	44.0	50.4	0.0	50.4
	15	51.6	65.0	45.0	58.0	57.0	54.0	53.0	51.0	50.0	47.0	46.0	45.0	51.6	0.0	51.6
	16	53.4	75.7	43.7	60.0	59.0	58.0	56.0	51.0	49.0	46.0	45.0	44.0	53.4	0.0	53.4
	17	51.9	71.5	44.1	60.0	58.0	54.0	53.0	51.0	49.0	47.0	46.0	45.0	51.9	0.0	51.9
	18	50.3	66.1	43.4	56.0	55.0	53.0	53.0	50.0	49.0	46.0	45.0	44.0	50.3	0.0	50.3
Evening	19	55.1	74.8	46.6	61.0	59.0	58.0	57.0	55.0	53.0	50.0	50.0	48.0	55.1	5.0	60.1
	20	56.4	82.4	51.2	59.0	58.0	57.0	57.0	56.0	55.0	53.0	53.0	52.0	56.4	5.0	61.4
	21	57.7	74.4	52.6	63.0	61.0	59.0	59.0	57.0	56.0	55.0	54.0	53.0	57.7	5.0	62.7
Night	22	57.5	73.1	49.1	64.0	62.0	60.0	59.0	57.0	56.0	53.0	52.0	51.0	57.5	10.0	67.5
	23	57.0	73.6	47.9	64.0	62.0	60.0	59.0	57.0	55.0	53.0	52.0	51.0	57.0	10.0	67.0

Timeframe	Hour	L_{eq}	L_{max}	L_{min}	L1%	L2%	L5%	L8%	L25%	L50%	L90%	L95%	L99%
Day	Min	49.4	60.3	42.7	56.0	54.0	52.0	51.0	49.0	48.0	45.0	45.0	43.0
	Max	60.1	80.6	48.1	70.0	69.0	68.0	67.0	57.0	54.0	52.0	51.0	50.0
Energy Average		53.8	Average:		58.9	57.3	55.3	54.5	51.5	49.8	47.2	46.4	45.4
Evening	Min	55.1	74.4	46.6	59.0	58.0	57.0	57.0	55.0	53.0	50.0	50.0	48.0
	Max	57.7	82.4	52.6	63.0	61.0	59.0	59.0	57.0	56.0	55.0	54.0	53.0
Energy Average		56.5	Average:		61.0	59.3	58.0	57.7	56.0	54.7	52.7	52.3	51.0
Night	Min	54.1	62.4	46.2	59.0	58.0	57.0	56.0	54.0	53.0	50.0	49.0	48.0
	Max	59.9	78.3	53.7	67.0	65.0	62.0	62.0	60.0	59.0	57.0	56.0	56.0
Energy Average		57.5	Average:		62.7	61.3	59.6	58.9	56.9	55.7	53.3	52.4	51.3

L_{eq} (dBA)		
24-Hour	Daytime	Nighttime
55.9	54.5	57.5

24-Hour CNEL (dBA)

63.8

URBAN CROSSROADS

APPENDIX 7.1:

OFF-SITE TRAFFIC NOISE LEVEL CONTOURS

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Hargrave St.
Road Segment: n/o I-10 Fwy. WB Ramps
Project Name: Estes Banning
Job Number: 12369

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	10,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,090 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	-0.49	0.71	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-17.72	0.74	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-21.68	0.73	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.3	61.4	59.7	53.6	62.2	62.8
Medium Trucks:	57.6	56.1	49.7	48.1	56.6	56.8
Heavy Trucks:	59.4	58.0	49.0	50.2	58.6	58.7
Vehicle Noise:	65.6	63.8	60.4	56.0	64.5	65.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	22	47	100	216
CNEL:	23	50	107	231

Saturday, September 14, 2019

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Hargrave St.
Road Segment: s/o I-10 Fwy. EB Ramps
Project Name: Estes Banning
Job Number: 12369

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,800 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	580 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	-3.23	0.71	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-20.46	0.74	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-24.42	0.73	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	60.6	58.7	56.9	50.9	59.5	60.1
Medium Trucks:	54.8	53.3	47.0	45.4	53.9	54.1
Heavy Trucks:	56.7	55.3	46.2	47.5	55.8	56.0
Vehicle Noise:	62.8	61.1	57.7	53.3	61.8	62.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	14	31	66	142
CNEL:	15	33	70	152

Saturday, September 14, 2019

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Hargrave St.
Road Segment: n/o Lincoln St.
Project Name: Estes Banning
Job Number: 12369

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,800 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	580 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	-3.23	0.71	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-20.46	0.74	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-24.42	0.73	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	60.6	58.7	56.9	50.9	59.5	60.1
Medium Trucks:	54.8	53.3	47.0	45.4	53.9	54.1
Heavy Trucks:	56.7	55.3	46.2	47.5	55.8	56.0
Vehicle Noise:	62.8	61.1	57.7	53.3	61.8	62.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	14	31	66	142
CNEL:	15	33	70	152

Saturday, September 14, 2019

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project
Road Name: Hargrave St.
Road Segment: s/o Lincoln St.
Project Name: Estes Banning
Job Number: 12369

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	4,600 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	460 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	40.460
Medium Trucks:	40.241
Heavy Trucks:	40.262

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-4.81	1.28	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-22.05	1.31	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-26.01	1.31	-1.20	-5.50	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.8	59.9	58.1	52.1	60.7	61.3
Medium Trucks:	55.8	54.3	47.9	46.4	54.8	55.1
Heavy Trucks:	57.1	55.7	46.6	47.9	56.2	56.4
Vehicle Noise:	63.8	62.1	58.8	54.2	62.8	63.2

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	15	31	67	145
CNEL:	16	33	72	155

Saturday, September 14, 2019

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project | Project Name: Estes Banning
Road Name: Hathaway St. | Job Number: 12369
Road Segment: n/o Barbour St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	90 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	40.460
Medium Trucks:	40.241
Heavy Trucks:	40.262

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-11.90	1.28	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-29.14	1.31	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-33.09	1.31	-1.20	-5.50	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	54.7	52.8	51.0	45.0	53.6	54.2
Medium Trucks:	48.7	47.2	40.8	39.3	47.7	48.0
Heavy Trucks:	50.0	48.6	39.6	40.8	49.2	49.3
Vehicle Noise:	56.7	55.0	51.7	47.2	55.7	56.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	5	11	23	49
CNEL:	5	11	24	52

Saturday, September 14, 2019

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project | Project Name: Estes Banning
Road Name: Lincoln St. | Job Number: 12369
Road Segment: e/o Hargrave St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,100 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	110 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	-10.45	0.71	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-27.68	0.74	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-31.64	0.73	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	53.4	51.5	49.7	43.6	52.3	52.9
Medium Trucks:	47.6	46.1	39.7	38.2	46.6	46.9
Heavy Trucks:	49.5	48.0	39.0	40.3	48.6	48.7
Vehicle Noise:	55.6	53.9	50.4	46.1	54.6	55.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	5	10	22	47
CNEL:	5	11	23	50

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing Without Project | Project Name: Estes Banning
Road Name: Barbour St. | Job Number: 12369
Road Segment: e/o Hargrave St.

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	40 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	-14.84	0.71	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-32.08	0.74	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-36.03	0.73	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	49.0	47.1	45.3	39.3	47.9	48.5
Medium Trucks:	43.2	41.7	35.3	33.8	42.3	42.5
Heavy Trucks:	45.1	43.6	34.6	35.9	44.2	44.3
Vehicle Noise:	51.2	49.5	46.0	41.7	50.2	50.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	2	5	11	24
CNEL:	3	5	12	26

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project | Project Name: Estes Banning
Road Name: Hargrave St. | Job Number: 12369
Road Segment: n/o I-10 Fwy. WB Ramps

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	11,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,100 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	-0.45	0.71	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-17.68	0.74	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-21.64	0.73	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.4	61.5	59.7	53.6	62.3	62.9
Medium Trucks:	57.6	56.1	49.7	48.2	56.6	56.9
Heavy Trucks:	59.5	58.0	49.0	50.3	58.6	58.7
Vehicle Noise:	65.6	63.9	60.4	56.1	64.6	65.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	22	47	101	218
CNEL:	23	50	108	233

Saturday, September 14, 2019

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Hargrave St.
Road Segment: s/o I-10 Fwy. EB Ramps
Project Name: Estes Banning
Job Number: 12369

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,200 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	620 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	-2.94	0.71	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-20.17	0.74	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-24.13	0.73	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	60.9	59.0	57.2	51.2	59.8	60.4
Medium Trucks:	55.1	53.6	47.2	45.7	54.2	54.4
Heavy Trucks:	57.0	55.6	46.5	47.8	56.1	56.2
Vehicle Noise:	63.1	61.4	57.9	53.6	62.1	62.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	15	32	69	149
CNEL:	16	34	74	159

Saturday, September 14, 2019

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Hargrave St.
Road Segment: n/o Lincoln St.
Project Name: Estes Banning
Job Number: 12369

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,200 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	620 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	-2.94	0.71	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-20.17	0.74	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-24.13	0.73	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	60.9	59.0	57.2	51.2	59.8	60.4
Medium Trucks:	55.1	53.6	47.2	45.7	54.2	54.4
Heavy Trucks:	57.0	55.6	46.5	47.8	56.1	56.2
Vehicle Noise:	63.1	61.4	57.9	53.6	62.1	62.5

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	15	32	69	149
CNEL:	16	34	74	159

Saturday, September 14, 2019

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Hargrave St.
Road Segment: s/o Lincoln St.
Project Name: Estes Banning
Job Number: 12369

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	500 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	40.460
Medium Trucks:	40.241
Heavy Trucks:	40.262

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-4.45	1.28	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-21.69	1.31	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-25.64	1.31	-1.20	-5.50	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.1	60.2	58.5	52.4	61.0	61.6
Medium Trucks:	56.1	54.6	48.3	46.7	55.2	55.4
Heavy Trucks:	57.5	56.0	47.0	48.2	56.6	56.7
Vehicle Noise:	64.2	62.4	59.1	54.6	63.1	63.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	15	33	71	153
CNEL:	16	35	76	164

Saturday, September 14, 2019

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Hathaway St.
Road Segment: n/o Barbour St.
Project Name: Estes Banning
Job Number: 12369

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	100 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	40.460
Medium Trucks:	40.241
Heavy Trucks:	40.262

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-11.44	1.28	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-28.68	1.31	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-32.63	1.31	-1.20	-5.50	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	55.1	53.2	51.5	45.4	54.1	54.7
Medium Trucks:	49.1	47.6	41.3	39.7	48.2	48.4
Heavy Trucks:	50.5	49.0	40.0	41.3	49.6	49.7
Vehicle Noise:	57.2	55.4	52.2	47.6	56.1	56.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	5	11	24	52
CNEL:	6	12	26	56

Saturday, September 14, 2019

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Lincoln St.
Road Segment: e/o Hargrave St.
Project Name: Estes Banning
Job Number: 12369

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,200 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	120 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	-10.07	0.71	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-27.31	0.74	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-31.26	0.73	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	53.7	51.8	50.1	44.0	52.6	53.3
Medium Trucks:	48.0	46.5	40.1	38.6	47.0	47.3
Heavy Trucks:	49.8	48.4	39.4	40.6	49.0	49.1
Vehicle Noise:	56.0	54.3	50.8	46.4	55.0	55.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	5	11	23	50
CNEL:	5	11	25	53

Saturday, September 14, 2019

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: Existing With Project
Road Name: Barbour St.
Road Segment: e/o Hargrave St.
Project Name: Estes Banning
Job Number: 12369

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	800 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	80 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	-11.83	0.71	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-29.07	0.74	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-33.02	0.73	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	52.0	50.1	48.3	42.3	50.9	51.5
Medium Trucks:	46.2	44.7	38.4	36.8	45.3	45.5
Heavy Trucks:	48.1	46.7	37.6	38.9	47.2	47.4
Vehicle Noise:	54.2	52.5	49.1	44.7	53.2	53.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	4	8	18	38
CNEL:	4	9	19	41

Saturday, September 14, 2019

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYC 2021 Without Project
Road Name: Hargrave St.
Road Segment: n/o I-10 Fwy. WB Ramps
Project Name: Estes Banning
Job Number: 12369

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,200 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	-0.07	0.71	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-17.31	0.74	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-21.26	0.73	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.7	61.8	60.1	54.0	62.6	63.3
Medium Trucks:	58.0	56.5	50.1	48.6	57.0	57.3
Heavy Trucks:	59.8	58.4	49.4	50.6	59.0	59.1
Vehicle Noise:	66.0	64.3	60.8	56.4	65.0	65.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	23	50	107	231
CNEL:	25	53	114	246

Saturday, September 14, 2019

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYC 2021 Without Project
Road Name: Hargrave St.
Road Segment: s/o I-10 Fwy. EB Ramps
Project Name: Estes Banning
Job Number: 12369

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,500 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	650 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	-2.73	0.71	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-19.97	0.74	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-23.92	0.73	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.1	59.2	57.4	51.4	60.0	60.6
Medium Trucks:	55.3	53.8	47.4	45.9	54.4	54.6
Heavy Trucks:	57.2	55.8	46.7	48.0	56.3	56.5
Vehicle Noise:	63.3	61.6	58.2	53.8	62.3	62.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	15	33	71	153
CNEL:	16	35	76	164

Saturday, September 14, 2019

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYC 2021 Without Project
Road Name: Hargrave St.
Road Segment: n/o Lincoln St.
Project Name: Estes Banning
Job Number: 12369

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	640 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	-2.80	0.71	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-20.04	0.74	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-23.99	0.73	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.0	59.1	57.3	51.3	59.9	60.5
Medium Trucks:	55.3	53.7	47.4	45.8	54.3	54.5
Heavy Trucks:	57.1	55.7	46.7	47.9	56.3	56.4
Vehicle Noise:	63.2	61.5	58.1	53.7	62.2	62.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	15	33	70	152
CNEL:	16	35	75	162

Saturday, September 14, 2019

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYC 2021 Without Project
Road Name: Hargrave St.
Road Segment: s/o Lincoln St.
Project Name: Estes Banning
Job Number: 12369

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	500 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	40.460
Medium Trucks:	40.241
Heavy Trucks:	40.262

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-4.45	1.28	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-21.69	1.31	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-25.64	1.31	-1.20	-5.50	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.1	60.2	58.5	52.4	61.0	61.6
Medium Trucks:	56.1	54.6	48.3	46.7	55.2	55.4
Heavy Trucks:	57.5	56.0	47.0	48.2	56.6	56.7
Vehicle Noise:	64.2	62.4	59.1	54.6	63.1	63.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	15	33	71	153
CNEL:	16	35	76	164

Saturday, September 14, 2019

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYC 2021 Without Project
Road Name: Hathaway St.
Road Segment: n/o Barbour St.
Project Name: Estes Banning
Job Number: 12369

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	90 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	40.460
Medium Trucks:	40.241
Heavy Trucks:	40.262

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-11.90	1.28	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-29.14	1.31	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-33.09	1.31	-1.20	-5.50	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	54.7	52.8	51.0	45.0	53.6	54.2
Medium Trucks:	48.7	47.2	40.8	39.3	47.7	48.0
Heavy Trucks:	50.0	48.6	39.6	40.8	49.2	49.3
Vehicle Noise:	56.7	55.0	51.7	47.2	55.7	56.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	5	11	23	49
CNEL:	5	11	24	52

Saturday, September 14, 2019

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYC 2021 Without Project
Road Name: Lincoln St.
Road Segment: e/o Hargrave St.
Project Name: Estes Banning
Job Number: 12369

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,300 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	130 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	-9.72	0.71	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-26.96	0.74	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-30.91	0.73	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	54.1	52.2	50.4	44.4	53.0	53.6
Medium Trucks:	48.3	46.8	40.5	38.9	47.4	47.6
Heavy Trucks:	50.2	48.8	39.7	41.0	49.3	49.5
Vehicle Noise:	56.3	54.6	51.2	46.8	55.3	55.7

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	5	11	24	52
CNEL:	6	12	26	56

Saturday, September 14, 2019

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYC 2021 Without Project
Road Name: Barbour St.
Road Segment: e/o Hargrave St.
Project Name: Estes Banning
Job Number: 12369

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	500 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	50 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	-13.87	0.71	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-31.11	0.74	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-35.06	0.73	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	49.9	48.0	46.3	40.2	48.8	49.4
Medium Trucks:	44.2	42.7	36.3	34.8	43.2	43.5
Heavy Trucks:	46.0	44.6	35.6	36.8	45.2	45.3
Vehicle Noise:	52.2	50.5	47.0	42.6	51.2	51.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	3	6	13	28
CNEL:	3	6	14	30

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYC 2021 With Project
Road Name: Hargrave St.
Road Segment: n/o I-10 Fwy. WB Ramps
Project Name: Estes Banning
Job Number: 12369

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	12,100 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	1,210 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	-0.03	0.71	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-17.27	0.74	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-21.23	0.73	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	63.8	61.9	60.1	54.1	62.7	63.3
Medium Trucks:	58.0	56.5	50.1	48.6	57.1	57.3
Heavy Trucks:	59.9	58.5	49.4	50.7	59.0	59.1
Vehicle Noise:	66.0	64.3	60.9	56.5	65.0	65.4

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	23	50	108	232
CNEL:	25	53	115	248

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYC 2021 With Project
Road Name: Hargrave St.
Road Segment: s/o I-10 Fwy. EB Ramps
Project Name: Estes Banning
Job Number: 12369

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	690 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	-2.47	0.71	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-19.71	0.74	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-23.67	0.73	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.3	59.4	57.7	51.6	60.2	60.8
Medium Trucks:	55.6	54.1	47.7	46.2	54.6	54.9
Heavy Trucks:	57.4	56.0	47.0	48.2	56.6	56.7
Vehicle Noise:	63.6	61.9	58.4	54.0	62.6	63.0

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	16	34	74	160
CNEL:	17	37	79	170

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYC 2021 With Project
Road Name: Hargrave St.
Road Segment: n/o Lincoln St.
Project Name: Estes Banning
Job Number: 12369

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	6,800 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	680 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	-2.53	0.71	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-19.77	0.74	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-23.73	0.73	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	61.3	59.4	57.6	51.6	60.2	60.8
Medium Trucks:	55.5	54.0	47.6	46.1	54.6	54.8
Heavy Trucks:	57.4	56.0	46.9	48.2	56.5	56.6
Vehicle Noise:	63.5	61.8	58.4	54.0	62.5	62.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	16	34	73	158
CNEL:	17	36	78	169

FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYC 2021 With Project
Road Name: Hargrave St.
Road Segment: s/o Lincoln St.
Project Name: Estes Banning
Job Number: 12369

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	5,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	540 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	40.460
Medium Trucks:	40.241
Heavy Trucks:	40.262

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-4.12	1.28	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-21.35	1.31	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-25.31	1.31	-1.20	-5.50	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	62.5	60.6	58.8	52.8	61.4	62.0
Medium Trucks:	56.5	55.0	48.6	47.1	55.5	55.8
Heavy Trucks:	57.8	56.4	47.3	48.6	56.9	57.1
Vehicle Noise:	64.5	62.8	59.5	54.9	63.5	63.9

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	16	35	75	161
CNEL:	17	37	80	173

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYC 2021 With Project
Road Name: Hathaway St.
Road Segment: n/o Barbour St.
Project Name: Estes Banning
Job Number: 12369

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,000 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	100 vehicles
Vehicle Speed:	40 mph
Near/Far Lane Distance:	36 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	44.0 feet
Centerline Dist. to Observer:	44.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	40.460
Medium Trucks:	40.241
Heavy Trucks:	40.262

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	66.51	-11.44	1.28	-1.20	-4.61	0.000	0.000
Medium Trucks:	77.72	-28.68	1.31	-1.20	-4.87	0.000	0.000
Heavy Trucks:	82.99	-32.63	1.31	-1.20	-5.50	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	55.1	53.2	51.5	45.4	54.1	54.7
Medium Trucks:	49.1	47.6	41.3	39.7	48.2	48.4
Heavy Trucks:	50.5	49.0	40.0	41.3	49.6	49.7
Vehicle Noise:	57.2	55.4	52.2	47.6	56.1	56.6

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	5	11	24	52
CNEL:	6	12	26	56

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYC 2021 With Project
Road Name: Lincoln St.
Road Segment: e/o Hargrave St.
Project Name: Estes Banning
Job Number: 12369

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	1,400 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	140 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	-9.40	0.71	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-26.64	0.74	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-30.59	0.73	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	54.4	52.5	50.7	44.7	53.3	53.9
Medium Trucks:	48.6	47.1	40.8	39.2	47.7	47.9
Heavy Trucks:	50.5	49.1	40.1	41.3	49.7	49.8
Vehicle Noise:	56.6	54.9	51.5	47.1	55.6	56.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	6	12	26	55
CNEL:	6	13	27	59

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FHWA-RD-77-108 HIGHWAY NOISE PREDICTION MODEL

Scenario: OYC 2021 With Project
Road Name: Barbour St.
Road Segment: e/o Hargrave St.
Project Name: Estes Banning
Job Number: 12369

SITE SPECIFIC INPUT DATA

Highway Data

Average Daily Traffic (Adt):	900 vehicles
Peak Hour Percentage:	10%
Peak Hour Volume:	90 vehicles
Vehicle Speed:	35 mph
Near/Far Lane Distance:	48 feet

Site Data

Barrier Height:	**0.0 feet**
Barrier Type (0-Wall, 1-Berm):	0.0
Centerline Dist. to Barrier:	50.0 feet
Centerline Dist. to Observer:	50.0 feet
Barrier Distance to Observer:	0.0 feet
Observer Height (Above Pad):	5.0 feet
Pad Elevation:	0.0 feet
Road Elevation:	0.0 feet
Road Grade:	0.0%
Left View:	-90.0 degrees
Right View:	90.0 degrees

NOISE MODEL INPUTS

Site Conditions (Hard = 10, Soft = 15)

Autos:	15
Medium Trucks (2 Axles):	15
Heavy Trucks (3+ Axles):	15

Vehicle Mix

VehicleType	Day	Evening	Night	Daily
Autos:	77.5%	12.9%	9.6%	97.42%
Medium Trucks:	84.8%	4.9%	10.3%	1.84%
Heavy Trucks:	86.5%	2.7%	10.8%	0.74%

Noise Source Elevations (in feet)

Autos:	0.000		
Medium Trucks:	2.297		
Heavy Trucks:	8.006	Grade Adjustment:	0.0

Lane Equivalent Distance (in feet)

Autos:	44.147
Medium Trucks:	43.947
Heavy Trucks:	43.966

FHWA Noise Model Calculations

VehicleType	REMEL	Traffic Flow	Distance	Finite Road	Fresnel	Barrier Atten	Berm Atten
Autos:	64.30	-11.32	0.71	-1.20	-4.65	0.000	0.000
Medium Trucks:	75.75	-28.56	0.74	-1.20	-4.87	0.000	0.000
Heavy Trucks:	81.57	-32.51	0.73	-1.20	-5.43	0.000	0.000

Unmitigated Noise Levels (without Topo and barrier attenuation)

VehicleType	Leq Peak Hour	Leq Day	Leq Evening	Leq Night	Ldn	CNEL
Autos:	52.5	50.6	48.8	42.8	51.4	52.0
Medium Trucks:	46.7	45.2	38.9	37.3	45.8	46.0
Heavy Trucks:	48.6	47.2	38.1	39.4	47.7	47.9
Vehicle Noise:	54.7	53.0	49.6	45.2	53.7	54.1

Centerline Distance to Noise Contour (in feet)

	70 dBA	65 dBA	60 dBA	55 dBA
Ldn:	4	9	19	41
CNEL:	4	9	20	44

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APPENDIX 9.1:

OPERATIONAL NOISE LEVEL CALCULATIONS

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STATIONARY SOURCE NOISE PREDICTION MODEL

9/12/2019

Observer Location: **R1**
Source: Truck Unloading/Docking Activity
Condition: Operational

Project Name: Estes Banning
Job Number: 12369
Analyst: B. Lawson

NOISE MODEL INPUTS

Noise Distance to Observer	185.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	185.0 feet	*Noise Source Height:*	8.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	67.2	64.2	67.2	71.8	75.6	80.0
Distance Attenuation	185.0	-15.8	-15.8	-15.8	-15.8	-15.8	-15.8
Shielding (Barrier Attenuation)	185.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		51.4	48.4	51.4	56.0	59.8	64.2
60 Minute Hourly Adjustment		**51.4**	**48.4**	**51.4**	**56.0**	**59.8**	**64.2**

STATIONARY SOURCE NOISE PREDICTION MODEL

9/12/2019

Observer Location: **R1**
Source: Roof-Top Air Conditioning Unit
Condition: Operational

Project Name: Estes Banning
Job Number: 12369
Analyst: B. Lawson

NOISE MODEL INPUTS

Noise Distance to Observer	1,295.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	1,295.0 feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	30.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	74.4	76.1	77.4	77.7	78.2
Distance Attenuation	1,295.0	-48.3	-48.3	-48.3	-48.3	-48.3	-48.3
Shielding (Barrier Attenuation)	1,295.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		28.9	26.1	27.8	29.1	29.4	29.9
60 Minute Hourly Adjustment		**28.9**	**26.1**	**27.8**	**29.1**	**29.4**	**29.9**

STATIONARY SOURCE NOISE PREDICTION MODEL

9/12/2019

Observer Location: **R1**
Source: Parking Lot Vehicle Movements
Condition: Operational

Project Name: Estes Banning
Job Number: 12369
Analyst: B. Lawson

NOISE MODEL INPUTS

Noise Distance to Observer	520.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	520.0 feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	15.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	49.0	50.0	55.0	61.0	71.9
Distance Attenuation	520.0	-25.7	-25.7	-25.7	-25.7	-25.7	-25.7
Shielding (Barrier Attenuation)	520.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		26.5	23.3	24.3	29.3	35.3	46.2
60 Minute Hourly Adjustment		**26.5**	**23.3**	**24.3**	**29.3**	**35.3**	**46.2**

STATIONARY SOURCE NOISE PREDICTION MODEL

9/12/2019

Observer Location: **R1**
Source: Trash Compactor
Condition: Operational

Project Name: Estes Banning
Job Number: 12369
Analyst: B. Lawson

NOISE MODEL INPUTS

Noise Distance to Observer	1,164.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	1,164.0 feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	75.5	70.5	71.8	80.1	85.3	86.3
Distance Attenuation	1,164.0	-47.3	-47.3	-47.3	-47.3	-47.3	-47.3
Shielding (Barrier Attenuation)	1,164.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		28.2	23.2	24.5	32.8	38.0	39.0
60 Minute Hourly Adjustment		**28.2**	**23.2**	**24.5**	**32.8**	**38.0**	**39.0**

STATIONARY SOURCE NOISE PREDICTION MODEL

9/12/2019

Observer Location: **R2**
Source: Truck Unloading/Docking Activity
Condition: Operational

Project Name: Estes Banning
Job Number: 12369
Analyst: B. Lawson

NOISE MODEL INPUTS

Noise Distance to Observer	790.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	790.0 feet	*Noise Source Height:*	8.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	67.2	64.2	67.2	71.8	75.6	80.0
Distance Attenuation	790.0	-28.4	-28.4	-28.4	-28.4	-28.4	-28.4
Shielding (Barrier Attenuation)	790.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		38.8	35.8	38.8	43.4	47.2	51.6
60 Minute Hourly Adjustment		**38.8**	**35.8**	**38.8**	**43.4**	**47.2**	**51.6**

STATIONARY SOURCE NOISE PREDICTION MODEL

9/12/2019

Observer Location: **R2**
Source: Roof-Top Air Conditioning Unit
Condition: Operational

Project Name: Estes Banning
Job Number: 12369
Analyst: B. Lawson

NOISE MODEL INPUTS

Noise Distance to Observer	1,882.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	1,882.0 feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	30.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	74.4	76.1	77.4	77.7	78.2
Distance Attenuation	1,882.0	-51.5	-51.5	-51.5	-51.5	-51.5	-51.5
Shielding (Barrier Attenuation)	1,882.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		25.7	22.9	24.6	25.9	26.2	26.7
60 Minute Hourly Adjustment		**25.7**	**22.9**	**24.6**	**25.9**	**26.2**	**26.7**

STATIONARY SOURCE NOISE PREDICTION MODEL

9/12/2019

Observer Location: **R2**
Source: Parking Lot Vehicle Movements
Condition: Operational

Project Name: Estes Banning
Job Number: 12369
Analyst: B. Lawson

NOISE MODEL INPUTS

Noise Distance to Observer	1,148.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	1,148.0 feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	15.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	49.0	50.0	55.0	61.0	71.9
Distance Attenuation	1,148.0	-30.9	-30.9	-30.9	-30.9	-30.9	-30.9
Shielding (Barrier Attenuation)	1,148.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		21.3	18.1	19.1	24.1	30.1	41.0
60 Minute Hourly Adjustment		**21.3**	**18.1**	**19.1**	**24.1**	**30.1**	**41.0**

STATIONARY SOURCE NOISE PREDICTION MODEL

9/12/2019

Observer Location: **R2**
Source: Trash Compactor
Condition: Operational

Project Name: Estes Banning
Job Number: 12369
Analyst: B. Lawson

NOISE MODEL INPUTS

Noise Distance to Observer	1,738.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	1,738.0 feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	75.5	70.5	71.8	80.1	85.3	86.3
Distance Attenuation	1,738.0	-50.8	-50.8	-50.8	-50.8	-50.8	-50.8
Shielding (Barrier Attenuation)	1,738.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		24.7	19.7	21.0	29.3	34.5	35.5
60 Minute Hourly Adjustment		**24.7**	**19.7**	**21.0**	**29.3**	**34.5**	**35.5**

STATIONARY SOURCE NOISE PREDICTION MODEL

9/12/2019

Observer Location: **R3**
Source: Truck Unloading/Docking Activity
Condition: Operational

Project Name: Estes Banning
Job Number: 12369
Analyst: B. Lawson

NOISE MODEL INPUTS

Noise Distance to Observer	1,689.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	1,689.0 feet	*Noise Source Height:*	8.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	67.2	64.2	67.2	71.8	75.6	80.0
Distance Attenuation	1,689.0	-35.0	-35.0	-35.0	-35.0	-35.0	-35.0
Shielding (Barrier Attenuation)	1,689.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		32.2	29.2	32.2	36.8	40.6	45.0
60 Minute Hourly Adjustment		**32.2**	**29.2**	**32.2**	**36.8**	**40.6**	**45.0**

STATIONARY SOURCE NOISE PREDICTION MODEL

9/12/2019

Observer Location: **R3**
Source: Roof-Top Air Conditioning Unit
Condition: Operational

Project Name: Estes Banning
Job Number: 12369
Analyst: B. Lawson

NOISE MODEL INPUTS

Noise Distance to Observer	2,694.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	2,694.0 feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	30.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	74.4	76.1	77.4	77.7	78.2
Distance Attenuation	2,694.0	-54.6	-54.6	-54.6	-54.6	-54.6	-54.6
Shielding (Barrier Attenuation)	2,694.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		22.6	19.8	21.5	22.8	23.1	23.6
60 Minute Hourly Adjustment		**22.6**	**19.8**	**21.5**	**22.8**	**23.1**	**23.6**

STATIONARY SOURCE NOISE PREDICTION MODEL

9/12/2019

Observer Location: **R3**
Source: Parking Lot Vehicle Movements
Condition: Operational

Project Name: Estes Banning
Job Number: 12369
Analyst: B. Lawson

NOISE MODEL INPUTS

Noise Distance to Observer	1,867.0	feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	1,867.0	feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	15.0
Barrier Elevation:	0.0	feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	49.0	50.0	55.0	61.0	71.9
Distance Attenuation	1,867.0	-34.1	-34.1	-34.1	-34.1	-34.1	-34.1
Shielding (Barrier Attenuation)	1,867.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		18.1	14.9	15.9	20.9	26.9	37.8
60 Minute Hourly Adjustment		**18.1**	**14.9**	**15.9**	**20.9**	**26.9**	**37.8**

STATIONARY SOURCE NOISE PREDICTION MODEL

9/12/2019

Observer Location: **R3**
Source: Trash Compactor
Condition: Operational

Project Name: Estes Banning
Job Number: 12369
Analyst: B. Lawson

NOISE MODEL INPUTS

Noise Distance to Observer	2,596.0	feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	2,596.0	feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0	feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0	feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0	feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0	feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	75.5	70.5	71.8	80.1	85.3	86.3
Distance Attenuation	2,596.0	-54.3	-54.3	-54.3	-54.3	-54.3	-54.3
Shielding (Barrier Attenuation)	2,596.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		21.2	16.2	17.5	25.8	31.0	32.0
60 Minute Hourly Adjustment		**21.2**	**16.2**	**17.5**	**25.8**	**31.0**	**32.0**

STATIONARY SOURCE NOISE PREDICTION MODEL

9/12/2019

Observer Location: **R4**
Source: Truck Unloading/Docking Activity
Condition: Operational

Project Name: Estes Banning
Job Number: 12369
Analyst: B. Lawson

NOISE MODEL INPUTS

Noise Distance to Observer	1,508.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	1,508.0 feet	*Noise Source Height:*	8.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	30.0	67.2	64.2	67.2	71.8	75.6	80.0
Distance Attenuation	1,508.0	-34.0	-34.0	-34.0	-34.0	-34.0	-34.0
Shielding (Barrier Attenuation)	1,508.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		33.2	30.2	33.2	37.8	41.6	46.0
60 Minute Hourly Adjustment		**33.2**	**30.2**	**33.2**	**37.8**	**41.6**	**46.0**

STATIONARY SOURCE NOISE PREDICTION MODEL

9/12/2019

Observer Location: **R4**
Source: Roof-Top Air Conditioning Unit
Condition: Operational

Project Name: Estes Banning
Job Number: 12369
Analyst: B. Lawson

NOISE MODEL INPUTS

Noise Distance to Observer	1,987.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	1,984.0 feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	3.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	30.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	77.2	74.4	76.1	77.4	77.7	78.2
Distance Attenuation	1,987.0	-52.0	-52.0	-52.0	-52.0	-52.0	-52.0
Shielding (Barrier Attenuation)	1,984.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		25.2	22.4	24.1	25.4	25.7	26.2
60 Minute Hourly Adjustment		**25.2**	**22.4**	**24.1**	**25.4**	**25.7**	**26.2**

STATIONARY SOURCE NOISE PREDICTION MODEL

9/12/2019

Observer Location: **R4**
Source: Parking Lot Vehicle Movements
Condition: Operational

Project Name: Estes Banning
Job Number: 12369
Analyst: B. Lawson

NOISE MODEL INPUTS

Noise Distance to Observer	1,448.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	1,448.0 feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	15.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	10.0	52.2	49.0	50.0	55.0	61.0	71.9
Distance Attenuation	1,448.0	-32.4	-32.4	-32.4	-32.4	-32.4	-32.4
Shielding (Barrier Attenuation)	1,448.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		19.8	16.6	17.6	22.6	28.6	39.5
60 Minute Hourly Adjustment		**19.8**	**16.6**	**17.6**	**22.6**	**28.6**	**39.5**

STATIONARY SOURCE NOISE PREDICTION MODEL

9/12/2019

Observer Location: **R4**
Source: Trash Compactor
Condition: Operational

Project Name: Estes Banning
Job Number: 12369
Analyst: B. Lawson

NOISE MODEL INPUTS

Noise Distance to Observer	2,009.0 feet	***Barrier Height:***	**0.0 feet**
Noise Distance to Barrier:	2,009.0 feet	*Noise Source Height:*	5.0 feet
Barrier Distance to Observer:	0.0 feet	*Observer Height:*	5.0 feet
Observer Elevation:	0.0 feet	*Barrier Type (0-Wall, 1-Berm):*	0
Noise Source Elevation:	0.0 feet	*Drop Off Coefficient:*	20.0
Barrier Elevation:	0.0 feet		

20 = 6 dBA per doubling of distance
15 = 4.5 dBA per doubling of distance

NOISE MODEL PROJECTIONS

Noise Level	*Distance (feet)*	*Leq*	*L50*	*L25*	*L8*	*L2*	*Lmax*
Reference (Sample)	5.0	75.5	70.5	71.8	80.1	85.3	86.3
Distance Attenuation	2,009.0	-52.1	-52.1	-52.1	-52.1	-52.1	-52.1
Shielding (Barrier Attenuation)	2,009.0	0.0	0.0	0.0	0.0	0.0	0.0
Raw (Distance + Barrier)		23.4	18.4	19.7	28.0	33.2	34.2
60 Minute Hourly Adjustment		**23.4**	**18.4**	**19.7**	**28.0**	**33.2**	**34.2**

Appendix H

Estes Banning

TRAFFIC IMPACT ANALYSIS

CITY OF BANNING

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AUGUST 2, 2019

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LIST OF ABBREVIATED TERMS

(1)	Reference
ADT	Average Daily Traffic
CA MUTCD	California Manual on Uniform Traffic Control Devices
Caltrans	California Department of Transportation
CEQA	California Environmental Quality Act
CIP	Capital Improvement Program
CMP	Congestion Management Program
E+P	Existing Plus Project
HCM	Highway Capacity Manual
ITE	Institute of Transportation Engineers
LOS	Level of Service
PHF	Peak Hour Factor
Project	Estes Banning
RTP	Regional Transportation Plan
SCAG	Southern California Association of Governments
SCS	Sustainable Communities Strategy
SHS	State Highway System
TIA	Traffic Impact Analysis
TUMF	Transportation Uniform Mitigation Fee
v/c	Volume to Capacity
WRCOG	Western Riverside Council of Governments

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1 INTRODUCTION

This report presents the results of the traffic impact analysis (TIA) for the proposed Estes Banning development (referred to as "Project"), which is located on the northwest corner of Westward Avenue and Scott Street in the City of Banning as shown on Exhibit 1-1.

The purpose of this traffic impact analysis is to evaluate the potential circulation system deficiencies that may result from the development of the proposed Project. This traffic study has been prepared in accordance with the County of Riverside Transportation Department Traffic Impact Analysis Preparation Guide (April 2008), the California Department of Transportation (Caltrans) Guide for the Preparation of Traffic Impact Studies (December 2002), and consultation with City of Banning staff during the scoping process. (1) (2) The approved Project Traffic Study Scoping agreement is provided in Appendix 1.1 of this TIA.

1.1 SUMMARY OF FINDINGS

Intersection operations analysis conducted for Existing, Existing plus Project (E+P), and Opening Year Cumulative (2021) Without Project traffic conditions indicates that the study area intersection of Hargrave Street & I-10 Eastbound Ramps is anticipated to operate at unacceptable level of service (LOS). With the addition of Project traffic in Opening Year Cumulative (2021) With Project traffic conditions, the study area intersection of Hargrave Street & I-10 Westbound Ramps is anticipated to operate at unacceptable LOS.

Queuing analysis conducted for Existing, Existing plus Project (E+P), Opening Year Cumulative (2021) Without Project, and Opening Year Cumulative (2021) With Project traffic conditions indicates that the 95th percentile queues at the I-10 Freeway interchange at Hargrave Street did not back up to the freeway mainline.

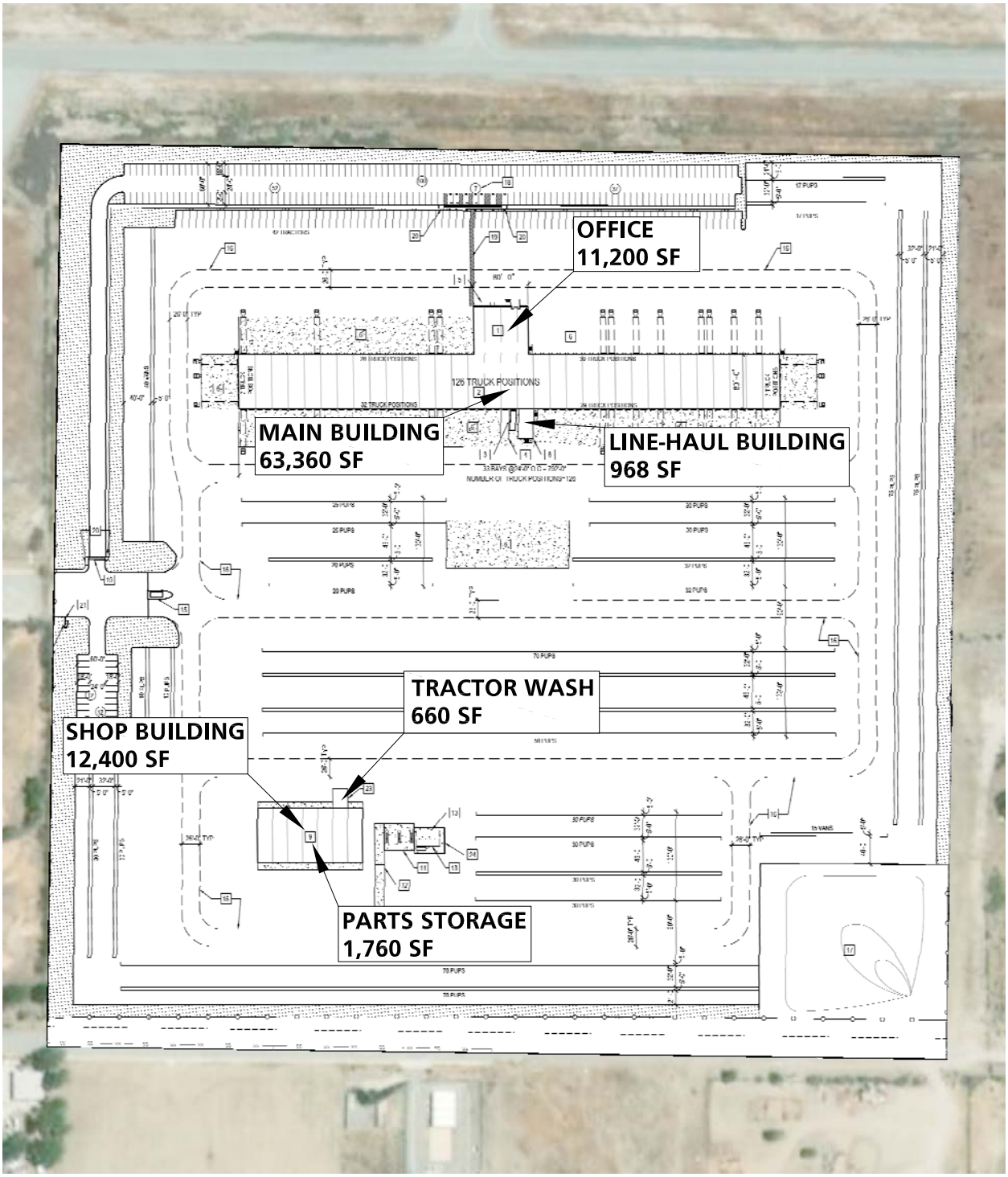
1.2 PROJECT OVERVIEW

Exhibit 1-1 illustrates the preliminary Project site plan. As indicated on Exhibit 1-1, the Project is to consist of approximately 97,400 square-feet (SF) of Truck Terminal use to include a 134 door cross-dock (this includes future expansion), a two-story office building, a line-haul building, a truck maintenance building, and a fuel station for project trucks.

The Project is anticipated to be built and occupied in 2021. As shown on Exhibit 1-1, access to the Project site will be provided via Barbour Street.

Trip generation for the Project are based on the anticipated number of employees per day and operational data provided by the client. Passenger car equivalent (PCE) factors were applied to the trip generation rates for heavy trucks (large 2-axles, 3-axles, 4+-axles). The proposed Project is anticipated to generate a net total of approximately 482 PCE daily trips, 92 PCE AM peak hour trips, and 112 PCE PM peak hour trips. The assumptions and methods used to estimate the Project's trip generation characteristics are discussed in greater detail in Section 4.1 *Project Trip Generation* of this report.

EXHIBIT 1-1: PRELIMINARY SITE PLAN



12367 - siteplan.dwg

1.3 ANALYSIS SCENARIOS

For the purposes of this traffic study, potential impacts to traffic and circulation have been assessed for each of the following conditions:

- Existing (2019)
- Existing plus Project (E+P)
- Opening Year Cumulative (2021) Without Project
- Opening Year Cumulative (2021) With Project

1.3.1 EXISTING (2019) CONDITIONS

Information for Existing (2019) conditions is disclosed to represent the baseline traffic conditions as they existed at the time this report was prepared.

1.3.2 EXISTING PLUS PROJECT CONDITIONS

The Existing Plus Project (E+P) analysis determines circulation system deficiencies that will occur on the existing roadway system in the scenario of the Project being placed upon Existing conditions. The E+P analysis intends to identify the project-specific traffic impacts associated solely with the development of the proposed Project based on a comparison of the E+P traffic conditions to Existing (2019) conditions.

1.3.3 OPENING YEAR CUMULATIVE (2021) CONDITIONS

The Opening Year Cumulative conditions analysis determines the potential near-term cumulative circulation system deficiencies. The Opening Year Cumulative (2021) traffic conditions analyses determine the potential near-term cumulative circulation system deficiencies. To account for background traffic growth, traffic associated with other known cumulative development projects in conjunction with an ambient growth factor from Existing conditions of 4.04% are included for Opening Year Cumulative (2021) traffic conditions. A list of cumulative projects that could potentially be constructed and contribute traffic to the study are was obtained from the City of Banning (lead agency).

1.4 STUDY AREA

To ensure that this TIA satisfies the City of Banning's traffic study requirements, Urban Crossroads, Inc. prepared a project traffic study scoping package for review by County staff prior to the preparation of this report. The Agreement provides an outline of the Project study area, trip generation, trip distribution, and analysis methodology. The Agreement approved by the City is included in Appendix 1.1.

1.4.1 INTERSECTIONS

The following 7 study area intersections listed in Table 1-1 and shown on Exhibit 1-2 were selected for this TIA based on consultation with City of Banning staff. In general, the study area includes intersections where the Project is anticipated to contribute 50 or more peak hour trips

at the study area intersections. These intersections have either been included because they are utilized for site access purposes or based on consultation with City staff.

TABLE 1-1: INTERSECTION ANALYSIS LOCATIONS

ID	Intersection Location	Jurisdiction
1	Hargrave St. & I-10 WB Ramps	Caltrans, City of Banning
2	Hargrave St. & I-10 EB Ramps	Caltrans, City of Banning
3	Hargrave St. & John St.	City of Banning
4	Hargrave St. & Lincoln St.	City of Banning
5	Hargrave St. & Barbour St.	City of Banning
6	Hathaway St. & Barbour St.	City of Banning
7	Driveway 1 & Barbour St.	City of Banning

The "50 peak hour trip" criterion is consistent with the methodology employed by the City of Banning, and generally represents a minimum number of trips at which a typical intersection would have the potential to be substantively impacted by a given development proposal. Although each intersection may have unique operating characteristics, this traffic engineering rule of thumb is a widely utilized tool for estimating a potential area of impact (i.e., study area).

1.5 ANALYSIS FINDINGS

This section provides a summary of the analysis results for Existing (2019), E+P, and Opening Year Cumulative (2021) traffic conditions. The results of the intersection operations analysis for the study area intersections for near term traffic conditions are summarized in Exhibit 1-3.

1.5.1 INTERSECTION OPERATIONS ANALYSIS

Existing (2019) Conditions

The study area intersection of Hargrave Street & I-10 Eastbound Ramps is currently operating at an unacceptable LOS during one or more of the peak hours under Existing (2019) traffic conditions.

E+P Conditions

The intersection analysis results indicate that the addition of Project traffic is not anticipated to result in any additional LOS deficiencies, consistent with Existing (2019) traffic conditions.

Opening Year Cumulative (2021) Without Project Conditions

The intersection analysis results indicate that there are no additional study area intersections that are anticipated to operate at unacceptable LOS during one or more of the peak hours under Opening Year Cumulative (2021) Without traffic conditions, consistent with Existing (2019) and E+P traffic conditions.

EXHIBIT 1-2: LOCATION MAP

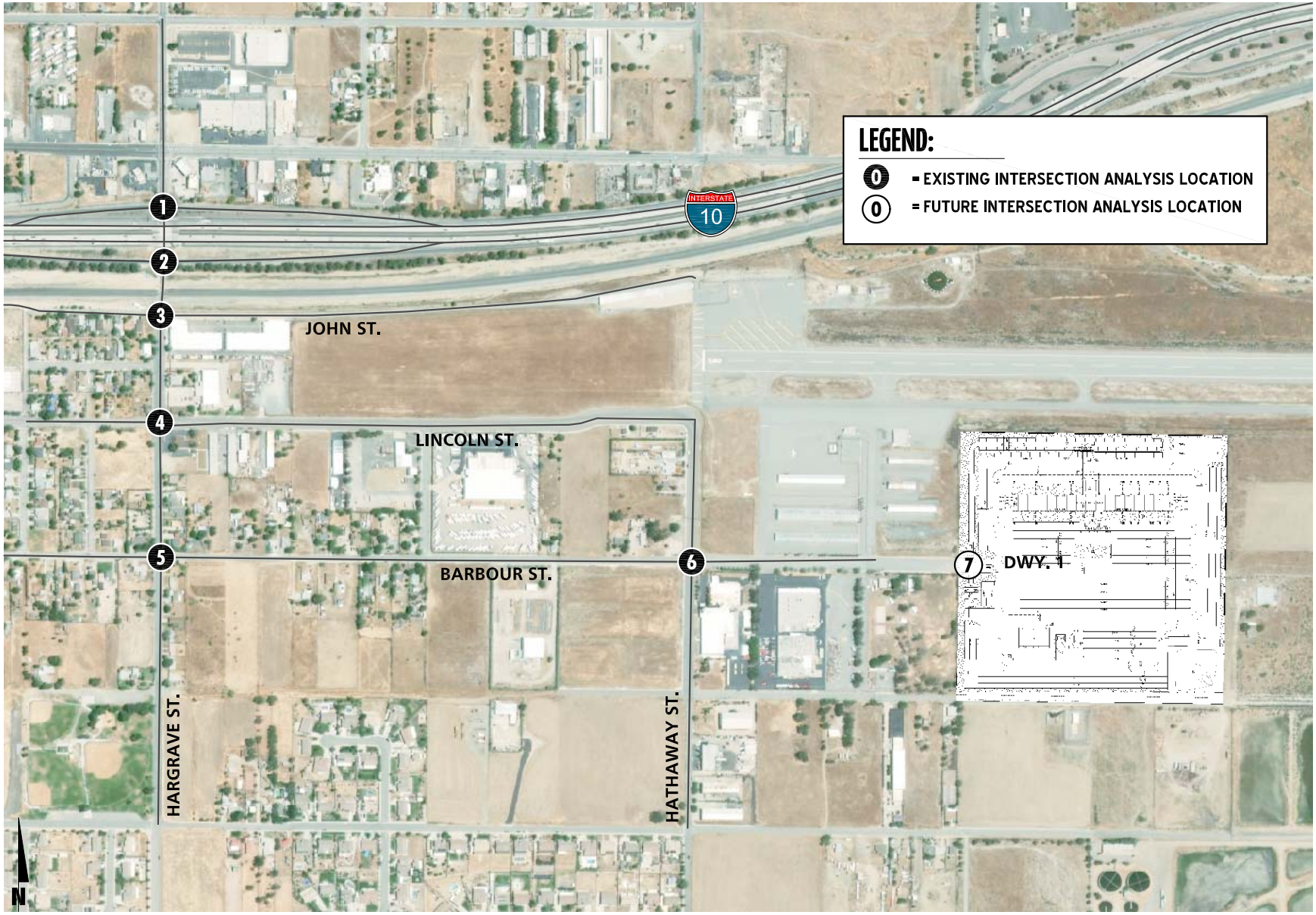


EXHIBIT 1-3: SUMMARY OF DEFICIENT INTERSECTIONS BY ANALYSIS SCENARIO

#	Intersection	Existing (2019)	E+P	Opening Year Cumulative (2021) Without Project	Opening Year Cumulative (2021) With Project
1	Hargrave St. & I-10 WB Ramps				
2	Hargrave St. & I-10 EB Ramps				
3	Hargrave St. & John St.				
4	Hargrave St. & Lincoln St.				
5	Hargrave St. & Barbour St.				
6	Hathaway St. & Barbour St.				
7	Dwy. 1 & Barbour St.	NA		NA	

LEGEND:

- = AM PEAK HOUR
- = PM PEAK HOUR
- = LOS A-D
- = LOS E
- = LOS F
- NA = NOT AN ANALYSIS LOCATION FOR THIS SCENARIO

Opening Year Cumulative (2021) With Project Conditions

The intersection analysis results indicate that the addition of Project traffic is anticipated to result in an additional LOS deficiency at the intersection of Hargrave Street & I-10 Westbound Ramps.

1.5.1 QUEUING ANALYSIS

Existing (2019), E+P, Opening Year Cumulative (2021) Without Project, and Opening Year Cumulative (2021) With Project Conditions

Queuing analysis conducted for Existing, Existing plus Project (E+P), Opening Year Cumulative (2021) Without Project, and Opening Year Cumulative (2021) With Project traffic conditions indicates that the 95th percentile queues at the I-10 Freeway interchange at Hargrave Street did not back up to the freeway mainline.

1.6 RECOMMENDATIONS

The following recommendations are based on the improvements needed to address the Project's deficiencies. Exhibit 1-4 shows the site adjacent recommendations.

Recommendation 1.1 – Hargrave Street & I-10 Eastbound Ramps (#2) – The following improvement is necessary to improve the peak hour deficiency:

- Contribute fair share to install an all-way stop control.

Recommendation 2.1 – Hargrave Street & I-10 Westbound Ramps (#1) – The following improvement is necessary to improve the peak hour deficiency:

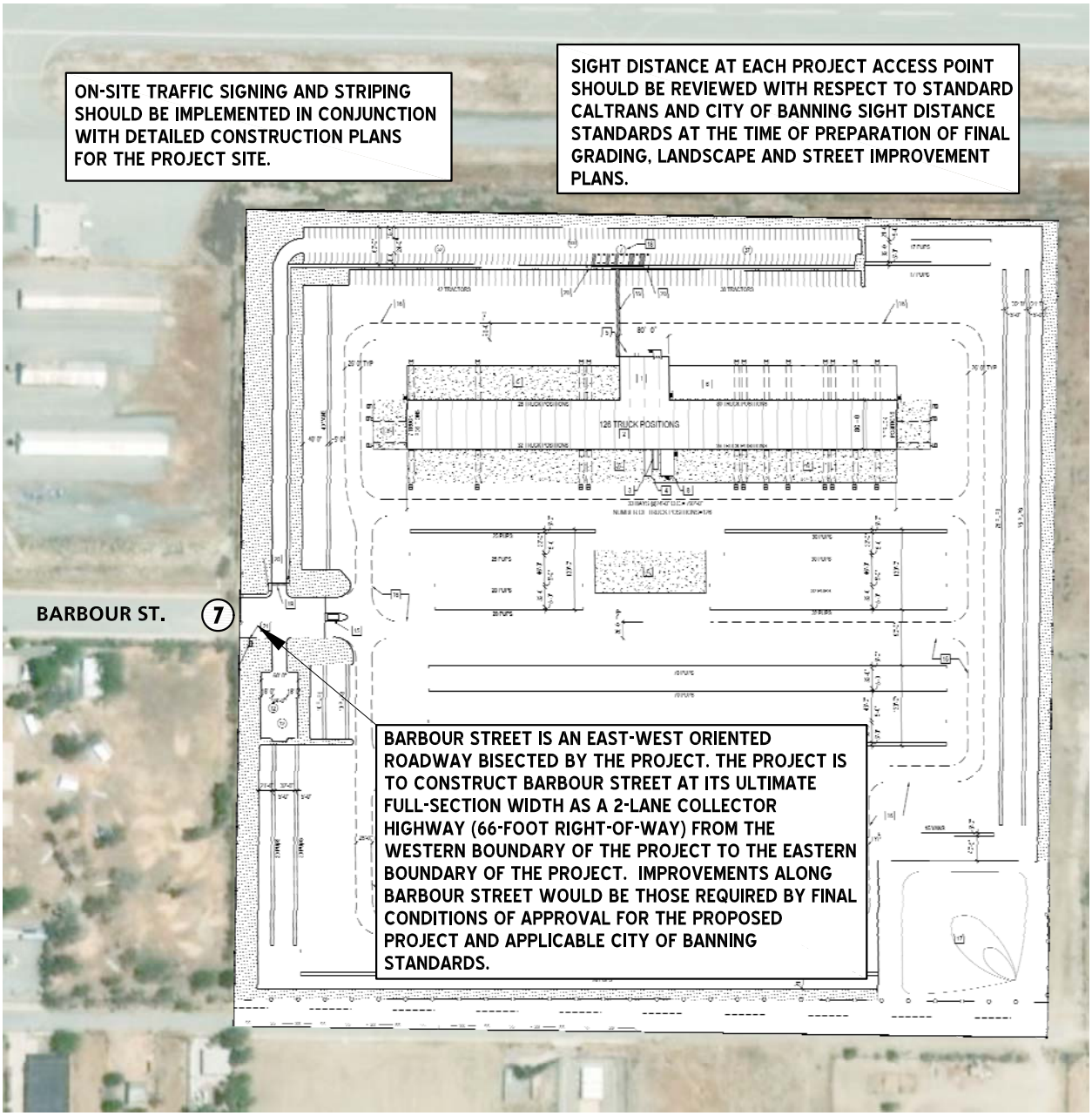
- Contribute fair share to install an all-way stop control.

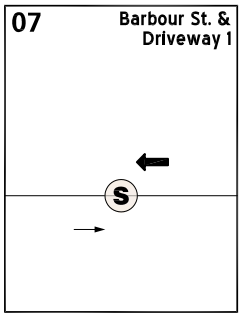
Recommendation 3.1 – Barbour Street – Barbour Street is an east-west oriented roadway bisected by the Project. The Project is to construct Barbour Street at its ultimate full-section width as a 2-lane Collector Highway (66-foot right-of-way) from the western boundary of the Project to the eastern boundary of the Project. Improvements along Barbour Street would be those required by final conditions of approval for the proposed Project and applicable City of Banning standards.

On-site traffic signing and striping should be implemented in conjunction with detailed construction plans for the Project site.

Sight distance at each project access point should be reviewed with respect to standard Caltrans and City of Banning sight distance standards at the time of preparation of final grading, landscape and street improvement plans.

EXHIBIT 1-4: SITE ADJACENT ROADWAY AND SITE ACCESS RECOMMENDATIONS





LEGEND:

- S = ALL WAY STOP
- = EXISTING LANE
- = LANE IMPROVEMENT

N

For those recommended improvements listed on Table 1-2 and not constructed as part of the Project, the Applicant's responsibility for the Project's contributions to deficient traffic conditions is fulfilled by payment of Transportation Uniform Mitigation Fee (TUMF) fair share fees and/or Capital Improvement Program (CIP) fees that would be assigned to construction of the identified recommended improvements. The Project Applicant would be required to pay TUMF and fair share fees consistent with the City requirements. Please refer to Section 7 *Local and Regional Funding Mechanisms*.

Table 1-2

Summary of Improvements

#	Intersection Location	Jurisdiction	E+P	2021 WP	Improvements in TUMF?[1]	Fair Share %[2]
1	Hargrave St. & I-10 WB Ramps	Caltrans, City of Banning	None	Install an all-way stop control	No	37.7%
2	Hargrave St. & I-10 EB Ramps	Caltrans, City of Banning	Install an all-way stop control	Same	No	54.0%

[1] Improvements included in County of Riverside TUMF programs for local, regional and specific plan components.

[2] Program improvements constructed by Project may be eligible for fee credit, at discretion of respective jurisdiction. See Table 7-1 for Fair Share Calculations.

2 METHODOLOGIES

This section of the report presents the methodologies used to perform the traffic analyses summarized in this report. The methodologies described are generally consistent with the County of Riverside study guidelines.

2.1 LEVEL OF SERVICE

Traffic operations of roadway facilities are described using the term "Level of Service" (LOS). LOS is a qualitative description of traffic flow based on several factors such as speed, travel time, delay, and freedom to maneuver. Six levels are typically defined ranging from LOS A, representing completely free-flow conditions, to LOS F, representing breakdown in flow resulting in stop-and-go conditions. LOS E represents operations at or near capacity, an unstable level where vehicles are operating with the minimum spacing for maintaining uniform flow.

2.2 INTERSECTION CAPACITY ANALYSIS

The definitions of LOS for interrupted traffic flow (flow restrained by the existence of traffic signals and other traffic control devices) differ slightly depending on the type of traffic control. The LOS is typically dependent on the quality of traffic flow at the intersections along a roadway. The Highway Capacity Manual (HCM) (6th Edition) methodology expresses the LOS at an intersection in terms of delay time for the various intersection approaches. (3) The HCM uses different procedures depending on the type of intersection control.

2.2.1 SIGNALIZED INTERSECTIONS

The City of Banning requires signalized intersection operations analysis based on the methodology described in the HCM (6th Edition). Intersection LOS operations are based on an intersection's average control delay. Control delay includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. For signalized intersections LOS is directly related to the average control delay per vehicle and is correlated to a LOS designation as described in Table 2-1. Study area intersections have been evaluated using the Synchro (Version 10) analysis software package.

TABLE 2-1: SIGNALIZED INTERSECTION LOS THRESHOLDS

Description	Average Control Delay (Seconds), V/C ≤ 1.0	Level of Service, V/C ≤ 1.0	Level of Service, V/C > 1.0
Operations with very low delay occurring with favorable progression and/or short cycle length.	0 to 10.00	A	F
Operations with low delay occurring with good progression and/or short cycle lengths.	10.01 to 20.00	B	F

Description	Average Control Delay (Seconds), V/C ≤ 1.0	Level of Service, V/C ≤ 1.0	Level of Service, V/C > 1.0
Operations with average delays resulting from fair progression and/or longer cycle lengths. Individual cycle failures begin to appear.	20.01 to 35.00	C	F
Operations with longer delays due to a combination of unfavorable progression, long cycle lengths, or high V/C ratios. Many vehicles stop and individual cycle failures are noticeable.	35.01 to 55.00	D	F
Operations with high delay values indicating poor progression, long cycle lengths, and high V/C ratios. Individual cycle failures are frequent occurrences. This is considered to be the limit of acceptable delay.	55.01 to 80.00	E	F
Operation with delays unacceptable to most drivers occurring due to over saturation, poor progression, or very long cycle lengths.	80.01 and up	F	F

Source: HCM, 6th Edition

The traffic modeling and signal timing optimization software package Synchro (Version 10) is utilized to analyze signalized intersections within the City of Banning. Synchro is a macroscopic traffic software program that is based on the signalized intersection capacity analysis as specified in the HCM. Macroscopic level models represent traffic in terms of aggregate measures for each movement at the study intersections. Equations are used to determine measures of effectiveness such as delay and queue length. The level of service and capacity analysis performed by Synchro takes into consideration optimization and coordination of signalized intersections within a network.

The peak hour traffic volumes are adjusted using a peak hour factor (PHF) to reflect peak 15-minute volumes. Common practice for LOS analysis is to use a peak 15-minute rate of flow. However, flow rates are typically expressed in vehicles per hour. The PHF is the relationship between the peak 15-minute flow rate and the full hourly volume (e.g. PHF = [Hourly Volume] / [4 x Peak 15-minute Flow Rate]). The use of a 15-minute PHF produces a more detailed analysis as compared to analyzing vehicles per hour. Existing PHFs have been used for all analysis scenarios. Per the HCM, PHF values over 0.95 often are indicative of high traffic volumes with capacity constraints on peak hour flows while lower PHF values are indicative of greater variability of flow during the peak hour. (3)

2.2.2 UNSIGNALIZED INTERSECTIONS

The City of Banning requires the operations of unsignalized intersections be evaluated using the methodology described the HCM (6th Edition). (3) The LOS rating is based on the weighted average control delay expressed in seconds per vehicle (see Table 2-2).

TABLE 2-2: UNSIGNALIZED INTERSECTION LOS THRESHOLDS

Description	Average Control Delay Per Vehicle (Seconds)	Level of Service, V/C ≤ 1.0	Level of Service, V/C > 1.0
Little or no delays.	0 to 10.00	A	F
Short traffic delays.	10.01 to 15.00	B	F
Average traffic delays.	15.01 to 25.00	C	F
Long traffic delays.	25.01 to 35.00	D	F
Very long traffic delays.	35.01 to 50.00	E	F
Extreme traffic delays with intersection capacity exceeded.	> 50.00	F	F

Source: HCM, 6th Edition

At two-way or side-street stop-controlled intersections, LOS is calculated for each controlled movement and for the left turn movement from the major street, as well as for the intersection as a whole. For approaches composed of a single lane, the delay is computed as the average of all movements in that lane. For all-way stop controlled intersections, LOS is computed for the intersection as a whole.

2.3 TRAFFIC SIGNAL WARRANT ANALYSIS METHODOLOGY

The term "signal warrants" refers to the list of established criteria used by Caltrans and other public agencies to quantitatively justify or ascertain the potential need for installation of a traffic signal at an otherwise unsignalized intersection. This TIA uses the signal warrant criteria presented in the latest edition of the Caltrans California Manual on Uniform Traffic Control Devices (CA MUTCD) for all unsignalized study area intersections. (4)

The signal warrant criteria for Existing study area intersections are based upon several factors, including volume of vehicular and pedestrian traffic, frequency of accidents, and location of school areas. The CA MUTCD indicate that the installation of a traffic signal should be considered if one or more of the signal warrants are met. (4) Specifically, this TIA utilizes the Peak Hour Volume-based Warrant 3 as the appropriate representative traffic signal warrant analysis for existing traffic conditions. Warrant 3 is appropriate to use for this TIA because it provides specialized warrant criteria for intersections with urban characteristics (e.g. located in communities with populations of more than 10,000 persons or with adjacent major streets operating above 40 miles per hour). For the purposes of this study, the speed limit was the basis for determining whether Urban or Rural warrants were used for a given intersection.

Future unsignalized intersections, that currently do not exist, have been assessed regarding the potential need for new traffic signals based on future average daily traffic (ADT) volumes, using the Caltrans planning level ADT-based signal warrant analysis worksheets.

As shown on Table 2-3, traffic signal warrant analyses were performed for the following unsignalized study area intersections during the peak weekday conditions wherein the Project is anticipated to contribute the highest trips:

TABLE 2-3: TRAFFIC SIGNAL WARRANT ANALYSIS LOCATIONS

ID	Intersection Location	Jurisdiction
1	Hargrave St. & I-10 WB Ramps	Caltrans, City of Banning
2	Hargrave St. & I-10 EB Ramps	Caltrans, City of Banning
3	Hargrave St. & John St.	City of Banning
4	Hargrave St. & Lincoln St.	City of Banning
5	Hargrave St. & Barbour St.	City of Banning
6	Hathaway St. & Barbour St.	City of Banning
7	Driveway 1 & Barbour St.	City of Banning

The Existing conditions traffic signal warrant analysis is presented in the subsequent section, Section 3 *Area Conditions* of this report. The traffic signal warrant analyses for future conditions are presented in Section 5 *E+P Traffic Analysis* and Section 6 *Opening Year Cumulative (2021) Traffic Analysis*.

It is important to note that a signal warrant defines the minimum condition under which the installation of a traffic signal might be warranted. Meeting this threshold condition does not require that a traffic control signal be installed at a particular location, but rather, that other traffic factors and conditions be evaluated in order to determine whether the signal is truly justified. It should also be noted that signal warrants do not necessarily correlate with LOS. An intersection may satisfy a signal warrant condition and operate at or above acceptable LOS or operate below acceptable LOS and not meet a signal warrant.

2.4 FREEWAY OFF-RAMP QUEUING ANALYSIS

The study area for this TIA includes the freeway-to-arterial interchange of the I-10 Freeway at Hargrave Street off-ramps. Consistent with Caltrans requirements, the 95th percentile queuing of vehicles has been assessed at the off-ramps to determine potential queuing impacts at the freeway ramp intersections on Hargrave Street. Specifically, the queuing analysis is utilized to identify any potential queuing and "spill back" onto the I-10 Freeway mainline from the off-ramps.

2.5 MINIMUM LEVEL OF SERVICE (LOS)

The definition of an intersection deficiency has been obtained from each of the applicable surrounding jurisdictions.

2.5.1 CITY OF BANNING

The City, as published in the City's General Plan Policy 6, shall maintain peak hour Level of Service C or better on all local intersections, except those on Ramsey Street and at I-10 interchanges,

where Level of Service D or better shall be maintained. The intersections will be analyzed based Highway Capacity Manual (6th Edition) methodology.

2.5.2 CMP

The CMP definition of deficiency is based on maintaining a level of service standard of LOS E or better, except where an existing LOS F condition is identified in the CMP document. However, there are no CMP intersections within the study area.

2.5.3 CALTRANS

Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D on SHS facilities, however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS. (2) If an existing State highway facility is operating at less than this target LOS, the existing LOS should be maintained. In general, the region-wide goal for an acceptable LOS on all freeways and intersections is LOS D. Consistent with the City of Banning LOS threshold of LOS D at the I-10 interchanges, LOS D will be used as the target LOS for freeway ramps.

2.6 THRESHOLDS OF SIGNIFICANCE

This section outlines the methodology used in this analysis related to identifying circulation system deficiencies. The following thresholds apply to intersections where the Project is anticipated to contribute 50 or more (actual) vehicle trips to a study area intersection. If the Project contributes less than 50 peak hour trips, then the impact is considered less than significant.

2.6.1 CITY OF BANNING INTERSECTIONS

To determine whether the addition of project traffic at a study intersection results in a significant project-related impact, the following thresholds of significance will be utilized:

- A significant project-related impact occurs at a study intersection if the addition of project-generated trips reduces the peak hour level of service of the study intersection to change from acceptable level of service (LOS A, B, or C) to an unacceptable level of service (LOS D, E, or F);
- A significant cumulative impact occurs at a study intersection if the Project contributes 50 or more peak hour trips to an intersection that is anticipated to operate at a deficient LOS without the Project (LOS D, E, or F).

2.6.2 CALTRANS FREEWAY OFF-RAMPS

To determine whether the addition of project traffic to the freeway off-ramps would result in a deficiency, the following will be utilized:

- The traffic study finds that the off-ramp will degrade from acceptable 95th percentile queues to unacceptable 95th percentile queues.
- The traffic study finds that the project will exacerbate an already deficient condition by contributing 50 or more peak hour trips to the off-ramp. An off-ramp that has 95th percentile queues that exceed the available storage is deemed to be deficient.

2.7 PROJECT FAIR SHARE CALCULATION METHODOLOGY

In cases where this TIA identifies that the Project would contribute additional traffic volumes to traffic deficiencies, Project fair share costs of improvements necessary to address deficiencies have been identified. The Project's fair share cost of improvements is determined based on the following equation, which is the ratio of Project traffic to new traffic, and new traffic is total future (Horizon Year) traffic less existing baseline traffic:

Project Fair Share % = Project Traffic / (2021 With Project Total Traffic – Existing Traffic)

The project fair share percentage has been calculated for both the AM peak hour and PM peak hour and the highest of the two has been selected. The Project fair share contribution calculations are presented in Section 7 *Local and Regional Funding Mechanisms* of this TIA.

2.8 SB 743 REQUIREMENTS

In the fall of 2013, Senate Bill 743 (SB 743) was passed by the legislature and signed into law by the governor. This legislation will eventually change the way that transportation studies are conducted for environmental documents. In the areas where SB 743 is implemented, delay-based metrics such as roadway capacity and level of service will no longer be the performance measures used for the determination of the transportation impacts of projects in studies conducted under California Environmental Quality Act (CEQA). Instead, new performance measures such as vehicle miles travelled (VMT) will be used.

In December 2018 CEQA Guidelines were updated to include a threshold for evaluating traffic impacts using the VMT methodology. This methodology is required to be used statewide after July 2020. During the preparation of this traffic impact study, VMT thresholds were not yet adopted by the lead agency. Therefore, this traffic impact study follows current practice regarding lead agency guidance as of the date of preparation. As such, and because the City of Banning as the lead agency has not yet adopted AMT thresholds, the analysis for this project utilizes the LOS methodology.

3 AREA CONDITIONS

This section provides a summary of the existing circulation network, the City of Banning General Plan Circulation Network, and a review of existing peak hour intersection operations and traffic signal warrant analyses.

3.1 EXISTING CIRCULATION NETWORK

Pursuant to the agreement with City of Banning staff (Appendix 1.1), the study area includes a total of 7 existing and future intersections as shown previously on Exhibit 1-2 where the Project is anticipated to contribute 50 or more peak hour trips, or at the request of the City staff. Exhibit 3-1 illustrates the study area intersections located near the proposed Project and identifies the number of through traffic lanes for existing roadways and intersection traffic controls.

3.2 CITY OF BANNING GENERAL PLAN CIRCULATION ELEMENT

As previously noted, the Project site is located within the City of Banning. Exhibit 3-2 shows the City of Banning General Plan Circulation Element, and Exhibit 3-3 illustrates the City of Banning General Plan roadway cross-sections.

The roadway classifications and planned (ultimate) roadway cross-sections of the major roadways within the City of Banning in the vicinity of the proposed Project as identified on the City's General Plan Circulation Element are shown subsequently.

Major or Arterial Highway:

- Hargrave Street, between Ramsey Street and Lincoln Street
- Lincoln Street, west of Cottonwood Road

Secondary Highway:

- Hathaway Street, south of I-10 Freeway

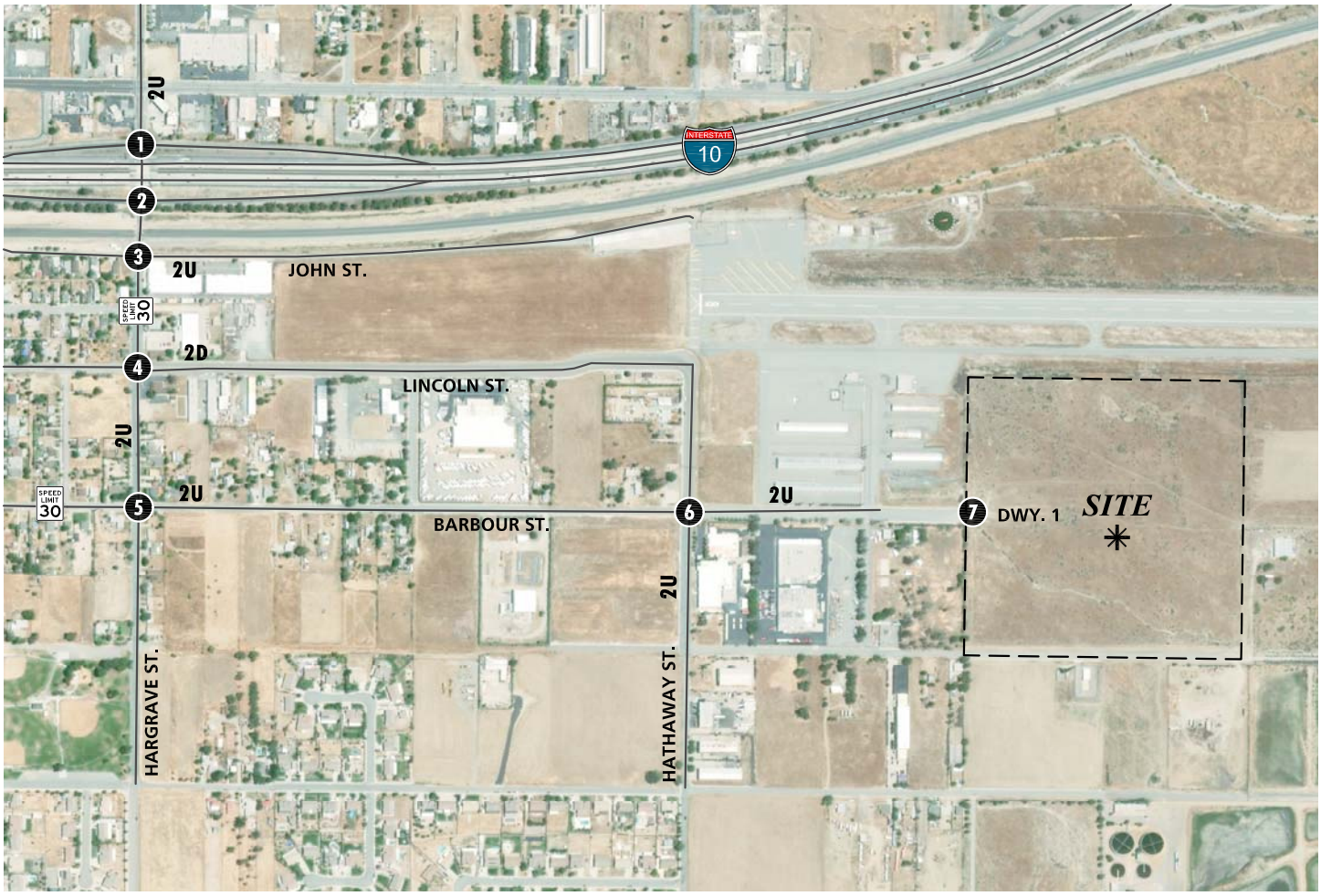
Collector Highway:

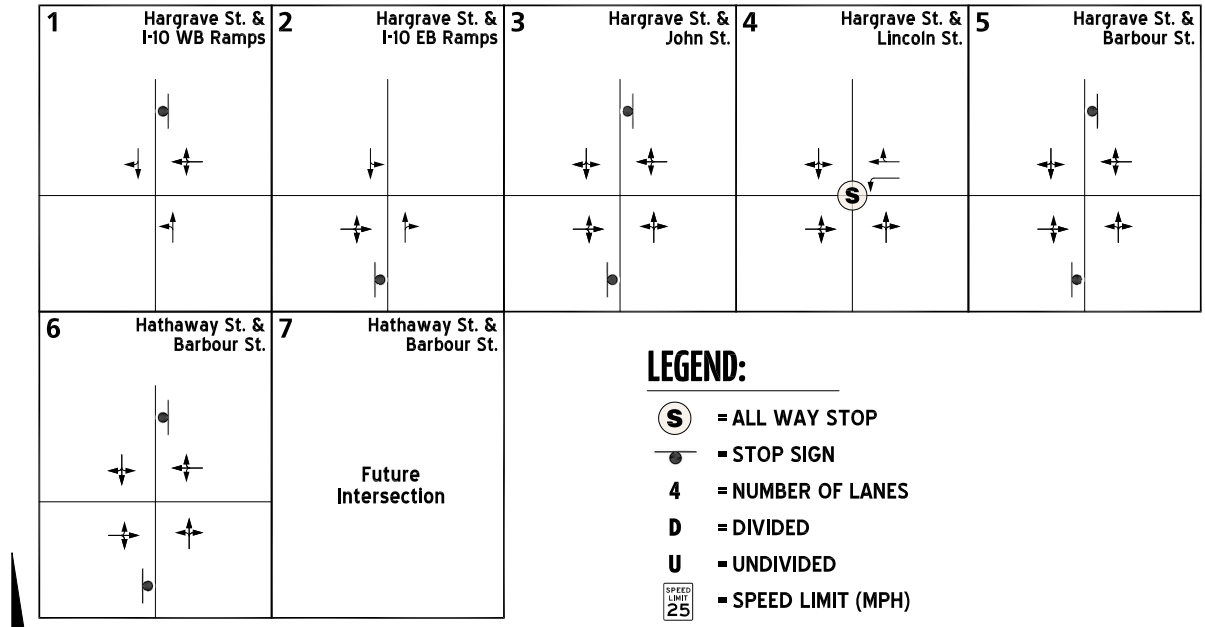
- Barbour Street, west of Cottonwood Road

3.3 COMMERCIAL VEHICLE ROUTES

The City of Banning designated commercial vehicle route map is shown on Exhibit 3-4. Hargrave Street, John Street, Lincoln Street, and Barbour Street are designated as commercial vehicle routes in the City of Banning. The designated truck route map has been utilized to route study area truck traffic.

EXHIBIT 3-1: EXISTING NUMBER OF THROUGH LANES AND INTERSECTION CONTROLS





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EXHIBIT 3-2: CITY OF BANNING GENERAL PLAN CIRCULATION ELEMENT

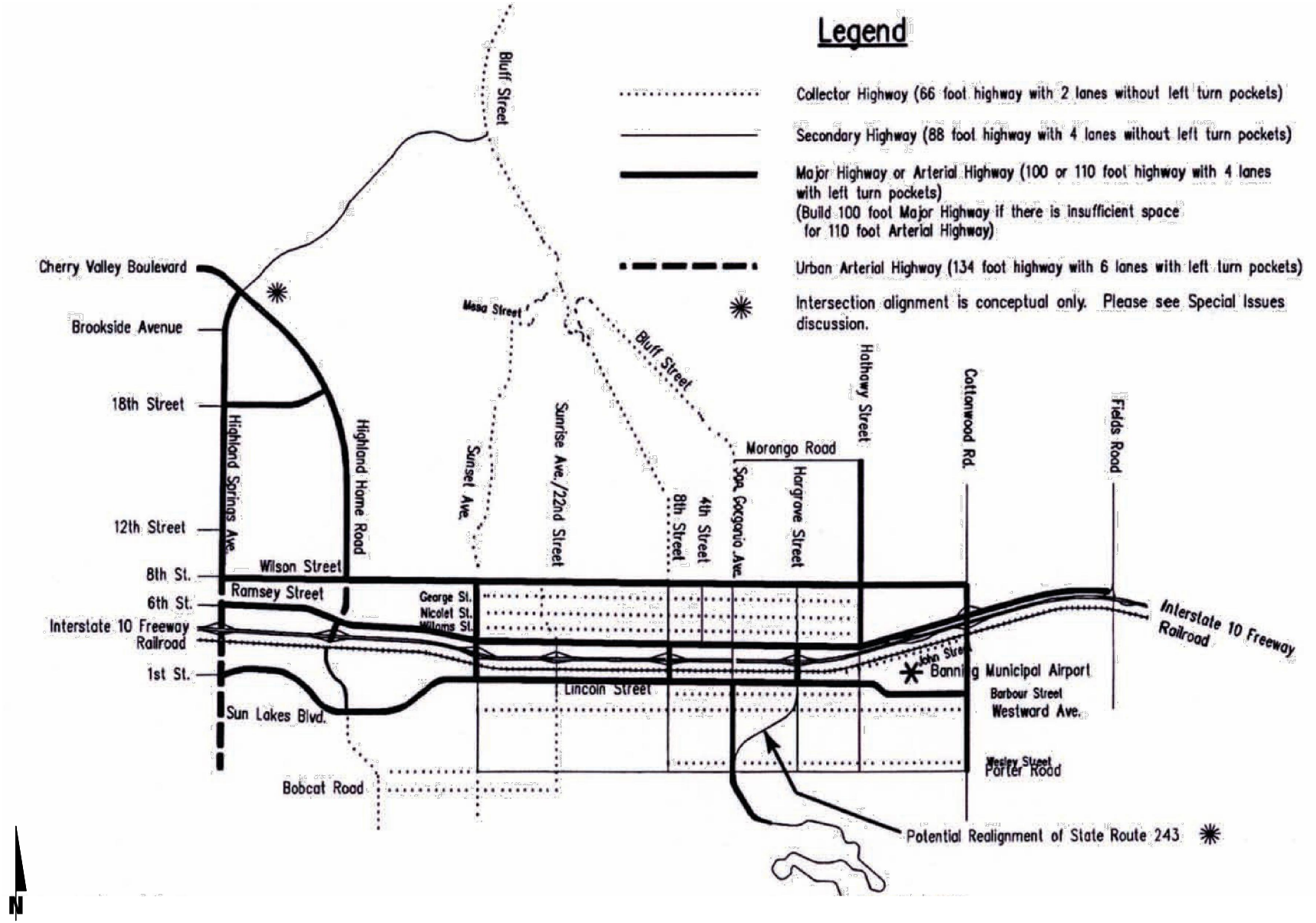


EXHIBIT 3-3: CITY OF BANNING GENERAL PLAN ROADWAY CROSS-SECTIONS

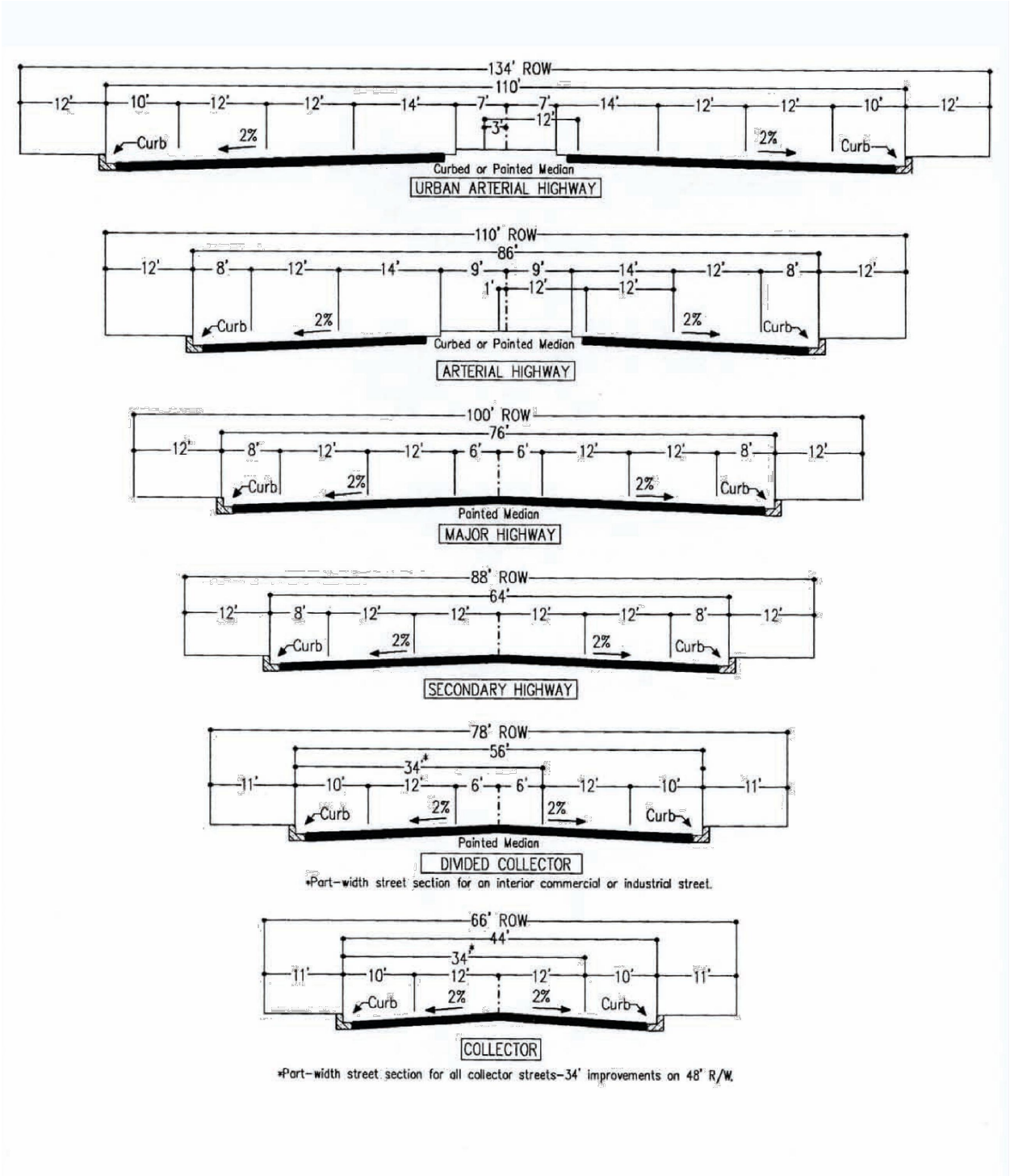
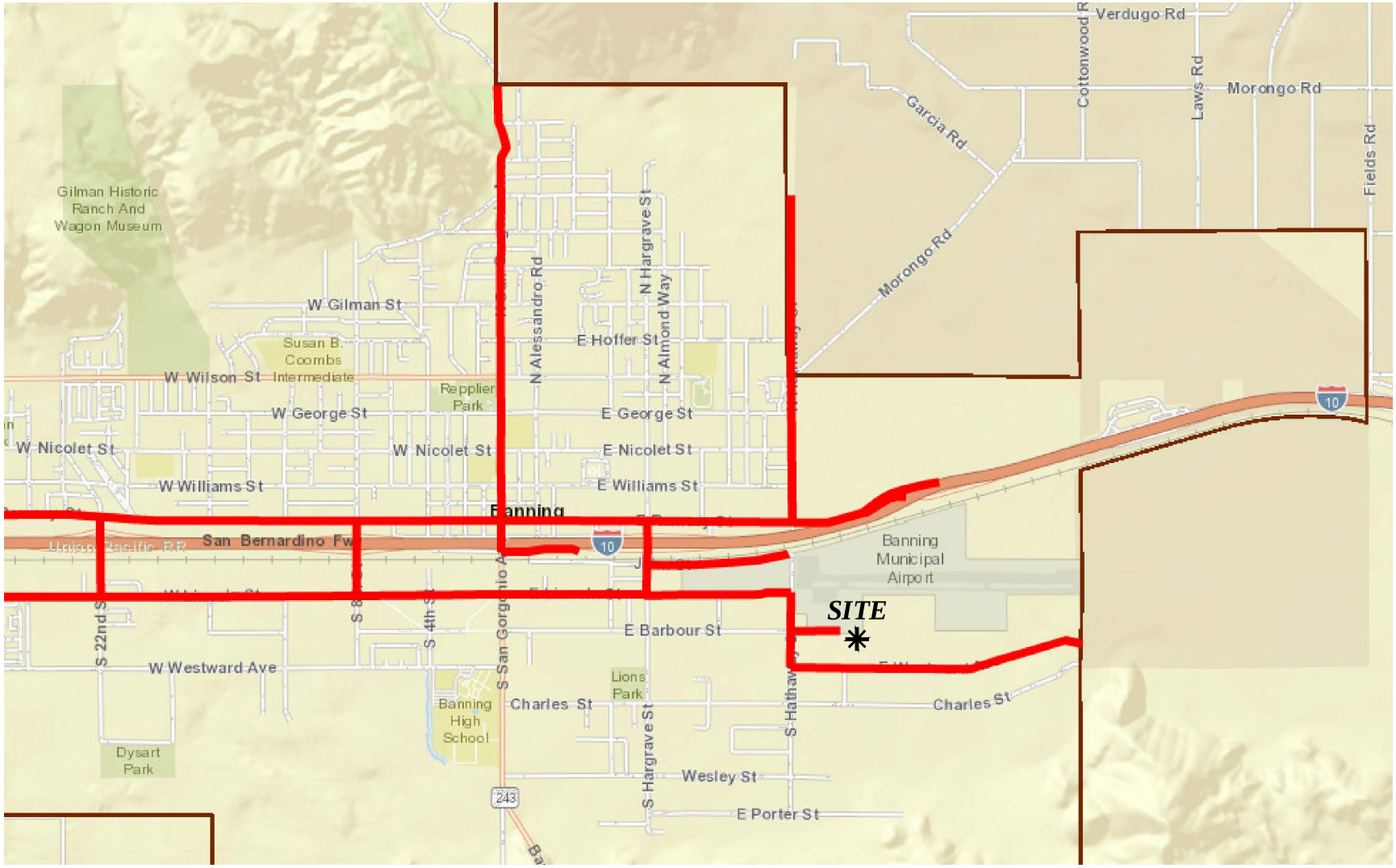


EXHIBIT 3-4: CITY OF BANNING COMMERCIAL VEHICLE ROUTES



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3.4 TRANSIT SERVICE

The study area is currently served by the Pass Transit with bus services along Hargrave Street via Routes 1 and 6. The transit services are illustrated on Exhibit 3-5. There appears to be existing transit routes that could potentially serve the Project. Transit service is reviewed and updated by Pass Transit periodically to address ridership, budget and community demand needs. Changes in land use can affect these periodic adjustments which may lead to either enhanced or reduced service where appropriate.

3.5 BICYCLE & PEDESTRIAN FACILITIES

Field observations conducted in May 2019 indicate nominal pedestrian and bicycle activity within the study area. Existing pedestrian facilities currently exist throughout the study area. The existing pedestrian facilities within the study area are shown on Exhibit 3-6.

3.6 EXISTING (2019) TRAFFIC COUNTS

The intersection LOS analysis is based on the traffic volumes observed during the peak hour conditions using traffic count data collected in May 2019. The following peak hours were selected for analysis:

- Weekday AM Peak Hour (peak hour between 7:00 AM and 9:00 AM)
- Weekday PM Peak Hour (peak hour between 4:00 PM and 6:00 PM)

The weekday AM and weekday PM peak hour count data are representative of typical weekday peak hour traffic conditions in the study area. There were no observations made in the field that would indicate atypical traffic conditions on the count dates, such as construction activity or detour routes and near-by schools were in session and operating on normal schedules. The raw manual peak hour turning movement traffic count data sheets are included in Appendix 3.1.

Existing weekday ADT volumes are shown on Exhibit 3-7. Where actual 24-hour tube count data was not available, Existing ADT volumes were based upon factored intersection peak hour counts collected by Urban Crossroads, Inc. using the following formula for each intersection leg:

Weekday PM Peak Hour (Approach Volume + Exit Volume) x 12.69 = Leg Volume

A comparison of the PM peak hour and daily traffic volumes of various roadway segments within the study area indicated that the peak-to-daily relationship is approximately 7.88 percent. As such, the above equation utilizing a factor of 12.69 estimates the ADT volumes on the study area roadway segments assuming a peak-to-daily relationship of approximately 7.88 percent (i.e., 1/0.0788 = 12.69) and was assumed to sufficiently estimate average daily traffic (ADT) volumes for planning-level analyses. Existing weekday AM and weekday PM peak hour intersection volumes are also shown on Exhibit 3-7.

EXHIBIT 3-5: EXISTING TRANSIT ROUTES

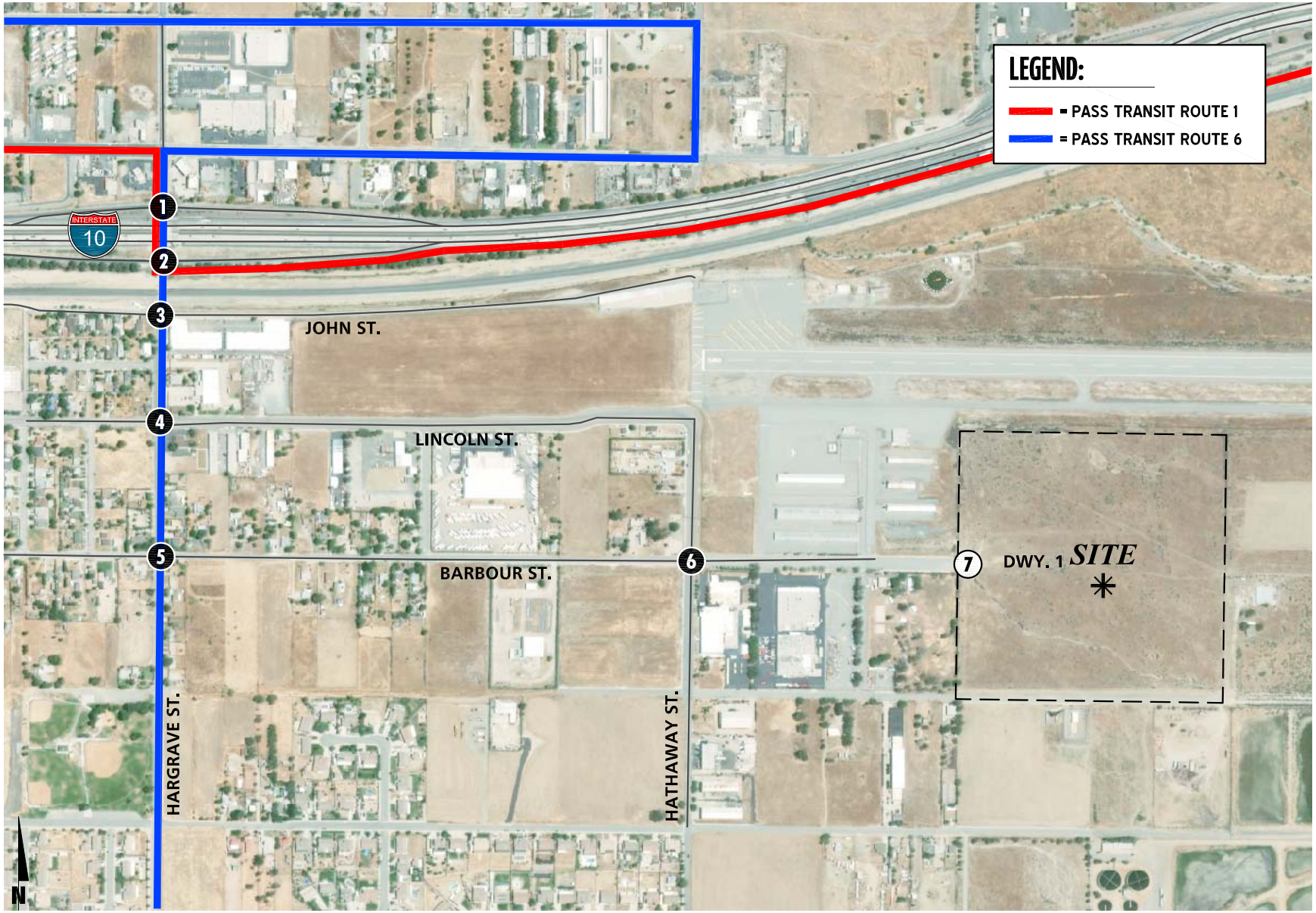
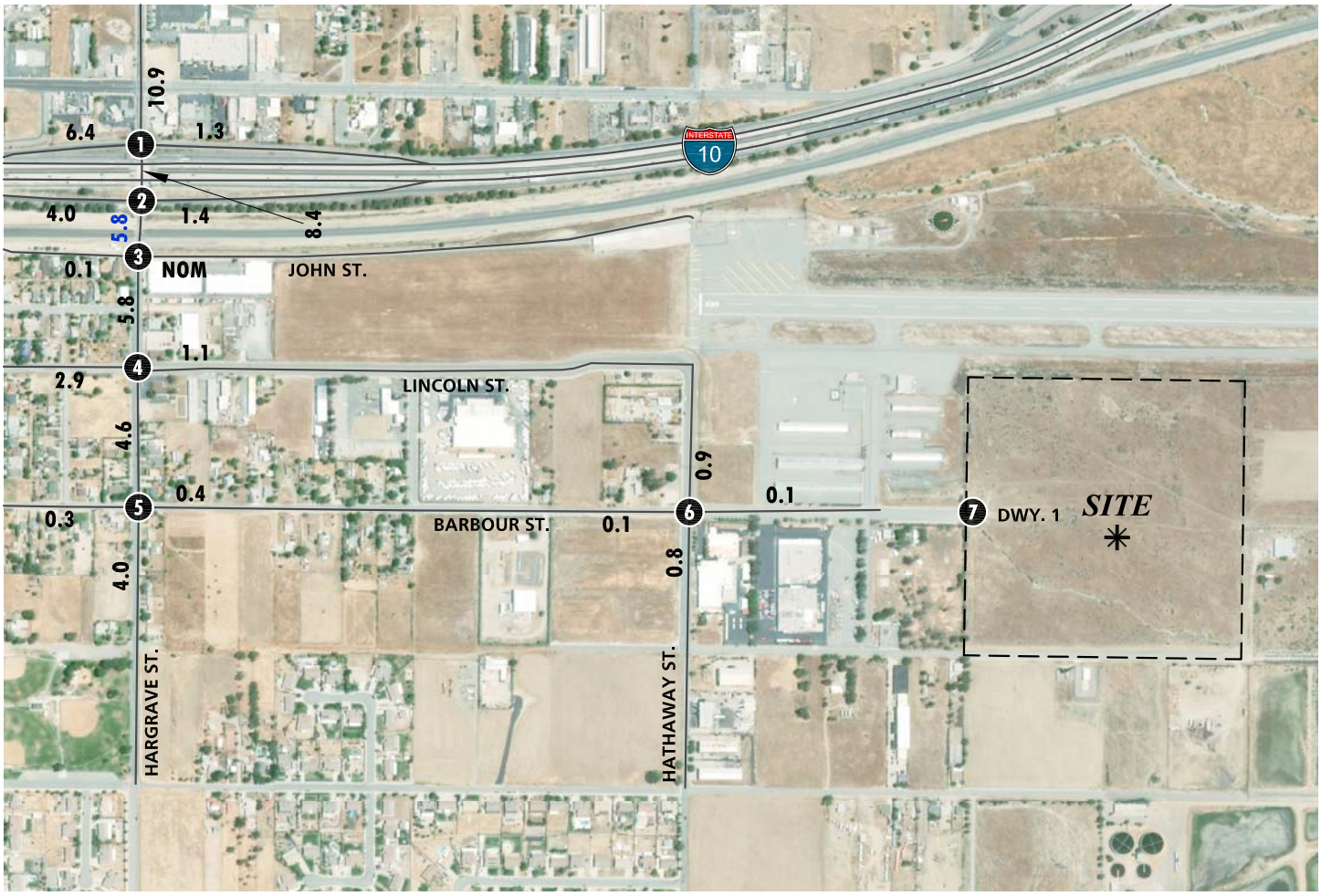


EXHIBIT 3-6: EXISTING PEDESTRIAN FACILITIES



EXHIBIT 3-7: EXISTING (2019) TRAFFIC VOLUMES (IN PCE)



1 Hargrave St. & I-10 WB Ramps	2 Hargrave St. & I-10 EB Ramps	3 Hargrave St. & John St.	4 Hargrave St. & Lincoln St.	5 Hargrave St. & Barbour St.
235(348) 199(150) ↓ ← 41(55) 3(0) ↰ 33(50)	162(146) ↓ 68(54)	2(5) ↓ 212(196) 4(2) ↰ 0(0) 0(0) ↰ 2(1)	108(52) 70(123) ↓ 28(22) ← 37(37) 4(8) ↰ 0(0)	12(12) 94(161) ↓ 6(10) ← 7(13) 5(1) ↰ 1(3)
61(155) 461(303) ↑	339(250) → 4(4) 56(57) ↰ 183(209) 65(53) ↑	3(4) → 0(0) 2(1) ↰ 0(0) 245(258) 1(0) ↑	81(42) → 15(21) 33(75) ↰ 25(27) 80(133) 1(1) ↑	5(6) → 4(0) 0(3) ↰ 2(0) 97(148) 3(1) ↑

6 Hathaway St. & Barbour St.	7 Hathaway St. & Barbour St.
3(1) 17(32) 12(2) ↓ ← 8(8) 0(0) ↰ 1(0)	Future Intersection
0(0) → 1(0) 1(3) ↰ 0(1) 34(24) 0(0) ↑	

LEGEND:

- **10.0** = ACTUAL (COUNT-BASED) VEHICLES PER DAY (1000'S)
- **10.0** = ESTIMATED VEHICLES PER DAY (1000'S)
- **NOM** = NOMINAL, LESS THAN 50 VEHICLES PER DAY
- **10(10)** = AM(PM) PEAK HOUR INTERSECTION VOLUMES

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3.7 EXISTING (2019) CONDITIONS INTERSECTION OPERATIONS ANALYSIS

The intersection analysis results indicate that the following study area intersection is anticipated to operate at unacceptable LOS during one or both of the peak hours:

- Hargrave St. & I-10 EB Ramps (#2) – LOS F AM peak hour

Consistent with Table 3-1, a summary of the peak hour intersection LOS for Existing conditions are shown on Exhibit 3-8. The intersection operations analysis worksheets are included in Appendix 3.2 of this TIA.

3.8 EXISTING (2019) CONDITIONS TRAFFIC SIGNAL WARRANTS ANALYSIS

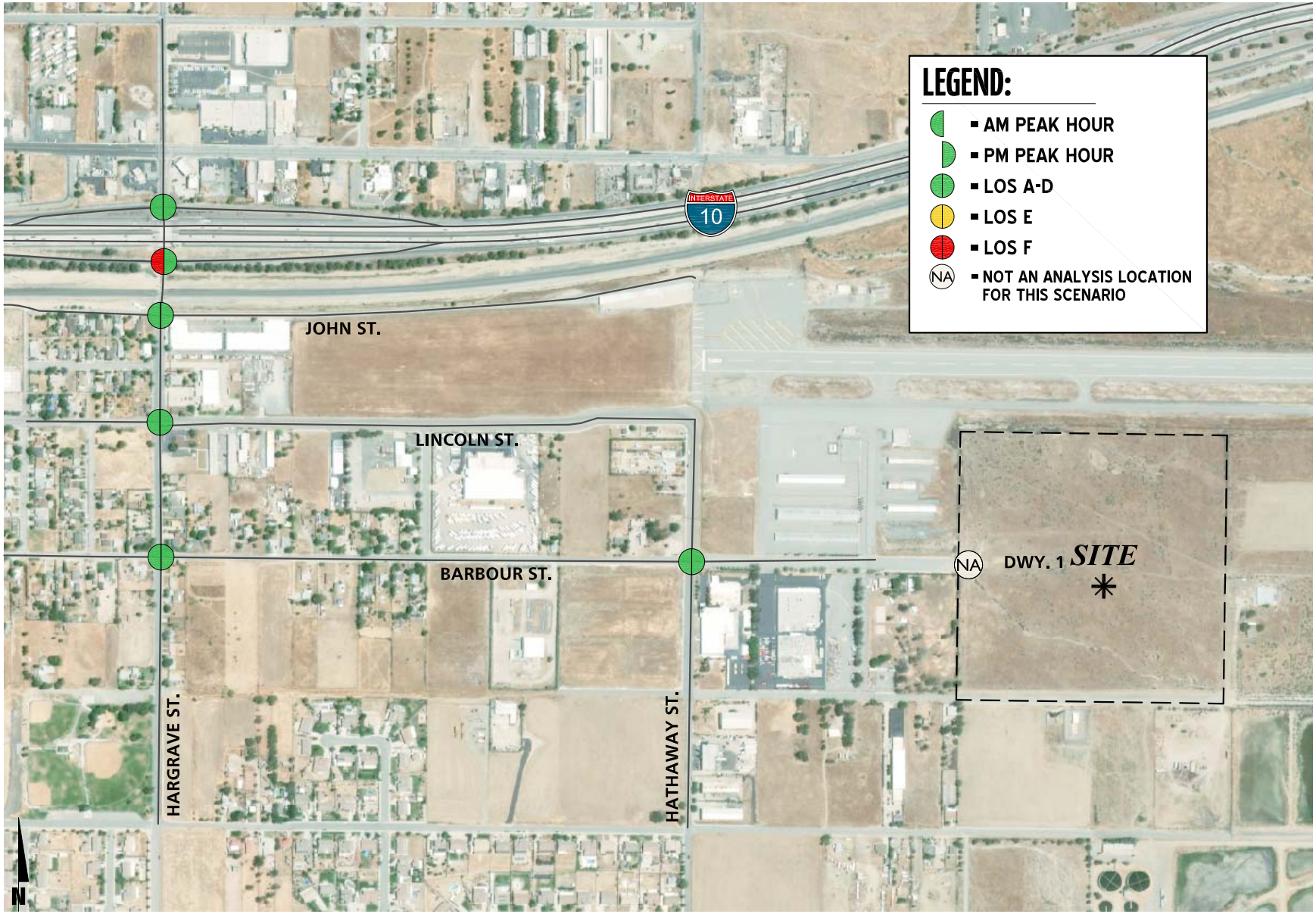
Traffic signal warrants for Existing traffic conditions are based on existing peak hour intersection turning volumes. No study area intersection currently warrants a traffic signal. Existing conditions traffic signal warrant analysis worksheets are provided in Appendix 3.3.

3.9 OFF-RAMP QUEUING ANALYSIS

A queuing analysis was performed for the off-ramps at the I-10 Freeway at Hargrave Street interchange to assess vehicle queues for the off ramps that may potentially result in deficient peak hour operations at the ramp-to-arterial intersections and may potentially "spill back" onto the I-10 Freeway mainline. Queuing analysis findings are presented in Table 3-2 for Existing (2019) traffic conditions. It is important to note that off-ramp lengths are consistent with the measured distance between the intersection and the freeway mainline. As shown on Table 3-2, there are no queuing issues anticipated for Existing (2019) traffic conditions.

Worksheets for Existing (2019) conditions off-ramp queuing analysis are provided in Appendix 3.4.

EXHIBIT 3-8: EXISTING (2019) SUMMARY OF LOS



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Table 3-1

Intersection Analysis for Existing (2019) Conditions

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
1	Hargrave St. & I-10 WB Ramps	CSS	0	1	0	0	1	0	0	0	0	0	1	0	19.3	21.6	C	C
2	Hargrave St. & I-10 EB Ramps	CSS	0	1	0	0	1	0	0	1	0	0	0	0	**81.6**	29.4	**F**	D
3	Hargrave St. & John St.	CSS	0	1	0	0	1	0	0	1	0	0	1	0	15.8	13.7	C	B
4	Hargrave St. & Lincoln St.	AWS	0	1	0	0	1	0	0	1	0	1	1	0	9.8	9.0	A	A
5	Hargrave St. & Barbour St.	CSS	0	1	0	0	1	0	0	1	0	0	1	0	10.9	11.4	B	B
6	Hathaway St. & Barbour St.	CSS	0	1	0	0	1	0	0	1	0	0	1	0	9.0	8.5	A	A
7	Driveway 1 & Barbour St.		Future Intersection															

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right

[2] Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown. HCM delay reported in seconds.

[3] CSS = Cross-street Stop; AWS = All-Way Stop

Table 3-2

Peak Hour Queuing Summary for Existing (2019) Conditions

Intersection	Movement	Available Stacking Distance (Feet)	95th Percentile Queue (Feet)		Acceptable? [1]	
			AM Peak Hour	PM Peak Hour	AM	PM
Hargrave St. & I-10 WB Ramps	WBL/T/R	1,170	52	72	Yes	Yes
Hargrave St. & I-10 EB Ramps	EBL/T/R	1,230	157	117	Yes	Yes

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided.

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4 PROJECTED FUTURE TRAFFIC

This section presents the traffic volumes estimated to be generated by the Project, as well as the Project's trip assignment onto the study area roadway network. The Project is to consist of approximately 97,400 square-feet (SF) of Truck Terminal use to include a 134 door cross-dock (this includes future expansion), a two-story office building, a line-haul building, a truck maintenance building, and a fuel station.

The Project is anticipated to be built and occupied in 2021. As shown on Exhibit 1-1, access to the Project site will be provided via Barbour Street.

4.1 PROJECT TRIP GENERATION

Trip generation represents the amount of traffic that is attracted and produced by a development, and is based upon the specific land uses planned for a given project. Trip generation for the Project are based on the anticipated number of employees per day and operational data provided by the client.

Trip generation for heavy trucks was further broken down by truck type (or axle type). The total truck percentage is comprised of 3 different truck types: 2-axle, 3-axle, and 4+-axle trucks. PCE factors were applied to the trip generation rates for heavy trucks (large 2-axles, 3-axles, 4+-axles).

Table 4-1 presents the trip generation summary. As shown on Table 4-1, the proposed development is anticipated to generate a net total of approximately 482 PCE daily trips, 92 PCE AM peak hour trips, and 112 PCE PM peak hour trips.

Please note that shift times provided by the applicant are anticipated to begin and end outside of the typical peak hours (7:00 a.m. to 9:00 a.m.; 4:00 p.m. to 6:00 p.m.). The peak hour trip generation estimates are conservative relative to the anticipated operations of the proposed Project.

4.2 PROJECT TRIP DISTRIBUTION

The Project trip distribution and assignment process represents the directional orientation of traffic to and from the Project site. The trip distribution pattern of passenger cars is heavily influenced by the geographical location of the site, the location of surrounding uses, and the proximity to the regional freeway system. The trip distribution pattern for truck traffic is also influenced by the local truck routes approved by the City of Banning and Caltrans as well as the anticipated truck routes for the Project. Given these differences, separate trip distributions were generated for both passenger cars and truck trips.

Exhibit 4-1 illustrates the passenger car trip distribution patterns and Exhibit 4-2 illustrates the truck trip distribution patterns.

Table 4-1

Project Trip Generation Summary

Land Use	AM Peak Hour			PM Peak Hour			Daily
	In	Out	Total	In	Out	Total	
Project Trip Generation Summary (Actual Vehicles)							
Truck Terminal[3]							
Passenger Cars:	5	30	35	30	25	55	226
Truck Trips:							
2-axle:	*0*	*2*	*2*	*2*	*0*	*2*	10
3-axle:	*0*	*0*	*0*	*0*	*0*	*0*	0
4+-axle:	*0*	*18*	*18*	*18*	*0*	*18*	80
- Net Truck Trips (Actual Vehicles)	*0*	*20*	*20*	*20*	*0*	*20*	90
TOTAL NET TRIPS (Actual Vehicles)[2]	***5***	***50***	***55***	***50***	***25***	***75***	**316**

[1] TSF = thousand square feet

[2] TOTAL NET TRIPS (Actual Vehicles) = Passenger Cars + Net Truck Trips

[3] Trip Generation Source: Trip generation is based on the anticipated number of employees per day and operational data provided by the client.

Land Use	AM Peak Hour			PM Peak Hour			Daily
	In	Out	Total	In	Out	Total	
Project Trip Generation Summary (PCE)							
Truck Terminal[4]							
Passenger Cars:	5	30	35	30	25	55	226
Truck Trips:							
2-axle:	*0*	*3*	*3*	*3*	*0*	*3*	16
3-axle:	*0*	*0*	*0*	*0*	*0*	*0*	0
4+-axle:	*0*	*54*	*54*	*54*	*0*	*54*	240
- Net Truck Trips (PCE)[2]	*0*	*57*	*57*	*57*	*0*	*57*	256
TOTAL NET TRIPS (PCE)[3]	***5***	***87***	***92***	***87***	***25***	***112***	**482**

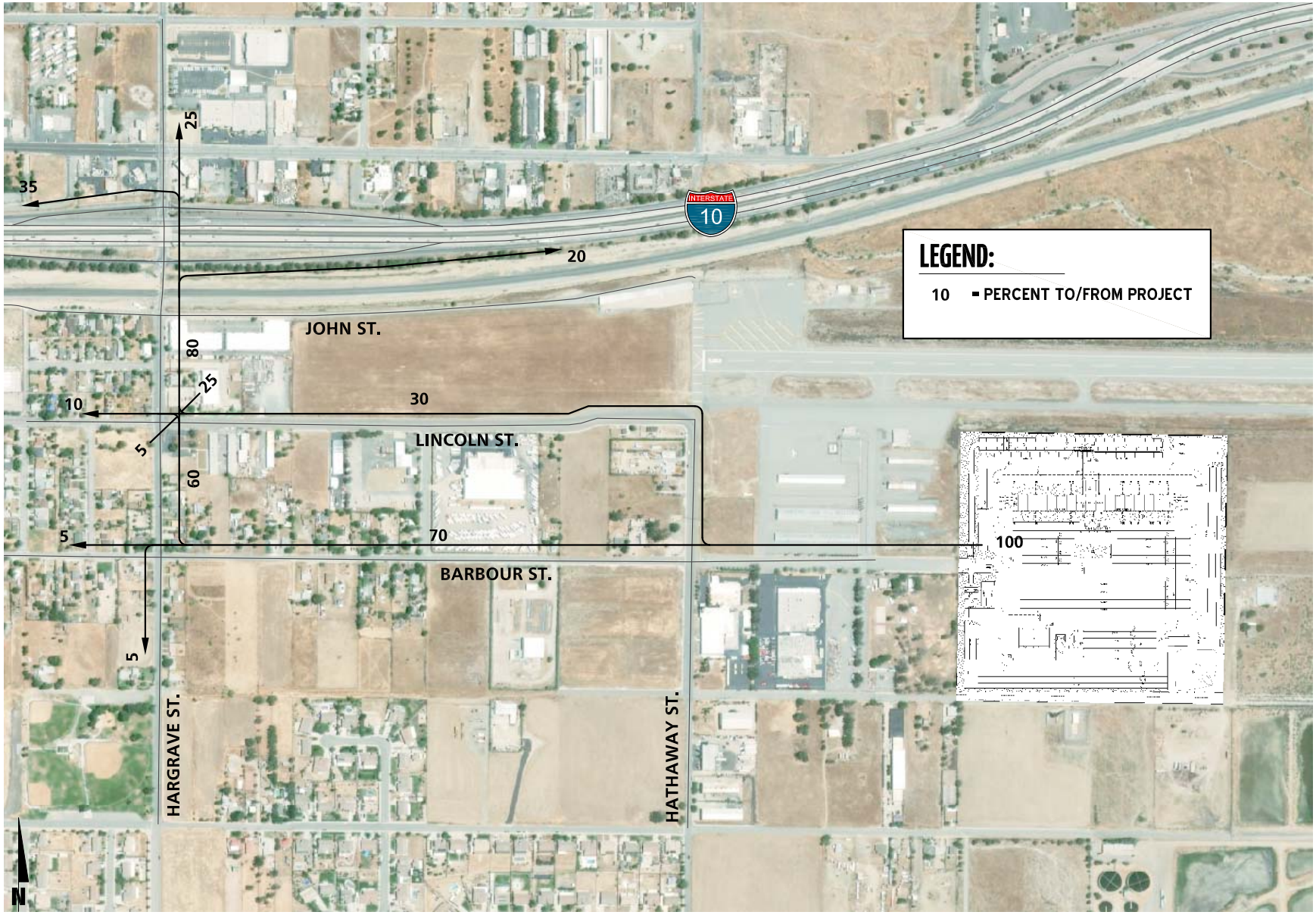
[1] TSF = thousand square feet

[2] PCE rates are per SBCTA.

[3] TOTAL NET TRIPS (PCE) = Passenger Cars + Net Truck Trips

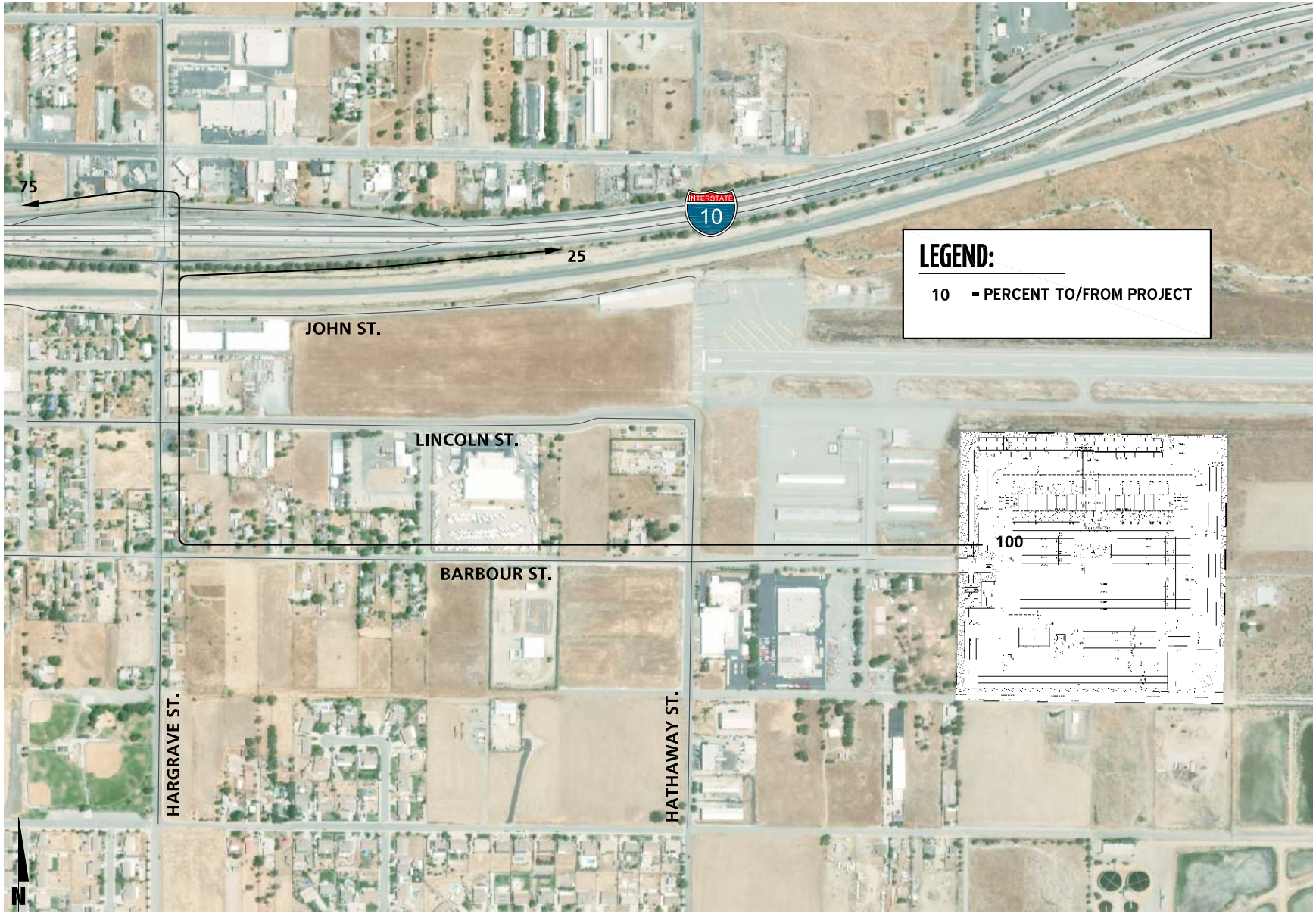
[4] Trip Generation Source: Trip generation is based on the anticipated number of employees per day and operational data provided by the client.

EXHIBIT 4-1: PROJECT (PASSENGER CAR) TRIP DISTRIBUTION



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EXHIBIT 4-2: PROJECT (TRUCK) TRIP DISTRIBUTION



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4.3 MODAL SPLIT

The potential for Project trips to be reduced by the use of public transit, walking or bicycling have not been included as part of the Project's estimated trip generation. Essentially, the Project's traffic projections are "conservative" in that these alternative travel modes would reduce the forecasted traffic volumes.

4.4 PROJECT TRIP ASSIGNMENT

The assignment of traffic from the Project area to the adjoining roadway system is based upon the Project trip generation and trip distribution. Based on the identified Project traffic generation and trip distribution patterns, Project ADT and peak hour intersection turning movement volumes are shown on Exhibit 4-3.

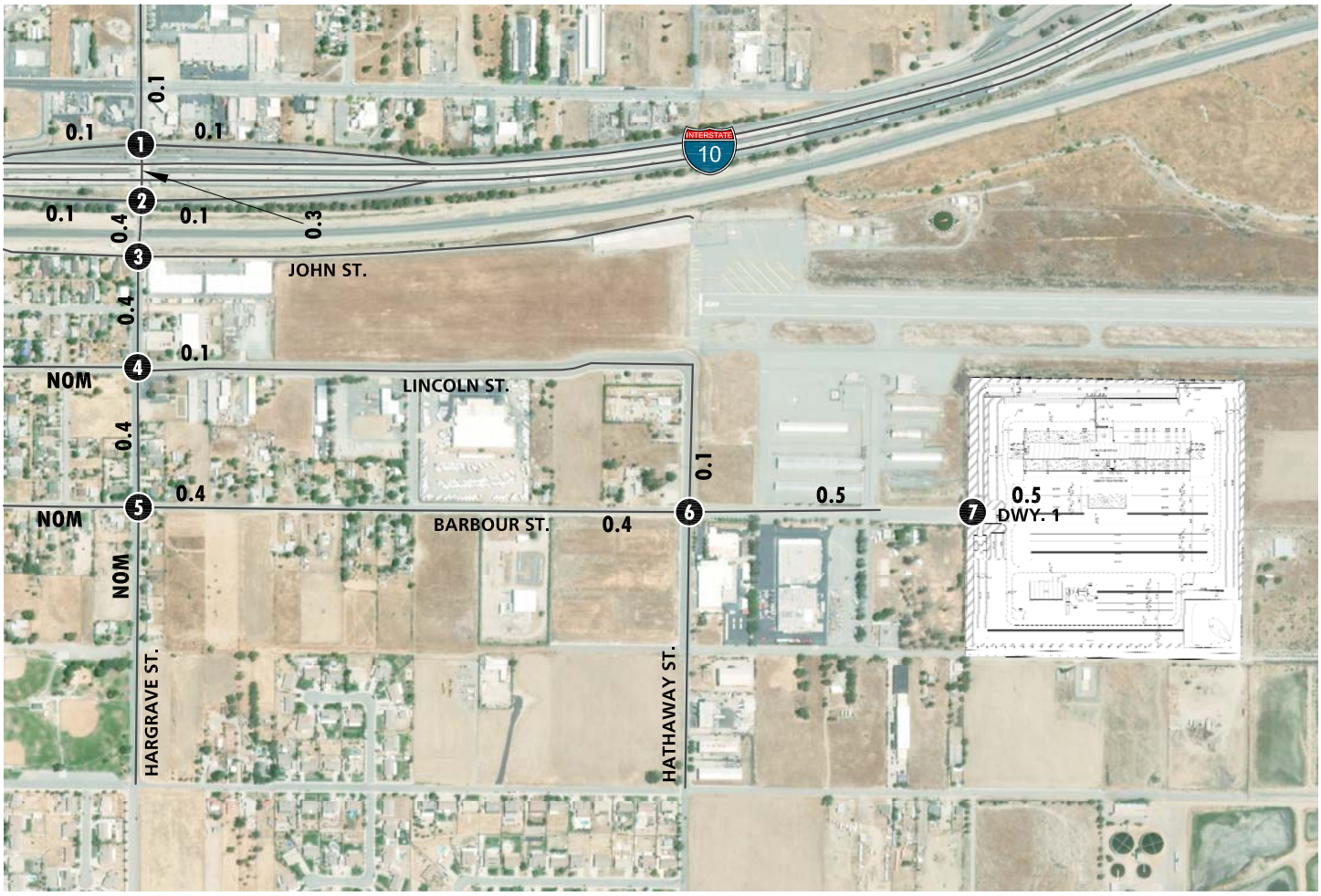
4.5 BACKGROUND TRAFFIC

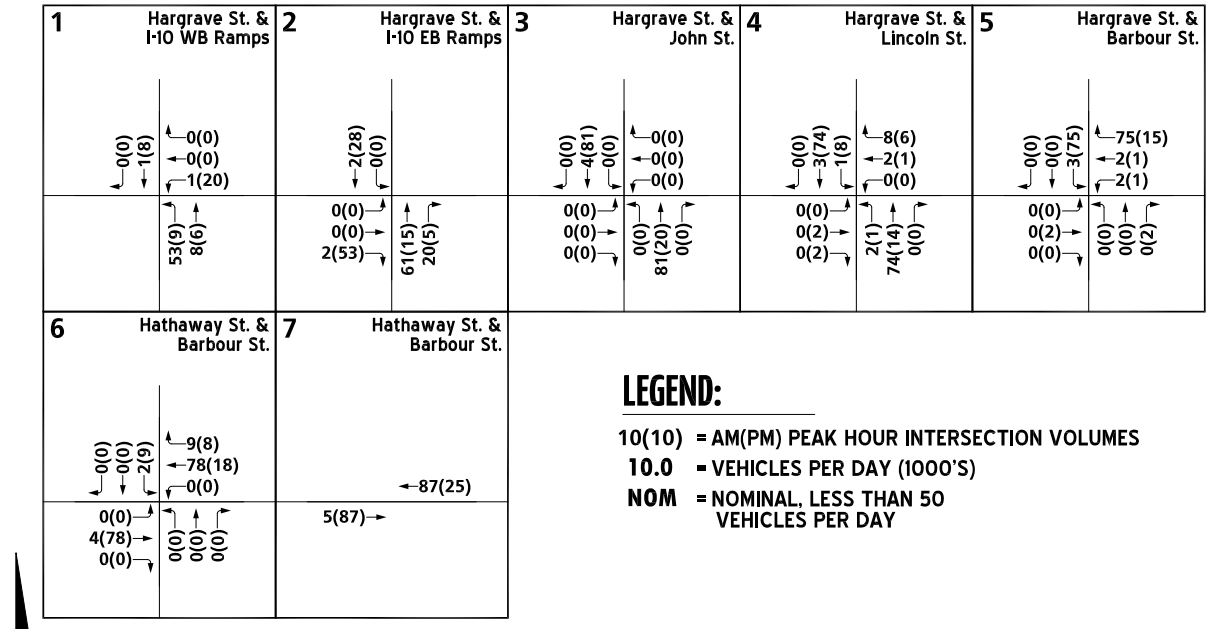
Future year traffic forecasts have been based upon background (ambient) growth at 4.04% per year for 2021 traffic conditions, compounded annually. The ambient growth factor is intended to approximate regional traffic growth. This ambient growth rate is added to existing traffic volumes to account for area-wide growth not reflected by cumulative development projects. Ambient growth has been added to daily and peak hour traffic volumes on surrounding roadways, in addition to traffic generated by the development of future projects that have been approved but not yet built and/or for which development applications have been filed and are under consideration by governing agencies.

The purpose of the ambient growth added to existing traffic volumes for Opening Year Cumulative (2021) traffic conditions is to identify any potential project-related traffic impacts for the Project's anticipated Opening Year and represents a more real-world scenario of the Project added to existing traffic, since it is likely that some nominal growth in traffic would occur (separate from the cumulative traffic). Per the City's traffic study guidelines, the growth rate utilized for the purposes of Opening Year Cumulative (2021) traffic conditions is 2% per year, compounded annually.

The currently adopted Southern California Association of Governments 2016 Regional Transportation Plan/Sustainable Communities Strategy (April 2016) growth forecasts for the City of Banning identifies projected growth in population of 30,100 in 2012 to 37,600 in 2040, or a 24.92 percent increase over the 28-year period. (5) The change in population equates to roughly a 0.80 percent growth rate, compounded annually. Similarly, growth over the same 28-year period in households is projected to increase by 29.63 percent, or 0.93 percent annual growth rate. Finally, growth in employment over the same 28-year period is projected to increase by 94.52 percent, or a 2.40 percent annual growth rate.

EXHIBIT 4-3: PROJECT ONLY TRAFFIC VOLUMES (IN PCE)





LEGEND:

10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES
10.0 = VEHICLES PER DAY (1000'S)
NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY

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Based on a comparison of Existing (2019) traffic volumes to the Opening Year Cumulative (2021) forecasts, the average growth rate is estimated at approximately 15.63 percent compounded annually between 2019 and 2021. The annual growth rate at each individual intersection is not lower than 10.21 percent compounded annually to as high as 24.07 percent compounded annually over the same time period. Therefore, the annual growth rate utilized for the purposes of this analysis would appear to conservatively approximate the anticipated regional growth in traffic volumes in the City of Banning for Opening Year Cumulative (2021) traffic conditions, especially when considered along with the addition of project-related traffic. As such, the growth in traffic volumes assumed in this traffic impact analysis would tend to overstate as opposed to understate the potential impacts to traffic and circulation.

4.6 CUMULATIVE DEVELOPMENT TRAFFIC

California Environmental Quality Act (CEQA) guidelines require that other reasonably foreseeable development projects which are either approved or being processed concurrently in the study area also be included as part of a cumulative analysis scenario. A list of cumulative projects that could potentially be constructed and contribute traffic to the study are was obtained from the City of Banning (lead agency) (see Table 4-2 and Exhibit 4-4). Where applicable, the traffic generated by individual cumulative projects was manually added to the Opening Year Cumulative (2021) forecasts to ensure that traffic generated by the listed cumulative development projects are reflected as part of the background traffic.

4.7 NEAR-TERM CONDITIONS

The "buildup" approach combines existing traffic counts with a background ambient growth factor to forecast the Opening Year Cumulative (2021) traffic conditions. An ambient growth factor of 4.04% accounts for background (area-wide) traffic increases that occur over time up to 2021 from 2019 (compounded two percent per year growth over a 2-year period). Project traffic is added to assess Opening Year Cumulative (2021) With Project traffic conditions. Traffic volumes generated by cumulative development projects are also included in the Opening Year Cumulative (2021) traffic conditions. The 2021 roadway networks are similar to the existing conditions roadway network with the exception of future roadways and intersections proposed to be developed by the Project.

The near-term traffic analysis includes the following traffic conditions, with the various traffic components:

- Opening Year Cumulative (2021) Without Project
    - Existing 2019 volumes
    - Ambient growth traffic (4.04%)
    - Cumulative Development Traffic
- Opening Year Cumulative (2021) With Project
    - Opening Year Cumulative (2021) Without Project volumes
    - Project Traffic

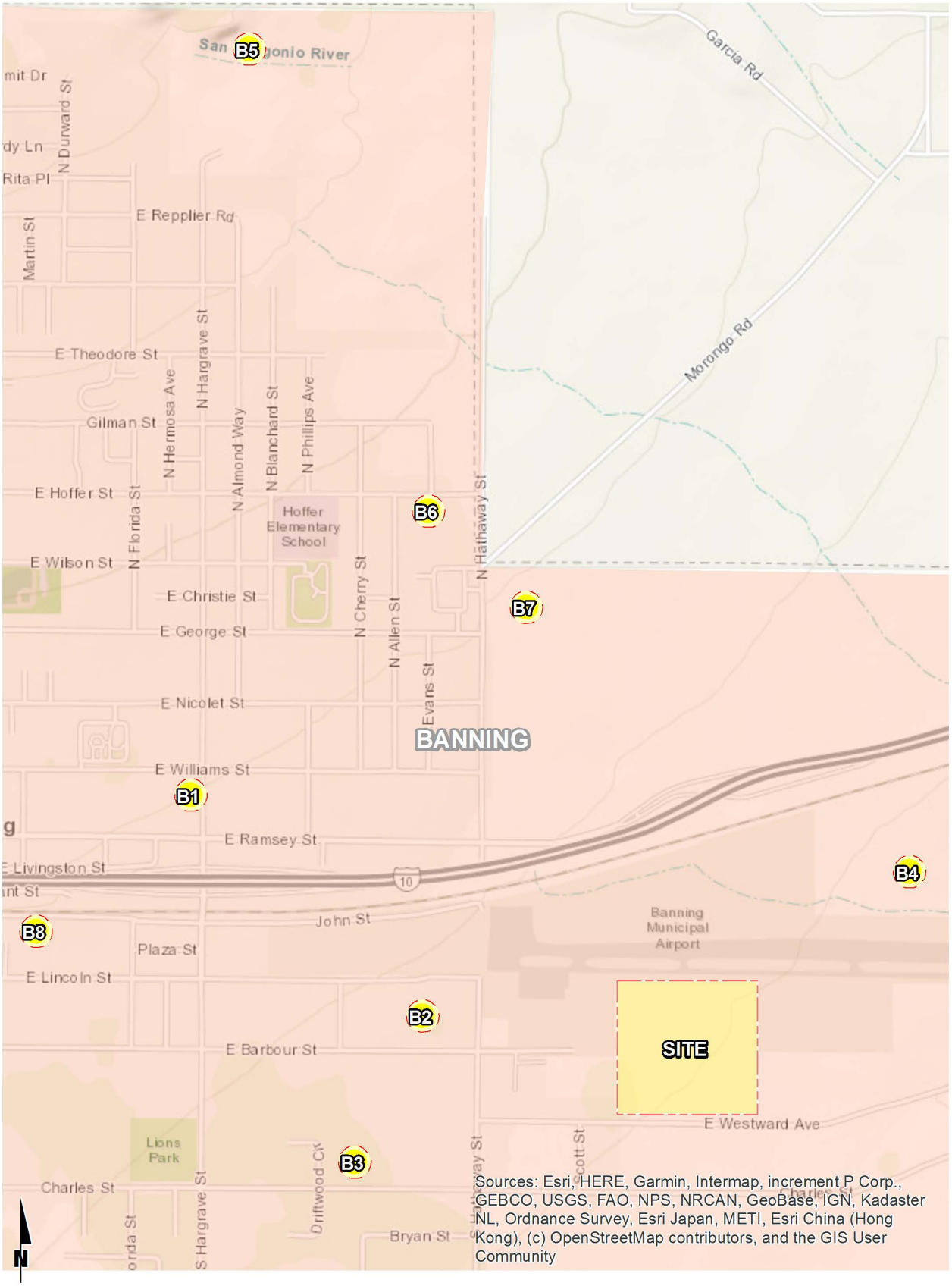
Table 4-2

Cumulative Development Land Use Summary

#	Project	Land Use	Quantity	Units[1]
B1	La Quinta Inn & Fast Food Pad + Café	Hotel	91	RM
		Commercial	4.000	TSF
B2	Airport Work Lofts	Office	9.900	TSF
		Industrial	26.950	TSF
		Residential	24	DU
B3	Andersen Equipment	Industrial	8.000	TSF
		Office	2.240	TSF
B4	Banning Distribution Center	Industrial	1,000.000	TSF
B5	Roberston's Ready Mix	Industrial	209.00	AC
B6	Hanna 96 Apartments	Residential	96	DU
B7	Stagecoach Business Park	Office	12.622	TSF
B8	Downing Constructon Corporate Office	Office	1.95	AC

[1] AC = Acres; DU = Dwelling Units; RM = Rooms; TSF = Thousand Square Feet

EXHIBIT 4-4: CUMULATIVE DEVELOPMENT PROJECTS LOCATION MAP



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5 E+P TRAFFIC CONDITIONS

This section discusses the traffic forecasts for Existing plus Project (E+P) conditions and the resulting intersection operations and traffic signal warrant analyses.

5.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for E+P conditions are consistent with those shown previously on Exhibit 3-1, with the exception of the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for E+P conditions only (e.g., intersection and roadway improvements at the Project's frontage and driveways).

5.2 E+P TRAFFIC VOLUME FORECASTS

This scenario includes Existing traffic volumes plus Project traffic. The ADT volumes which can be expected for E+P traffic conditions are shown on Exhibit 5-1. E+P weekday AM and PM peak hour intersection turning movement volumes are also shown on Exhibit 5-1.

5.3 INTERSECTION OPERATIONS ANALYSIS

E+P peak hour traffic operations have been evaluated for the study area intersections based on the analysis methodologies presented in Section 2 *Methodologies* of this TIA. The intersection analysis results are summarized in Table 5-1, which indicates that no additional study area intersections are anticipated to operate at an unacceptable LOS during one or more peak hours, consistent with Existing traffic conditions.

Consistent with Table 5-1, a summary of the peak hour intersection LOS for E+P conditions is shown on Exhibit 5-2. The intersection operations analysis worksheets for E+P traffic conditions are included in Appendix 5.1 of this TIA.

5.4 TRAFFIC SIGNAL WARRANTS ANALYSIS

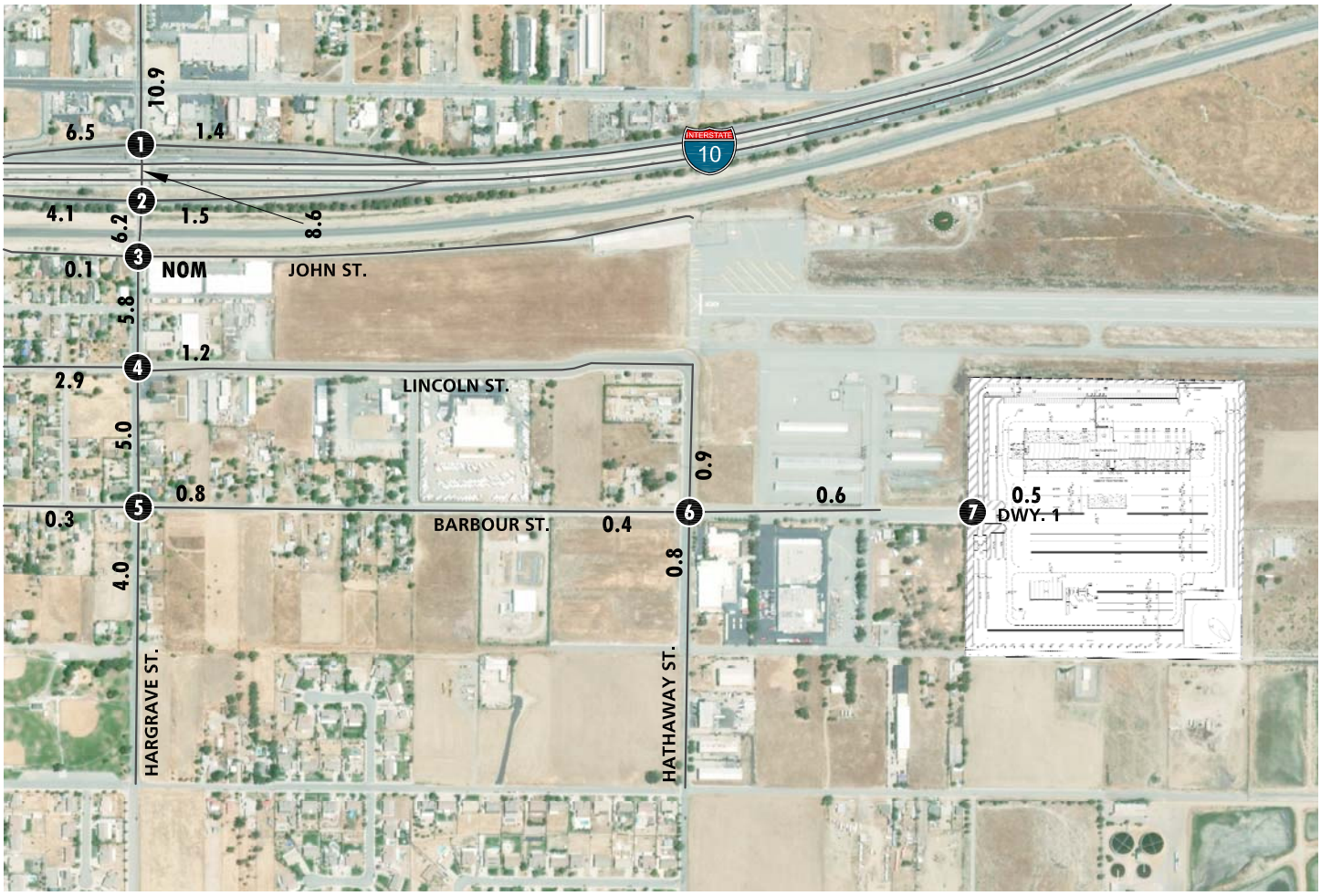
The following intersection is anticipated to meet either peak hour volume based or planning level (Caltrans) ADT traffic signal warrants with the addition of Project traffic (see Appendix 5.2):

- Hargrave St. & I-10 EB Ramps (#2)

5.5 OFF-RAMP QUEUING ANALYSIS

A queuing analysis was performed for the off-ramps at the I-10 Freeway at Hargrave Street interchange to assess vehicle queues for the off ramps that may potentially result in deficient peak hour operations at the ramp-to-arterial intersections and may potentially "spill back" onto the I-10 Freeway mainline. Queuing analysis findings are presented in Table 5-2 for E+P traffic conditions.

EXHIBIT 5-1: E+P TRAFFIC VOLUMES (IN PCE)



1 Hargrave St. & I-10 WB Ramps	2 Hargrave St. & I-10 EB Ramps	3 Hargrave St. & John St.	4 Hargrave St. & Lincoln St.	5 Hargrave St. & Barbour St.
235(348) ↓ 200(158) ↓	164(174) ↓ 68(54) ↓	2(5) ↓ 216(277) ↓ 4(2) ↓	108(52) ↓ 73(197) ↓ 29(30) ↓	12(12) ↓ 94(161) ↓ 9(85) ↓
← 41(55) ← 3(0) ← 34(70)		← 0(0) ← 0(0) ← 2(1)	← 45(43) ← 6(9) ← 0(0)	← 82(28) ← 7(2) ← 3(4)
114(164) ↑ 469(309) ↑	339(250) → 4(4) → 58(110) →	3(4) → 0(0) → 2(1) →	81(42) → 15(23) → 33(77) →	5(6) → 4(2) → 0(3) →
	244(224) ↑ 85(58) ↑	0(0) ↑ 326(278) ↑ 1(0) ↑	27(28) ↑ 154(147) ↑ 1(1) ↑	2(0) ↑ 97(148) ↑ 3(3) ↑

6 Hathaway St. & Barbour St.	7 Hathaway St. & Barbour St.
3(1) ↓ 17(32) ↓ 14(11) ↓	
← 17(16) ← 78(18) ← 1(0)	← 87(25)
0(0) → 5(78) → 1(3) →	5(87) →
0(1) ↑ 34(24) ↑ 0(0) ↑	

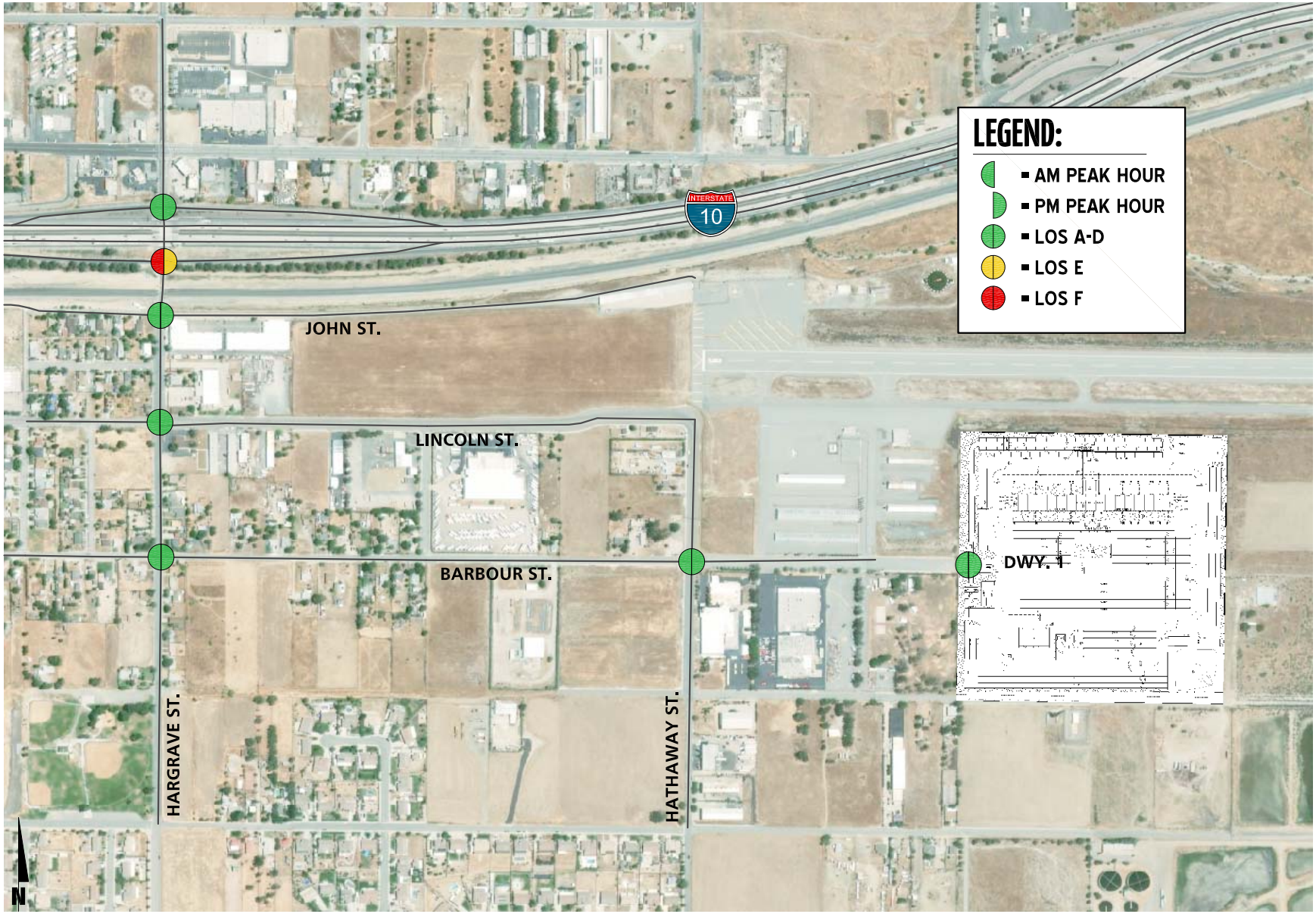
LEGEND:

10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES
10.0 = VEHICLES PER DAY (1000'S)
NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY

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EXHIBIT 5-2: E+P SUMMARY OF LOS



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Table 5-1

Intersection Analysis for E+P Conditions

#	Intersection	Traffic Control[2]	Existing (2019) Delay[1] (secs.) AM	Existing (2019) Delay[1] (secs.) PM	Existing (2019) Level of Service AM	Existing (2019) Level of Service PM	E+P Delay[1] (secs.) AM	E+P Delay[1] (secs.) PM	E+P Level of Service AM	E+P Level of Service PM	Acceptable LOS
1	Hargrave St. & I-10 WB Ramps	CSS	19.3	21.6	C	C	24.2	28.7	C	D	D
2	Hargrave St. & I-10 EB Ramps	CSS	**81.6**	29.4	**F**	D	**126.9**	**42.3**	**F**	**E**	D
3	Hargrave St. & John St.	CSS	15.8	13.7	C	B	18.3	15.7	C	C	C
4	Hargrave St. & Lincoln St.	AWS	9.8	9.0	A	A	10.9	9.9	B	A	C
5	Hargrave St. & Barbour St.	CSS	10.9	11.4	B	B	11.8	14.3	B	B	C
6	Hathaway St. & Barbour St.	CSS	9.0	8.5	A	A	10.3	10.2	B	B	C
7	Driveway 1 & Barbour St.	--/**AWS**	Future Intersection				7.4	7.3	A	A	C

[1] Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown. HCM delay reported in seconds.

[2] CSS = Cross-street Stop; AWS = All-Way Stop; **AWS** = Improvement

Table 5-2

Peak Hour Queuing Summary for E+P Conditions

Intersection	Movement	Available Stacking Distance (Feet)	Existing (2019)				E+P			
			95th Percentile Queue (Feet)		Acceptable?[1]		95th Percentile Queue (Feet)		Acceptable?[1]	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
Hargrave St. & I-10 WB Ramps	WBL/T/R	1,170	52	72	Yes	Yes	73	114	Yes	Yes
Hargrave St. & I-10 EB Ramps	EBL/T/R	1,230	157	117	Yes	Yes	250	162	Yes	Yes

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided.

It is important to note that off-ramp lengths are consistent with the measured distance between the intersection and the freeway mainline. As shown on Table 5-2, there are no queuing issues anticipated for E+P traffic conditions.

Worksheets for E+P conditions off-ramp queuing analysis are provided in Appendix 5.3.

5.6 PROJECT DEFICIENCIES AND RECOMMENDED IMPROVEMENTS

This section provides a summary of Project deficiencies and recommended improvements. The following intersections were found to be deficient. Improvements necessary to improve project-related traffic deficiencies are also discussed below.

5.6.1 RECOMMENDED IMPROVEMENTS TO ADDRESS DEFICIENCIES AT INTERSECTIONS

The effectiveness of the proposed recommended improvements is presented on Table 5-3 for E+P traffic conditions. The intersection operations analysis worksheets for E+P traffic conditions, with improvements, are included in Appendix 5.4 of this TIA.

Hargrave Street & I-10 Eastbound Ramps (#2) – This intersection was found to operate at an unacceptable LOS (LOS E or worse) during one or both of the peak hours under Existing traffic conditions, and is anticipated to continue to operate at an unacceptable LOS during the one or more peak hours with the addition of Project traffic resulting in a deficiency.

Recommendation 1.1 – Hargrave Street & I-10 Eastbound Ramps (#2) – The following improvement is necessary to improve the peak hour deficiency:

- Contribute fair share to install an all-way stop control.

5.6.2 RECOMMENDED IMPROVEMENTS TO ADDRESS DEFICIENCIES ON OFF-RAMP QUEUES

As shown previously on Table 5-2, there are no peak hour queuing issues at the study area interchanges. However, improvements have been recommended to improve intersection operations for E+P traffic conditions. The resulting queuing analysis for the recommended improvements is presented on Table 5-4 for E+P traffic conditions. The queuing analysis worksheets for E+P traffic conditions, with improvements, are included in Appendix 5.5 of this TIA.

Table 5-3

Intersection Analysis for E+P Conditions With Improvements

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
2	Hargrave St. & I-10 EB Ramps																	
	Without Improvements	CSS	0	1	0	0	1	0	0	1	0	0	0	0	**126.9**	**42.3**	**F**	**E**
	With Improvements	**AWS**	0	1	0	0	1	0	0	1	0	0	0	0	20.7	15.6	C	C

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right

[2] Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[3] CSS = Cross-street Stop; AWS = All-Way Stop; **AWS** = Improvement

Table 5-4

Peak Hour Queuing Summary for E+P Conditions With Improvements

Intersection	Movement	Available Stacking Distance (Feet)	Without Improvements				With Improvements			
			95th Percentile Queue (Feet)		Acceptable?[1]		95th Percentile Queue (Feet)		Acceptable?[1]	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
Hargrave St. & I-10 EB Ramps	EBL/T/R	1,230	250	162	Yes	Yes	129	83	Yes	Yes
	NBT/R	120	Not Applicable				86	68	Yes	Yes
	SBL/T/R	240	Not Applicable				58	67	Yes	Yes

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided.

6 OPENING YEAR CUMULATIVE (2021) TRAFFIC CONDITIONS

This section discusses the traffic forecasts for Opening Year Cumulative (2021) conditions and the resulting intersection operations and traffic signal warrant analyses.

6.1 OPENING YEAR CUMULATIVE (2021) WITHOUT PROJECT TRAFFIC VOLUME FORECASTS

This scenario includes Existing traffic volumes plus an ambient growth factor of 4.04% plus traffic from pending and approved but not yet constructed known development projects in the area. The weekday ADT and weekday AM and PM peak hour volumes which can be expected for Opening Year Cumulative (2021) Without Project traffic conditions are shown on Exhibit 6-1.

6.1.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for Opening Year Cumulative (2021) Without Project conditions are consistent with those shown previously on Exhibit 3-1, with the exception of the following:

- Driveways and those facilities assumed to be constructed by cumulative developments to provide site access are also assumed to be in place for Opening Year Cumulative conditions only (e.g., intersection and roadway improvements along the cumulative development's frontages).

6.2 OPENING YEAR CUMULATIVE (2021) WITH PROJECT TRAFFIC VOLUME FORECASTS

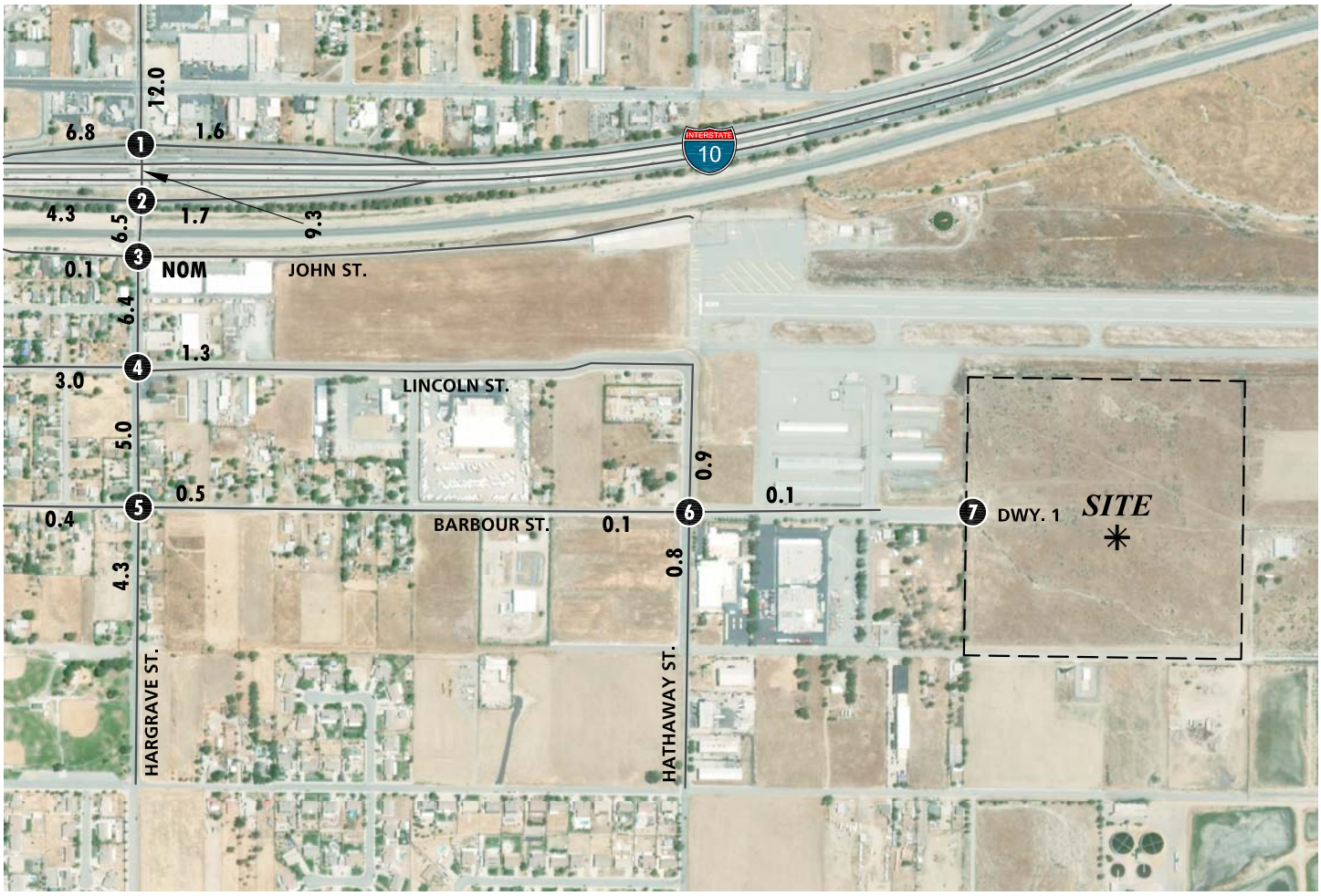
This scenario includes Opening Year Cumulative (2021) Without Project traffic in conjunction with the addition of Project traffic. The weekday ADT and weekday AM and PM peak hour volumes which can be expected for Opening Year Cumulative (2021) With Project traffic conditions are shown on Exhibit 6-2.

6.2.1 ROADWAY IMPROVEMENTS

The lane configurations and traffic controls assumed to be in place for Opening Year Cumulative (2021) With Project conditions are consistent with those shown previously on Exhibit 3-1, with the exception of the following:

- Project driveways and those facilities assumed to be constructed by the Project to provide site access are also assumed to be in place for Opening Year Cumulative conditions only (e.g., intersection and roadway improvements along the Project's frontage and driveways).
- Driveways and those facilities assumed to be constructed by cumulative developments to provide site access are also assumed to be in place for Opening Year Cumulative conditions only (e.g., intersection and roadway improvements along the cumulative development's frontages).

EXHIBIT 6-1: OPENING YEAR CUMULATIVE (2021) WITHOUT PROJECT TRAFFIC VOLUMES (IN PCE)



1 Hargrave St. & I-10 WB Ramps	2 Hargrave St. & I-10 EB Ramps	3 Hargrave St. & John St.	4 Hargrave St. & Lincoln St.	5 Hargrave St. & Barbour St.
252(372) 219(171) ← 55(67) ← 3(0) ← 41(56)	181(161) 79(66)	2(5) 241(217) 4(2) ← 0(0) ← 0(0) ← 2(1)	113(55) 84(135) 37(28) ← 43(47) ← 5(9) ← 0(0)	13(13) 102(169) 13(15) ← 12(22) ← 6(2) ← 2(4)
67(169) 499(331)	365(270) 4(4) 65(63) 201(231) 72(63)	3(4) 0(0) 2(1) 0(0) 270(290) 1(0)	85(45) 17(23) 35(79) 27(29) 92(151) 1(1)	7(8) 5(1) 0(3) 2(0) 103(159) 4(2)

6 Hathaway St. & Barbour St.	7 Hathaway St. & Barbour St.
3(1) 18(33) 12(2) ← 8(8) ← 0(0) ← 1(0)	Future Intersection
0(0) 1(0) 2(5) 2(3) 35(25) 0(0)	

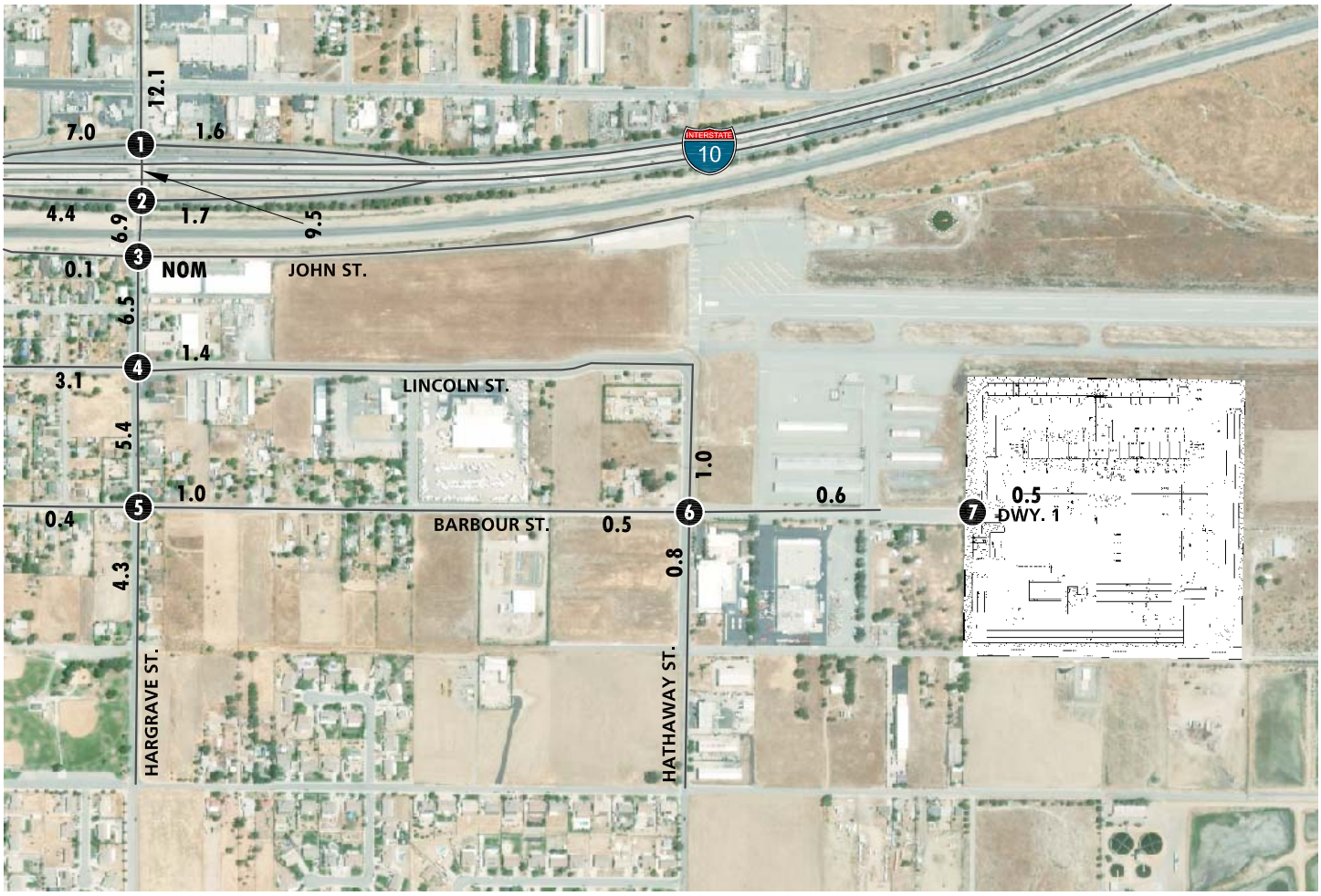
LEGEND:

10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES
10.0 = VEHICLES PER DAY (1000'S)
NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY

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EXHIBIT 6-2: OPENING YEAR CUMULATIVE (2021) WITH PROJECT TRAFFIC VOLUMES (IN PCE)



1 Hargrave St. & I-10 WB Ramps	2 Hargrave St. & I-10 EB Ramps	3 Hargrave St. & John St.	4 Hargrave St. & Lincoln St.	5 Hargrave St. & Barbour St.
252(372) → 220(179) ← 55(67), ← 3(0), ↰ 42(76)	← 183(189), ← 79(66)	2(5) → 245(298) ← 4(2), ← 0(0), ← 0(0), ↰ 2(1)	113(55) → 87(209) ← 38(36), ← 51(53), ← 7(10), ↰ 0(0)	13(13) → 102(169) ← 16(90), ← 87(37), ← 8(3), ↰ 4(5)
↱ 120(178), ↑ 507(337)	365(270) → 4(4) → 67(116) ↰, ↑ 262(246), ↱ 92(68)	3(4) → 0(0) → 2(1) ↰, ↑ 0(0), ↑ 351(310), ↱ 1(0)	85(45) → 17(25) → 35(81) ↰, ↑ 29(30), ↑ 166(165), ↱ 1(1)	7(8) → 5(3) → 0(3) ↰, ↑ 2(0), ↑ 103(159), ↱ 4(4)

6 Hathaway St. & Barbour St.	7 Hathaway St. & Barbour St.
3(1) → 18(33) → 14(11) ← 17(16), ← 78(18), ↰ 1(0)	← 87(25)
0(0) → 5(78) → 2(5) ↰, ↑ 2(3), ↑ 35(25), ↱ 0(0)	5(87) →

LEGEND:

10(10) = AM(PM) PEAK HOUR INTERSECTION VOLUMES
10.0 = VEHICLES PER DAY (1000'S)
NOM = NOMINAL, LESS THAN 50 VEHICLES PER DAY

N

6.3 INTERSECTION OPERATIONS ANALYSIS

6.3.1 OPENING YEAR CUMULATIVE (2021) WITHOUT PROJECT TRAFFIC CONDITIONS

LOS calculations were conducted for the study intersections to evaluate their operations under Opening Year Cumulative (2021) Without Project conditions with roadway and intersection geometrics consistent with Section 6.1.1 *Roadway Improvements*. As shown in Table 6-1, no additional study area intersections are anticipated to operate at an unacceptable LOS under Opening Year Cumulative (2021) Without Project traffic conditions, consistent with Existing (2019) and E+P traffic conditions.

A summary of the peak hour intersection LOS for Opening Year Cumulative (2021) Without Project conditions is shown on Exhibit 6-3. The intersection operations analysis worksheets for Opening Year Cumulative (2021) Without Project traffic conditions are included in Appendix 6.1 of this TIA.

6.3.2 OPENING YEAR CUMULATIVE (2021) WITH PROJECT CONDITIONS

As shown on Table 6-1 and illustrated on Exhibit 6-4, there following study area intersection is anticipated to experience unacceptable LOS during the peak hours with the addition of Project traffic:

- Hargrave St. & I-10 WB Ramps (#1) – LOS E PM peak hour only

The intersection operations analysis worksheets for Opening Year Cumulative (2021) With Project traffic conditions are included in Appendix 6.2 of this TIA.

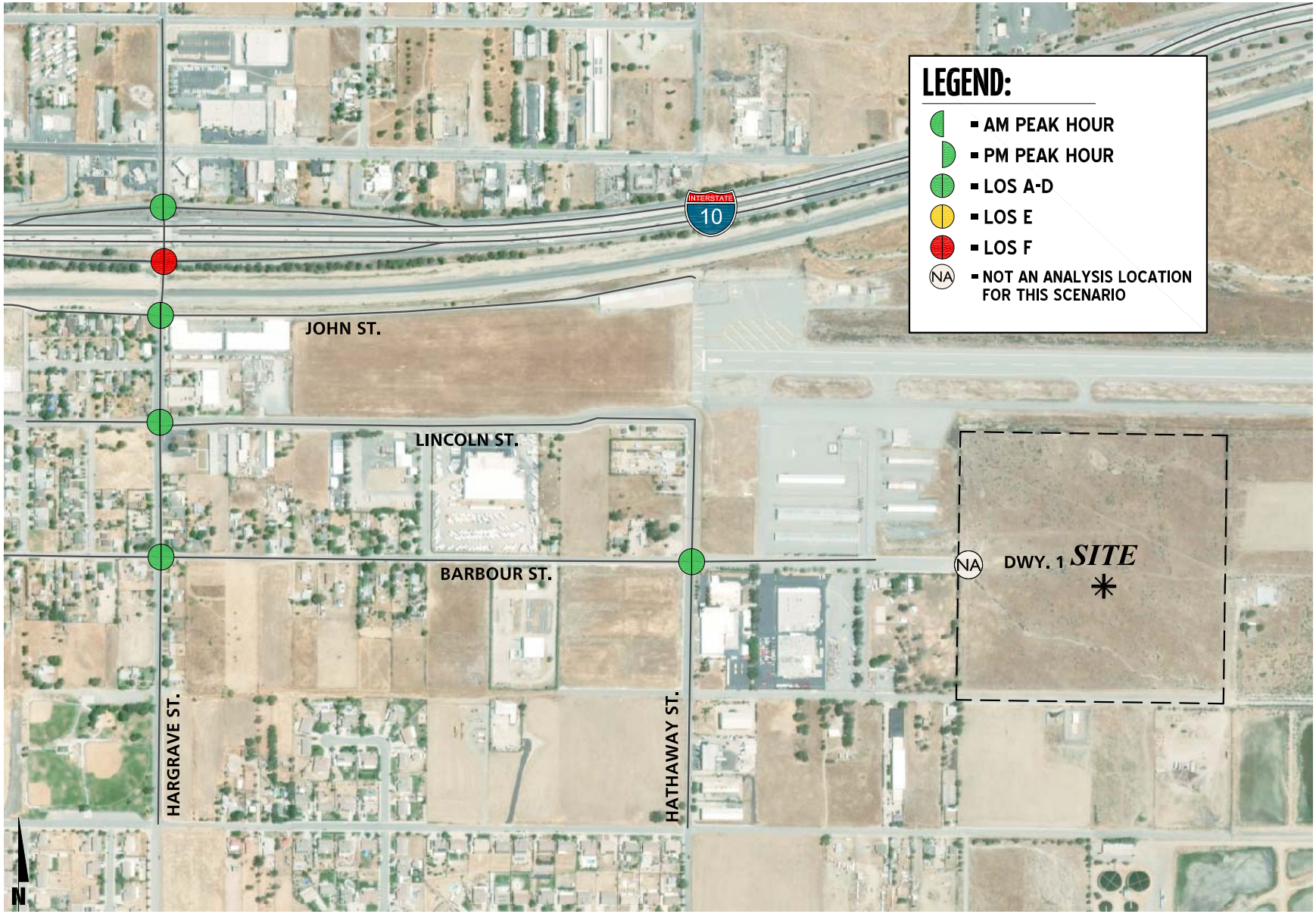
6.4 TRAFFIC SIGNAL WARRANTS ANALYSIS

There are no intersections that are anticipated to meet either peak hour volume based or planning level (Caltrans) ADT traffic signal warrants for Opening Year Cumulative (2021) Without and With Project traffic conditions. Worksheets for Opening Year Cumulative (2021) Without and With Project traffic conditions signal warrants are provided in Appendices 6.3 and 6.4, respectively.

6.5 OFF-RAMP QUEUING ANALYSIS

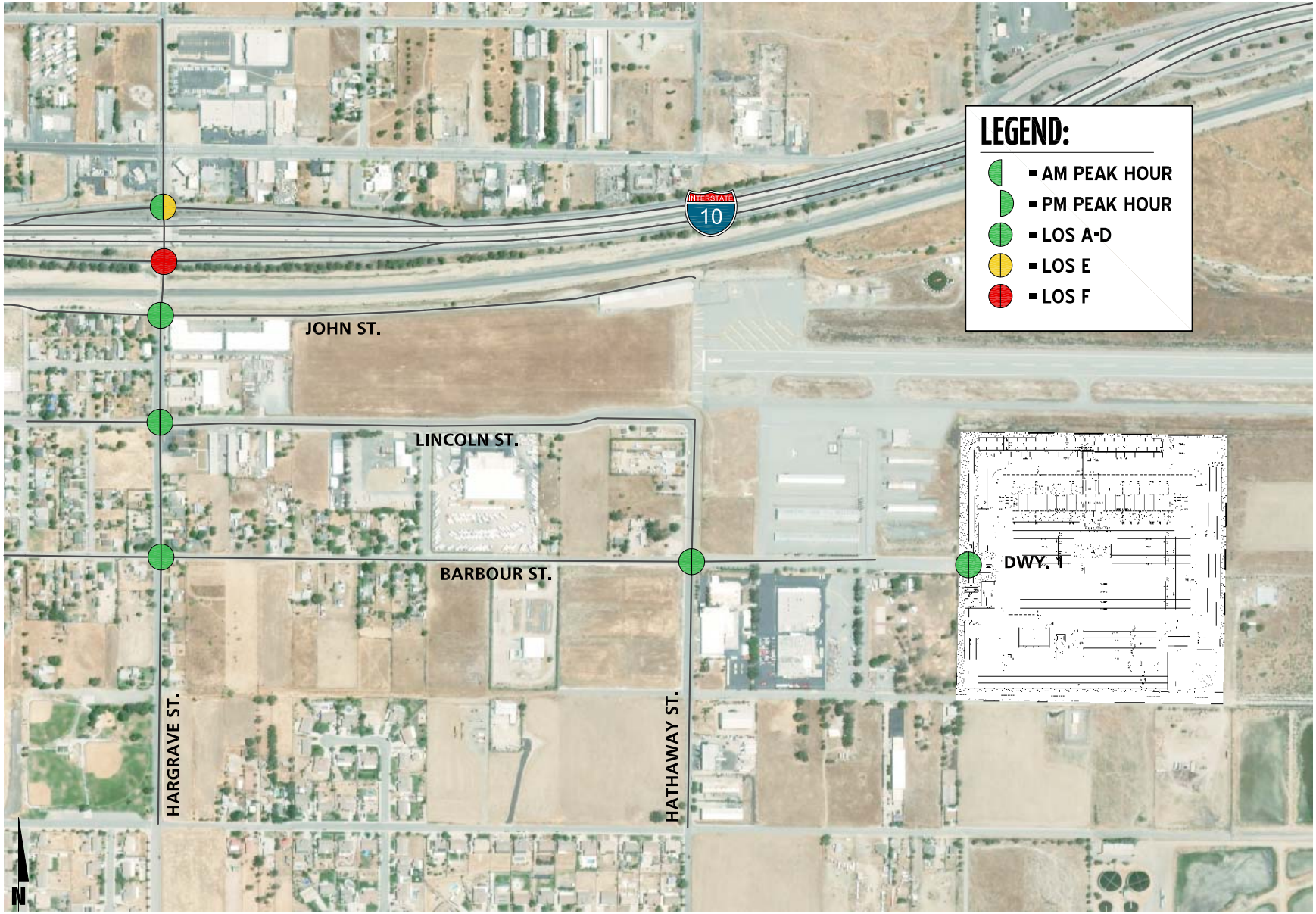
A queuing analysis was performed for the off-ramps at the I-10 Freeway at Hargrave Street interchange to assess vehicle queues for the off ramps that may potentially result in deficient peak hour operations at the ramp-to-arterial intersections and may potentially "spill back" onto the I-10 Freeway mainline. Queuing analysis findings are presented in Table 6-2 for Opening Year Cumulative (2021) Without and With Project traffic conditions. It is important to note that off-ramp lengths are consistent with the measured distance between the intersection and the freeway mainline. As shown on Table 6-2, there are no queuing issues anticipated for Opening Year Cumulative (2021) Without and With Project traffic conditions.

EXHIBIT 6-3: OPENING YEAR CUMULATIVE (2021) WITHOUT PROJECT SUMMARY OF LOS



URBAN CROSSROADS

EXHIBIT 6-4: OPENING YEAR CUMULATIVE (2021) WITH PROJECT SUMMARY OF LOS



URBAN CROSSROADS

Table 6-1

Intersection Analysis for Opening Year Cumulative (2021) Conditions

#	Intersection	Traffic Control[2]	2021 Without Project				2021 With Project				Acceptable LOS
			Delay[1] (secs.)		Level of Service		Delay[1] (secs.)		Level of Service		
			AM	PM	AM	PM	AM	PM	AM	PM	
1	Hargrave St. & I-10 WB Ramps	CSS	23.4	27.4	C	D	31.5	**40.0**	D	**E**	D
2	Hargrave St. & I-10 EB Ramps	CSS	**>100.0**	**49.0**	**F**	**F**	**>100.0**	**79.6**	**F**	**F**	D
3	Hargrave St. & John St.	CSS	17.3	14.7	C	B	20.1	15.7	C	C	C
4	Hargrave St. & Lincoln St.	AWS	10.6	9.5	B	A	11.9	10.3	B	B	C
5	Hargrave St. & Barbour St.	CSS	11.4	12.2	B	B	12.4	15.7	B	C	C
6	Hathaway St. & Barbour St.	CSS	8.8	8.5	A	A	10.4	10.3	B	B	C
7	Driveway 1 & Barbour St.	--/**AWS**	Future Intersection				7.4	7.3	A	A	C

[1] Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown. HCM delay reported in seconds.

[2] CSS = Cross-street Stop; AWS = All-Way Stop; **AWS** = Improvement

Table 6-2

Peak Hour Queuing Summary for Opening Year Cumulative (2021) Conditions

Intersection	Movement	Available Stacking Distance (Feet)	2021 Without Project				2021 With Project			
			95th Percentile Queue (Feet)		Acceptable? [1]		95th Percentile Queue (Feet)		Acceptable? [1]	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
Hargrave St. & I-10 WB Ramps	WBL/T/R	1,170	64	81	Yes	Yes	65	99	Yes	Yes
Hargrave St. & I-10 EB Ramps	EBL/T/R	1,230	194	182	Yes	Yes	264	198	Yes	Yes

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided.

Worksheets for Opening Year Cumulative (2021) Without Project conditions off-ramp queuing analysis are provided in Appendix 6.5. Worksheets for Opening Year Cumulative (2021) With Project conditions off-ramp queuing analysis are provided in Appendix 6.6.

6.6 PROJECT DEFICIENCIES AND RECOMMENDED IMPROVEMENTS

This section provides a summary of Project deficiencies and recommended improvements. The following intersections were found to be deficient. Improvements necessary to improve project-related traffic deficiencies are also discussed below.

6.6.1 RECOMMENDED IMPROVEMENTS TO ADDRESS DEFICIENCIES AT INTERSECTIONS

The effectiveness of the proposed recommended improvements is presented on Table 6-3 for Opening Year Cumulative (2021) traffic conditions. The intersection operations analysis worksheets for Opening Year Cumulative (2021) traffic conditions, with improvements, are included in Appendix 6.7 of this TIA.

Hargrave Street & I-10 Eastbound Ramps (#2) – This intersection was found to operate at an unacceptable LOS (LOS E or worse) during one or both of the peak hours under Existing, E+P, and Opening Year Cumulative (2021) Without Project traffic conditions, and is anticipated to continue to operate at an unacceptable LOS during the one or more peak hours with the addition of Project traffic resulting in a deficiency.

Recommendation 1.1 – Hargrave Street & I-10 Eastbound Ramps (#2) – The following improvement is necessary to improve the peak hour deficiency:

- Construct the intersection with an all-way stop control (consistent with E+P conditions).

Hargrave Street & I-10 Westbound Ramps (#1) – This intersection was found to operate at an acceptable LOS (LOS D or better) during both of the peak hours under Opening Year Cumulative (2021) Without Project traffic conditions, and is anticipated to operate at an unacceptable LOS during the one or more peak hours with the addition of Project traffic resulting in a deficiency.

Recommendation 2.1 – Hargrave Street & I-10 Westbound Ramps (#1) – The following improvement is necessary to improve the peak hour deficiency:

- Construct the intersection with an all-way stop control.

6.6.2 RECOMMENDED IMPROVEMENTS TO ADDRESS DEFICIENCIES ON OFF-RAMP QUEUES

As shown previously on Table 6-2, there are no peak hour queuing issues at the study area interchanges. However, improvements have been recommended to improve intersection operations for Opening Year Cumulative (2021) traffic conditions. The resulting queuing analysis for the recommended improvements is presented on Table 6-4 for Opening Year Cumulative (2021) traffic conditions. The queuing analysis worksheets for Opening Year Cumulative (2021) traffic conditions, with improvements, are included in Appendix 6.8 of this TIA.

Table 6-3

Intersection Analysis for Opening Year Cumulative (2021) Conditions With Improvements

#	Intersection	Traffic Control[3]	Intersection Approach Lanes[1]												Delay[2] (secs.)		Level of Service	
			Northbound			Southbound			Eastbound			Westbound						
			L	T	R	L	T	R	L	T	R	L	T	R	AM	PM	AM	PM
1	Hargrave St. & I-10 WB Ramps																	
	Without Improvements	CSS	0	1	0	0	1	0	0	0	0	0	1	0	31.5	**40.0**	D	**E**
	With Improvements	**AWS**	0	1	0	0	1	0	0	0	0	0	1	0	29.1	29.4	D	D
2	Hargrave St. & I-10 EB Ramps																	
	Without Improvements	CSS	0	1	0	0	1	0	0	1	0	0	0	0	**>100.0**	**79.6**	**F**	**F**
	With Improvements	**AWS**	0	1	0	0	1	0	0	1	0	0	0	0	24.6	18.6	C	C

[1] When a right turn is designated, the lane can either be striped or unstriped. To function as a right turn lane there must be sufficient width for right turning vehicles to travel outside the through lanes.

L = Left; T = Through; R = Right

[2] Per the Highway Capacity Manual (6th Edition), overall average intersection delay and level of service are shown for intersections with a traffic signal or all way stop control. For intersections with cross street stop control, the delay and level of service for the worst individual movement (or movements sharing a single lane) are shown.

[3] CSS = Cross-street Stop; AWS = All-Way Stop; **AWS** = Improvement

Table 6-4

Peak Hour Queuing Summary for Opening Year Cumulative (2021) Conditions With Improvements

Intersection	Movement	Available Stacking Distance (Feet)	Without Improvements				With Improvements			
			95th Percentile Queue (Feet)		Acceptable?[1]		95th Percentile Queue (Feet)		Acceptable?[1]	
			AM Peak Hour	PM Peak Hour	AM	PM	AM Peak Hour	PM Peak Hour	AM	PM
Hargrave St. & I-10 WB Ramps	WBL/T/R	1,170	65	99	Yes	Yes	45	48	Yes	Yes
	NBL/T	240	Not Applicable				119	106	Yes	Yes
	SBT/R	220	Not Applicable				110	131	Yes	Yes
Hargrave St. & I-10 EB Ramps	EBL/T/R	1,230	264	198	Yes	Yes	136	95	Yes	Yes
	NBT/R	120	Not Applicable				112	68	Yes	Yes
	SBL/T/R	240	Not Applicable				70	55	Yes	Yes

[1] Stacking Distance is acceptable if the required stacking distance is less than or equal to the stacking distance provided.

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7 LOCAL AND REGIONAL FUNDING MECHANISMS

Transportation improvements within the City of Banning are funded through a combination of direct project mitigation, development impact fee programs or fair share contributions, such as the WRCOG TUMF program. Identification and timing of needed improvements is generally determined through local jurisdictions based upon a variety of factors.

7.1 TRANSPORTATION UNIFORM MITIGATION FEE (TUMF) PROGRAM

The TUMF program is administered by the WRCOG based upon a regional Nexus Study most recently updated in 2017 to address major changes in right of way acquisition and improvement cost factors. (6) This regional program was put into place to ensure that development pays its fair share and that funding is in place for construction of facilities needed to maintain the requisite level of service and critical to mobility in the region. TUMF is a truly regional mitigation fee program and is imposed and implemented in every jurisdiction in Western Riverside County.

TUMF fees are imposed on new residential, industrial, and commercial development through application of the TUMF fee ordinance and fees are collected at the building or occupancy permit stage. In addition, an annual inflation adjustment is considered each year in February. In this way, TUMF fees are adjusted upwards on a regular basis to ensure that the development impact fees collected keep pace with construction and labor costs, etc.

7.2 FAIR SHARE CONTRIBUTION

Project improvement may include a combination of fee payments to established programs, construction of specific improvements, payment of a fair share contribution toward future improvements or a combination of these approaches. Improvements constructed by development may be eligible for a fee credit or reimbursement through the program where appropriate (to be determined at the City's discretion).

When off-site improvements are identified with a minor share of responsibility assigned to proposed development, the approving jurisdiction may elect to collect a fair share contribution or require the development to construct improvements. Detailed fair share calculations, for each peak hour, has been provided on Table 7-1 for the applicable deficient study area intersections.

These fees are collected with the proceeds solely used as part of a funding mechanism aimed at ensuring that regional highways and arterial expansions keep pace with the projected population increases.

Table 7-1

Project Fair Share Calculations for Intersections

#	Intersection		Existing	Total Project	2021 With Project Volume	Total New Traffic	Project % of New Traffic
1	Hargrave St. & I-10 WB Ramps						
		AM:	1,033	63	1,200	167	**37.7%**
		PM:	996	43	1,210	214	20.1%
2	Hargrave St. & I-10 EB Ramps						
		AM:	879	85	1,054	175	48.6%
		PM:	773	101	960	187	**54.0%**

BOLD = Denotes highest fair share percentage.

8 REFERENCES

1. **Riverside County Transportation Department.** *Traffic Impact Analysis Preparation Guide.* County of Riverside : s.n., April 2008.
2. **California Department of Transportation.** *Guide for the Preparation of Traffic Impact Studies.* December 2002.
3. **Transportation Research Board.** *Highway Capacity Manual (HCM).* 6th Edition. s.l. : National Academy of Sciences, 2016.
4. **California Department of Transportation.** Manual on Uniform Traffic Control Devices (MUTCD). [book auth.] California Department of Transportation. *California Manual on Uniform Traffic Control Devices (CAMUTCD).* 2014.
5. **Southern California Association of Governments.** *2016 Regional Transportation Plan / Sustainable Communities Strategy.* April 2016.
6. **Western Riverside Council of Governments.** *TUMF Nexus Study, 2016 Program Update.* July 2017.

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