The Crestview Apartments Project

Final Environmental Impact Report
SCH#2020069047

prepared for
City of Riverside
Community & Economic Development Department, Planning Division
3900 Main Street, 3rd Floor
Riverside, California 92522
Contact: Candice Assadzadeh, Senior Planner

prepared by
Ruth Villalobos & Associates, Inc.
3602 Inland Empire Blvd., Suite C310
Ontario, CA 91764

September 2021

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September 2021

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Appendices

1.0 Introduction

The Final Environmental Impact Report (FEIR), as required pursuant to State *CEQA Guidelines* Sections 15089 and 15132, includes the Draft Environmental Impact Report (DEIR) or a revision thereof, comments and recommendations received on the DEIR, a list of persons, organizations, and public agencies commenting on the DEIR, and the responses of the lead agency, which is the City of Riverside (City) for this Project, to significant environmental points raised in the review and consultation process. A Mitigation Monitoring and Reporting Program (MMRP) is also included to ensure compliance during Project implementation (Public Resources Code Section 21081.6, State *CEQA Guidelines* Section 15097).

1.1. Purpose of the EIR Process

This Final Environmental Impact Report (Final EIR) is an informational document to evaluate the potential environmental impacts of the proposed Crestview Apartments Project. The primary objectives of the EIR process under the California Environmental Quality Act (CEQA) are to inform decision-makers and the public about a project's potentially significant environmental effects, identify feasible ways to minimize significant effects, and consider a reasonable range of alternatives to the project.

This Final EIR contains 1) The Draft EIR (incorporated by reference in accordance with State CEQA Guidelines Section 15150); 2) Errata, a revision of the DEIR, includes minor changes that clarify or correct minor inaccuracies; 3) Comments received on the DEIR; 4) List of persons, public agencies, organizations that commented on the DEIR; and 5) Responses to significant environmental points raised in the review period. Pursuant to the requirements of CEQA, the City of Riverside must certify the EIR as complete and adequate prior to any potential approval of the project or a project alternative.

Revisions to the Draft EIR necessary in light of the comments received and responses provided, or necessary to amplify or clarify material in the Draft EIR, are included in the responses to comments as well as the Errata. <u>Underlined</u> text represents language that has been added to the Draft EIR; text with strikeout has been deleted from the Draft EIR. All revisions are then compiled in the order in which they would appear in the Draft EIR (by section and page number) in Section 3, Revisions to the Draft EIR, of this document. Page numbers cited in this section correspond to the page numbers of the Draft EIR. When mitigation measure language has been changed, it has been changed in the text on the stated Draft EIR page, the summary table (Draft EIR Table 1) in the Executive Summary of the Draft EIR, and the Mitigation Monitoring and Reporting Plan (MMRP). The Final EIR includes the responses to comments on the Draft EIR provided herein and the text of the Draft EIR, revised based on responses to comments and other information.

1.2. EIR Certification Process and Consideration of Project Approval

In accordance with the requirements of CEQA and the procedures of the City of Riverside, the EIR must be certified as complete and adequate prior to any potential final action on the proposed project. Once the EIR is certified and all information considered, using its independent judgment, the City can choose to take no action, or to take action to go forward with the proposed project, make changes, or select an alternative to the proposed project. While the information in the EIR

does not constrain the City's ultimate decision under its land use authority, the City must respond to each significant effect and mitigation measure identified in the EIR as required by CEQA by making findings supporting its decision.

1.3. Public Review Summary

The City circulated the DEIR for the Project for a 45-day public review period from March 19, 2021 through May 3, 2021. Notices of Completion and Availability of the DEIR were circulated to the State Clearinghouse, responsible agencies, trustee agencies, and other interested parties on March 19, 2021.

General public Notice of Availability of the DEIR was also given by publication in The Press-Enterprise daily circulation newspaper on March 19, 2021. As required by Public Resources Code Section 21092.3, a copy of the public notice was posted with the Riverside County Clerk on March 19, 2021.

General public Notice of Availability of the DEIR was also published in the local newspaper, The Press-Enterprise, on March 19, 2021. As required by Public Resources Code Section 21092.3, a copy of the public notice was posted with the Riverside County Clerk on March 19, 2021.

As prescribed by the State CEQA Guidelines Sections 21091 (d), the City of Riverside, as the lead agency, is required to 1) evaluate comments on significant environmental issues received during the 45-day public comment period, and may respond to late comments, from persons who have reviewed the Draft EIR; and 2) prepare written responses to comments. (CEQA Guidelines, § 15088). The Responses to Comments, along with the comment letters, are included in Section 2 of this FEIR. In accordance with the provisions of Public Resources Code Section 21092.5, the City has provided a written response to each commenting public agency no less than 10 days prior to the proposed certification date.

2.0 Responses to Comments

This Response to Comments (RTC) section provides responses to public and agency written comments received by the City of Riverside on the Draft Environmental Impact Report (DEIR) for the proposed Crestview Apartments Project (Project). The DEIR identifies the likely environmental consequences associated with development of the proposed Project and recommends mitigation measures to reduce potentially significant impacts. In addition to providing responses to public and agency comments received on the DEIR, this RTC document also makes revisions to the DEIR to clarify or amplify the existing analysis, as necessary, in response to those comments or to make clarifications to information presented in the DEIR.

2.1 Environmental Review Process

According to the California Environmental Quality Act (CEQA), lead agencies are required to consult with public agencies having jurisdiction over a proposed project and to provide the general public with an opportunity to comment on the DEIR.

On June 30, 2020, the City of Riverside circulated a Notice of Preparation (NOP) for a 30-day period to identify environmental issue areas potentially affected if the proposed project were to be implemented. As discussed in Section 2.3 of the DEIR, the NOP was distributed to the State Clearinghouse, responsible agencies, and individuals/parties considered likely to be interested in the proposed Project and its potential impacts. Comments received by the City of Riverside on the NOP and during the July 22, 2020 virtual EIR scoping meeting held by the City are summarized in Table 2.0-1 of the DEIR. These comments were taken into account during the preparation of the DEIR.

The DEIR was made available for public review on March 19, 2021 and was distributed to local and State responsible and trustee agencies. Copies of the Notice of Availability of the DEIR were mailed to a list of interested parties, groups and public agencies, as well as property owners and occupants of nearby properties. The DEIR and an announcement of its availability were posted electronically on the City's website. The Notice of Availability of the DEIR was also posted at the office of the Riverside County Clerk and with the State Clearinghouse. Due to the current COVID-19 guidance from the California Department of Public Health, and the closures of governmental facilities during the public review period, copies of the DEIR were made available for public viewing at the following City facilities when they returned to normal hours of operation: (1) Riverside City Hall, Community & Economic Development Department, Planning Division, 3900 Main Street, Third Floor, Riverside, CA 92522; and (2) SPC Jesus S. Duran Eastside public library, 4033-C Chicago Avenue.

The 45-day CEQA public comment period began on March 19, 2021 and ended on May 3, 2021. The City of Riverside received nine comment letters on the DEIR prior to the close of the public comment period. Copies of all written comments on the DEIR received are included in Section 2.3 of this document, as are responses to those comments.

2.2 Organization of Comment Letters and Responses

This section presents a list of comment letters received on the DEIR and describes the organization of the letters and comments that are provided in Section 2.3, Comments and Responses, of this document. The letters are presented in the order in which the letters were received.

Each comment letter has been numbered sequentially and each separate issue raised by the commenter has been assigned a number. The responses to each comment identify first the number of the comment letter, and then the number assigned to each issue, as identified in the bracketing/numbering of each comment. For example, Response 1.1 indicates that the response is for the first issue raised in comment Letter 1.

Table 2.2-1 – DEIR Comment Letters Received

Letter Number and Commenter	Agency/Group/Organization/Individual	Page Number
1. Deborah de Chambeau, Engineering Project Manager	Riverside County Flood Control and Water Conservation District	2.0-5
2. Cheryl Madrigal, Tribal Historic Preservation Officer & Cultural Resources Manager	Rincon Band of Luiseño Indians	2.0-10
3. Transmission Technical Services Department	SoCalGas	2.0-13
4. Daniel Zerda, Student Intern	County of Riverside Transportation and Land Management Agency, Airport Land Use Commission	2.0-16
5a. Rachel Blackburn 5b.[1] Matt Hagemann and Paul E. Rosenfield	5a. DeLano & DeLano (on behalf of Friends of Riverside's Hills) 5b. Soil/Water/Air Protection Enterprise (SWAPE)	2.0-19 2.0-30
6. Kevin Dawson	Individual	2.0-415
7. Rachel Blackburn	DeLano & DeLano (on behalf of Friends of Riverside's Hills)	2.0-423
8a. Mitchell M. Tsai 8b.[2] Matt Hagemann and Paul E. Rosenfield	8a. Attorneys for Southwest Regional Council of Carpenters 8b. Soil/Water/Air Protection Enterprise (SWAPE)	2.0-427 2.0-445
9.Leonard Nunney	Friends of Riverside's Hills	2.0-491
Comment Letters Received After Close of the DEIR Comment Review Period		
10. Everett DeLano	DeLano & DeLano (on behalf of Friends of Riverside's Hills)	2.0-531
11. Kevin Akin	Individual	2.0-544
12. Mitchell M. Tsai	Attorneys for Southwest Regional Council of Carpenters	2.0-550

[1] Letter 5b. from SWAPE is a letter attachment to the 5a. comment letter from DeLano & DeLano.
[2] Letter 8b. from SWAPE is a letter attachment to the 8a. comment letter from Mitchell M. Tsai.

2.3 Comments and Responses

Written responses to each comment letter received on the DEIR are provided in this section. All letters received on the DEIR are provided in their entirety, followed by responses to the comments contained in the letters.

Comment Letter 1 – Riverside County Flood Control and Water Conservation District

Comment letter 1 commences on the next page.

JASON E. UHLEY
General Manager-Chief Engineer

1995 MARKET STREET
RIVERSIDE, CA 92501
951.955.1200
951.788.9965 FAX
www.rcflood.org

RIVERSIDE COUNTY FLOOD CONTROL
AND WATER CONSERVATION DISTRICT

237277

March 23, 2021

City of Riverside
Planning Department
3900 Main Street
Riverside, CA 92522

Attention: Candice Assadzadeh

Re: Crestview Apartments, APN 256-050-012

The Riverside County Flood Control and Water Conservation District (District) does not normally recommend conditions for land divisions or other land use cases in incorporated cities. The District also does not plan check City land use cases or provide State Division of Real Estate letters or other flood hazard reports for such cases. District comments/recommendations for such cases are normally limited to items of specific interest to the District including District Master Drainage Plan facilities, other regional flood control and drainage facilities which could be considered a logical component or extension of a master plan system, and District Area Drainage Plan fees (development mitigation fees). In addition, information of a general nature is provided.

The District's review is based on the above-referenced project transmittal, received March 17, 2021. The District **has not** reviewed the proposed project in detail, and the following comments do not in any way constitute or imply District approval or endorsement of the proposed project with respect to flood hazard, public health and safety, or any other such issue:

1.1 ☒ This project would not be impacted by District Master Drainage Plan facilities, nor are other facilities of regional interest proposed.

☐ This project involves District proposed Master Drainage Plan facilities, namely _____, _____. The District will accept ownership of such facilities on written request of the City. Facilities must be constructed to District standards, and District plan check and inspection will be required for District acceptance. Plan check, inspection, and administrative fees will be required.

☐ This project proposes channels, storm drains 36 inches or larger in diameter, or other facilities that could be considered regional in nature and/or a logical extension of the adopted ____ Master Drainage Plan. The District would consider accepting ownership of such facilities on written request of the City. Facilities must be constructed to District standards, and District plan check and inspection will be required for District acceptance. Plan check, inspection, and administrative fees will be required.

☐ This project is located within the limits of the District's _____ Area Drainage Plan for which drainage fees have been adopted. If the project is proposing to create additional impervious

City of Riverside - 2 - March 23, 2021
Re: Crestview Apartments, APN 256-050-012 237277

surface area, applicable fees should be paid by cashier's check or money order only to the Flood Control District or City prior to issuance of grading or building permits. Fees to be paid should be at the rate in effect at the time of issuance of the actual permit.

☐ An encroachment permit shall be obtained for any construction related activities occurring within District right of way or facilities, namely, _____. For further information, contact the District's Encroachment Permit Section at 951.955.1266.

☐ The District's previous comments are still valid.

GENERAL INFORMATION

1.2 This project may require a National Pollutant Discharge Elimination System (NPDES) permit from the State Water Resources Control Board. Clearance for grading, recordation, or other final approval should not be given until the City has determined that the project has been granted a permit or is shown to be exempt.

1.3 If this project involves a Federal Emergency Management Agency (FEMA) mapped floodplain, then the City should require the applicant to provide all studies, calculations, plans, and other information required to meet FEMA requirements, and should further require that the applicant obtain a Conditional Letter of Map Revision (CLOMR) prior to grading, recordation, or other final approval of the project and a Letter of Map Revision (LOMR) prior to occupancy.

1.4 If a natural watercourse or mapped floodplain is impacted by this project, the City should require the applicant to obtain a Section 1602 Agreement from the California Department of Fish and Wildlife and a Clean Water Act Section 404 Permit from the U.S. Army Corps of Engineers, or written correspondence from these agencies indicating the project is exempt from these requirements. A Clean Water Act Section 401 Water Quality Certification may be required from the local California Regional Water Quality Control Board prior to issuance of the Corps 404 permit.

Very truly yours,

Deborah de Chambeau

DEBORAH DE CHAMBEAU
Engineering Project Manager

ec: Riverside County Planning Department
Attn: Phayvanh Nanthavongdouangsy

SLJ:blm

Letter 1 – Riverside County Flood Control and Water Conservation District

Commenter: Deborah de Chambeau

Date: March 23, 2021

Response 1.1:

The commenter states that the proposed Project would not be impacted by District Drainage Plan facilities, nor are other facilities of regional interest proposed.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Response 1.2:

The commenter states the proposed Project may require a National Pollutant Discharge Elimination System (NPDES) permit from the State Water Resources Control Board (SWRCB).

The proposed Project does require and will obtain an NPDES permit from the SWRCB,, as noted in the Initial Study and DEIR (pp. 2.0-5, 7.0-9). This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Response 1.3:

This comment is in regards to whether or not the proposed Project involves a Federal Emergency Management Agency (FEMA) mapped floodplain. As the proposed Project does not involve a FEMA mapped floodplain, the applicant is not required to obtain a Conditional Letter of Map Revision (CLOMR) or Letter of Map Revision (LOMR). Further, the Project site is not located within a flood zone area or a dam inundation area as seen on Figure 5.8-2 in the City's General Plan FPEIR. (p. 7.0-12.)

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Response 1.4:

The commenter states that if a natural watercourse or mapped floodplain is impacted by the proposed Project, the City should require the applicant to obtain applicable permits from resource agencies. As described in Section 5.3.5 of the Biological Resources section of the DEIR, the willow riparian plant community and its associated drainage on the southwest corner of the Project

site would qualify as a jurisdictional feature under the regulatory authority of the U.S. Army Corps of Engineers (Corps), Regional Water Quality Control Board (Regional Board), and the California Department of Fish and Wildlife (CDFW), as well as riparian/riverine habitat under the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP) (p. 5.3-26). However, no temporary or permanent impacts are proposed or anticipated to occur to the willow riparian plant community or its associated drainage on the southwest corner of the Project site. Therefore, development of the Project site will not result in impacts to Corps, Regional Board, or CDFW jurisdiction and regulatory permits/approvals will not be required.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

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Comment Letter 2 – Rincon Band of Luiseño Indians Cultural Resources Department

Comment letter 2 commences on the next page.

Rincon Band of Luiseño Indians

CULTURAL RESOURCES DEPARTMENT

One Government Center Lane | Valley Center | CA 92082
(760) 749-1051 | Fax: (760) 749-8901 | rincon-nsn.gov

March 24, 2021

Sent via email: cassadzadeh@riversideca.gov
City of Riverside
Community & Economic Development Department
Planning Division
Attn.: Candice Assadzadeh
3900 Main Street, 3rd Floor
Riverside, CA 92522

Re: Crestview Apartments; State Clearinghouse No. 2020069047

Dear Ms. Assadzadeh,

This letter is written on behalf of the Rincon Band of Luiseño Indians ("Rincon Band" or "Band"), a federally recognized Indian Tribe and sovereign government. Thank you for providing us with the Notice of Availability of a Draft Environmental Impact Report (DEIR) for the above referenced project. The identified location is within the Territory of the Luiseño people, and is also within Rincon's specific area of Historic interest.

2.1 We have reviewed the provided documents and we are in agreement with the measures which include archaeological and tribal monitoring, a monitoring report, and protocols for discovery of cultural material and human remains. We do request that the Rincon Band be notified of any changes in project plans. In addition, we request a copy of the final monitoring report, when available.

If you have additional questions or concerns, please do not hesitate to contact our office at your convenience at (760) 297-2635. Thank you for the opportunity to protect and preserve our cultural assets.

Sincerely,

Cheryl Madrigal
Tribal Historic Preservation Officer
Cultural Resources Manager

Letter 2 – Rincon Band of Luiseño Indians Cultural Resources Department

Commenter: Cheryl Madrigal

Date: March 24, 2021

Response 2.1:

The commenter states the Rincon Band of Luiseño Indians (Rincon Band) is in agreement with the measures and protocols for the discovery of cultural materials and human remains. As requested in the comment letter, the Rincon Band will be notified of any changes in proposed Project plans, in compliance with Mitigation Measure **MM CUL-1**. Mitigation Measure **MM CUL-2**: Archaeological and Paleontological Monitoring, requires that the developer/applicant retain a qualified archaeological monitoring to monitor ground-disturbing activities and to develop an Archaeological Monitoring Plan to address the details, timing and responsibility of all archaeological and cultural activities that will occur on the project site. Pursuant to Mitigation Measure **MM CUL-3**: Treatment and Disposition of Cultural Resources, at the completion of grading, excavation, and ground-disturbing activities on the site, a Phase IV Monitoring Report shall be submitted to the City documenting monitoring activities conducted by the project archaeologist and Native Tribal Monitors within 60 days of completion of grading. This report shall document the impacts to the known resources on the property; describe how each mitigation measure was fulfilled; document the type of cultural resources recovered and the disposition of such resources; provide evidence of the required cultural sensitivity training for the construction staff held during the required pre-grade meeting; and, in a confidential appendix, include the daily/weekly monitoring notes from the archaeologist. All reports produced will be submitted to the City of Riverside, Eastern Information Center, and consulting tribes. As a consulting tribe, a copy of the Phase IV Monitoring Report shall be submitted to the Rincon Band pursuant to their request.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Comment Letter 3 – SoCalGas Transmission Technical Services Department

Comment letter 3 commences on the next page.

SoCalGas
A Sempra Energy utility

Transmission Technical
Services Department

9400 Oakdale Ave
Chatsworth, CA 91311
SC9314

March 26, 2021

Candice Assadzadeh
City of Riverside
CAssadzadeh@riversideca.gov

Subject: **State Clearinghouse No. 2020069047**

DCF: **0568-21NC**

The Transmission Department of SoCalGas does not operate any facilities within your proposed improvement. However, the Distribution Department of SoCalGas may maintain and operate facilities within your project scope.

To assure no conflict with the Distribution's pipeline system, please e-mail them at:

SCGSERegionRedlandsUtilityRequest@semprautilities.com

Best Regards,

SoCalGas Transmission Technical Services
SoCalGasTransmissionUtilityRequest@semprautilities.com

Letter 3 – SoCalGas

Commenter: Transmission Technical Services Department

Date: March 26, 2021

Response 3.1:

The commenter states that while the Transmission Department of SoCalGas does not operate any facilities within the proposed Project, the Distribution Department of SoCalGas may maintain and operate facilities within the proposed Project's scope. The City of Riverside had previously contacted the SoCalGas Distribution Department in October 2020 to confirm if the Distribution Department maintains and operates facilities in proximity to the proposed Project. The SoCalGas Distribution Department responded to the City's inquiry on October 28, 2020 indicating that while the Distribution Department does not have facilities within the limits of the proposed Project, the Department does have facilities outside of the proposed Project's parameters and requested the Department be contacted if any change of Project scope is anticipated. Should the scope of the Project change, the City will contact the SoCalGas Distribution Department pursuant to their request.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Comment Letter 4 – County of Riverside Transportation and Land Management Agency, Airport Land Use Commission

Comment letter 4 commences on the next page.

From: Zerda, Daniel
To: Assadzadeh, Candice
Subject: [External] State Clearinghouse No. 2020069047 ALUC Comments
Date: Thursday, April 1, 2021 12:43:21 PM

Hi Candice,
Thank you for your transmittal of the above referenced project. The related GPA (P19-0775), Zone Change (P19-0776), and Design Review (P19-0777) were reviewed and found consistent in ALUC case ZAP1414MA20. Please let me know if you have any questions.

Additionally, when you have more transmittals for us, as well as general questions, please feel free to send them my way. Thank you.

-Best Regards,

Daniel Zerda
Student Intern
Transportation and Land Management Agency
County of Riverside
(951)955-0982

Letter 4 – County of Riverside Transportation and Land Management Agency, Airport Land Use Commission

Commenter: Daniel Zerda

Date: April 1, 2021

Response 4.1:

The commenter states the proposed Project's General Plan Amendment (GPA), Zone Change, and Design Review were reviewed and found consistent in its associated Airport Land Use Commission (ALUC) case.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Comment Letter 5a – DeLano & DeLano

Comment letter 5a commences on the next page.

DELANO & DELANO

May 3, 2021

VIA E-MAIL

Candice Assadzadeh
Senior Planner, City of Riverside
Community & Economic Development Department
Planning Division
3900 Main Street, 3rd Floor
Riverside, CA 92522

Re: Crestview Apartments Draft Environmental Impact Report (P20-310); SCH # 2020069047

Dear City of Riverside:

This letter is submitted on behalf of Friends of Riverside's Hills in connection with the proposed Crestview Apartments Project ("Project") and related Draft Environmental Impact Report ("DEIR").

I. Introduction

5a.1

The California Environmental Quality Act ("CEQA"), Pub. Res. Code§§ 21000-21177, must be interpreted "so as to afford the fullest possible protection to the environment within the reasonable scope of the statutory language." *Friends of Mammoth v. Board of Supervisors* (1972) 8 Cal. App. 3d 247,259. An EIR is "aptly described as the 'heart of CEQA'"; its purpose is to inform the public and its responsible officials of the environmental consequences before they are made. *Laurel Heights Improvement Assoc. v. University of California* (1988) 47 Cal.3d 376, 392; CEQA Guidelines § 15151.

A sufficient EIR demonstrates "adequacy, completeness and a good-faith effort at full disclosure." *Berkeley Keep Jets Over the Bay Committee v. Board of Port Commissioners* (2001) 91 Cal.App.4th 1344, 1355 (quoting *Rio Vista Farm Bureau Center v. City of Solano* (1992) 5 Cal.App.4th 351,368). If an EIR fails to provide agency decision-makers and the public with all relevant information regarding a project that is necessary for informed decision-making and informed public participation, the EIR is legally deficient and the agency's decision must be set aside. *Kings County Farm Bureau v. City of Hanford* (1990) 221 Cal. App. 3d 692, 712.

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II. The DEIR's Discussion of Project Impacts is Inadequate

The DEIR fails to adequately analyze land use, aesthetic, and community character impacts.

5a.2

- The DEIR failed to apply the threshold for scenic vistas; it states that the Project would have a less than significant impact on a scenic vista. DEIR at 5.1-25. Immediately west of the Project site is the City of Riverside's Quail Run Open Space Park. DEIR at 5.1-3. Since the Project site is currently vacant, the view of the Park is unobscured from several angles. The Project will construct seven buildings, two at 50 feet height and five at almost 40 feet. DEIR at 5.1-9. The Project is also requesting a Grading Exception to allow retaining walls greater than 6 feet in an area open to the public view. DEIR at 5.6-17. The analysis of impacts avoids the Project's impacts to views of and from the Park caused by the construction of three-story apartment buildings and retaining walls.

5a.3

- The DEIR fails to support its conclusion that the Project will not degrade the existing visual character or quality of public views of the site with substantial evidence. DEIR at 5.1-26. The DEIR claims that the Project site is in an urbanized area, but the Site is immediately adjacent to the Quail Run Open Space Park. DEIR at 5.1-26. The fact that the Project will comply with the City's Design Guidelines and the Zoning Code is not evidence that supports a finding that Project would not degrade the existing quality of public views of the adjacent Quail Run Park. *See* DEIR at 2.0-8. The Project's utilization of land will inevitably destroy the visual open space that gives the community a view of the Park. DEIR at 5.8-15.

5a.4

- The analysis has not adequately applied the CEQA Threshold to analyze whether the Project would cause a significant environmental impact due to a conflict with any land use plan. DEIR at 1.0-35. The people of the City of Riverside adopted City Measure R in 1979. Section IV of Measure R provides that the Residential Conservation Zone as described in the Riverside Municipal Code is applied to all property with an average natural slope of fifteen percent or more. Riverside Municipal Code § 19.10.050(A)(3). All lots having an average natural slope of fifteen to thirty percent shall be limited to one single-family dwelling unit per five acres. *Id.* The Project site has an average natural slope of 25.9 percent. DEIR at 3.0-4; 5.6-17. However, the Project is not included in the Residential Conservation Zone. DEIR Figure 3.0-4. The DEIR must address environmental impacts caused by the Project's conflict with Measure R.

The DEIR fails to adequately analyze impacts to biological resources.

5a.5

- The Project will impact a portion of one a blue line stream in the City. DEIR at 2.0-9. The Project site's existing steep slope drains into the stream and the drainage course contains willow riparian and anuran community. DEIR at 3.0-4; 5.3-7. This drainage feature is considered a California Department Fish and Wildlife streambed, giving the agency authority over diversion or obstruction of the natural flow in the beds, channels, and banks. DEIR at 5.3-13—5.3-14; 5.3-19; Figure 5.3-4. The analysis states that the Project is subject to Section 17.28.020 because of the presence of the blue line stream. DEIR at 5.6-17. The analysis fails to explain how the application of Section 17.28.020 to the Project impacts the affected blue line stream.

5a.6

- The DEIR improperly deferred analysis of impacts. The DEIR states that any impacts to the willow riparian plant community and its associated drainage that may occur as a result of the Project will require a Determination of Biologically Equivalent or Superior Preservation to be prepared. DEIR at 5.3-25. The Project site includes willow riparian plant community that may be altered or lost by the development of the Project, yet the Determination has not been included in the EIR. DEIR at 5.3-25. The analysis must state reasons why the Project does or does not require a Determination of Biologically Equivalent or Superior Preservation and include the Determination in the EIR if necessary.

5a.7

- The DEIR failed to adequately analyze impacts to wildlife movement corridors, in part by relying on an assumption that bobcats have no incentive to occur on the upland portion of the Project site. DEIR at 5.3-16. This assertion conflates the use of the Project site for habitat as opposed to a movement corridor. The analysis acknowledges a habitat corridor may be adequate for one species and inadequate for another others. DEIR at 5.3-16. The fact other wildlife like coyotes have been observed in adjacent developed areas and that a portion of the southwest corner of the Project site has the potential to be used by other wildlife suggests wildlife would use the Project site for movement even though it is heavily disturbed. *See* DEIR at 2.0-9; 5.3-16.

The DEIR fails to adequately analyze impacts to air quality.

5a.8

- The attached comments by Mr. Hagemann and Mr. Rosenfeld of Soil/Water/Air Protection Enterprise ("SWAPE"), which are hereby incorporated by refence, raise additional concerns regarding the air quality analysis. The comments from SWAPE discuss, among other things, the DEIR's failure to adequately evaluate air quality impacts, failure to adequately address emissions and health risk impacts, and failure to adequately mitigate impacts.

5a.9

- The DEIR fails to address the Project's contribution to an existing air quality violation for fine particulate matter under both the State and Federal standards and the State standard for coarse dust particles. The Project is located in the South Coast Air Basin, which is characterized by poor air quality. DEIR at 5.2-1; 5.2-21. Under Federal designations, the Project site is in nonattainment for ozone (O3) and particulate matter (PM2.5). DEIR at 5.2-4. Under State standards, the Project site is in nonattainment for ozone (O3), coarse dust particles (PM10) and fine particulate matter (PM2.5). DEIR at 5.2-4; *see also* City of Riverside General Plan Air Quality Element at AQ-4. The DEIR asserts that the Project will not result in an increase in frequency or severity of existing air quality violations, but the Project's construction will result in daily emissions of, among other things, particulate matter and coarse dust particles.

The DEIR fails to adequately analyze impacts to energy use and greenhouse gas emissions.

5a.10

- The DEIR concludes that the Project would not generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment because the Project will result in approximately 300 metric tons of carbon dioxide per year less than its selected screening threshold. DEIR at 5.7-34. The DEIR does not cite to the authority for the 3,000 metric ton per year threshold for small projects, nor does it demonstrate how the Project qualifies as a small project under the screening threshold.

5a.11

- The DEIR notes that the California Energy Commission adopted Title 24, which requires new homes to have solar photovoltaic systems so they will use about 53% less energy than homes built under prior standards. DEIR at 5.2-18. The EIR states that adherence to the 2019 Title 24 standards, which requires solar PV systems for its three-story multifamily buildings, "would" increase building efficiency. EIR at 5.5-24. The analysis assumed compliance with the effective standards. DEIR at 5.2-18. An assumption is not substantial evidence that the Project is compliant with an applicable renewable energy code. The Project is in Occupancy Group R-2, low rise residential, because it is designed as multi-family with three habitable stories or less. *See* California Code of Regulations (CCR) Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings Section 100.1. The Project is required to comply with the mandatory requirements of Section 110.10 for solar ready buildings. *Id.* Table 100.0-A "Application of Standards". Low-rise multifamily buildings shall locate a solar zone on the roof or overhang of the building or of another structure within 250 feet of the building such as covered parking. *Id.* Section 110.10(b)(1)(B). A solar zone is a section of roof designated and reserved for future installation of a solar electric or

5a.11 cont'd

solar thermal system. *Id.* Section 110.1. The Project does not appear to qualify for any of the exceptions listed to this provision. The Project does not state whether it has in fact incorporated any photovoltaic systems or a solar zone. DEIR at 5.7-36.

5a.12

- The DEIR states that the Project will implement energy-saving features and operational programs, consistent with the reduction measures set forth in the RRG CAP. DEIR at 5.5-23; 5.5-11. The DEIR neither describes which of these designs and programs are to be implemented nor discusses their impact on energy consumption relative to other feasible designs and programs. The DEIR provides no quantified analysis or evidence to support its conclusion that the Project would decrease overall "per capital [sic]" energy consumption, reliance on natural gas, and increase reliance on renewable energy sources. DEIR at 5.5-24.

5a.13

- The DEIR relies primarily upon the California Building Code requirements to reach its conclusion that potential impacts from wasteful energy use would be insignificant. DEIR at 5.5-24. But as the California Supreme Court has noted, such reliance is insufficient to ensure compliance – "That a project is designed to meet high building efficiency and conservation standards, for example, does not establish that its greenhouse gas emissions from transportation activities lack significant impacts." *Center for Biological Diversity v. Dept. of Fish and Wildlife* (2015) 62 Cal.4th 204, 229.

The DEIR fails to adequately analyze impacts to transportation.

5a.14

- The Project is anticipated to contribute to the deficient intersection by contributing traffic (as measured by 50 or more peak hours trips) to the intersection of Sycamore Canyon Boulevard and Central Avenue, resulting in an increase to peak hour delays that exceed the City's criteria. Focused Traffic Analysis and VMT Analysis at 6. The Project would also contribute traffic to these deficient intersections along with other cumulative development projects. VMT Analysis at 6. The DEIR states that the Project shall contribute its fair share of 8.6% of the cost of modifying a traffic signal to alleviate an LOS deficiency and associated conflict with GP policies. DEIR at 5.8-26. However, the City of Riverside does not have a fair share program to collect fair share payments. VMT Analysis at 8.

5a.15

- The DEIR states that the Project will have a less than significant impact caused by the Project's conflict with any plan addressing the circulation system. DEIR at 1.0-36. The DEIR incorrectly states that all the study area roadway segments are anticipated to continue to operate at an acceptable LOS with the addition of Project traffic. DEIR at 5.10-30. However, there

5a.15 cont'd

is an existing unacceptable LOS E for one of the study area roadway segments and the Project will only further burden the segment to LOS F by 2022. DEIR at 5.10-35. The DEIR must analyze the Project's impact to LOS as it conflicts with the City of Riverside General Plan's Mobility Element.

A. The DEIR's Discussion of Cumulative Impacts is Inadequate

5a.16

A discussion of cumulative impacts requires a two-fold analysis; first, the DEIR must determine whether the combined effects from the proposed project and other projects would be cumulatively significant. If the DEIR determines the combined effects would be cumulatively significant, it must next determine whether the project's incremental effects are cumulatively considerable. *Communities for a Better Environment v. California Resource Agency* (3d Dist. 2002) 103 Cal. App. 4th 98, 120.

5a.17

The need for such assessment reflects the fact that, although a project may cause an "individually limited" or "individually minor" incremental impact that, by itself, is not significant, the increment may be "cumulatively considerable," and thus significant, when viewed together with environmental changes anticipated from past, present, and probable future projects. CEQA Guidelines §§ 15064(h)(1). When relying on a plan, regulation or program, the EIR should explain how implementing the particular requirements in the plan, regulation or program ensure that the project's incremental contribution to the cumulative effect is not cumulatively considerable. CEQA Guidelines §§ 15064(h)(3).

5.a18

The Project notes 22 other total developments consisting of residential, retail, warehouse, office, institutional, hotel, gas station, fast food restaurants, a church, health/fitness club, and carwash as part of its analysis of cumulative impacts. DEIR at 4.0-2; 4.0-4. The DEIR admits that cumulative development would modify the visual characteristic of the surrounding area through redevelopment of vacant lots such as the Project site. DEIR at 5.1-28. The DEIR claims the SCAQMD recommends project-specific impacts be used to determine whether emissions are cumulatively considerable. DEIR at 5.2-34. The DEIR fails to analyze the combined emissions of construction with other proposed or reasonably foreseeable future projects under the first step of the cumulative impacts analysis to determine whether the Project will contribute to a significant cumulative impact. The EIR claims that the impacts associated with other cumulative projects would be addressed "on a case-by-case basis." DEIR at 5.1-29. This is an oxymoron and the DEIR fails to provide substantial evidence that the Project will not have a substantial cumulative effect on a scenic vista. DEIR at 5.1-28.

5a.19

The CEQA Thresholds require the DEIR to analyze whether the Project would result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in nonattainment under an applicable Federal or State ambient air quality standard. DEIR at 5.2-24. The DEIR analyzed emissions based on daily estimates of construction and operational emissions. DEIR at 5.2-26—5.2-28. However, the Project is

5a.19 cont'd

estimated to take eighteen months to construct and will operate indefinitely. The DEIR fails to analyze the combined daily emissions to determine whether impacts to the implementation of an applicable air quality plan would be significant. The Project lacks substantial evidence that the Project is consistent with the 2016 Air Quality Management Plan. DEIR at 5.2-29.

5a.20

The DEIR identifies seven air quality sensitive receptors, all within 1000 feet of the Project site. Air Quality Impact Analysis and Freeway Health Risk Assessment, Exhibit 3-A. The Project Area is surrounded by four noise sensitive receivers in addition to the Quail Run Open Space Park. Noise Impact Analysis at 53, Exhibit 9-A. The DEIR states the contractor shall place stationary construction equipment so the noise is directed away from the noise sensitive receivers under mitigation measure MM BIO-5. DEIR at 1.0-15—1.0-16. According to Exhibit 9-A of the Noise Impact Analysis, sensitive receivers are located around the entire Project site perimeter such that noise cannot be directed away from any sensitive receivers. Further, use of equipment like a tamper for deep dynamic compaction cannot be directed away from sensitive receivers. DEIR at 5.6-18—5.6-19.

5a.21

The DEIR fails to support its conclusion that the cumulative projects would not result in the wasteful use of energy despite acknowledging each of the proposed developments would increase consumption and demand for energy. DEIR at 5.5-24. The DEIR's exclusive reliance on regulation of the cumulative projects by Energy Efficiency Standards embodied in Title 24 of the California Building Code is not substantial evidence that the Project will not contribute to significant cumulative impacts.

III. <u>The DEIR's Discussion of Mitigation and Alternatives is Deficient</u>

5a.22

CEQA contains a "substantive mandate" that agencies refrain from approving a project with significant environmental effects if "there are feasible alternatives or mitigation measures" that can substantially lessen or avoid those effects. *Mountain Lion Foundation v. Fish and Game Comm.* (1997) 16 Cal.4th 105, 134; Pub. Res. Code § 21002. It "requires public agencies to deny approval of a project with significant adverse effects when feasible alternatives or feasible mitigation measures can substantially lessen such effects." *Sierra Club v. Gilroy* (1990) 222 Cal.App.3d 30, 41. The EIR is required to consider and the City is required to adopt feasible mitigation and alternatives that can lessen or avoid the significant Project impacts. *City of Marina v. Board of Trustees of the California State Univ.* (2006) 2006 39 Cal.4th 341, 360; *see also* CEQA Guidelines § 15126.6(b).

5a.23

Modifications incorporated into the project, whether required or not, which avoid or substantially lessen the significant environmental effect as identified in the final EIR shall be supported by substantial evidence in the record. CEQA Guidelines § 15091(a)-(b).

5a.24 Claims "of infeasibility [are not] supported by substantial evidence," particularly where the DEIR fails even to discuss or consider possible mitigation. *County of San Diego v. Grossmont-Cuyamaca Community College Dist.* (2006) 141 Cal.App.4th 86, 100 (citing Pub. Res. Code § 21081.5; CEQA Guidelines § 15091(b)).

A. The DEIR's Failed to Adequately Discuss Mitigation

5a.25 The DEIR failed to consider mitigation to GHG emissions based on its unsupported conclusion that the Project does not exceed any significance thresholds. DEIR at 5.7-48. Because it concluded the Project will not have a significant impact on energy use, the DEIR assumed the Project did not require any energy-related mitigation measures because the energy consumed is comparable to energy consumed by other residential uses of similar scale and intensity. DEIR at 5.5-24. The DEIR should consider feasible mitigation measures and deferred formulating mitigation.

5a.26 The Project's Mitigation Measure BIO-8 provides that the Project will continue to construct on windy days despite the City of Riverside General Plan requirement to suspend all grading operations when wind speeds exceed 25 miles per hour. *Compare* EIR at 1.0-18 *with* Air Quality Element at AQ-34, Policy AQ-4.5. The EIR fails to discuss environmental impacts associated with violating the Air Quality Element of the General Plan Policies AQ-4.2, AQ-4.3, AQ-4.4, and AQ-4.5 that are designed to reduce particulates and particulate matter. Air Quality Element at AQ-34.

5a.27 The DEIR notes a non-toxic chemical stabilizer may be applied to all stockpiles that would not be utilized within three days to mitigate fugitive dust emissions. DEIR at 5.3-38. The DEIR failed to identify what chemical stabilizer the Project will utilize and the potential environmental impacts of this chemical entering construction runoff.

5a.28 The DEIR focused only on impacts to wildlife within the Multiple Species Habitat Conservation Plan caused by noise from construction equipment. DEIR at 5.3-32. All of the measures the DEIR selected to mitigate noise impacts are temporary because they correlate to construction noise. DEIR at 5.3-36—5.5-38. The DEIR must analyze and determine what mitigation would be necessary to reduce any significant environmental impacts caused from operational noise.

i. The DEIR Improperly Deferred Mitigation

5a.29 Formulation of mitigation measures shall not be deferred until some future time. CEQA Guidelines § 15126.4(a)(1)(B); In *Communities for a Better Environment v. City of Richmond* (2010) 184 Cal.App.4th 70, the court observed: "Numerous cases illustrate that reliance on tentative plans for future mitigation after completion of the CEQA process significantly undermines CEQA's goals of full disclosure and informed decisionmaking; and consequently, these mitigation plans have been overturned on judicial review as constituting improper deferral of environmental assessment." *Id.* at 92 (citations omitted).

5a.29 cont'd

The DEIR states that the Contractor should establish construction Best Management Practices ('BMPs') to control erosion of graded/excavated areas and maintain the BMPs until permanent stormwater infiltration BMPs are operable. DEIR at 5.6-21. The DEIR improperly defers mitigation of erosion impacts.

The DEIR improperly defers mitigation of water quality impacts. The DEIR states that a Stormwater Pollution Prevention Plan shall be implemented and shall identify Best Management Practices ('BMPs') to control toxic substances, construction fuels, oils, and other liquids. DEIR at 5.3-38.

5a.30

The DEIR improperly defers mitigation of impacts from lighting. The Project will have significant impacts to the protected species in the Multiple Species Habitat Conservation Plan area from direct night lighting. DEIR at 5.3-31. The DEIR states mitigation for the Project shall be designed and the design is to be confirmed.

5a.31

The mitigation measures the DEIR selected to minimize short-term noise levels caused by construction are improperly deferred because the noise-reduction devices have not been specifically identified and noise attenuation techniques are to be employed as needed. DEIR at 5.3-38.

5a.32

The Project would interfere substantially with the movement of wildlife in corridors. DEIR at 1.0-13. The Mitigation Measures MM BIO-2 through MM BIO-15 do not adequately address the Project's impacts to wildlife movement. In particular, MM BIO-7 provides that avoidance and minimization measures shall be included in the Project specifications to address direct construction impacts to wildlife corridors, but none of the measures it describes relates to the fact that the Project will cause wildlife to lose access to a travel route.

B. <u>The DEIR's Discussion of Alternatives is Insufficient</u>

5a.33

"Under CEQA, the public agency bears the burden of demonstrating that, notwithstanding a project's impact on the environment, the agency's approval of the proposed project followed meaningful consideration of alternatives." *Pesticide Action Network v. California Dept. of Pesticide Regulation* (2017) 16 Cal.App.5th 224, 247. "Without meaningful analysis of alternatives in the EIR, neither the courts nor the public can fulfill their proper roles in the CEQA process." *Laurel Heights Improvement Assoc. v. University of California* (1988) 47 Cal.3d 376, 404. "Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment [], the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, <u>even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly</u>." CEQA Guidelines § 15126.6(b) (emphasis added).

5a.33 cont'd The Program and its objectives are defined too narrowly, thereby resulting in a narrowing of the consideration of alternatives to the Project. *City of Santee v. County ofSan Diego* (1989) 214 Cal.App.3d 1438, 1455. The DEIR analyzed three alternatives; the No Project/No Development Alternative, the Commercial Development Alternative, and the Mixed Use Development Alternative. DEIR at Table 8.0-1. The DEIR weighed the possibility of an increased density alternative but did not explain why a reduced density alternative was rejected from further consideration. DEIR at 8.0-18.

5a.34 The DEIR also failed to provide substantial evidence of its analysis for the comparison of Alternatives. The DEIR lists the Project Objectives, but fails to demonstrate which of the objectives each Alternative would or would not realize. *Compare* DEIR 8.0-1 *with* Table 8.0-1. Instead, the DEIR either states the Alternative does not meet <u>any</u> or <u>all</u> of the Project objectives. *Id.* A reasonable range of alternativesincludes those which would impede the attainment of Project objectives to some degree.

5a.35 The DEIR initially selected the No Development Alternative as the Environmentally Superior Alternative since it would eliminate significant impacts but would not meet any of the Project objectives. DEIR at 8.0-19. Therefore, the DEIR selected the Commercial Development Alternative as the Environmentally Superior Alternative. *Id.* However, the analysis admits that the Project's objectives do not includecommercial development. DEIR at 8.0-18. Therefore, neither the Commercial Development nor the Mixed Use Development are within a reasonable range of alternatives; the DEIR's explanation that the applicant failed to successfully attract tenants for commercial development is not substantial evidence as to how or why this alternative is infeasible.

5a.36 IV. <u>The DEIR Should be Recirculated</u>

The DEIR is sufficiently lacking that the only way to fix these issues is to revise itand recirculate an adequate report.

5a.37 V. <u>Conclusion</u>

For the foregoing reasons, Friends of Riverside's Hills urges you to reject theProject and DEIR as proposed. Thank you for your consideration of these concerns.

Enclosures:

Sincerely,

Rachel Blackburn

Rachel Blackburn

1. Letter from Matt Hageman and Paul E. Rosenfeld, SWAPE, to DeLano &DeLano (April 30, 2021)

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Comment Letter 5b – Soil/Water/Air Protection Enterprise (SWAPE)

Comment letter 5b commences on the next page.

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April 30, 2021

Everett DeLano
DeLano & DeLano
104 W. Grand Avenue, Suite A
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Subject: Comments on The Crestview Apartments Project (SCH No. 2020069047)

Dear Mr. DeLano,

5b.1 We have reviewed the March 2021 Draft Environmental Impact Report ("DEIR") for The Crestview Apartments Project ("Project") located in the City of Riverside ("City"). The Project proposes to construct 237 residential units and 427 parking spaces, as well as an on-site leasing office, mail lounge, putting green, outdoor resort style pool and spa, dog run area with a dog wash station, fitness center, clubhouse, shade structures with barbecues and tables, and a walking perimeter loop trail, on the 9.44-acre site.

5b.2 Our review concludes that the DEIR fails to adequately evaluate the Project's air quality, health risk, and greenhouse gas impacts. As a result, emissions and health risk impacts associated with construction and operation of the proposed Project are underestimated and inadequately addressed. An updated EIR should be prepared to adequately assess and mitigate the potential air quality, health risk, and greenhouse gas impacts that the project may have on the surrounding environment.

Air Quality

Unsubstantiated Input Parameters Used to Estimate Project Emissions

5b.3 The DEIR's air quality analysis relies on emissions calculated with CalEEMod.2016.3.2 (p. 5.2-25).[1] CalEEMod provides recommended default values based on site-specific information, such as land use type, meteorological data, total lot acreage, project type and typical equipment associated with project

[1] CalEEMod User Guide, *available at:* http://www.caleemod.com/.

5b.3 Cont'd

type. If more specific project information is known, the user can change the default values and input project-specific values, but the California Environmental Quality Act ("CEQA") requires that such changes be justified by substantial evidence.[2] Once all of the values are inputted into the model, the Project's construction and operational emissions are calculated, and "output files" are generated. These output files disclose to the reader what parameters were utilized in calculating the Project's air pollutant emissions and make known which default values were changed as well as provide justification for the values selected.[3]

When reviewing the Project's CalEEMod output files, provided in the Air Quality Impact Analysis & Freeway Health Risk Assessment ("AQ & HRA Report") as Appendix B to the DEIR and Greenhouse Gas Analysis ("GHG Report") as Appendix G to the DEIR, we found that several model inputs were not consistent with information disclosed in the DEIR. As a result, the Project's construction and operational emissions are underestimated. An updated EIR should be prepared to include an updated air quality analysis that adequately evaluates the impacts that construction and operation of the Project will have on local and regional air quality.

5b.4

Unsubstantiated Reduction to Parking Land Use Size

According to the DEIR, the Project proposes to construct 427 parking spaces. However, review of the CalEEMod output files demonstrates that, while the "12585 Crestview Apartments" model includes the correct number of parking spaces, the square footage of the parking land use was reduced from the default value of 171,200- to 35,719-SF (see excerpt below) (Appendix B, pp. 112, 190; Appendix G, pp. 82).

Table Name	Column Name	Default Value	New Value
tblLandUse	LandUseSquareFeet	171,200.00	35,719.00

As you can see in the excerpt above, the parking land use size was manually reduced by 135,481-SF. As previously mentioned, the CalEEMod User's Guide requires any changes to model defaults be justified.[4] According to the "User Entered Comments & Non-Default Data" table, the justification provided for this change is: "Per parcel number and TIA analysis" (Appendix B, pp. 111, 189; Appendix G, pp. 81). Furthermore, the DEIR states:

> "As specific building and unit areas were unavailable during the time of the Project's Energy Analysis, *the CalEEMod default square footage* of 75,000 SF for the 75 DU multifamily housing low rise, 162,000 SF for the 162 DU multifamily housing mid-rise, and *35,719 SF of parking space was used in calculating the total power cost of the on-site electricity usage during construction of the Project*" (emphasis added) (p. 5.5-13).

[2] CalEEMod User Guide, *available at:* http://www.caleemod.com/, p. 1, 9.
[3] CalEEMod User Guide, *available at:* http://www.caleemod.com/, p. 11, 12 – 13. A key feature of the CalEEMod program is the "remarks" feature, where the user explains why a default setting was replaced by a "user defined" value. These remarks are included in the report.
[4] CalEEMod User Guide, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 2, 9

2

5b.4 Cont'd

As you can see in the excerpt above, the DEIR indicates that the default square footages were utilized to model the Project's emissions. Thus, regardless of the statement that 35,719-SF of parking square footage was used, by including a *non-default* parking land use size, the model is inconsistent with the information provided by the DEIR and should not be relied upon to determine Project significance.

This unsubstantiated reduction presents an issue, as the land use size feature is used throughout CalEEMod to determine default variable and emission factors that go into the model's calculations. The square footage of a land use is used for certain calculations such as determining the wall space to be painted (i.e., VOC emissions from architectural coatings) and volume that is heated or cooled (i.e., energy impacts).[5] Thus, by including an unsubstantiated reduction the size of the proposed parking land use space, the model underestimates the Project's emissions and should not be relied upon to determine Project significance.

5b.5

Unsubstantiated Changes to Individual Construction Phase Lengths

Review of the CalEEMod output files demonstrates that the "12585 Crestview Apartments" model includes several changes to the default individual construction phase lengths (see excerpt below) (Appendix B, pp. 111, 189; Appendix G, pp. 81).

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	230.00	300.00
tblConstructionPhase	NumDays	20.00	40.00

As a result, the models include a construction schedule as follows (see excerpt below) (Appendix B, pp. 162, 240; Appendix G, pp. 133):

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days
1	Crushing	Demolition	10/16/2021	11/12/2021	5	20
2	Site Preparation	Site Preparation	10/4/2021	10/15/2021	5	10
3	Grading	Grading	11/13/2021	12/10/2021	5	20
4	Building Construction	Building Construction	12/11/2021	2/3/2023	5	300
5	Paving	Paving	2/4/2023	3/3/2023	5	20
6	Architectural Coating	Architectural Coating	3/4/2023	4/28/2023	5	40

As you can see in the excerpts above, the building construction phase was increased by approximately 30%, from the default value of 230 to 300 days; and the architectural coating phase was increased by 100%, from the default value of 20 to 40 days. As previously mentioned, the CalEEMod User's Guide requires any changes to model defaults be justified.[6] According to the "User Entered Comments and Non-Default Data" table, the justification provided for these changes is: "Per 18 month site plan

[5] CalEEMod User Guide, *available at:* http://www.caleemod.com/, p. 28
[6] CalEEMod User Guide, *available at:* http://www.caleemod.com/, p. 2, 9

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provided by Project Applicant" (Appendix B, pp. 111, 189; Appendix G, pp. 81). Furthermore, regarding the Project's anticipated construction schedule, the DEIR states:

> "Construction of the proposed project is expected to occur over approximately 18 months" (p. 1.0-3).

However, these changes remain unsupported for two reasons. First, while the DEIR indicates the overall length of the construction period would be 18 months, the DEIR fails to provide the *individual construction phase lengths*. Second, the DEIR fails to mention or justify why the individual construction phase lengths were *disproportionately* altered. As such, we cannot verify the changes.

These unsubstantiated changes present an issue, as they disproportionately spread out construction emissions over a longer period of time for some phases, but not others. According to the CalEEMod User's Guide, each construction phase is associated with different emissions activities (see excerpt below).[7]

5b.5

> *Demolition* involves removing buildings or structures.
>
> *Site Preparation* involves clearing vegetation (grubbing and tree/stump removal) and removing stones and other unwanted material or debris prior to grading.
>
> *Grading* involves the cut and fill of land to ensure that the proper base and slope is created for the foundation.
>
> *Building Construction* involves the construction of the foundation, structures and buildings.
>
> *Architectural Coating* involves the application of coatings to both the interior and exterior of buildings or structures, the painting of parking lot or parking garage striping, associated signage and curbs, and the painting of the walls or other components such as stair railings inside parking structures.
>
> *Paving* involves the laying of concrete or asphalt such as in parking lots, roads, driveways, or sidewalks

As such, by disproportionately altering individual construction phase lengths without proper justification, the model's calculations are altered and emissions are distorted, and possibly underestimated. Thus, by including unsubstantiated increases to the default individual construction phase lengths, the model may underestimate the Project's construction-related emissions and should not be relied upon to determine Project significance.

Unsubstantiated Reductions to Energy Use Values

5b.6

Review of the CalEEMod output files demonstrates that the "12585 Crestview Apartments" model includes several reductions to the default energy use values (see excerpt below) (Appendix B, pp. 111-112, 189-190; Appendix G, pp. 81-82).

[7] "CalEEMod User's Guide." CAPCOA, November 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 31.

Table Name	Column Name	Default Value	New Value
tblEnergyUse	LightingElect	810.36	380.87
tblEnergyUse	LightingElect	741.44	348.48
tblEnergyUse	T24E	877.14	412.26
tblEnergyUse	T24E	772.17	362.92
tblEnergyUse	T24NG	9,544.50	4,485.92
tblEnergyUse	T24NG	8,764.08	4,119.12

5b.6 Cont'd

As you can see in the excerpt above, the lighting electricity ("LightingElect"), Title 24 electricity energy intensity ("T24E"), and Title 24 natural gas intensity ("T24NG") values were each reduced. As previously mentioned, the CalEEMod User's Guide requires any changes to model defaults be justified.[8] According to the "User Entered Comments and Non-Default Data" table, the justification provided for these changes is: "Title 24 2019" (Appendix B, pp. 111, 189; Appendix G, pp. 81). Furthermore, regarding Project compliance with Title 24 standards, the DEIR states:

> "[T]he Project will comply with the applicable Title 24 standards which would ensure that the Project energy demands would not be inefficient, wasteful, or otherwise unnecessary" (p. 5.5-22).

However, these reductions remain unsupported. Simply because the 2019 Title 24 standards *expect* a reduction in building energy consumption does not *guarantee* that these reductions would be implemented locally on the Project site. Absent additional information demonstrating that these reductions would be achieved through the implementation, monitoring, and enforcement of energy-related mitigation measures, we are unable to verify the revised energy use values inputted into the model.

These unsubstantiated reductions present an issue, as CalEEMod uses energy use values to calculate the Project's emissions associated with building electricity and non-hearth natural gas usage.[9] By including unsubstantiated reductions to the default lighting electricity, Title 24 electricity energy intensity, and Title 24 natural gas intensity values, the model may underestimate the Project's energy-source operational emissions and should not be relied upon to determine Project significance.

5b.7

Updated Analysis Indicates Significant Air Quality Impact

In an effort to more accurately estimate Project's construction-related and operational emissions, we prepared updated CalEEMod models, using the Project-specific information provided by the DEIR. In our updated models, we omitted the unsubstantiated changes to the parking land use size, individual construction phase lengths, and energy use values. Our updated analysis estimates that the Project's

[8] CalEEMod User Guide, *available at:* http://www.caleemod.com/, p. 2, 9
[9] CalEEMod User Guide, *available at:* http://www.caleemod.com/, p. 43

5b.7 Cont'd

construction-related VOC emissions exceed the applicable SCAQMD thresholds of 75-pounds per day ("lbs/day") (see table below).[10]

Model	VOC
DEIR Construction	37.73
SWAPE Construction	77.02
% Increase	104%
SCAQMD Regional Threshold (lbs/day)	**75**
Threshold Exceeded?	***Yes***

As you can see in the excerpt above, the Project's construction-related VOC emissions, as estimated by SWAPE, increase by approximately 104% and exceed the applicable SCAQMD significance thresholds. Thus, our model demonstrates that the Project would result in a potentially significant air quality impact that was not previously identified or addressed in the DEIR. As a result, an updated EIR should be prepared to adequately assess and mitigate the potential air quality impacts that the Project may have on the surrounding environment.

5b.8

Diesel Particulate Matter Health Risk Emissions Inadequately Evaluated

The DEIR concludes that the proposed Project would have a less-than-significant health risk impact based on a quantified operational health risk analysis ("HRA"). Specifically, the DEIR estimates that the cancer risk posed by toxic air contaminant ("TAC") emissions from the I-215 Freeway to people expected to be housed on the Project site would be approximately 3.45 in one million, which would not exceed the SCAQMD threshold of 10 in one million (p. 5.2-31). Furthermore, regarding the potential health risk impacts associated with Project construction, the DEIR states:

> "Exposure to concentrations of TACs was assessed based on the Project's potential to result in increased exposure of sensitive receptors to TAC emission sources. The Project could potentially expose the adjacent sensitive receptors to temporary health hazards associated with TACs from diesel particulate matter from the use of construction equipment. As described under Threshold A, construction emissions would not exceed SCAQMD thresholds established to protect public health and air quality. Therefore, the health risk associated with construction emissions for the surrounding sensitive uses would be less than significant" (p. 5.2-31).

As demonstrated above, the DEIR concludes that the Project would result in a less-than-significant construction-related health risk impact because the Project's construction-related emissions would not exceed SCAQMD thresholds. However, the DEIR's evaluation of the Project's potential health risk impacts, as well as the less-than-significant impact conclusion, is incorrect for three reasons.

5b.9

First, while the DEIR concludes that the Project's construction-related criteria air pollutants would not exceed SCAQMD thresholds, it fails to quantitatively evaluate the Project's construction-related and operational toxic air contaminants ("TAC") emissions or make a reasonable effort to connect these

[10] "South Coast AQMD Air Quality Significance Thresholds." SCAQMD, April 2019, *available at*: http://www.aqmd.gov/docs/default-source/ceqa/handbook/scaqmd-air-quality-significance-thresholds.pdf.

5b.9 Cont'd emissions to potential health risk impacts posed to nearby existing sensitive receptors. Despite the DEIR's qualitative claims that construction-related TAC emissions would be less-than-significant, construction of the proposed Project would produce diesel particulate matter ("DPM") emissions through the exhaust stacks of construction equipment over a potential construction period of approximately 18 months (p. 1.0-3). Furthermore, the Focused Traffic Analysis and Vehicle Miles Traveled Analysis ("TIA & VMT Analysis"), provided as Appendix I to the DEIR, indicates that the Project is expected to generate approximately 1,432 average daily vehicle trips, which would generate additional exhaust emissions and continue to expose nearby sensitive receptors to DPM emissions (Appendix I, p. 1). However, the DEIR fails to discuss the Project's potential TAC emissions or indicate the concentrations at which such pollutants would trigger adverse health effects. Thus, without making a reasonable effort to connect the Project's construction-related and operational TAC emissions to the potential health risks posed to nearby receptors, the DEIR is inconsistent with CEQA's requirement to correlate the increase in emissions generated by the Project with the potential adverse impacts on human health.

5b.10 Second, the Office of Environmental Health Hazard Assessment ("OEHHA"), the organization responsible for providing guidance on conducting HRAs in California, released its most recent *Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments* in February 2015.[11] This guidance document describes the types of projects that warrant the preparation of an HRA. The OEHHA document recommends that all short-term projects lasting at least two months be evaluated for cancer risks to nearby sensitive receptors. As the Project's 18-month construction duration vastly exceeds the 2-month requirement set forth by OEHHA, it is clear that the Project meets the threshold warranting a quantified HRA under OEHHA guidance. Furthermore, the OEHHA document recommends that exposure from projects lasting more than 6 months be evaluated for the duration of the project and recommends that an exposure duration of 30 years be used to estimate individual cancer risk for the maximally exposed individual resident ("MEIR"). Even though we were not provided with the expected lifetime of the Project, we can reasonably assume that the Project will operate for at least 30 years, if not more. Therefore, we recommend that health risk impacts from Project operation also be evaluated, as a 30-year exposure duration vastly exceeds the 6-month requirement set forth by OEHHA. These recommendations reflect the most recent state health risk policies, and as such, we recommend that an analysis of health risk impacts posed to nearby sensitive receptors from Project-generated DPM emissions be included in an updated EIR for the Project.

5b.11 Third, while the DEIR quantifies the cancer risk posed by the I-215 Freeway, the DEIR is insufficient in addressing the *non-cancer health risks* posed to future, on-site receptors as a result of proximity to the I-215 Freeway. Additional impacts related to non-cancer health risks have been documented for people

[11] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* http://oehha.ca.gov/air/hot_spots/hotspots2015.html.

5b.11 Cont'd

living near congested roadways. Key findings from a 2005 California Air Resources Board ("CARB") report[12] on health risk impacts from nearby freeways include:

- Reduced lung function in children was associated with traffic density, especially trucks, within 1,000 feet and the association was strongest within 300 feet.
- Increased asthma hospitalizations were associated with living within 650 feet of heavy traffic and heavy truck volume (Lin, 2000).
- Asthma symptoms increased with proximity to roadways and the risk was greatest within 300 feet (Venn, 2001).
- A San Diego study found increased medical visits in children living within 550 feet of heavy traffic (English, 1999).

People housed by the proposed Project will be located directly southwest of the I-215 Freeway (Figure 3.0-2). Therefore, many of the Project's residents will be subjected to additional non-cancer health risks as a result of close proximity to the I-215 Freeway. Regarding risks posed to people living nearby busy roadways, CARB concludes:

> "The combination of the children's health studies and the distance related findings suggests that it is important to avoid exposing children to elevated air pollution levels immediately downwind of freeways and high traffic roadways. These studies suggest a substantial benefit to a 500-foot separation."[13]

As a result, CARB recommends that projects:

> "[a]void siting new sensitive land uses within 500 feet of a freeway, urban roads with 100,000 vehicles/day, or rural roads with 50,000 vehicles/day."[14]

Despite this recommendation, asthma and other non-cancer, freeway-related health risks are not mentioned or assessed by the DEIR. As such, an updated EIR should be prepared to include an assessment of all risks faced by residents at the Project not only cancer, especially to sensitive groups, such as newborns and the elderly. Because of the proximity to the I-215 Freeway, all feasible mitigation should be considered in the updated EIR to reduce health impacts to people living at the project. Feasible mitigation, implemented at other Southern California projects adjacent to freeways include:

- Disclose to residents the potential health impacts from living in proximity to the I-215 Freeway;
- Installation, use, and maintenance of filtration systems with at least a Minimum Efficiency Reporting Value (MERV) 15;
- Lead Agency verification and certification of the implementation the filtration systems;

[12] "Air Quality and Land Use Handbook: A Community Health Perspective." CARB, April 2005, *available at:* https://ww3.arb.ca.gov/ch/handbook.pdf.
[13] "Air Quality and Land Use Handbook: A Community Health Perspective." CARB, April 2005, *available at:* https://ww3.arb.ca.gov/ch/handbook.pdf, p. 10.
[14] "Air Quality and Land Use Handbook: A Community Health Perspective." CARB, April 2005, *available at:* https://ww3.arb.ca.gov/ch/handbook.pdf, p. 15.

5b.11 Cont'd

- Lead Agency verification of maintenance to include manufacturer's recommended filter replacement schedule; and
- Disclosure to residents that opening windows will reduce the health-protectiveness of the filter systems.

5b.12

Screening-Level Analysis Indicates a Potentially Significant Health Risk Impact

In order to conduct our screening-level risk analysis we relied upon AERSCREEN, which is a screening level air quality dispersion model.[15] The model replaced SCREEN3, and AERSCREEN is included in the OEHHA[16] and the California Air Pollution Control Officers Associated ("CAPCOA")[17] guidance as the appropriate air dispersion model for Level 2 health risk screening analyses ("HRSAs"). A Level 2 HRSA utilizes a limited amount of site-specific information to generate maximum reasonable downwind concentrations of air contaminants to which nearby sensitive receptors may be exposed. If an unacceptable air quality hazard is determined to be possible using AERSCREEN, a more refined modeling approach is required prior to approval of the Project.

In order to estimate the health risk impacts posed to residential sensitive receptors as a result of the Project's construction-related and operational TAC emissions, we prepared a preliminary HRA using the annual PM_{10} exhaust estimates from the DEIR's CalEEMod output files. Consistent with recommendations set forth by OEHHA, we assumed residential exposure begins during the third trimester stage of life. The DEIR's CalEEMod model indicates that construction activities will generate approximately 371 pounds of DPM over the 559-day construction period. The AERSCREEN model relies on a continuous average emission rate to simulate maximum downward concentrations from point, area, and volume emission sources. To account for the variability in equipment usage and truck trips over Project construction, we calculated an average DPM emission rate by the following equation:

$$\textit{Emission Rate}\left(\frac{grams}{second}\right) = \frac{370.96\ lbs}{559\ days} \times \frac{453.6\ grams}{lbs} \times \frac{1\ day}{24\ hours} \times \frac{1\ hour}{3{,}600\ seconds} = 0.00348\ g/s$$

Using this equation, we estimated a construction emission rate of 0.00348 grams per second ("g/s"). Subtracting the 559-day construction period from the total residential duration of 30 years, we assumed that after Project construction, the sensitive receptor would be exposed to the Project's operational DPM for an additional 28.47 years, approximately. The DEIR's operational CalEEMod emissions indicate that operational activities will generate approximately 87 pounds of DPM per year throughout operation. Applying the same equation used to estimate the construction DPM rate, we estimated the following emission rate for Project operation:

[15] U.S. EPA (April 2011) AERSCREEN Released as the EPA Recommended Screening Model, http://www.epa.gov/ttn/scram/guidance/clarification/20110411_AERSCREEN_Release_Memo.pdf
[16] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* http://oehha.ca.gov/air/hot_spots/2015/2015GuidanceManual.pdf
[17] CAPCOA (July 2009) Health Risk Assessments for Proposed Land Use Projects, http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA_HRA_LU_Guidelines_8-6-09.pdf.

5b.12 Cont'd

$$\text{Emission Rate}\left(\frac{grams}{second}\right) = \frac{86.8\ lbs}{365\ days} \times \frac{453.6\ grams}{lbs} \times \frac{1\ day}{24\ hours} \times \frac{1\ hour}{3{,}600\ seconds} = 0.00125\ g/s$$

Using this equation, we estimated an operational emission rate of 0.00125 g/s. Construction and operational activity were simulated as a 9.44-acre rectangular area source in AERSCREEN with dimensions of 260 by 147 meters. A release height of three meters was selected to represent the height of exhaust stacks on operational equipment and other heavy-duty vehicles, and an initial vertical dimension of one and a half meters was used to simulate instantaneous plume dispersion upon release. An urban meteorological setting was selected with model-default inputs for wind speed and direction distribution.

The AERSCREEN model generates maximum reasonable estimates of single-hour DPM concentrations from the Project site. EPA guidance suggests that in screening procedures, the annualized average concentration of an air pollutant be estimated by multiplying the single-hour concentration by 10%.[18] According to the DEIR, the nearest sensitive receptors are located approximately 448 feet, or 137 meters, southwest the Project site (p. 5.2-14). Thus, the single-hour concentration estimated by AERSCREEN for Project construction is approximately 3.146 µg/m³ DPM at approximately 150 meters downwind. Multiplying this single-hour concentration by 10%, we get an annualized average concentration of 0.3146 µg/m³ for Project construction at the MEIR. For Project operation, the single-hour concentration estimated by AERSCREEN is 1.13 µg/m³ DPM at approximately 150 meters downwind. Multiplying this single-hour concentration by 10%, we get an annualized average concentration of 0.113 µg/m³ for Project operation.

We calculated the excess cancer risk to the MEIR using applicable HRA methodologies prescribed by OEHHA. Consistent with the 559-day construction schedule used in the Project's modeling, the annualized average concentration for Project construction was used for the entire third trimester of pregnancy (0.25 years) and the first 1.28 years of the infantile stage of life (0 – 2 years); and the annualized averaged concentration for operation was used for the remainder of the child stage of life (2 – 16 years) and the entire the adult stage of life (16 – 30 years).

Consistent with OEHHA guidance and recommended by the SCAQMD, BAAQMD, and SJVAPCD guidance, we used Age Sensitivity Factors ("ASF") to account for the heightened susceptibility of young children to

[18] "Screening Procedures for Estimating the Air Quality Impact of Stationary Sources Revised." EPA, 1992, *availableat*: http://www.epa.gov/ttn/scram/guidance/guide/EPA-454R-92-019_OCR.pdf; *see also* "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf p. 4-36

5b.12 Cont'd

the carcinogenic toxicity of air pollution.[19, 20, 21] According to this guidance, the quantified cancer risk should be multiplied by a factor of ten during the third trimester of pregnancy and during the first two years of life (infant), as well as multiplied by a factor of three during the child stage of life (2 – 16 years). We also included the quantified cancer risk without adjusting for the heightened susceptibility of young children to the carcinogenic toxicity of air pollution in accordance with older OEHHA guidance from 2003. This guidance utilizes a less health protective scenario than what is currently recommended by SCAQMD, the air quality district with jurisdiction over the City, and several other air districts in the state. Furthermore, in accordance with the guidance set forth by OEHHA, we used the 95th percentile breathing rates for infants.[22] Finally, according to SCAQMD guidance, we used a Fraction of Time At Home ("FAH") Value of 1 for the 3rd trimester and infant receptors.[23] We used a cancer potency factor of 1.1 $(mg/kg\text{-}day)^{-1}$ and an averaging time of 25,550 days. The results of our calculations are shown below.

[19] "Draft Environmental Impact Report (DEIR) for the Proposed The Exchange (SCH No. 2018071058)." SCAQMD, March 2019, *available at:* http://www.aqmd.gov/docs/default-source/ceqa/comment- letters/2019/march/RVC190115-03.pdf?sfvrsn=8, p. 4.

[20] "California Environmental Quality Act Air Quality Guidelines." BAAQMD, May 2017, *available at:* http://www.baaqmd.gov/~/media/files/planning-and-research/ceqa/ceqa_guidelines_may2017-pdf.pdf?la=en, p. 56; see also "Recommended Methods for Screening and Modeling Local Risks and Hazards." BAAQMD, May 2011, *available at:* http://www.baaqmd.gov/~/media/Files/Planning%20and%20Research/CEQA/BAAQMD%20Modeling%20Approach.ashx, p. 65, 86.

[21] "Update to District's Risk Management Policy to Address OEHHA's Revised Risk Assessment Guidance Document." SJVAPCD, May 2015, *available at:* https://www.valleyair.org/busind/pto/staff-report-5-28-15.pdf, p. 8, 20, 24.

[22] "Supplemental Guidelines for Preparing Risk Assessments for the Air Toxics 'Hot Spots' Information and Assessment Act," July 2018, *available at:* http://www.aqmd.gov/docs/default-source/planning/risk-assessment/ab2588supplementalguidelines.pdf, p. 16.
"Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

[23] "Risk Assessment Procedures for Rules 1401, 1401.1, and 212." SCAQMD, August 2017, *available at:* http://www.aqmd.gov/docs/default-source/rule-book/Proposed-Rules/1401/riskassessmentprocedures_2017_080717.pdf, p. 7.

5b.12 Cont'd

The Closest Exposed Individual at an Existing Residential Receptor

Activity	Duration (years)	Concentration (ug/m3)	Breathing Rate (L/kg-day)	Cancer Risk without ASFs*	ASF	Cancer Risk with ASFs*
Construction	0.25	0.3146	361	4.3E-07	10	4.3E-06
3rd Trimester Duration	***0.25***			***4.3E-07***	***3rd Trimester Exposure***	***4.3E-06***
Construction	1.28	0.3146	1090	6.6E-06	10	6.6E-05
Operation	0.72	0.113	1090	1.3E-06	10	1.3E-05
Infant Exposure Duration	***2.00***			***8.0E-06***	***Infant Exposure***	***8.0E-05***
Operation	14.00	0.113	572	1.4E-05	3	4.1E-05
Child Exposure Duration	***14.00***			***1.4E-05***	***Child Exposure***	***4.1E-05***
Operation	14.00	0.113	261	4.5E-06	1	4.5E-06
Adult Exposure Duration	***14.00***			***4.5E-06***	***Adult Exposure***	***4.5E-06***
Lifetime Exposure Duration	30.00			2.7E-05	Lifetime Exposure	1.3E-04

* We, along with CARB and SCAQMD, recommend using the more updated and health protective 2015 OEHHA guidance, which includes ASFs.

As demonstrated in the first table above, the excess cancer risks posed to adults, children, infants, and during the 3rd trimester of pregnancy at the MEIR located approximately 150 meters away, over the course of Project construction and operation, utilizing ASFs, are approximately 4.5, 41, 80, and 4.3 in one million, respectively. The excess cancer risk over the course of a residential lifetime (30 years), utilizing ASFs, is approximately 130 in one million. The infant, child, and lifetime cancer risks exceed the SCAQMD threshold of 10 in one million, thus resulting in a potentially significant impact not previously addressed or identified by the DEIR.

Utilizing ASFs is the most conservative, health-protective analysis according to the most recent guidance by OEHHA and reflects recommendations from the air district. Results without ASFs are presented in the table above, although we **do not** recommend utilizing these values for health risk analysis. Regardless, the excess cancer risks posed to adults, children, infants, and during the 3rd trimester of pregnancy at the MEIR located approximately 150 meters away, over the course of Project construction and operation, without ASFs, are approximately 4.5, 14, 8, and 0.43 in one million, respectively. The excess cancer risk over the course of a residential lifetime, without ASFs, is approximately 27 in one million. The child and lifetime cancer risks, without ASFs, exceed the SCAQMD threshold of 10 in one million, thus resulting in a potentially significant impact not previously addressed or identified by the DEIR. While we recommend the use of ASFs, the Project's cancer risk without ASFs, as estimated by SWAPE, exceeds the SCAQMD threshold regardless.

12

5b.12 Cont'd An agency must include an analysis of health risks that connects the Project's air emissions with the health risk posed by those emissions. Our analysis represents a screening-level HRA, which is known to be conservative and tends to err on the side of health protection. [24] The purpose of the screening-level construction and operational HRA shown above is to demonstrate the link between the proposed Project's emissions and the potential health risk. Our screening-level HRA demonstrates that construction and operation of the Project could result in a potentially significant health risk impact, when correct exposure assumptions and up-to-date, applicable guidance are used. Therefore, since our screening-level HRA indicates a potentially significant impact, the City should prepare an updated EIR with an HRA which makes a reasonable effort to connect the Project's air quality emissions and the potential health risks posed to nearby receptors. Thus, the City should prepare an updated, quantified air pollution model as well as an updated, quantified refined health risk analysis which adequately and accurately evaluates health risk impacts associated with both Project construction and operation.

Greenhouse Gas

Failure to Adequately Evaluate Greenhouse Gas Impacts

5b.13 The DEIR estimates that the Project would result in net annual greenhouse gas ("GHG") emissions of 2,706.33 metric tons of carbon dioxide equivalents per year ("MT CO_2e/year") (see excerpt below) (p. 5.7-34, Table 5.7-5).

Emission Source	Emissions (MT/yr) CO_2	CH_4	N_2O	TotalCO_2E
Annual construction-related emissions amortized over 30 years	41.07	0.01	0.00	41.24
Area Source	60.92	4.97e-03	1.04e-03	61.35
Energy Source	683.00	0.01	4.88e-03	684.82
Mobile Source	1,655.18	0.06	0.00	1,656.79
Waste	22.13	1.31	0.00	54.83
Water Usage	190.83	0.51	0.01	207.31
Total CO_2E (All Sources)			**2,706.33**	

As a result, the DEIR concludes that the Project's estimated GHG emissions would not exceed the SCAQMD bright-line threshold of 3,000 MT CO_2e/year, and impacts would be less-than-significant (p. 5.7-34). Furthermore, the DEIR relies upon the Project's consistency with the 2008 and 2017 Scoping Plans, as well as the City's Climate Action Plan ("CAP") in order to conclude that the Project would result in a less-than-significant GHG impact (p. 5.7-35 - 5.7-48). However, the DEIR's GHG analysis, as well as the subsequent less-than-significant impact conclusion, is incorrect for the following three reasons:

5b.14
(1) The DEIR's quantitative GHG analysis relies upon an incorrect and unsubstantiated air model;
(2) The DEIR relies upon an incorrect threshold; and

[24] "Risk Assessment Guidelines Guidance Manual for Preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf, p. 1-5

(3) The DEIR's unsubstantiated air model indicates a potentially significant impact.

1) Incorrect and Unsubstantiated Quantitative Analysis of Emissions

5b.14 Cont'd

As previously stated, the DEIR estimates that the Project would result in net annual GHG emissions of 2,706.33 MT CO_2e/year (p. 5.7-34). However, the DEIR's quantitative GHG analysis is unsubstantiated. As previously discussed, when we reviewed the Project's CalEEMod output files, provided in the AQ & HRA Report as Appendix B to the DEIR and GHG Report as Appendix G to the DEIR, we found that several of the values inputted into the model are not consistent with information disclosed in the DEIR. As a result, the model underestimates the Project's emissions, and the Project's quantitative GHG analysis should not be relied upon to determine Project significance. An updated EIR should be prepared that adequately assesses the potential GHG impacts that construction and operation of the proposed Project may have on the surrounding environment.

2) Incorrect Reliance on an Outdated Quantitative GHG Threshold

5b.15

As previously discussed, the DEIR estimates that the Project would result in net annual GHG emissions of 2,706.33 MT CO_2e/year, which would not exceed the SCAQMD bright-line threshold of 3,000 MT CO_2e/year (p. 5.7-34). However, the guidance that provided the 3,000 MTCO_2/year threshold, the SCAQMD's 2008 *Interim CEQA GHG Significance Threshold for Stationary Sources, Rules, and Plans* report, was developed when the Global Warming Solutions Act of 2006 (commonly known as "AB 32") was the governing statute for GHG reductions in California. AB 32 requires California to reduce GHG emissions to 1990 levels by 2020.[25] As it is already April 2021, thresholds for 2020 are not applicable to the proposed Project. As such, the SCAQMD bright-line threshold of 3,000 MT CO_2e/year is outdated and inapplicable to the proposed Project, and the DEIR's less-than-significant GHG impact conclusion should not be relied upon.

Instead, we recommend that the Project apply the Association of Environmental Professionals' ("AEP") "2030 Land Use Efficiency Threshold" of 2.6 metric tons of CO_2 equivalents per service population per year ("MT CO_2e/SP/year").[26] In support of this threshold for projects with a horizon year beyond 2020, AEP's guidance *states*:

> "Once the state has a full plan for 2030 (which is expected in 2017), and then *a project with a horizon between 2021 and 2030 should be evaluated based on a threshold using the 2030 target*. A more conservative approach would be to apply a 2030 threshold *based on SB 32* for any project with a horizon between 2021 and 2030 regardless of the status of the Scoping Plan Update" (emphasis added).[27]

[25] HEALTH & SAFETY CODE 38550, *available at:* https://leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?lawCode=HSC&sectionNum=38550.
[26] "Beyond Newhall and 2020: A Field Guide to New CEQA Greenhouse Gas Thresholds and Climate Action Plan Targets for California." Association of Environmental Professionals (AEP), October 2016, *available at:* https://califaep.org/docs/AEP-2016_Final_White_Paper.pdf, p. 40.
[27] "Beyond Newhall and 2020: A Field Guide to New CEQA Greenhouse Gas Thresholds and Climate Action Plan Targets for California." Association of Environmental Professionals (AEP), October 2016, *available at:* https://califaep.org/docs/AEP-2016_Final_White_Paper.pdf, p. 40.

5b.15 As the California Air Resources Board ("CARB") adopted *California's 2017 Climate Change Scoping Plan* in November of 2017, the proposed Project "should be evaluated based on a threshold using the 2030 target," according to the relevant guidance referenced above. We recommend the preparation of an updated EIR to compare the Project's estimated GHG emissions, as estimated in an updated air model, to the AEP's "2030 Land Use Efficiency Threshold" of 2.6 MT CO_2e/SP/year.

5b.16

3) *Failure to Identify a Potentially Significant Impact*

When applying the AEP's "2030 Land Use Efficiency Threshold" of 2.6 MT CO_2e/SP/year, the Project's incorrect and unsubstantiated air model indicates a potentially significant GHG impact. As previously stated, the DEIR estimates that the Project would result in net annual GHG emissions of 2,706.33 MT CO_2e/year (p. 5.7-34). Furthermore, according to CAPCOA's *CEQA & Climate Change* report, service population is defined as "the sum of the number of residents and the number of jobs supported by the project."[28] The DEIR estimates that the Project would house approximately 754 residents (p. 5.10-39, Table 5.10-11). As the Project would not require any employees, we estimate a service population of 754 people.[29] When dividing the Project's GHG emissions, as estimated by the DEIR, by a service population of 754 people, we find that the Project would emit approximately 3.6 MT CO_2e/SP/year (see table below).[30]

DEIR Service Population Efficiency	
Project Phase	Proposed Project (MT CO_2e/year)
Total	2,706.33
Service Population	754
Service Population Efficiency	3.6
Threshold	2.6
Exceed?	*Yes*

As demonstrated above, when we compare the Project's per service population GHG emissions to the AEP's "2030 Land Use Efficiency Threshold" of 2.6 MT CO_2e/SP/year, we find that the Project would result in a potentially significant GHG impact not previously identified or addressed by the DEIR. Therefore, an updated EIR should be prepared and recirculated for the Project, and mitigation should be implemented where necessary.

5b.17

Feasible Mitigation Measures Available to Reduce Emissions

Our analysis demonstrates that the Project would result in potentially significant air quality, health risk, and GHG impacts that should be mitigated further. In an effort to reduce the Project's emissions, we identified several mitigation measures that are applicable to the proposed Project. Feasible mitigation

[28] CAPCOA (Jan. 2008) CEQA & Climate Change, p. 71-72, http://www.capcoa.org/wp-content/uploads/2012/03/CAPCOA-White-Paper.pdf.
[29] Calculated: 754 residents + 0 employees = 754 service population.
[30] Calculated: (2,706.33 MT CO_2e/year) / (754 service population) = (3.6 MT CO_2e/SP/year).

5b.17 Cont'd

measures can be found in CAPCOA's *Quantifying Greenhouse Gas Mitigation Measures*.[31] Therefore, to reduce the Project's emissions, consideration of the following measures should be made:

CAPCOA's *Quantifying Greenhouse Gas Mitigation Measures*[32]
Measures – Energy
Building Energy Use
Install Programmable Thermostat Timers
Obtain Third-party HVAC Commissioning and Verification of Energy Savings
Install Energy Efficient Boilers
Alternative Energy Generation
Establish Onsite Renewable or Carbon-Neutral Energy Systems
Establish Onsite Renewable Energy System – Solar Power
Measures – Transportation
Land Use/Location
Increase Density
Increase Location Efficiency
Increase Diversity of Urban and Suburban Developments (Mixed Use)
Increase Destination Accessibility
Increase Transit Accessibility
Integrate Affordable and Below Market Rate Housing
Locate Project near Bike Path/Bike Lane
Neighborhood/Site Enhancements
Provide Pedestrian Network Improvements, such as: • Compact, mixed-use communities • Interconnected street network • Narrower roadways and shorter block lengths • Sidewalks • Accessibility to transit and transit shelters • Traffic calming measures and street trees • Parks and public spaces • Minimize pedestrian barriers
Provide Traffic Calming Measures, such as: • Marked crosswalks

[31] http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf
[32] "Quantifying Greenhouse Gas Mitigation Measures." California Air Pollution Control Officers Association (CAPCOA), August 2010, *available at:* http://www.capcoa.org/wp-content/uploads/2010/11/CAPCOA-Quantification-Report-9-14-Final.pdf, p.

5b.17 Cont'd

• Count-down signal timers • Curb extensions • Speed tables • Raised crosswalks • Raised intersections • Median islands • Tight corner radii • Roundabouts or mini-circles • On-street parking • Planter strips with trees • Chicanes/chokers
Implement a Neighborhood Electric Vehicle (NEV) Network.
Incorporate Bike Lane Street Design (on-site)
Provide Bike Parking with Multi-Unit Residential Projects
Provide Electric Vehicle Parking
Dedicate Land for Bike Trails
Parking Policy/Pricing
Limit Parking Supply through: • Elimination (or reduction) of minimum parking requirements • Creation of maximum parking requirements • Provision of shared parking
Unbundle Parking Costs from Property Cost
Implement Market Price Public Parking (On-Street)
Require Residential Area Parking Permits
Measures – Water
Water Supply
Use Reclaimed Water
Use Gray Water
Use Locally Sourced Water Supply
Water Use
Adopt a Water Conservation strategy
Design Water-Efficient Landscapes (see California Department of Water Resources Model Water Efficient Landscape Ordinance), such as: • Reducing lawn sizes; • Planting vegetation with minimal water needs, such as native species; • Choosing vegetation appropriate for the climate of the project site; • Choosing complimentary plants with similar water needs or which can provide each other with shade and/or water.
Use Water-Efficient Landscape Irrigation Systems ("Smart" irrigation control systems)

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5b.17 Cont'd

Reduce Turf in Landscapes and Lawns
Plant Native or Drought-Resistant Trees and Vegetation
Measures – Area Landscaping
Landscaping Equipment
Prohibit Gas Powered Landscape Equipment
Implement Lawnmower Exchange Program
Electric Yard Equipment Compatibility
Measures – Solid Waste
Solid Waste
Recycle Demolished Construction Material
Measures – Vegetation
Vegetation
Urban Tree Planting
Create New Vegetated Open Space
Measures – Construction
Construction
Use Alternative Fuels for Construction Equipment
Use Electric and Hybrid Construction Equipment
Limit Construction Equipment Idling Beyond Regulation Requirements
Institute a Heavy-Duty Off-Road Vehicle Plan, including: • Construction vehicle inventory tracking system; • Requiring hour meters on equipment; • Document the serial number, horsepower, manufacture age, fuel, etc. of all onsite equipment; and • Daily logging of the operating hours of the equipment.
Implement a Construction Vehicle Inventory Tracking System
Measures – Miscellaneous
Miscellaneous
Use Local and Sustainable Building Materials
Require Environmentally Responsible Purchasing, such as: • Purchasing products with sustainable packaging; • Purchasing post-consumer recycled copier paper, paper towels, and stationary; • Purchasing and stocking communal kitchens with reusable dishes and utensils; • Choosing sustainable cleaning supplies; • Leasing equipment from manufacturers who will recycle the components at their end of life; • Choosing ENERGY STAR appliances and Water Sense-certified water fixtures; • Choosing electronic appliances with built in sleep-mode timers;

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5b.17 Cont'd

ii. Equipment type, equipment manufacturer, equipment serial number, engine manufacturer, engine model year, engine certification (Tier rating), horsepower, engine serial number, and expected fuel usage and hours of operation. iii. For the emission control technology installed: technology type, serial number, make, model, manufacturer, EPA/CARB verification number/level, and installation date and hour-meter reading on installation date.
b. If the contractor subsequently needs to bring on site equipment not on the list, the contractor shall submit written notification within 24 hours that attests the equipment complies with all contract conditions and provide information.
c. All diesel equipment shall comply with all pertinent local, state, and federal regulations relative to exhaust emission controls and safety.
d. The contractor shall establish generator sites and truck-staging zones for vehicles waiting to load or unload material on site. Such zones shall be located where diesel emissions have the least impact on abutters, the general public, and especially sensitive receptors such as hospitals, schools, daycare facilities, elderly housing, and convalescent facilities.
Reporting
a. For each onroad diesel vehicle, nonroad construction equipment, or generator, the contractor shall submit to the developer's representative a report prior to bringing said equipment on site that includes: i. Equipment type, equipment manufacturer, equipment serial number, engine manufacturer, engine model year, engine certification (Tier rating), horsepower, and engine serial number. ii. The type of emission control technology installed, serial number, make, model, manufacturer, and EPA/CARB verification number/level. iii. The Certification Statement signed and printed on the contractor's letterhead.
b. The contractor shall submit to the developer's representative a monthly report that, for each onroad diesel vehicle, nonroad construction equipment, or generator onsite, includes: i. Hour-meter readings on arrival on-site, the first and last day of every month, and on off-site date. ii. Any problems with the equipment or emission controls. iii. Certified copies of fuel deliveries for the time period that identify: 1. Source of supply 2. Quantity of fuel 3. Quality of fuel, including sulfur content (percent by weight)

These measures offer a cost-effective, feasible way to incorporate lower-emitting design features into the proposed Project, which subsequently, reduce emissions released during Project construction and operation. An updated EIR should be prepared to include all feasible mitigation measures, as well as include an updated health risk and GHG analysis to ensure that the necessary mitigation measures are implemented to reduce emissions to below thresholds. The EIR should also demonstrate a commitment to the implementation of these measures prior to Project approval, to ensure that the Project's significant emissions are reduced to the maximum extent possible.

Disclaimer

SWAPE has received limited discovery regarding this project. Additional information may become available in the future; thus, we retain the right to revise or amend this report when additional information becomes available. Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable environmental consultants practicing in this or similar localities at the time of service. No other warranty, expressed or implied, is

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made as to the scope of work, work methodologies and protocols, site conditions, analytical testing results, and findings presented. This report reflects efforts which were limited to information that was reasonably accessible at the time of the work, and may contain informational gaps, inconsistencies, or otherwise be incomplete due to the unavailability or uncertainty of information obtained or provided by third parties.

Sincerely,

Matt Hagemann, P.G., C.Hg.

Paul E. Rosenfeld, Ph.D.

Attachment A:	SWAPE Health Risk Calculations
Attachment B:	SWAPE Project CalEEMod Modeling
Attachment C:	SWAPE Project AERSCREEN Modeling
Attachment D:	Paul Rosenfeld CV
Attachment E:	Matt Hagemann CV

Attachment A

Construction	
2021	
Annual Emissions (tons/year)	0.0516
Daily Emissions (lbs/day)	0.282739726
Construction Duration (days)	77
Total DPM (lbs)	21.7709589
Total DPM (g)	9875.306959
Start Date	10/16/2021
End Date	1/1/2022
Construction Days	77
2022	
Annual Emissions (tons/year)	0.1678
Daily Emissions (lbs/day)	0.919452055
Construction Duration (days)	365
Total DPM (lbs)	335.6
Total DPM (g)	152228.16
Start Date	1/1/2022
End Date	1/1/2023
Construction Days	365
2023	
Annual Emissions (tons/year)	0.0212
Daily Emissions (lbs/day)	0.116164384
Construction Duration (days)	117
Total DPM (lbs)	13.59123288
Total DPM (g)	6164.983233
Start Date	1/1/2023
End Date	4/28/2023
Construction Days	117

Total	
Total DPM (lbs)	370.9621918
Total DPM (g)	168268.4502
Total Construction Days	559
Emission Rate (g/s)	0.003483992
Release Height (meters)	3
Initial Vertical Dimension (meters)	1.5
Max Horizontal (meters)	260.0
Min Horizontal (meters)	147.0
Total Acreage	9.44435933
Setting	Urban
Population	326,414
Start Date	10/16/2021
End Date	4/28/2023
Total Construction Days	559
Total Years of Operation	28.47

Operation	
Emission Rate	
Annual Emissions (tons/year)	0.0434
Daily Emissions (lbs/day)	0.237808219
Emission Rate (g/s)	0.001248493
Release Height (meters)	3
Initial Vertical Dimension (meters)	1.5
Max Horizontal (meters)	260.0
Min Horizontal (meters)	147.0
Total Acreage	9.44435933
Setting	Urban
Population	326,414
Total Pounds of DPM	
Total DPM (lbs)	86.8

The Closest Exposed Individual at an Existing Residential Receptor

Activity	Duration (years)	Concentration (ug/m3)	Breathing Rate (L/kg-day)	Cancer Risk without ASFs*	ASF	Cancer Risk with ASFs*
Construction	0.25	0.3146	361	4.3E-07	10	4.3E-06
3rd Trimester Duration	***0.25***			***4.3E-07***	***3rd Trimester Exposure***	***4.3E-06***
Construction	1.28	0.3146	1090	6.6E-06	10	6.6E-05
Operation	0.72	0.113	1090	1.3E-06	10	1.3E-05
Infant Exposure Duration	***2.00***			***8.0E-06***	***Infant Exposure***	***8.0E-05***
Operation	14.00	0.113	572	1.4E-05	3	4.1E-05
Child Exposure Duration	***14.00***			***1.4E-05***	***Child Exposure***	***4.1E-05***
Operation	14.00	0.113	261	4.5E-06	1	4.5E-06
Adult Exposure Duration	***14.00***			***4.5E-06***	***Adult Exposure***	***4.5E-06***
Lifetime Exposure Duration	**30.00**			**2.7E-05**	**Lifetime Exposure**	**1.3E-04**

* We, along with CARB and SCAQMD, recommend using the more updated and health protective 2015 OEHHA guidance, which includes ASFs.

Attachment B

12585 Crestview Apartments

Riverside-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	428.00	Space	0.82	171,200.00	0
Apartments Low Rise	75.00	Dwelling Unit	4.69	75,000.00	239
Apartments Mid Rise	162.00	Dwelling Unit	4.26	162,000.00	515

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2023
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -

Land Use - Consistent with DEIR's model.

Construction Phase - See SWAPE comment about phase lengths.

Off-road Equipment - Consistent with DEIR's model.

Off-road Equipment - Consistent with DEIR's model.

Off-road Equipment - Consistent with DEIR's model.

Off-road Equipment - Consistent with DEIR's model.

Off-road Equipment - Consistent with DEIR's model.

Off-road Equipment -

Off-road Equipment - Consistent with DEIR's model.

Trips and VMT - Consistent with DEIR's model.

Grading - Consistent with DEIR's model.

Vehicle Trips - Consistent with DEIR's model.

Vehicle Emission Factors - Consistent with DEIR's model.

Vehicle Emission Factors - Consistent with DEIR's model.

Vehicle Emission Factors - Consistent with DEIR's model.

Woodstoves - Consistent with DEIR's model.

Energy Use - See SWAPE comment about energy use values.

Construction Off-road Equipment Mitigation - Consistent with DEIR's model.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	PhaseEndDate	7/19/2022	1/6/2023
tblConstructionPhase	PhaseEndDate	5/24/2022	11/11/2022
tblConstructionPhase	PhaseEndDate	5/25/2021	11/12/2021
tblConstructionPhase	PhaseEndDate	7/6/2021	12/24/2021
tblConstructionPhase	PhaseEndDate	6/21/2022	12/9/2022
tblConstructionPhase	PhaseEndDate	6/8/2021	11/26/2021

tblConstructionPhase	PhaseStartDate	6/22/2022	12/10/2022
tblConstructionPhase	PhaseStartDate	7/7/2021	12/25/2021
tblConstructionPhase	PhaseStartDate	4/28/2021	10/16/2021
tblConstructionPhase	PhaseStartDate	6/9/2021	11/27/2021
tblConstructionPhase	PhaseStartDate	5/25/2022	11/12/2022
tblConstructionPhase	PhaseStartDate	5/26/2021	11/13/2021
tblFireplaces	NumberGas	63.75	75.00
tblFireplaces	NumberGas	137.70	162.00
tblFireplaces	NumberNoFireplace	7.50	0.00
tblFireplaces	NumberNoFireplace	16.20	0.00
tblFireplaces	NumberWood	3.75	0.00
tblFireplaces	NumberWood	8.10	0.00
tblGrading	AcresOfGrading	40.00	50.00
tblGrading	AcresOfGrading	20.00	35.00
tblGrading	MaterialExported	0.00	10,000.00
tblGrading	MaterialImported	0.00	20,000.00
tblLandUse	LotAcreage	3.85	0.82
tblLandUse	Population	215.00	239.00
tblLandUse	Population	463.00	515.00
tblOffRoadEquipment	HorsePower	84.00	1,050.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	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
tblTripsAndVMT	HaulingTripLength	20.00	23.00
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tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	0.08	0.00
tblVehicleEF	HHD	2.07	6.43
tblVehicleEF	HHD	0.41	0.24
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tblVehicleEF	HHD	17.43	5.31
tblVehicleEF	HHD	0.97	1.96
tblVehicleEF	HHD	20.29	2.50
tblVehicleEF	HHD	5.1890e-003	2.3650e-003
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tblVehicleEF	HHD	0.04	0.04
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tblVehicleEF	HHD	3.9000e-005	0.00
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tblVehicleEF	HHD	4.9210e-003	0.02
tblVehicleEF	HHD	3.6000e-005	0.00
tblVehicleEF	HHD	7.3000e-005	3.0000e-006
tblVehicleEF	HHD	2.3430e-003	9.7000e-005

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tblVehicleEF	HHD	4.3000e-005	2.0000e-006
tblVehicleEF	HHD	0.04	0.02
tblVehicleEF	HHD	1.5400e-004	4.4400e-004
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tblVehicleEF	HHD	0.06	0.01
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tblVehicleEF	HHD	2.3430e-003	9.7000e-005
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tblVehicleEF	HHD	4.3000e-005	2.0000e-006
tblVehicleEF	HHD	0.08	0.05
tblVehicleEF	HHD	1.5400e-004	4.4400e-004
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tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	0.08	0.00
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tblVehicleEF	HHD	5.1440e-003	0.02
tblVehicleEF	HHD	3.9000e-005	0.00
tblVehicleEF	HHD	4.1860e-003	1.9880e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8620e-003	8.8060e-003
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tblVehicleEF	HHD	3.6000e-005	0.00
tblVehicleEF	HHD	1.4000e-004	5.0000e-006
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tblVehicleEF	LDA	0.10	0.09
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tblVehicleEF	LDT1	0.18	0.73
tblVehicleEF	LDT1	0.19	0.37

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tblVehicleEF	LDT1	0.30	0.23
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tblVehicleEF	LDT1	0.01	6.4140e-003
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tblVehicleEF	LDT1	1.43	1.45
tblVehicleEF	LDT1	2.40	1.92
tblVehicleEF	LDT1	320.93	328.53
tblVehicleEF	LDT1	68.37	64.60
tblVehicleEF	LDT1	0.11	0.09
tblVehicleEF	LDT1	0.16	0.24
tblVehicleEF	LDT1	2.2770e-003	1.9040e-003
tblVehicleEF	LDT1	3.3510e-003	2.5710e-003
tblVehicleEF	LDT1	2.0960e-003	1.7520e-003
tblVehicleEF	LDT1	3.0820e-003	2.3640e-003
tblVehicleEF	LDT1	0.36	0.30
tblVehicleEF	LDT1	0.37	0.26
tblVehicleEF	LDT1	0.24	0.22
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.18	0.72
tblVehicleEF	LDT1	0.16	0.31
tblVehicleEF	LDT1	3.2270e-003	3.1280e-003

tblVehicleEF	LDT1	7.2500e-004	6.1500e-004
tblVehicleEF	LDT1	0.36	0.30
tblVehicleEF	LDT1	0.37	0.26
tblVehicleEF	LDT1	0.24	0.22
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.18	0.72
tblVehicleEF	LDT1	0.18	0.34
tblVehicleEF	LDT1	8.9360e-003	5.6560e-003
tblVehicleEF	LDT1	0.01	0.07
tblVehicleEF	LDT1	1.11	1.19
tblVehicleEF	LDT1	2.78	2.28
tblVehicleEF	LDT1	287.77	303.10
tblVehicleEF	LDT1	68.37	65.36
tblVehicleEF	LDT1	0.11	0.10
tblVehicleEF	LDT1	0.17	0.26
tblVehicleEF	LDT1	2.2770e-003	1.9040e-003
tblVehicleEF	LDT1	3.3510e-003	2.5710e-003
tblVehicleEF	LDT1	2.0960e-003	1.7520e-003
tblVehicleEF	LDT1	3.0820e-003	2.3640e-003
tblVehicleEF	LDT1	0.16	0.16
tblVehicleEF	LDT1	0.33	0.26
tblVehicleEF	LDT1	0.10	0.11
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.21	0.86
tblVehicleEF	LDT1	0.19	0.36
tblVehicleEF	LDT1	2.8910e-003	2.8860e-003
tblVehicleEF	LDT1	7.3200e-004	6.2200e-004

tblVehicleEF	LDT1	0.16	0.16
tblVehicleEF	LDT1	0.33	0.26
tblVehicleEF	LDT1	0.10	0.11
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.21	0.86
tblVehicleEF	LDT1	0.21	0.40
tblVehicleEF	LDT2	4.7540e-003	3.1840e-003
tblVehicleEF	LDT2	5.7630e-003	0.06
tblVehicleEF	LDT2	0.68	0.79
tblVehicleEF	LDT2	1.27	2.60
tblVehicleEF	LDT2	330.23	322.49
tblVehicleEF	LDT2	76.02	69.04
tblVehicleEF	LDT2	0.06	0.06
tblVehicleEF	LDT2	0.10	0.26
tblVehicleEF	LDT2	1.6020e-003	1.3550e-003
tblVehicleEF	LDT2	2.3660e-003	1.8060e-003
tblVehicleEF	LDT2	1.4730e-003	1.2480e-003
tblVehicleEF	LDT2	2.1760e-003	1.6600e-003
tblVehicleEF	LDT2	0.06	0.08
tblVehicleEF	LDT2	0.10	0.12
tblVehicleEF	LDT2	0.05	0.07
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.06	0.39
tblVehicleEF	LDT2	0.08	0.28
tblVehicleEF	LDT2	3.3070e-003	3.0700e-003
tblVehicleEF	LDT2	7.8100e-004	6.5700e-004
tblVehicleEF	LDT2	0.06	0.08

tblVehicleEF	LDT2	0.10	0.12
tblVehicleEF	LDT2	0.05	0.07
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.39
tblVehicleEF	LDT2	0.09	0.31
tblVehicleEF	LDT2	5.3890e-003	3.5750e-003
tblVehicleEF	LDT2	5.0030e-003	0.05
tblVehicleEF	LDT2	0.83	0.95
tblVehicleEF	LDT2	1.13	2.17
tblVehicleEF	LDT2	359.32	343.18
tblVehicleEF	LDT2	76.02	68.20
tblVehicleEF	LDT2	0.06	0.06
tblVehicleEF	LDT2	0.10	0.24
tblVehicleEF	LDT2	1.6020e-003	1.3550e-003
tblVehicleEF	LDT2	2.3660e-003	1.8060e-003
tblVehicleEF	LDT2	1.4730e-003	1.2480e-003
tblVehicleEF	LDT2	2.1760e-003	1.6600e-003
tblVehicleEF	LDT2	0.12	0.15
tblVehicleEF	LDT2	0.12	0.14
tblVehicleEF	LDT2	0.10	0.13
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.06	0.39
tblVehicleEF	LDT2	0.07	0.24
tblVehicleEF	LDT2	3.6000e-003	3.2670e-003
tblVehicleEF	LDT2	7.7900e-004	6.4900e-004
tblVehicleEF	LDT2	0.12	0.15
tblVehicleEF	LDT2	0.12	0.14

tblVehicleEF	LDT2	0.10	0.13
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.39
tblVehicleEF	LDT2	0.07	0.27
tblVehicleEF	LDT2	4.5710e-003	3.1320e-003
tblVehicleEF	LDT2	5.9350e-003	0.06
tblVehicleEF	LDT2	0.63	0.77
tblVehicleEF	LDT2	1.30	2.58
tblVehicleEF	LDT2	321.50	318.99
tblVehicleEF	LDT2	76.02	69.01
tblVehicleEF	LDT2	0.06	0.06
tblVehicleEF	LDT2	0.10	0.25
tblVehicleEF	LDT2	1.6020e-003	1.3550e-003
tblVehicleEF	LDT2	2.3660e-003	1.8060e-003
tblVehicleEF	LDT2	1.4730e-003	1.2480e-003
tblVehicleEF	LDT2	2.1760e-003	1.6600e-003
tblVehicleEF	LDT2	0.05	0.08
tblVehicleEF	LDT2	0.11	0.13
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.07	0.46
tblVehicleEF	LDT2	0.08	0.28
tblVehicleEF	LDT2	3.2190e-003	3.0370e-003
tblVehicleEF	LDT2	7.8200e-004	6.5700e-004
tblVehicleEF	LDT2	0.05	0.08
tblVehicleEF	LDT2	0.11	0.13
tblVehicleEF	LDT2	0.04	0.07

tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.46
tblVehicleEF	LDT2	0.09	0.31
tblVehicleEF	LHD1	4.9950e-003	4.5410e-003
tblVehicleEF	LHD1	8.5970e-003	4.4200e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	0.17
tblVehicleEF	LHD1	0.81	0.60
tblVehicleEF	LHD1	2.14	0.89
tblVehicleEF	LHD1	9.25	9.36
tblVehicleEF	LHD1	596.36	619.96
tblVehicleEF	LHD1	29.33	9.99
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	1.91	1.39
tblVehicleEF	LHD1	0.93	0.28
tblVehicleEF	LHD1	9.6600e-004	1.0130e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	7.9000e-004	2.1100e-004
tblVehicleEF	LHD1	9.2400e-004	9.6900e-004
tblVehicleEF	LHD1	2.5590e-003	2.5170e-003
tblVehicleEF	LHD1	0.01	9.8330e-003
tblVehicleEF	LHD1	7.2700e-004	1.9400e-004
tblVehicleEF	LHD1	3.6750e-003	2.3920e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.8430e-003	1.2620e-003

tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.31	0.44
tblVehicleEF	LHD1	0.23	0.07
tblVehicleEF	LHD1	9.2000e-005	9.0000e-005
tblVehicleEF	LHD1	5.8420e-003	6.0260e-003
tblVehicleEF	LHD1	3.3400e-004	9.9000e-005
tblVehicleEF	LHD1	3.6750e-003	2.3920e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.8430e-003	1.2620e-003
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	0.31	0.44
tblVehicleEF	LHD1	0.25	0.07
tblVehicleEF	LHD1	4.9950e-003	4.5540e-003
tblVehicleEF	LHD1	8.7610e-003	4.4900e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	0.17
tblVehicleEF	LHD1	0.82	0.61
tblVehicleEF	LHD1	2.04	0.84
tblVehicleEF	LHD1	9.25	9.36
tblVehicleEF	LHD1	596.36	619.98
tblVehicleEF	LHD1	29.33	9.91
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	1.80	1.31
tblVehicleEF	LHD1	0.90	0.27
tblVehicleEF	LHD1	9.6600e-004	1.0130e-003
tblVehicleEF	LHD1	0.01	0.01

tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	7.9000e-004	2.1100e-004
tblVehicleEF	LHD1	9.2400e-004	9.6900e-004
tblVehicleEF	LHD1	2.5590e-003	2.5170e-003
tblVehicleEF	LHD1	0.01	9.8330e-003
tblVehicleEF	LHD1	7.2700e-004	1.9400e-004
tblVehicleEF	LHD1	6.8550e-003	4.2440e-003
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	3.4810e-003	2.4050e-003
tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.32	0.44
tblVehicleEF	LHD1	0.22	0.06
tblVehicleEF	LHD1	9.2000e-005	9.0000e-005
tblVehicleEF	LHD1	5.8420e-003	6.0270e-003
tblVehicleEF	LHD1	3.3200e-004	9.8000e-005
tblVehicleEF	LHD1	6.8550e-003	4.2440e-003
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	3.4810e-003	2.4050e-003
tblVehicleEF	LHD1	0.09	0.07
tblVehicleEF	LHD1	0.32	0.44
tblVehicleEF	LHD1	0.24	0.07
tblVehicleEF	LHD1	4.9950e-003	4.5430e-003
tblVehicleEF	LHD1	8.5850e-003	4.4280e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	0.17

tblVehicleEF	LHD1	0.81	0.60
tblVehicleEF	LHD1	2.14	0.88
tblVehicleEF	LHD1	9.25	9.36
tblVehicleEF	LHD1	596.36	619.96
tblVehicleEF	LHD1	29.33	9.98
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	1.89	1.37
tblVehicleEF	LHD1	0.92	0.28
tblVehicleEF	LHD1	9.6600e-004	1.0130e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	7.9000e-004	2.1100e-004
tblVehicleEF	LHD1	9.2400e-004	9.6900e-004
tblVehicleEF	LHD1	2.5590e-003	2.5170e-003
tblVehicleEF	LHD1	0.01	9.8330e-003
tblVehicleEF	LHD1	7.2700e-004	1.9400e-004
tblVehicleEF	LHD1	3.2380e-003	2.4970e-003
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.6810e-003	1.3210e-003
tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.33	0.47
tblVehicleEF	LHD1	0.23	0.07
tblVehicleEF	LHD1	9.2000e-005	9.0000e-005
tblVehicleEF	LHD1	5.8420e-003	6.0260e-003
tblVehicleEF	LHD1	3.3400e-004	9.9000e-005
tblVehicleEF	LHD1	3.2380e-003	2.4970e-003

tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.6810e-003	1.3210e-003
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	0.33	0.47
tblVehicleEF	LHD1	0.25	0.07
tblVehicleEF	LHD2	3.3070e-003	2.7700e-003
tblVehicleEF	LHD2	3.5370e-003	3.2640e-003
tblVehicleEF	LHD2	6.6670e-003	7.1780e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.40	0.44
tblVehicleEF	LHD2	1.03	0.48
tblVehicleEF	LHD2	14.34	14.92
tblVehicleEF	LHD2	592.89	614.92
tblVehicleEF	LHD2	22.93	6.42
tblVehicleEF	LHD2	0.11	0.12
tblVehicleEF	LHD2	1.29	1.52
tblVehicleEF	LHD2	0.46	0.16
tblVehicleEF	LHD2	1.2850e-003	1.5130e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5700e-004	9.8000e-005
tblVehicleEF	LHD2	1.2290e-003	1.4470e-003
tblVehicleEF	LHD2	2.7020e-003	2.7370e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.2800e-004	9.1000e-005
tblVehicleEF	LHD2	1.3090e-003	1.1190e-003

tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	7.0300e-004	6.1300e-004
tblVehicleEF	LHD2	0.05	0.06
tblVehicleEF	LHD2	0.07	0.19
tblVehicleEF	LHD2	0.09	0.04
tblVehicleEF	LHD2	1.4000e-004	1.4200e-004
tblVehicleEF	LHD2	5.7620e-003	5.9160e-003
tblVehicleEF	LHD2	2.4800e-004	6.4000e-005
tblVehicleEF	LHD2	1.3090e-003	1.1190e-003
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	7.0300e-004	6.1300e-004
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.07	0.19
tblVehicleEF	LHD2	0.10	0.04
tblVehicleEF	LHD2	3.3070e-003	2.7770e-003
tblVehicleEF	LHD2	3.5730e-003	3.2860e-003
tblVehicleEF	LHD2	6.4430e-003	6.9030e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.40	0.45
tblVehicleEF	LHD2	0.98	0.45
tblVehicleEF	LHD2	14.34	14.92
tblVehicleEF	LHD2	592.89	614.93
tblVehicleEF	LHD2	22.93	6.38
tblVehicleEF	LHD2	0.11	0.12
tblVehicleEF	LHD2	1.22	1.43

tblVehicleEF	LHD2	0.45	0.15
tblVehicleEF	LHD2	1.2850e-003	1.5130e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5700e-004	9.8000e-005
tblVehicleEF	LHD2	1.2290e-003	1.4470e-003
tblVehicleEF	LHD2	2.7020e-003	2.7370e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.2800e-004	9.1000e-005
tblVehicleEF	LHD2	2.4680e-003	1.9920e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	1.3130e-003	1.1680e-003
tblVehicleEF	LHD2	0.05	0.06
tblVehicleEF	LHD2	0.07	0.20
tblVehicleEF	LHD2	0.09	0.03
tblVehicleEF	LHD2	1.4000e-004	1.4200e-004
tblVehicleEF	LHD2	5.7620e-003	5.9160e-003
tblVehicleEF	LHD2	2.4700e-004	6.3000e-005
tblVehicleEF	LHD2	2.4680e-003	1.9920e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.3130e-003	1.1680e-003
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.07	0.20
tblVehicleEF	LHD2	0.10	0.04
tblVehicleEF	LHD2	3.3070e-003	2.7710e-003

tblVehicleEF	LHD2	3.5300e-003	3.2670e-003
tblVehicleEF	LHD2	6.7050e-003	7.1290e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.40	0.44
tblVehicleEF	LHD2	1.03	0.47
tblVehicleEF	LHD2	14.34	14.92
tblVehicleEF	LHD2	592.89	614.92
tblVehicleEF	LHD2	22.93	6.42
tblVehicleEF	LHD2	0.11	0.12
tblVehicleEF	LHD2	1.28	1.49
tblVehicleEF	LHD2	0.46	0.16
tblVehicleEF	LHD2	1.2850e-003	1.5130e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5700e-004	9.8000e-005
tblVehicleEF	LHD2	1.2290e-003	1.4470e-003
tblVehicleEF	LHD2	2.7020e-003	2.7370e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.2800e-004	9.1000e-005
tblVehicleEF	LHD2	1.0230e-003	1.1350e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	5.9800e-004	6.3500e-004
tblVehicleEF	LHD2	0.05	0.06
tblVehicleEF	LHD2	0.08	0.21
tblVehicleEF	LHD2	0.09	0.03
tblVehicleEF	LHD2	1.4000e-004	1.4200e-004

tblVehicleEF	LHD2	5.7620e-003	5.9160e-003
tblVehicleEF	LHD2	2.4800e-004	6.3000e-005
tblVehicleEF	LHD2	1.0230e-003	1.1350e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	5.9800e-004	6.3500e-004
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.08	0.21
tblVehicleEF	LHD2	0.10	0.04
tblVehicleEF	MCY	0.43	0.31
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	18.81	18.85
tblVehicleEF	MCY	9.70	8.64
tblVehicleEF	MCY	166.71	207.60
tblVehicleEF	MCY	45.36	60.36
tblVehicleEF	MCY	1.12	1.13
tblVehicleEF	MCY	0.31	0.26
tblVehicleEF	MCY	1.8630e-003	1.7970e-003
tblVehicleEF	MCY	3.2830e-003	2.7750e-003
tblVehicleEF	MCY	1.7410e-003	1.6800e-003
tblVehicleEF	MCY	3.0870e-003	2.6090e-003
tblVehicleEF	MCY	1.69	1.43
tblVehicleEF	MCY	0.83	0.79
tblVehicleEF	MCY	0.92	0.76
tblVehicleEF	MCY	2.11	2.11
tblVehicleEF	MCY	0.55	1.77
tblVehicleEF	MCY	2.05	1.83

tblVehicleEF	MCY	2.0360e-003	2.0540e-003
tblVehicleEF	MCY	6.7200e-004	5.9700e-004
tblVehicleEF	MCY	1.69	1.43
tblVehicleEF	MCY	0.83	0.79
tblVehicleEF	MCY	0.92	0.76
tblVehicleEF	MCY	2.61	2.61
tblVehicleEF	MCY	0.55	1.77
tblVehicleEF	MCY	2.23	2.00
tblVehicleEF	MCY	0.42	0.31
tblVehicleEF	MCY	0.13	0.21
tblVehicleEF	MCY	19.51	18.83
tblVehicleEF	MCY	9.10	7.90
tblVehicleEF	MCY	166.71	207.41
tblVehicleEF	MCY	45.36	58.44
tblVehicleEF	MCY	0.97	0.97
tblVehicleEF	MCY	0.29	0.25
tblVehicleEF	MCY	1.8630e-003	1.7970e-003
tblVehicleEF	MCY	3.2830e-003	2.7750e-003
tblVehicleEF	MCY	1.7410e-003	1.6800e-003
tblVehicleEF	MCY	3.0870e-003	2.6090e-003
tblVehicleEF	MCY	3.35	2.75
tblVehicleEF	MCY	1.23	1.09
tblVehicleEF	MCY	2.09	1.72
tblVehicleEF	MCY	2.09	2.07
tblVehicleEF	MCY	0.55	1.74
tblVehicleEF	MCY	1.84	1.61
tblVehicleEF	MCY	2.0460e-003	2.0530e-003

tblVehicleEF	MCY	6.5600e-004	5.7800e-004
tblVehicleEF	MCY	3.35	2.75
tblVehicleEF	MCY	1.23	1.09
tblVehicleEF	MCY	2.09	1.72
tblVehicleEF	MCY	2.59	2.56
tblVehicleEF	MCY	0.55	1.74
tblVehicleEF	MCY	2.00	1.75
tblVehicleEF	MCY	0.42	0.31
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	18.37	18.30
tblVehicleEF	MCY	9.67	8.43
tblVehicleEF	MCY	166.71	206.64
tblVehicleEF	MCY	45.36	59.88
tblVehicleEF	MCY	1.12	1.09
tblVehicleEF	MCY	0.31	0.26
tblVehicleEF	MCY	1.8630e-003	1.7970e-003
tblVehicleEF	MCY	3.2830e-003	2.7750e-003
tblVehicleEF	MCY	1.7410e-003	1.6800e-003
tblVehicleEF	MCY	3.0870e-003	2.6090e-003
tblVehicleEF	MCY	1.59	1.64
tblVehicleEF	MCY	1.02	1.05
tblVehicleEF	MCY	0.73	0.76
tblVehicleEF	MCY	2.11	2.09
tblVehicleEF	MCY	0.63	2.02
tblVehicleEF	MCY	2.06	1.79
tblVehicleEF	MCY	2.0290e-003	2.0450e-003
tblVehicleEF	MCY	6.7200e-004	5.9300e-004

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tblVehicleEF	MCY	1.02	1.05
tblVehicleEF	MCY	0.73	0.76
tblVehicleEF	MCY	2.61	2.59
tblVehicleEF	MCY	0.63	2.02
tblVehicleEF	MCY	2.24	1.95
tblVehicleEF	MDV	9.8990e-003	4.1640e-003
tblVehicleEF	MDV	0.01	0.08
tblVehicleEF	MDV	1.15	0.92
tblVehicleEF	MDV	2.62	3.01
tblVehicleEF	MDV	458.82	406.42
tblVehicleEF	MDV	104.21	86.29
tblVehicleEF	MDV	0.13	0.09
tblVehicleEF	MDV	0.25	0.33
tblVehicleEF	MDV	1.6580e-003	1.4180e-003
tblVehicleEF	MDV	2.3780e-003	1.8620e-003
tblVehicleEF	MDV	1.5280e-003	1.3080e-003
tblVehicleEF	MDV	2.1870e-003	1.7120e-003
tblVehicleEF	MDV	0.11	0.10
tblVehicleEF	MDV	0.19	0.15
tblVehicleEF	MDV	0.09	0.09
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.11	0.46
tblVehicleEF	MDV	0.20	0.38
tblVehicleEF	MDV	4.5960e-003	3.8690e-003
tblVehicleEF	MDV	1.0880e-003	8.2200e-004
tblVehicleEF	MDV	0.11	0.10

tblVehicleEF	MDV	0.19	0.15
tblVehicleEF	MDV	0.09	0.09
tblVehicleEF	MDV	0.04	0.02
tblVehicleEF	MDV	0.11	0.46
tblVehicleEF	MDV	0.22	0.41
tblVehicleEF	MDV	0.01	4.6800e-003
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tblVehicleEF	MDV	1.41	1.10
tblVehicleEF	MDV	2.31	2.51
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tblVehicleEF	MDV	104.21	85.29
tblVehicleEF	MDV	0.13	0.08
tblVehicleEF	MDV	0.24	0.31
tblVehicleEF	MDV	1.6580e-003	1.4180e-003
tblVehicleEF	MDV	2.3780e-003	1.8620e-003
tblVehicleEF	MDV	1.5280e-003	1.3080e-003
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tblVehicleEF	MDV	0.21	0.19
tblVehicleEF	MDV	0.22	0.17
tblVehicleEF	MDV	0.16	0.17
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tblVehicleEF	MDV	0.11	0.45
tblVehicleEF	MDV	0.17	0.32
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tblVehicleEF	MDV	1.0820e-003	8.1200e-004
tblVehicleEF	MDV	0.21	0.19
tblVehicleEF	MDV	0.22	0.17

tblVehicleEF	MDV	0.16	0.17
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.45
tblVehicleEF	MDV	0.19	0.35
tblVehicleEF	MDV	9.5100e-003	4.0920e-003
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tblVehicleEF	MDV	104.21	86.25
tblVehicleEF	MDV	0.13	0.08
tblVehicleEF	MDV	0.25	0.33
tblVehicleEF	MDV	1.6580e-003	1.4180e-003
tblVehicleEF	MDV	2.3780e-003	1.8620e-003
tblVehicleEF	MDV	1.5280e-003	1.3080e-003
tblVehicleEF	MDV	2.1870e-003	1.7120e-003
tblVehicleEF	MDV	0.08	0.10
tblVehicleEF	MDV	0.20	0.16
tblVehicleEF	MDV	0.08	0.09
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.13	0.52
tblVehicleEF	MDV	0.20	0.38
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tblVehicleEF	MDV	1.0890e-003	8.2100e-004
tblVehicleEF	MDV	0.08	0.10
tblVehicleEF	MDV	0.20	0.16
tblVehicleEF	MDV	0.08	0.09

tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.13	0.53
tblVehicleEF	MDV	0.22	0.41
tblVehicleEF	MH	0.02	3.2740e-003
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tblVehicleEF	MH	5.24	0.00
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tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.04	0.14
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tblVehicleEF	MH	0.04	0.13
tblVehicleEF	MH	8.9900e-004	0.00
tblVehicleEF	MH	1.38	0.00
tblVehicleEF	MH	0.08	0.00
tblVehicleEF	MH	0.49	0.00
tblVehicleEF	MH	0.07	0.07
tblVehicleEF	MH	0.02	0.00
tblVehicleEF	MH	0.31	0.00
tblVehicleEF	MH	9.8680e-003	8.7860e-003
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tblVehicleEF	MH	1.38	0.00
tblVehicleEF	MH	0.08	0.00

tblVehicleEF	MH	0.49	0.00
tblVehicleEF	MH	0.10	0.08
tblVehicleEF	MH	0.02	0.00
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tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	9.7800e-004	0.00
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tblVehicleEF	MH	0.04	0.13
tblVehicleEF	MH	8.9900e-004	0.00
tblVehicleEF	MH	2.52	0.00
tblVehicleEF	MH	0.09	0.00
tblVehicleEF	MH	0.94	0.00
tblVehicleEF	MH	0.08	0.07
tblVehicleEF	MH	0.02	0.00
tblVehicleEF	MH	0.30	0.00
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tblVehicleEF	MH	6.5700e-004	0.00
tblVehicleEF	MH	2.52	0.00

tblVehicleEF	MH	0.09	0.00
tblVehicleEF	MH	0.94	0.00
tblVehicleEF	MH	0.10	0.08
tblVehicleEF	MH	0.02	0.00
tblVehicleEF	MH	0.32	0.00
tblVehicleEF	MH	0.02	3.2740e-003
tblVehicleEF	MH	0.02	0.00
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tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	9.7800e-004	0.00
tblVehicleEF	MH	3.2460e-003	4.0000e-003
tblVehicleEF	MH	0.04	0.13
tblVehicleEF	MH	8.9900e-004	0.00
tblVehicleEF	MH	1.38	0.00
tblVehicleEF	MH	0.09	0.00
tblVehicleEF	MH	0.47	0.00
tblVehicleEF	MH	0.07	0.07
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.31	0.00
tblVehicleEF	MH	9.8680e-003	8.7860e-003
tblVehicleEF	MH	6.6300e-004	0.00

tblVehicleEF	MH	1.38	0.00
tblVehicleEF	MH	0.09	0.00
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tblVehicleEF	MH	0.10	0.08
tblVehicleEF	MH	0.03	0.00
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tblVehicleEF	MHD	2.6660e-003	9.4670e-003
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tblVehicleEF	MHD	2.5470e-003	9.0550e-003
tblVehicleEF	MHD	6.7100e-004	7.6000e-005
tblVehicleEF	MHD	1.5020e-003	4.1800e-004
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tblVehicleEF	MHD	0.02	0.02

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tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	7.6500e-004	2.2800e-004
tblVehicleEF	MHD	0.03	0.01
tblVehicleEF	MHD	0.02	0.07
tblVehicleEF	MHD	0.34	0.04
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tblVehicleEF	MHD	0.02	0.02
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tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	5.9600e-004	2.3900e-004

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tblVehicleEF	OBUS	1.9500e-003	8.4680e-003
tblVehicleEF	OBUS	8.7100e-004	2.1800e-004
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tblVehicleEF	OBUS	1.9500e-003	8.4680e-003
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tblVehicleEF	OBUS	1.9500e-003	8.4680e-003
tblVehicleEF	OBUS	8.7100e-004	2.1800e-004
tblVehicleEF	OBUS	1.4000e-005	8.3000e-005
tblVehicleEF	OBUS	1.8490e-003	8.0880e-003
tblVehicleEF	OBUS	8.0000e-004	2.0100e-004
tblVehicleEF	OBUS	1.7990e-003	2.7830e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.03	0.04
tblVehicleEF	OBUS	8.3400e-004	1.2520e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.05	0.31
tblVehicleEF	OBUS	0.35	0.13
tblVehicleEF	OBUS	6.2600e-004	6.2400e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.9300e-004	2.1000e-004
tblVehicleEF	OBUS	1.7990e-003	2.7830e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.05	0.06
tblVehicleEF	OBUS	8.3400e-004	1.2520e-003
tblVehicleEF	OBUS	0.03	0.04
tblVehicleEF	OBUS	0.05	0.31
tblVehicleEF	OBUS	0.38	0.14

tblVehicleEF	SBUS	0.82	0.09
tblVehicleEF	SBUS	9.5650e-003	6.6030e-003
tblVehicleEF	SBUS	0.06	8.0990e-003
tblVehicleEF	SBUS	7.84	3.43
tblVehicleEF	SBUS	0.57	0.55
tblVehicleEF	SBUS	6.44	1.08
tblVehicleEF	SBUS	1,128.57	369.74
tblVehicleEF	SBUS	1,093.03	1,096.55
tblVehicleEF	SBUS	55.12	6.92
tblVehicleEF	SBUS	8.81	3.32
tblVehicleEF	SBUS	3.97	4.42
tblVehicleEF	SBUS	12.20	0.78
tblVehicleEF	SBUS	8.4250e-003	3.3040e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	5.0000e-004	4.8000e-005
tblVehicleEF	SBUS	8.0610e-003	3.1610e-003
tblVehicleEF	SBUS	2.6870e-003	2.6500e-003
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	4.6000e-004	4.4000e-005
tblVehicleEF	SBUS	5.0680e-003	1.5760e-003
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	0.93	0.41
tblVehicleEF	SBUS	2.4310e-003	7.9200e-004
tblVehicleEF	SBUS	0.10	0.09
tblVehicleEF	SBUS	0.02	0.07
tblVehicleEF	SBUS	0.36	0.05

tblVehicleEF	SBUS	0.01	3.5360e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.6300e-004	6.9000e-005
tblVehicleEF	SBUS	5.0680e-003	1.5760e-003
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	1.34	0.59
tblVehicleEF	SBUS	2.4310e-003	7.9200e-004
tblVehicleEF	SBUS	0.12	0.11
tblVehicleEF	SBUS	0.02	0.07
tblVehicleEF	SBUS	0.39	0.05
tblVehicleEF	SBUS	0.82	0.09
tblVehicleEF	SBUS	9.7050e-003	6.6880e-003
tblVehicleEF	SBUS	0.05	6.7520e-003
tblVehicleEF	SBUS	7.74	3.39
tblVehicleEF	SBUS	0.58	0.56
tblVehicleEF	SBUS	4.67	0.77
tblVehicleEF	SBUS	1,179.47	378.98
tblVehicleEF	SBUS	1,093.03	1,096.56
tblVehicleEF	SBUS	55.12	6.42
tblVehicleEF	SBUS	9.10	3.40
tblVehicleEF	SBUS	3.73	4.16
tblVehicleEF	SBUS	12.17	0.77
tblVehicleEF	SBUS	7.1020e-003	2.7930e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	5.0000e-004	4.8000e-005
tblVehicleEF	SBUS	6.7950e-003	2.6720e-003

tblVehicleEF	SBUS	2.6870e-003	2.6500e-003
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	4.6000e-004	4.4000e-005
tblVehicleEF	SBUS	9.1290e-003	2.7600e-003
tblVehicleEF	SBUS	0.04	0.01
tblVehicleEF	SBUS	0.92	0.41
tblVehicleEF	SBUS	4.4980e-003	1.4670e-003
tblVehicleEF	SBUS	0.10	0.09
tblVehicleEF	SBUS	0.02	0.06
tblVehicleEF	SBUS	0.30	0.04
tblVehicleEF	SBUS	0.01	3.6240e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.3300e-004	6.3000e-005
tblVehicleEF	SBUS	9.1290e-003	2.7600e-003
tblVehicleEF	SBUS	0.04	0.01
tblVehicleEF	SBUS	1.34	0.59
tblVehicleEF	SBUS	4.4980e-003	1.4670e-003
tblVehicleEF	SBUS	0.12	0.11
tblVehicleEF	SBUS	0.02	0.06
tblVehicleEF	SBUS	0.33	0.04
tblVehicleEF	SBUS	0.82	0.09
tblVehicleEF	SBUS	9.5210e-003	6.6020e-003
tblVehicleEF	SBUS	0.06	8.2440e-003
tblVehicleEF	SBUS	8.00	3.48
tblVehicleEF	SBUS	0.57	0.55
tblVehicleEF	SBUS	6.79	1.10
tblVehicleEF	SBUS	1,058.28	356.98

tblVehicleEF	SBUS	1,093.03	1,096.55
tblVehicleEF	SBUS	55.12	6.96
tblVehicleEF	SBUS	8.43	3.21
tblVehicleEF	SBUS	3.93	4.35
tblVehicleEF	SBUS	12.21	0.78
tblVehicleEF	SBUS	0.01	4.0110e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	5.0000e-004	4.8000e-005
tblVehicleEF	SBUS	9.8080e-003	3.8370e-003
tblVehicleEF	SBUS	2.6870e-003	2.6500e-003
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	4.6000e-004	4.4000e-005
tblVehicleEF	SBUS	4.3640e-003	1.4840e-003
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	0.93	0.41
tblVehicleEF	SBUS	2.3310e-003	8.1800e-004
tblVehicleEF	SBUS	0.10	0.09
tblVehicleEF	SBUS	0.02	0.08
tblVehicleEF	SBUS	0.37	0.05
tblVehicleEF	SBUS	0.01	3.4160e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.6900e-004	6.9000e-005
tblVehicleEF	SBUS	4.3640e-003	1.4840e-003
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	1.34	0.59
tblVehicleEF	SBUS	2.3310e-003	8.1800e-004

tblVehicleEF	SBUS	0.12	0.11
tblVehicleEF	SBUS	0.02	0.08
tblVehicleEF	SBUS	0.40	0.05
tblVehicleEF	UBUS	1.36	3.04
tblVehicleEF	UBUS	0.08	0.02
tblVehicleEF	UBUS	7.52	23.60
tblVehicleEF	UBUS	13.83	1.86
tblVehicleEF	UBUS	1,788.21	1,635.62
tblVehicleEF	UBUS	153.17	22.96
tblVehicleEF	UBUS	3.79	0.30
tblVehicleEF	UBUS	12.24	0.22
tblVehicleEF	UBUS	0.49	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.04	2.1820e-003
tblVehicleEF	UBUS	1.4880e-003	2.2400e-004
tblVehicleEF	UBUS	0.21	0.04
tblVehicleEF	UBUS	3.0000e-003	5.0570e-003
tblVehicleEF	UBUS	0.04	2.0670e-003
tblVehicleEF	UBUS	1.3680e-003	2.0600e-004
tblVehicleEF	UBUS	9.0420e-003	2.8050e-003
tblVehicleEF	UBUS	0.10	0.02
tblVehicleEF	UBUS	4.5390e-003	1.1470e-003
tblVehicleEF	UBUS	0.42	0.05
tblVehicleEF	UBUS	0.02	0.08
tblVehicleEF	UBUS	1.09	0.10
tblVehicleEF	UBUS	9.5090e-003	6.3200e-003
tblVehicleEF	UBUS	1.7820e-003	2.2700e-004

tblVehicleEF	UBUS	9.0420e-003	2.8050e-003
tblVehicleEF	UBUS	0.10	0.02
tblVehicleEF	UBUS	4.5390e-003	1.1470e-003
tblVehicleEF	UBUS	1.82	3.11
tblVehicleEF	UBUS	0.02	0.08
tblVehicleEF	UBUS	1.19	0.10
tblVehicleEF	UBUS	1.36	3.04
tblVehicleEF	UBUS	0.07	0.02
tblVehicleEF	UBUS	7.58	23.60
tblVehicleEF	UBUS	11.85	1.58
tblVehicleEF	UBUS	1,788.21	1,635.63
tblVehicleEF	UBUS	153.17	22.49
tblVehicleEF	UBUS	3.53	0.30
tblVehicleEF	UBUS	12.16	0.21
tblVehicleEF	UBUS	0.49	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.04	2.1820e-003
tblVehicleEF	UBUS	1.4880e-003	2.2400e-004
tblVehicleEF	UBUS	0.21	0.04
tblVehicleEF	UBUS	3.0000e-003	5.0570e-003
tblVehicleEF	UBUS	0.04	2.0670e-003
tblVehicleEF	UBUS	1.3680e-003	2.0600e-004
tblVehicleEF	UBUS	0.02	4.9810e-003
tblVehicleEF	UBUS	0.13	0.02
tblVehicleEF	UBUS	9.0520e-003	2.2660e-003
tblVehicleEF	UBUS	0.43	0.05
tblVehicleEF	UBUS	0.02	0.07

tblVehicleEF	UBUS	0.99	0.09
tblVehicleEF	UBUS	9.5110e-003	6.3200e-003
tblVehicleEF	UBUS	1.7480e-003	2.2300e-004
tblVehicleEF	UBUS	0.02	4.9810e-003
tblVehicleEF	UBUS	0.13	0.02
tblVehicleEF	UBUS	9.0520e-003	2.2660e-003
tblVehicleEF	UBUS	1.83	3.11
tblVehicleEF	UBUS	0.02	0.07
tblVehicleEF	UBUS	1.09	0.09
tblVehicleEF	UBUS	1.36	3.04
tblVehicleEF	UBUS	0.08	0.02
tblVehicleEF	UBUS	7.51	23.60
tblVehicleEF	UBUS	14.02	1.85
tblVehicleEF	UBUS	1,788.21	1,635.62
tblVehicleEF	UBUS	153.17	22.93
tblVehicleEF	UBUS	3.75	0.30
tblVehicleEF	UBUS	12.25	0.22
tblVehicleEF	UBUS	0.49	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.04	2.1820e-003
tblVehicleEF	UBUS	1.4880e-003	2.2400e-004
tblVehicleEF	UBUS	0.21	0.04
tblVehicleEF	UBUS	3.0000e-003	5.0570e-003
tblVehicleEF	UBUS	0.04	2.0670e-003
tblVehicleEF	UBUS	1.3680e-003	2.0600e-004
tblVehicleEF	UBUS	8.1990e-003	2.8430e-003
tblVehicleEF	UBUS	0.12	0.02

tblVehicleEF	UBUS	4.1400e-003	1.2010e-003
tblVehicleEF	UBUS	0.42	0.05
tblVehicleEF	UBUS	0.03	0.09
tblVehicleEF	UBUS	1.10	0.09
tblVehicleEF	UBUS	9.5090e-003	6.3200e-003
tblVehicleEF	UBUS	1.7850e-003	2.2700e-004
tblVehicleEF	UBUS	8.1990e-003	2.8430e-003
tblVehicleEF	UBUS	0.12	0.02
tblVehicleEF	UBUS	4.1400e-003	1.2010e-003
tblVehicleEF	UBUS	1.82	3.11
tblVehicleEF	UBUS	0.03	0.09
tblVehicleEF	UBUS	1.20	0.10
tblVehicleTrips	HW_TL	14.70	11.50
tblVehicleTrips	HW_TL	14.70	11.50
tblVehicleTrips	ST_TR	7.16	8.14
tblVehicleTrips	ST_TR	6.39	4.91
tblVehicleTrips	SU_TR	6.07	6.28
tblVehicleTrips	SU_TR	5.86	4.09
tblVehicleTrips	WD_TR	6.59	7.33
tblVehicleTrips	WD_TR	6.65	5.44
tblWoodstoves	NumberCatalytic	3.75	0.00
tblWoodstoves	NumberCatalytic	8.10	0.00
tblWoodstoves	NumberNoncatalytic	3.75	0.00
tblWoodstoves	NumberNoncatalytic	8.10	0.00

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1127	1.7153	0.5569	3.2000e-003	0.2452	0.0441	0.2893	0.1009	0.0415	0.1424	0.0000	305.6036	305.6036	0.0345	0.0000	306.4658
2022	1.0279	4.0699	3.0592	9.2400e-003	0.3438	0.1525	0.4964	0.0922	0.1423	0.2345	0.0000	824.8657	824.8657	0.1362	0.0000	828.2697
2023	0.1924	4.6300e-003	9.3100e-003	2.0000e-005	1.3500e-003	2.4000e-004	1.5900e-003	3.6000e-004	2.4000e-004	6.0000e-004	0.0000	1.8604	1.8604	7.0000e-005	0.0000	1.8622
Maximum	**1.0279**	**4.0699**	**3.0592**	**9.2400e-003**	**0.3438**	**0.1525**	**0.4964**	**0.1009**	**0.1423**	**0.2345**	**0.0000**	**824.8657**	**824.8657**	**0.1362**	**0.0000**	**828.2697**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2021	0.1127	1.7153	0.5569	3.2000e-003	0.2452	0.0441	0.2893	0.1009	0.0415	0.1424	0.0000	305.6034	305.6034	0.0345	0.0000	306.4657
2022	1.0279	4.0699	3.0592	9.2400e-003	0.3438	0.1525	0.4964	0.0922	0.1423	0.2345	0.0000	824.8652	824.8652	0.1362	0.0000	828.2692
2023	0.1924	4.6300e-003	9.3100e-003	2.0000e-005	1.3500e-003	2.4000e-004	1.5900e-003	3.6000e-004	2.4000e-004	6.0000e-004	0.0000	1.8604	1.8604	7.0000e-005	0.0000	1.8622
Maximum	**1.0279**	**4.0699**	**3.0592**	**9.2400e-003**	**0.3438**	**0.1525**	**0.4964**	**0.1009**	**0.1423**	**0.2345**	**0.0000**	**824.8652**	**824.8652**	**0.1362**	**0.0000**	**828.2692**

	ROG	NOx	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)
2	7-28-2021	10-27-2021	0.2111	0.2111
3	10-28-2021	1-27-2022	1.9862	1.9862
4	1-28-2022	4-27-2022	1.2518	1.2518
5	4-28-2022	7-27-2022	1.2666	1.2666
6	7-28-2022	10-27-2022	1.2801	1.2801
7	10-28-2022	1-27-2023	1.1227	1.1227
		Highest	1.9862	1.9862

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	1.0239	0.0774	2.4710	4.4000e-004		0.0175	0.0175		0.0175	0.0175	0.0000	60.9155	60.9155	4.9600e-003	1.0400e-003	61.3504
Energy	0.0192	0.1643	0.0899	1.0500e-003		0.0133	0.0133		0.0133	0.0133	0.0000	890.3918	890.3918	0.0190	6.6600e-003	892.8495
Mobile	0.5148	1.5229	4.8523	0.0172	1.5847	0.0168	1.6015	0.4242	0.0158	0.4400	0.0000	1,654.4361	1,654.4361	0.0642	0.0000	1,656.0420
Waste						0.0000	0.0000		0.0000	0.0000	22.1301	0.0000	22.1301	1.3079	0.0000	54.8263
Water						0.0000	0.0000		0.0000	0.0000	4.8989	185.9343	190.8332	0.5072	0.0127	207.3052
Total	**1.5579**	**1.7645**	**7.3932**	**0.0187**	**1.5847**	**0.0476**	**1.6323**	**0.4242**	**0.0466**	**0.4708**	**27.0290**	**2,791.6778**	**2,818.7067**	**1.9032**	**0.0204**	**2,872.3734**

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	1.0239	0.0774	2.4710	4.4000e-004		0.0175	0.0175		0.0175	0.0175	0.0000	60.9155	60.9155	4.9600e-003	1.0400e-003	61.3504
Energy	0.0192	0.1643	0.0699	1.0500e-003		0.0133	0.0133		0.0133	0.0133	0.0000	890.3918	890.3918	0.0190	6.6600e-003	892.8495
Mobile	0.5148	1.5229	4.8523	0.0172	1.5847	0.0168	1.6015	0.4242	0.0158	0.4400	0.0000	1,654.4361	1,654.4361	0.0642	0.0000	1,656.0420
Waste						0.0000	0.0000		0.0000	0.0000	22.1301	0.0000	22.1301	1.3079	0.0000	54.8263
Water						0.0000	0.0000		0.0000	0.0000	4.8989	185.9343	190.8332	0.5072	0.0127	207.3052
Total	**1.5579**	**1.7645**	**7.3932**	**0.0187**	**1.5847**	**0.0476**	**1.6323**	**0.4242**	**0.0466**	**0.4708**	**27.0290**	**2,791.6778**	**2,818.7067**	**1.9032**	**0.0204**	**2,872.3734**

	ROG	NOx	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	Crushing	Demolition	10/16/2021	11/12/2021	5	20	
2	Site Preparation	Site Preparation	11/13/2021	11/26/2021	5	10	
3	Grading	Grading	11/27/2021	12/24/2021	5	20	
4	Building Construction	Building Construction	12/25/2021	11/11/2022	5	230	
5	Paving	Paving	11/12/2022	12/9/2022	5	20	
6	Architectural Coating	Architectural Coating	12/10/2022	1/6/2023	5	20	

Acres of Grading (Site Preparation Phase): 35

Acres of Grading (Grading Phase): 50

Acres of Paving: 0.82

Residential Indoor: 479,925; Residential Outdoor: 159,975; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 10,272 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Crushing	Concrete/Industrial Saws	0	8.00	81	0.73
Crushing	Excavators	0	8.00	158	0.38
Crushing	Generator Sets	1	8.00	1050	0.74
Crushing	Rubber Tired Dozers	0	8.00	247	0.40
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
Grading	Crawler Tractors	3	8.00	212	0.43
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
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
Crushing	1	3.00	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
Grading	6	15.00	0.00	3,750.00	14.70	6.90	23.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	243.00	53.00	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	49.00	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 Crushing - 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	0.0302	0.4621	0.1453	6.9000e-004		9.5900e-003	9.5900e-003		9.5900e-003	9.5900e-003	0.0000	70.6511	70.6511	2.3600e-003	0.0000	70.7101
Total	**0.0302**	**0.4621**	**0.1453**	**6.9000e-004**		**9.5900e-003**	**9.5900e-003**		**9.5900e-003**	**9.5900e-003**	**0.0000**	**70.6511**	**70.6511**	**2.3600e-003**	**0.0000**	**70.7101**

3.2 Crushing - 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	1.3000e-004	9.0000e-005	9.4000e-004	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2667	0.2667	1.0000e-005	0.0000	0.2668
Total	**1.3000e-004**	**9.0000e-005**	**9.4000e-004**	**0.0000**	**3.3000e-004**	**0.0000**	**3.3000e-004**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.2667**	**0.2667**	**1.0000e-005**	**0.0000**	**0.2668**

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	0.0302	0.4621	0.1453	6.9000e-004		9.5900e-003	9.5900e-003		9.5900e-003	9.5900e-003	0.0000	70.6510	70.6510	2.3600e-003	0.0000	70.7100
Total	**0.0302**	**0.4621**	**0.1453**	**6.9000e-004**		**9.5900e-003**	**9.5900e-003**		**9.5900e-003**	**9.5900e-003**	**0.0000**	**70.6510**	**70.6510**	**2.3600e-003**	**0.0000**	**70.7100**

3.2 Crushing - 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	1.3000e-004	9.0000e-005	9.4000e-004	0.0000	3.3000e-004	0.0000	3.3000e-004	9.0000e-005	0.0000	9.0000e-005	0.0000	0.2667	0.2667	1.0000e-005	0.0000	0.2668
Total	**1.3000e-004**	**9.0000e-005**	**9.4000e-004**	**0.0000**	**3.3000e-004**	**0.0000**	**3.3000e-004**	**9.0000e-005**	**0.0000**	**9.0000e-005**	**0.0000**	**0.2667**	**0.2667**	**1.0000e-005**	**0.0000**	**0.2668**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1089	0.0000	0.1089	0.0517	0.0000	0.0517	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0267	0.3039	0.1093	2.8000e-004		0.0132	0.0132		0.0122	0.0122	0.0000	25.0542	25.0542	8.1000e-003	0.0000	25.2568
Total	**0.0267**	**0.3039**	**0.1093**	**2.8000e-004**	**0.1089**	**0.0132**	**0.1221**	**0.0517**	**0.0122**	**0.0638**	**0.0000**	**25.0542**	**25.0542**	**8.1000e-003**	**0.0000**	**25.2568**

3.3 Site Preparation - 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	3.9000e-004	2.6000e-004	2.8300e-003	1.0000e-005	9.9000e-004	1.0000e-005	1.0000e-003	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.8000	0.8000	2.0000e-005	0.0000	0.8004
Total	**3.9000e-004**	**2.6000e-004**	**2.8300e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**1.0000e-003**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.8000**	**0.8000**	**2.0000e-005**	**0.0000**	**0.8004**

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					0.1089	0.0000	0.1089	0.0517	0.0000	0.0517	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0267	0.3039	0.1093	2.8000e-004		0.0132	0.0132		0.0122	0.0122	0.0000	25.0542	25.0542	8.1000e-003	0.0000	25.2567
Total	**0.0267**	**0.3039**	**0.1093**	**2.8000e-004**	**0.1089**	**0.0132**	**0.1221**	**0.0517**	**0.0122**	**0.0638**	**0.0000**	**25.0542**	**25.0542**	**8.1000e-003**	**0.0000**	**25.2567**

3.3 Site Preparation - 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	3.9000e-004	2.6000e-004	2.8300e-003	1.0000e-005	9.9000e-004	1.0000e-005	1.0000e-003	2.6000e-004	1.0000e-005	2.7000e-004	0.0000	0.8000	0.8000	2.0000e-005	0.0000	0.8004
Total	**3.9000e-004**	**2.6000e-004**	**2.8300e-003**	**1.0000e-005**	**9.9000e-004**	**1.0000e-005**	**1.0000e-003**	**2.6000e-004**	**1.0000e-005**	**2.7000e-004**	**0.0000**	**0.8000**	**0.8000**	**2.0000e-005**	**0.0000**	**0.8004**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0886	0.0000	0.0886	0.0363	0.0000	0.0363	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0338	0.3995	0.1638	4.4000e-004		0.0161	0.0161		0.0148	0.0148	0.0000	38.5582	38.5582	0.0125	0.0000	38.8700
Total	**0.0338**	**0.3995**	**0.1638**	**4.4000e-004**	**0.0886**	**0.0161**	**0.1047**	**0.0363**	**0.0148**	**0.0511**	**0.0000**	**38.5582**	**38.5582**	**0.0125**	**0.0000**	**38.8700**

3.4 Grading - 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	0.0102	0.4500	0.0631	1.5700e-003	0.0372	1.4300e-003	0.0386	0.0102	1.3600e-003	0.0116	0.0000	150.9765	150.9765	8.5800e-003	0.0000	151.1911
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	6.4000e-004	4.3000e-004	4.7200e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3333	1.3333	3.0000e-005	0.0000	1.3341
Total	**0.0108**	**0.4504**	**0.0678**	**1.5800e-003**	**0.0388**	**1.4400e-003**	**0.0403**	**0.0106**	**1.3700e-003**	**0.0120**	**0.0000**	**152.3097**	**152.3097**	**8.6100e-003**	**0.0000**	**152.5251**

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					0.0886	0.0000	0.0886	0.0363	0.0000	0.0363	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0338	0.3995	0.1638	4.4000e-004		0.0161	0.0161		0.0148	0.0148	0.0000	38.5582	38.5582	0.0125	0.0000	38.8699
Total	**0.0338**	**0.3995**	**0.1638**	**4.4000e-004**	**0.0886**	**0.0161**	**0.1047**	**0.0363**	**0.0148**	**0.0511**	**0.0000**	**38.5582**	**38.5582**	**0.0125**	**0.0000**	**38.8699**

3.4 Grading - 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	0.0102	0.4500	0.0631	1.5700e-003	0.0372	1.4300e-003	0.0386	0.0102	1.3600e-003	0.0116	0.0000	150.9765	150.9765	8.5800e-003	0.0000	151.1911
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	6.4000e-004	4.3000e-004	4.7200e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.3333	1.3333	3.0000e-005	0.0000	1.3341
Total	**0.0108**	**0.4504**	**0.0678**	**1.5800e-003**	**0.0388**	**1.4400e-003**	**0.0403**	**0.0106**	**1.3700e-003**	**0.0120**	**0.0000**	**152.3097**	**152.3097**	**8.6100e-003**	**0.0000**	**152.5251**

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	7.7800e-003	0.0849	0.0455	1.1000e-004		3.6900e-003	3.6900e-003		3.4400e-003	3.4400e-003	0.0000	9.3314	9.3314	2.5400e-003	0.0000	9.3949
Total	**7.7800e-003**	**0.0849**	**0.0455**	**1.1000e-004**		**3.6900e-003**	**3.6900e-003**		**3.4400e-003**	**3.4400e-003**	**0.0000**	**9.3314**	**9.3314**	**2.5400e-003**	**0.0000**	**9.3949**

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	3.2000e-004	0.0124	2.3800e-003	3.0000e-005	8.4000e-004	2.0000e-005	8.6000e-004	2.4000e-004	2.0000e-005	2.6000e-004	0.0000	3.2326	3.2326	2.5000e-004	0.0000	3.2388
Worker	2.6000e-003	1.7600e-003	0.0191	6.0000e-005	6.6800e-003	4.0000e-005	6.7200e-003	1.7700e-003	4.0000e-005	1.8100e-003	0.0000	5.3997	5.3997	1.3000e-004	0.0000	5.4029
Total	**2.9200e-003**	**0.0141**	**0.0215**	**9.0000e-005**	**7.5200e-003**	**6.0000e-005**	**7.5800e-003**	**2.0100e-003**	**6.0000e-005**	**2.0700e-003**	**0.0000**	**8.6324**	**8.6324**	**3.8000e-004**	**0.0000**	**8.6417**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	7.7800e-003	0.0849	0.0455	1.1000e-004		3.6900e-003	3.6900e-003		3.4400e-003	3.4400e-003	0.0000	9.3314	9.3314	2.5400e-003	0.0000	9.3949
Total	**7.7800e-003**	**0.0849**	**0.0455**	**1.1000e-004**		**3.6900e-003**	**3.6900e-003**		**3.4400e-003**	**3.4400e-003**	**0.0000**	**9.3314**	**9.3314**	**2.5400e-003**	**0.0000**	**9.3949**

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	3.2000e-004	0.0124	2.3800e-003	3.0000e-005	8.4000e-004	2.0000e-005	8.6000e-004	2.4000e-004	2.0000e-005	2.6000e-004	0.0000	3.2326	3.2326	2.5000e-004	0.0000	3.2388
Worker	2.6000e-003	1.7600e-003	0.0191	6.0000e-005	6.6800e-003	4.0000e-005	6.7200e-003	1.7700e-003	4.0000e-005	1.8100e-003	0.0000	5.3997	5.3997	1.3000e-004	0.0000	5.4029
Total	**2.9200e-003**	**0.0141**	**0.0215**	**9.0000e-005**	**7.5200e-003**	**6.0000e-005**	**7.5800e-003**	**2.0100e-003**	**6.0000e-005**	**2.0700e-003**	**0.0000**	**8.6324**	**8.6324**	**3.8000e-004**	**0.0000**	**8.6417**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.3146	3.3484	1.9879	4.8400e-003		0.1434	0.1434		0.1338	0.1338	0.0000	419.5139	419.5139	0.1138	0.0000	422.3594
Total	**0.3146**	**3.3484**	**1.9879**	**4.8400e-003**		**0.1434**	**0.1434**		**0.1338**	**0.1338**	**0.0000**	**419.5139**	**419.5139**	**0.1138**	**0.0000**	**422.3594**

3.5 Building Construction - 2022

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	0.0133	0.5238	0.0996	1.5100e-003	0.0377	8.9000e-004	0.0386	0.0109	8.6000e-004	0.0117	0.0000	144.2177	144.2177	0.0105	0.0000	144.4805
Worker	0.1098	0.0711	0.7928	2.5900e-003	0.3005	1.7500e-003	0.3022	0.0798	1.6100e-003	0.0814	0.0000	234.1214	234.1214	5.0900e-003	0.0000	234.2486
Total	**0.1231**	**0.5948**	**0.8924**	**4.1000e-003**	**0.3381**	**2.6400e-003**	**0.3408**	**0.0907**	**2.4700e-003**	**0.0931**	**0.0000**	**378.3391**	**378.3391**	**0.0156**	**0.0000**	**378.7291**

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	0.3146	3.3484	1.9879	4.8400e-003		0.1434	0.1434		0.1338	0.1338	0.0000	419.5134	419.5134	0.1138	0.0000	422.3589
Total	**0.3146**	**3.3484**	**1.9879**	**4.8400e-003**		**0.1434**	**0.1434**		**0.1338**	**0.1338**	**0.0000**	**419.5134**	**419.5134**	**0.1138**	**0.0000**	**422.3589**

3.5 Building Construction - 2022

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	0.0133	0.5238	0.0996	1.5100e-003	0.0377	8.9000e-004	0.0386	0.0109	8.6000e-004	0.0117	0.0000	144.2177	144.2177	0.0105	0.0000	144.4805
Worker	0.1098	0.0711	0.7928	2.5900e-003	0.3005	1.7500e-003	0.3022	0.0798	1.6100e-003	0.0814	0.0000	234.1214	234.1214	5.0900e-003	0.0000	234.2486
Total	**0.1231**	**0.5948**	**0.8924**	**4.1000e-003**	**0.3381**	**2.6400e-003**	**0.3408**	**0.0907**	**2.4700e-003**	**0.0931**	**0.0000**	**378.3391**	**378.3391**	**0.0156**	**0.0000**	**378.7291**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0110	0.1113	0.1458	2.3000e-004		5.6800e-003	5.6800e-003		5.2200e-003	5.2200e-003	0.0000	20.0276	20.0276	6.4800e-003	0.0000	20.1895
Paving	1.0700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0121**	**0.1113**	**0.1458**	**2.3000e-004**		**5.6800e-003**	**5.6800e-003**		**5.2200e-003**	**5.2200e-003**	**0.0000**	**20.0276**	**20.0276**	**6.4800e-003**	**0.0000**	**20.1895**

3.6 Paving - 2022

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	6.0000e-004	3.9000e-004	4.3500e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.2846	1.2846	3.0000e-005	0.0000	1.2853
Total	**6.0000e-004**	**3.9000e-004**	**4.3500e-003**	**1.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.2846**	**1.2846**	**3.0000e-005**	**0.0000**	**1.2853**

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	0.0110	0.1113	0.1458	2.3000e-004		5.6800e-003	5.6800e-003		5.2200e-003	5.2200e-003	0.0000	20.0275	20.0275	6.4800e-003	0.0000	20.1895
Paving	1.0700e-003					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0121**	**0.1113**	**0.1458**	**2.3000e-004**		**5.6800e-003**	**5.6800e-003**		**5.2200e-003**	**5.2200e-003**	**0.0000**	**20.0275**	**20.0275**	**6.4800e-003**	**0.0000**	**20.1895**

3.6 Paving - 2022

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	6.0000e-004	3.9000e-004	4.3500e-003	1.0000e-005	1.6500e-003	1.0000e-005	1.6600e-003	4.4000e-004	1.0000e-005	4.5000e-004	0.0000	1.2846	1.2846	3.0000e-005	0.0000	1.2853
Total	**6.0000e-004**	**3.9000e-004**	**4.3500e-003**	**1.0000e-005**	**1.6500e-003**	**1.0000e-005**	**1.6600e-003**	**4.4000e-004**	**1.0000e-005**	**4.5000e-004**	**0.0000**	**1.2846**	**1.2846**	**3.0000e-005**	**0.0000**	**1.2853**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.5740					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0500e-003	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	**0.5760**	**0.0141**	**0.0181**	**3.0000e-005**		**8.2000e-004**	**8.2000e-004**		**8.2000e-004**	**8.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.7000e-004**	**0.0000**	**2.5574**

3.7 Architectural Coating - 2022

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	1.4800e-003	9.6000e-004	0.0107	3.0000e-005	4.0400e-003	2.0000e-005	4.0600e-003	1.0700e-003	2.0000e-005	1.0900e-003	0.0000	3.1473	3.1473	7.0000e-005	0.0000	3.1490
Total	**1.4800e-003**	**9.6000e-004**	**0.0107**	**3.0000e-005**	**4.0400e-003**	**2.0000e-005**	**4.0600e-003**	**1.0700e-003**	**2.0000e-005**	**1.0900e-003**	**0.0000**	**3.1473**	**3.1473**	**7.0000e-005**	**0.0000**	**3.1490**

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	0.5740					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	2.0500e-003	0.0141	0.0181	3.0000e-005		8.2000e-004	8.2000e-004		8.2000e-004	8.2000e-004	0.0000	2.5533	2.5533	1.7000e-004	0.0000	2.5574
Total	**0.5760**	**0.0141**	**0.0181**	**3.0000e-005**		**8.2000e-004**	**8.2000e-004**		**8.2000e-004**	**8.2000e-004**	**0.0000**	**2.5533**	**2.5533**	**1.7000e-004**	**0.0000**	**2.5574**

3.7 Architectural Coating - 2022

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	1.4800e-003	9.6000e-004	0.0107	3.0000e-005	4.0400e-003	2.0000e-005	4.0600e-003	1.0700e-003	2.0000e-005	1.0900e-003	0.0000	3.1473	3.1473	7.0000e-005	0.0000	3.1490
Total	**1.4800e-003**	**9.6000e-004**	**0.0107**	**3.0000e-005**	**4.0400e-003**	**2.0000e-005**	**4.0600e-003**	**1.0700e-003**	**2.0000e-005**	**1.0900e-003**	**0.0000**	**3.1473**	**3.1473**	**7.0000e-005**	**0.0000**	**3.1490**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	0.1913					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.4000e-004	4.3400e-003	6.0400e-003	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	0.8511	0.8511	5.0000e-005	0.0000	0.8524
Total	**0.1920**	**4.3400e-003**	**6.0400e-003**	**1.0000e-005**		**2.4000e-004**	**2.4000e-004**		**2.4000e-004**	**2.4000e-004**	**0.0000**	**0.8511**	**0.8511**	**5.0000e-005**	**0.0000**	**0.8524**

3.7 Architectural Coating - 2023

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	4.6000e-004	2.9000e-004	3.2700e-003	1.0000e-005	1.3500e-003	1.0000e-005	1.3500e-003	3.6000e-004	1.0000e-005	3.6000e-004	0.0000	1.0093	1.0093	2.0000e-005	0.0000	1.0098
Total	**4.6000e-004**	**2.9000e-004**	**3.2700e-003**	**1.0000e-005**	**1.3500e-003**	**1.0000e-005**	**1.3500e-003**	**3.6000e-004**	**1.0000e-005**	**3.6000e-004**	**0.0000**	**1.0093**	**1.0093**	**2.0000e-005**	**0.0000**	**1.0098**

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	0.1913					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	6.4000e-004	4.3400e-003	6.0400e-003	1.0000e-005		2.4000e-004	2.4000e-004		2.4000e-004	2.4000e-004	0.0000	0.8511	0.8511	5.0000e-005	0.0000	0.8524
Total	**0.1920**	**4.3400e-003**	**6.0400e-003**	**1.0000e-005**		**2.4000e-004**	**2.4000e-004**		**2.4000e-004**	**2.4000e-004**	**0.0000**	**0.8511**	**0.8511**	**5.0000e-005**	**0.0000**	**0.8524**

3.7 Architectural Coating - 2023

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	4.6000e-004	2.9000e-004	3.2700e-003	1.0000e-005	1.3500e-003	1.0000e-005	1.3500e-003	3.6000e-004	1.0000e-005	3.6000e-004	0.0000	1.0093	1.0093	2.0000e-005	0.0000	1.0098
Total	**4.6000e-004**	**2.9000e-004**	**3.2700e-003**	**1.0000e-005**	**1.3500e-003**	**1.0000e-005**	**1.3500e-003**	**3.6000e-004**	**1.0000e-005**	**3.6000e-004**	**0.0000**	**1.0093**	**1.0093**	**2.0000e-005**	**0.0000**	**1.0098**

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	0.5148	1.5229	4.8523	0.0172	1.5847	0.0168	1.6015	0.4242	0.0158	0.4400	0.0000	1,654.4361	1,654.4361	0.0642	0.0000	1,656.0420
Unmitigated	0.5148	1.5229	4.8523	0.0172	1.5847	0.0168	1.6015	0.4242	0.0158	0.4400	0.0000	1,654.4361	1,654.4361	0.0642	0.0000	1,656.0420

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	549.75	610.50	471.00	1,642,400	1,642,400
Apartments Mid Rise	881.28	795.42	662.58	2,514,638	2,514,638
Parking Lot	0.00	0.00	0.00		
Total	1,431.03	1,405.92	1,133.58	4,157,039	4,157,039

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	11.50	5.90	8.70	40.20	19.20	40.60	86	11	3
Apartments Mid Rise	11.50	5.90	8.70	40.20	19.20	40.60	86	11	3
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Apartments Mid Rise	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Parking Lot	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898

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	700.1644	700.1644	0.0153	3.1700e-003	701.4916
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	700.1644	700.1644	0.0153	3.1700e-003	701.4916
NaturalGas Mitigated	0.0192	0.1643	0.0699	1.0500e-003		0.0133	0.0133		0.0133	0.0133	0.0000	190.2275	190.2275	3.6500e-003	3.4900e-003	191.3579
NaturalGas Unmitigated	0.0192	0.1643	0.0699	1.0500e-003		0.0133	0.0133		0.0133	0.0133	0.0000	190.2275	190.2275	3.6500e-003	3.4900e-003	191.3579

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	1.16809e+006	6.3000e-003	0.0538	0.0229	3.4000e-004		4.3500e-003	4.3500e-003		4.3500e-003	4.3500e-003	0.0000	62.3336	62.3336	1.1900e-003	1.1400e-003	62.7040
Apartments Mid Rise	2.39664e+006	0.0129	0.1104	0.0470	7.0000e-004		8.9300e-003	8.9300e-003		8.9300e-003	8.9300e-003	0.0000	127.8939	127.8939	2.4500e-003	2.3400e-003	128.6539
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0192**	**0.1643**	**0.0699**	**1.0400e-003**		**0.0133**	**0.0133**		**0.0133**	**0.0133**	**0.0000**	**190.2275**	**190.2275**	**3.6400e-003**	**3.4800e-003**	**191.3579**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	1.16809e+006	6.3000e-003	0.0538	0.0229	3.4000e-004		4.3500e-003	4.3500e-003		4.3500e-003	4.3500e-003	0.0000	62.3336	62.3336	1.1900e-003	1.1400e-003	62.7040
Apartments Mid Rise	2.39664e+006	0.0129	0.1104	0.0470	7.0000e-004		8.9300e-003	8.9300e-003		8.9300e-003	8.9300e-003	0.0000	127.8939	127.8939	2.4500e-003	2.3400e-003	128.6539
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.0192**	**0.1643**	**0.0699**	**1.0400e-003**		**0.0133**	**0.0133**		**0.0133**	**0.0133**	**0.0000**	**190.2275**	**190.2275**	**3.6400e-003**	**3.4800e-003**	**191.3579**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	364520	219.1873	4.7900e-003	9.9000e-004	219.6028
Apartments Mid Rise	739969	444.9469	9.7300e-003	2.0100e-003	445.7903
Parking Lot	59920	36.0302	7.9000e-004	1.6000e-004	36.0985
Total		**700.1644**	**0.0153**	**3.1600e-003**	**701.4916**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	364520	219.1873	4.7900e-003	9.9000e-004	219.6028
Apartments Mid Rise	739969	444.9469	9.7300e-003	2.0100e-003	445.7903
Parking Lot	59920	36.0302	7.9000e-004	1.6000e-004	36.0985
Total		**700.1644**	**0.0153**	**3.1600e-003**	**701.4916**

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	1.0239	0.0774	2.4710	4.4000e-004		0.0175	0.0175		0.0175	0.0175	0.0000	60.9155	60.9155	4.9600e-003	1.0400e-003	61.3504
Unmitigated	1.0239	0.0774	2.4710	4.4000e-004		0.0175	0.0175		0.0175	0.0175	0.0000	60.9155	60.9155	4.9600e-003	1.0400e-003	61.3504

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	0.0765					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.8675					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.7500e-003	0.0491	0.0209	3.1000e-004		3.9700e-003	3.9700e-003		3.9700e-003	3.9700e-003	0.0000	56.9125	56.9125	1.0900e-003	1.0400e-003	57.2507
Landscaping	0.0742	0.0282	2.4501	1.3000e-004		0.0136	0.0136		0.0136	0.0136	0.0000	4.0030	4.0030	3.8700e-003	0.0000	4.0997
Total	**1.0239**	**0.0774**	**2.4710**	**4.4000e-004**		**0.0175**	**0.0175**		**0.0175**	**0.0175**	**0.0000**	**60.9155**	**60.9155**	**4.9600e-003**	**1.0400e-003**	**61.3504**

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	0.0765					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.8675					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	5.7500e-003	0.0491	0.0209	3.1000e-004		3.9700e-003	3.9700e-003		3.9700e-003	3.9700e-003	0.0000	56.9125	56.9125	1.0900e-003	1.0400e-003	57.2507
Landscaping	0.0742	0.0282	2.4501	1.3000e-004		0.0136	0.0136		0.0136	0.0136	0.0000	4.0030	4.0030	3.8700e-003	0.0000	4.0997
Total	**1.0239**	**0.0774**	**2.4710**	**4.4000e-004**		**0.0175**	**0.0175**		**0.0175**	**0.0175**	**0.0000**	**60.9155**	**60.9155**	**4.9600e-003**	**1.0400e-003**	**61.3504**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	190.8332	0.5072	0.0127	207.3052
Unmitigated	190.8332	0.5072	0.0127	207.3052

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	4.69855 / 3.09065	60.3903	0.1805	4.0300e-003	65.6029
Apartments Mid Rise	10.555 / 6.65421	130.4430	0.3467	8.7000e-003	141.7023
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		190.8332	0.5072	0.0127	207.3052

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	4.88555 / 3.08055	60.3903	0.1606	4.0300e-003	65.6029
Apartments Mid Rise	10.555 / 6.65421	130.4430	0.3467	8.7000e-003	141.7023
Parking Lot	0 / 0	0.0000	0.0000	0.0000	0.0000
Total		190.8332	0.5072	0.0127	207.3052

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	22.1301	1.3079	0.0000	54.8253
Unmitigated	22.1301	1.3079	0.0000	54.8253

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	34.5	7.0232	0.4139	0.0000	17.3501
Apartments Mid Rise	74.52	15.1269	0.8940	0.0000	37.4752
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		22.1301	1.3079	0.0000	54.8253

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	34.5	7.0032	0.4139	0.0000	17.3501
Apartments Mid Rise	74.52	15.1269	0.8940	0.0000	37.4762
Parking Lot	0	0.0000	0.0000	0.0000	0.0000
Total		22.1301	1.3079	0.0000	54.8263

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

12585 Crestview Apartments
Riverside-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	428.00	Space	0.82	171,200.00	0
Apartments Low Rise	75.00	Dwelling Unit	4.89	75,000.00	239
Apartments Mid Rise	162.00	Dwelling Unit	4.26	162,000.00	515

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2023
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1326.05	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -
Land Use - Consistent with DEIR's model.
Construction Phase - See SWAPE comment about phase lengths.
Off-road Equipment - Consistent with DEIR's model.
Off-road Equipment - Consistent with DEIR's model.
Off-road Equipment - Consistent with DEIR's model.
Off-road Equipment - Consistent with DEIR's model.
Off-road Equipment - Consistent with DEIR's model.
Off-road Equipment -
Off-road Equipment - Consistent with DEIR's model.
Trips and VMT - Consistent with DEIR's model.
Grading - Consistent with DEIR's model.
Vehicle Trips - Consistent with DEIR's model.
Vehicle Emission Factors - Consistent with DEIR's model.
Vehicle Emission Factors - Consistent with DEIR's model.
Vehicle Emission Factors - Consistent with DEIR's model.
Woodstoves - Consistent with DEIR's model.
Energy Use - See SWAPE comment about energy use values.
Construction Off-road Equipment Mitigation - Consistent with DEIR's model.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	PhaseEndDate	7/19/2022	1/6/2023
tblConstructionPhase	PhaseEndDate	5/24/2022	11/11/2022
tblConstructionPhase	PhaseEndDate	5/25/2021	11/12/2021
tblConstructionPhase	PhaseEndDate	7/6/2021	12/24/2021
tblConstructionPhase	PhaseEndDate	6/21/2022	12/9/2022
tblConstructionPhase	PhaseEndDate	6/8/2021	11/26/2021

tblConstructionPhase	PhaseStartDate	6/22/2022	12/10/2022
tblConstructionPhase	PhaseStartDate	7/7/2021	12/25/2021
tblConstructionPhase	PhaseStartDate	4/28/2021	10/16/2021
tblConstructionPhase	PhaseStartDate	6/9/2021	11/27/2021
tblConstructionPhase	PhaseStartDate	5/25/2022	11/12/2022
tblConstructionPhase	PhaseStartDate	5/26/2021	11/13/2021
tblFireplaces	NumberGas	63.75	75.00
tblFireplaces	NumberGas	137.70	162.00
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tblFireplaces	NumberNoFireplace	16.20	0.00
tblFireplaces	NumberWood	3.75	0.00
tblFireplaces	NumberWood	8.10	0.00
tblGrading	AcresOfGrading	40.00	50.00
tblGrading	AcresOfGrading	20.00	35.00
tblGrading	MaterialExported	0.00	10,000.00
tblGrading	MaterialImported	0.00	20,000.00
tblLandUse	LotAcreage	3.85	0.82
tblLandUse	Population	215.00	239.00
tblLandUse	Population	463.00	515.00
tblOffRoadEquipment	HorsePower	84.00	1,050.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
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tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	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
tblTripsAndVMT	HaulingTripLength	20.00	23.00
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tblVehicleEF	HHD	2.3430e-003	9.7000e-005
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tblVehicleEF	HHD	0.08	0.05
tblVehicleEF	HHD	1.5400e-004	4.4400e-004
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tblVehicleEF	HHD	3.6000e-005	0.00
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tblVehicleEF	LDA	0.06	0.19
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tblVehicleEF	LDA	0.10	0.09
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tblVehicleEF	LDT1	2.73	2.29
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tblVehicleEF	LDT1	0.17	0.26
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tblVehicleEF	LDT1	2.0960e-003	1.7520e-003
tblVehicleEF	LDT1	3.0820e-003	2.3640e-003
tblVehicleEF	LDT1	0.18	0.16
tblVehicleEF	LDT1	0.30	0.22
tblVehicleEF	LDT1	0.12	0.11
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.18	0.73
tblVehicleEF	LDT1	0.19	0.37

tblVehicleEF	LDT1	2.9680e-003	2.9210e-003
tblVehicleEF	LDT1	7.3100e-004	6.2300e-004
tblVehicleEF	LDT1	0.18	0.16
tblVehicleEF	LDT1	0.30	0.23
tblVehicleEF	LDT1	0.12	0.11
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.18	0.74
tblVehicleEF	LDT1	0.21	0.40
tblVehicleEF	LDT1	0.01	6.4140e-003
tblVehicleEF	LDT1	0.01	0.06
tblVehicleEF	LDT1	1.43	1.45
tblVehicleEF	LDT1	2.40	1.92
tblVehicleEF	LDT1	320.93	328.53
tblVehicleEF	LDT1	68.37	64.60
tblVehicleEF	LDT1	0.11	0.09
tblVehicleEF	LDT1	0.16	0.24
tblVehicleEF	LDT1	2.2770e-003	1.9040e-003
tblVehicleEF	LDT1	3.3510e-003	2.5710e-003
tblVehicleEF	LDT1	2.0960e-003	1.7520e-003
tblVehicleEF	LDT1	3.0820e-003	2.3640e-003
tblVehicleEF	LDT1	0.36	0.30
tblVehicleEF	LDT1	0.37	0.26
tblVehicleEF	LDT1	0.24	0.22
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.18	0.72
tblVehicleEF	LDT1	0.16	0.31
tblVehicleEF	LDT1	3.2270e-003	3.1280e-003

tblVehicleEF	LDT1	7.2500e-004	6.1500e-004
tblVehicleEF	LDT1	0.36	0.30
tblVehicleEF	LDT1	0.37	0.26
tblVehicleEF	LDT1	0.24	0.22
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.18	0.72
tblVehicleEF	LDT1	0.18	0.34
tblVehicleEF	LDT1	8.9360e-003	5.6560e-003
tblVehicleEF	LDT1	0.01	0.07
tblVehicleEF	LDT1	1.11	1.19
tblVehicleEF	LDT1	2.78	2.28
tblVehicleEF	LDT1	287.77	303.10
tblVehicleEF	LDT1	68.37	65.36
tblVehicleEF	LDT1	0.11	0.10
tblVehicleEF	LDT1	0.17	0.26
tblVehicleEF	LDT1	2.2770e-003	1.9040e-003
tblVehicleEF	LDT1	3.3510e-003	2.5710e-003
tblVehicleEF	LDT1	2.0960e-003	1.7520e-003
tblVehicleEF	LDT1	3.0820e-003	2.3640e-003
tblVehicleEF	LDT1	0.16	0.16
tblVehicleEF	LDT1	0.33	0.26
tblVehicleEF	LDT1	0.10	0.11
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.21	0.86
tblVehicleEF	LDT1	0.19	0.36
tblVehicleEF	LDT1	2.8910e-003	2.8860e-003
tblVehicleEF	LDT1	7.3200e-004	6.2200e-004

tblVehicleEF	LDT1	0.16	0.16
tblVehicleEF	LDT1	0.33	0.26
tblVehicleEF	LDT1	0.10	0.11
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.21	0.86
tblVehicleEF	LDT1	0.21	0.40
tblVehicleEF	LDT2	4.7540e-003	3.1840e-003
tblVehicleEF	LDT2	5.7630e-003	0.06
tblVehicleEF	LDT2	0.68	0.79
tblVehicleEF	LDT2	1.27	2.60
tblVehicleEF	LDT2	330.23	322.49
tblVehicleEF	LDT2	76.02	69.04
tblVehicleEF	LDT2	0.06	0.06
tblVehicleEF	LDT2	0.10	0.26
tblVehicleEF	LDT2	1.6020e-003	1.3550e-003
tblVehicleEF	LDT2	2.3660e-003	1.8060e-003
tblVehicleEF	LDT2	1.4730e-003	1.2480e-003
tblVehicleEF	LDT2	2.1760e-003	1.6600e-003
tblVehicleEF	LDT2	0.06	0.08
tblVehicleEF	LDT2	0.10	0.12
tblVehicleEF	LDT2	0.05	0.07
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.06	0.39
tblVehicleEF	LDT2	0.08	0.28
tblVehicleEF	LDT2	3.3070e-003	3.0700e-003
tblVehicleEF	LDT2	7.8100e-004	6.5700e-004
tblVehicleEF	LDT2	0.06	0.08

tblVehicleEF	LDT2	0.10	0.12
tblVehicleEF	LDT2	0.05	0.07
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.39
tblVehicleEF	LDT2	0.09	0.31
tblVehicleEF	LDT2	5.3890e-003	3.5750e-003
tblVehicleEF	LDT2	5.0030e-003	0.05
tblVehicleEF	LDT2	0.83	0.95
tblVehicleEF	LDT2	1.13	2.17
tblVehicleEF	LDT2	359.32	343.18
tblVehicleEF	LDT2	76.02	68.20
tblVehicleEF	LDT2	0.06	0.06
tblVehicleEF	LDT2	0.10	0.24
tblVehicleEF	LDT2	1.6020e-003	1.3550e-003
tblVehicleEF	LDT2	2.3660e-003	1.8060e-003
tblVehicleEF	LDT2	1.4730e-003	1.2480e-003
tblVehicleEF	LDT2	2.1760e-003	1.6600e-003
tblVehicleEF	LDT2	0.12	0.15
tblVehicleEF	LDT2	0.12	0.14
tblVehicleEF	LDT2	0.10	0.13
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.06	0.39
tblVehicleEF	LDT2	0.07	0.24
tblVehicleEF	LDT2	3.6000e-003	3.2670e-003
tblVehicleEF	LDT2	7.7900e-004	6.4900e-004
tblVehicleEF	LDT2	0.12	0.15
tblVehicleEF	LDT2	0.12	0.14

tblVehicleEF	LDT2	0.10	0.13
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.39
tblVehicleEF	LDT2	0.07	0.27
tblVehicleEF	LDT2	4.5710e-003	3.1320e-003
tblVehicleEF	LDT2	5.9350e-003	0.06
tblVehicleEF	LDT2	0.63	0.77
tblVehicleEF	LDT2	1.30	2.58
tblVehicleEF	LDT2	321.50	318.99
tblVehicleEF	LDT2	76.02	69.01
tblVehicleEF	LDT2	0.06	0.06
tblVehicleEF	LDT2	0.10	0.25
tblVehicleEF	LDT2	1.6020e-003	1.3550e-003
tblVehicleEF	LDT2	2.3660e-003	1.8060e-003
tblVehicleEF	LDT2	1.4730e-003	1.2480e-003
tblVehicleEF	LDT2	2.1760e-003	1.6600e-003
tblVehicleEF	LDT2	0.05	0.08
tblVehicleEF	LDT2	0.11	0.13
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.07	0.46
tblVehicleEF	LDT2	0.08	0.28
tblVehicleEF	LDT2	3.2190e-003	3.0370e-003
tblVehicleEF	LDT2	7.8200e-004	6.5700e-004
tblVehicleEF	LDT2	0.05	0.08
tblVehicleEF	LDT2	0.11	0.13
tblVehicleEF	LDT2	0.04	0.07

tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.46
tblVehicleEF	LDT2	0.09	0.31
tblVehicleEF	LHD1	4.9950e-003	4.5410e-003
tblVehicleEF	LHD1	8.5970e-003	4.4200e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	0.17
tblVehicleEF	LHD1	0.81	0.60
tblVehicleEF	LHD1	2.14	0.89
tblVehicleEF	LHD1	9.25	9.36
tblVehicleEF	LHD1	596.36	619.96
tblVehicleEF	LHD1	29.33	9.99
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	1.91	1.39
tblVehicleEF	LHD1	0.93	0.28
tblVehicleEF	LHD1	9.6600e-004	1.0130e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	7.9000e-004	2.1100e-004
tblVehicleEF	LHD1	9.2400e-004	9.6900e-004
tblVehicleEF	LHD1	2.5590e-003	2.5170e-003
tblVehicleEF	LHD1	0.01	9.8330e-003
tblVehicleEF	LHD1	7.2700e-004	1.9400e-004
tblVehicleEF	LHD1	3.6750e-003	2.3920e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.8430e-003	1.2620e-003

tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.31	0.44
tblVehicleEF	LHD1	0.23	0.07
tblVehicleEF	LHD1	9.2000e-005	9.0000e-005
tblVehicleEF	LHD1	5.8420e-003	6.0260e-003
tblVehicleEF	LHD1	3.3400e-004	9.9000e-005
tblVehicleEF	LHD1	3.6750e-003	2.3920e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.8430e-003	1.2620e-003
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	0.31	0.44
tblVehicleEF	LHD1	0.25	0.07
tblVehicleEF	LHD1	4.9950e-003	4.5540e-003
tblVehicleEF	LHD1	8.7610e-003	4.4900e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	0.17
tblVehicleEF	LHD1	0.82	0.61
tblVehicleEF	LHD1	2.04	0.84
tblVehicleEF	LHD1	9.25	9.36
tblVehicleEF	LHD1	596.36	619.98
tblVehicleEF	LHD1	29.33	9.91
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	1.80	1.31
tblVehicleEF	LHD1	0.90	0.27
tblVehicleEF	LHD1	9.6600e-004	1.0130e-003
tblVehicleEF	LHD1	0.01	0.01

tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	7.9000e-004	2.1100e-004
tblVehicleEF	LHD1	9.2400e-004	9.6900e-004
tblVehicleEF	LHD1	2.5590e-003	2.5170e-003
tblVehicleEF	LHD1	0.01	9.8330e-003
tblVehicleEF	LHD1	7.2700e-004	1.9400e-004
tblVehicleEF	LHD1	6.8550e-003	4.2440e-003
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	3.4810e-003	2.4050e-003
tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.32	0.44
tblVehicleEF	LHD1	0.22	0.06
tblVehicleEF	LHD1	9.2000e-005	9.0000e-005
tblVehicleEF	LHD1	5.8420e-003	6.0270e-003
tblVehicleEF	LHD1	3.3200e-004	9.8000e-005
tblVehicleEF	LHD1	6.8550e-003	4.2440e-003
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	3.4810e-003	2.4050e-003
tblVehicleEF	LHD1	0.09	0.07
tblVehicleEF	LHD1	0.32	0.44
tblVehicleEF	LHD1	0.24	0.07
tblVehicleEF	LHD1	4.9950e-003	4.5430e-003
tblVehicleEF	LHD1	8.5850e-003	4.4280e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	0.17

tblVehicleEF	LHD1	0.81	0.60
tblVehicleEF	LHD1	2.14	0.88
tblVehicleEF	LHD1	9.25	9.36
tblVehicleEF	LHD1	596.36	619.96
tblVehicleEF	LHD1	29.33	9.98
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	1.89	1.37
tblVehicleEF	LHD1	0.92	0.28
tblVehicleEF	LHD1	9.6600e-004	1.0130e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	7.9000e-004	2.1100e-004
tblVehicleEF	LHD1	9.2400e-004	9.6900e-004
tblVehicleEF	LHD1	2.5590e-003	2.5170e-003
tblVehicleEF	LHD1	0.01	9.8330e-003
tblVehicleEF	LHD1	7.2700e-004	1.9400e-004
tblVehicleEF	LHD1	3.2380e-003	2.4970e-003
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.6810e-003	1.3210e-003
tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.33	0.47
tblVehicleEF	LHD1	0.23	0.07
tblVehicleEF	LHD1	9.2000e-005	9.0000e-005
tblVehicleEF	LHD1	5.8420e-003	6.0260e-003
tblVehicleEF	LHD1	3.3400e-004	9.9000e-005
tblVehicleEF	LHD1	3.2380e-003	2.4970e-003

tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.6810e-003	1.3210e-003
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	0.33	0.47
tblVehicleEF	LHD1	0.25	0.07
tblVehicleEF	LHD2	3.3070e-003	2.7700e-003
tblVehicleEF	LHD2	3.5370e-003	3.2640e-003
tblVehicleEF	LHD2	6.6670e-003	7.1780e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.40	0.44
tblVehicleEF	LHD2	1.03	0.48
tblVehicleEF	LHD2	14.34	14.92
tblVehicleEF	LHD2	592.89	614.92
tblVehicleEF	LHD2	22.93	6.42
tblVehicleEF	LHD2	0.11	0.12
tblVehicleEF	LHD2	1.29	1.52
tblVehicleEF	LHD2	0.46	0.16
tblVehicleEF	LHD2	1.2850e-003	1.5130e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5700e-004	9.8000e-005
tblVehicleEF	LHD2	1.2290e-003	1.4470e-003
tblVehicleEF	LHD2	2.7020e-003	2.7370e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.2800e-004	9.1000e-005
tblVehicleEF	LHD2	1.3090e-003	1.1190e-003

tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	7.0300e-004	6.1300e-004
tblVehicleEF	LHD2	0.05	0.06
tblVehicleEF	LHD2	0.07	0.19
tblVehicleEF	LHD2	0.09	0.04
tblVehicleEF	LHD2	1.4000e-004	1.4200e-004
tblVehicleEF	LHD2	5.7620e-003	5.9160e-003
tblVehicleEF	LHD2	2.4800e-004	6.4000e-005
tblVehicleEF	LHD2	1.3090e-003	1.1190e-003
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	7.0300e-004	6.1300e-004
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.07	0.19
tblVehicleEF	LHD2	0.10	0.04
tblVehicleEF	LHD2	3.3070e-003	2.7770e-003
tblVehicleEF	LHD2	3.5730e-003	3.2860e-003
tblVehicleEF	LHD2	6.4430e-003	6.9030e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.40	0.45
tblVehicleEF	LHD2	0.98	0.45
tblVehicleEF	LHD2	14.34	14.92
tblVehicleEF	LHD2	592.89	614.93
tblVehicleEF	LHD2	22.93	6.38
tblVehicleEF	LHD2	0.11	0.12
tblVehicleEF	LHD2	1.22	1.43

tblVehicleEF	LHD2	0.45	0.15
tblVehicleEF	LHD2	1.2850e-003	1.5130e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5700e-004	9.8000e-005
tblVehicleEF	LHD2	1.2290e-003	1.4470e-003
tblVehicleEF	LHD2	2.7020e-003	2.7370e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.2800e-004	9.1000e-005
tblVehicleEF	LHD2	2.4680e-003	1.9920e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	1.3130e-003	1.1680e-003
tblVehicleEF	LHD2	0.05	0.06
tblVehicleEF	LHD2	0.07	0.20
tblVehicleEF	LHD2	0.09	0.03
tblVehicleEF	LHD2	1.4000e-004	1.4200e-004
tblVehicleEF	LHD2	5.7620e-003	5.9160e-003
tblVehicleEF	LHD2	2.4700e-004	6.3000e-005
tblVehicleEF	LHD2	2.4680e-003	1.9920e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.3130e-003	1.1680e-003
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.07	0.20
tblVehicleEF	LHD2	0.10	0.04
tblVehicleEF	LHD2	3.3070e-003	2.7710e-003

tblVehicleEF	LHD2	3.5300e-003	3.2670e-003
tblVehicleEF	LHD2	6.7050e-003	7.1290e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.40	0.44
tblVehicleEF	LHD2	1.03	0.47
tblVehicleEF	LHD2	14.34	14.92
tblVehicleEF	LHD2	592.89	614.92
tblVehicleEF	LHD2	22.93	6.42
tblVehicleEF	LHD2	0.11	0.12
tblVehicleEF	LHD2	1.28	1.49
tblVehicleEF	LHD2	0.46	0.16
tblVehicleEF	LHD2	1.2850e-003	1.5130e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5700e-004	9.8000e-005
tblVehicleEF	LHD2	1.2290e-003	1.4470e-003
tblVehicleEF	LHD2	2.7020e-003	2.7370e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.2800e-004	9.1000e-005
tblVehicleEF	LHD2	1.0230e-003	1.1350e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	5.9800e-004	6.3500e-004
tblVehicleEF	LHD2	0.05	0.06
tblVehicleEF	LHD2	0.08	0.21
tblVehicleEF	LHD2	0.09	0.03
tblVehicleEF	LHD2	1.4000e-004	1.4200e-004

tblVehicleEF	LHD2	5.7620e-003	5.9160e-003
tblVehicleEF	LHD2	2.4800e-004	6.3000e-005
tblVehicleEF	LHD2	1.0230e-003	1.1350e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	5.9800e-004	6.3500e-004
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.08	0.21
tblVehicleEF	LHD2	0.10	0.04
tblVehicleEF	MCY	0.43	0.31
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	18.81	18.85
tblVehicleEF	MCY	9.70	8.64
tblVehicleEF	MCY	166.71	207.60
tblVehicleEF	MCY	45.36	60.36
tblVehicleEF	MCY	1.12	1.13
tblVehicleEF	MCY	0.31	0.26
tblVehicleEF	MCY	1.8630e-003	1.7970e-003
tblVehicleEF	MCY	3.2830e-003	2.7750e-003
tblVehicleEF	MCY	1.7410e-003	1.6800e-003
tblVehicleEF	MCY	3.0870e-003	2.6090e-003
tblVehicleEF	MCY	1.69	1.43
tblVehicleEF	MCY	0.83	0.79
tblVehicleEF	MCY	0.92	0.76
tblVehicleEF	MCY	2.11	2.11
tblVehicleEF	MCY	0.55	1.77
tblVehicleEF	MCY	2.05	1.83

tblVehicleEF	MCY	2.0360e-003	2.0540e-003
tblVehicleEF	MCY	6.7200e-004	5.9700e-004
tblVehicleEF	MCY	1.69	1.43
tblVehicleEF	MCY	0.83	0.79
tblVehicleEF	MCY	0.92	0.76
tblVehicleEF	MCY	2.61	2.61
tblVehicleEF	MCY	0.55	1.77
tblVehicleEF	MCY	2.23	2.00
tblVehicleEF	MCY	0.42	0.31
tblVehicleEF	MCY	0.13	0.21
tblVehicleEF	MCY	19.51	18.83
tblVehicleEF	MCY	9.10	7.90
tblVehicleEF	MCY	166.71	207.41
tblVehicleEF	MCY	45.36	58.44
tblVehicleEF	MCY	0.97	0.97
tblVehicleEF	MCY	0.29	0.25
tblVehicleEF	MCY	1.8630e-003	1.7970e-003
tblVehicleEF	MCY	3.2830e-003	2.7750e-003
tblVehicleEF	MCY	1.7410e-003	1.6800e-003
tblVehicleEF	MCY	3.0870e-003	2.6090e-003
tblVehicleEF	MCY	3.35	2.75
tblVehicleEF	MCY	1.23	1.09
tblVehicleEF	MCY	2.09	1.72
tblVehicleEF	MCY	2.09	2.07
tblVehicleEF	MCY	0.55	1.74
tblVehicleEF	MCY	1.84	1.61
tblVehicleEF	MCY	2.0460e-003	2.0530e-003

tblVehicleEF	MCY	6.5600e-004	5.7800e-004
tblVehicleEF	MCY	3.35	2.75
tblVehicleEF	MCY	1.23	1.09
tblVehicleEF	MCY	2.09	1.72
tblVehicleEF	MCY	2.59	2.56
tblVehicleEF	MCY	0.55	1.74
tblVehicleEF	MCY	2.00	1.75
tblVehicleEF	MCY	0.42	0.31
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	18.37	18.30
tblVehicleEF	MCY	9.67	8.43
tblVehicleEF	MCY	166.71	206.64
tblVehicleEF	MCY	45.36	59.88
tblVehicleEF	MCY	1.12	1.09
tblVehicleEF	MCY	0.31	0.26
tblVehicleEF	MCY	1.8630e-003	1.7970e-003
tblVehicleEF	MCY	3.2830e-003	2.7750e-003
tblVehicleEF	MCY	1.7410e-003	1.6800e-003
tblVehicleEF	MCY	3.0870e-003	2.6090e-003
tblVehicleEF	MCY	1.59	1.64
tblVehicleEF	MCY	1.02	1.05
tblVehicleEF	MCY	0.73	0.76
tblVehicleEF	MCY	2.11	2.09
tblVehicleEF	MCY	0.63	2.02
tblVehicleEF	MCY	2.06	1.79
tblVehicleEF	MCY	2.0290e-003	2.0450e-003
tblVehicleEF	MCY	6.7200e-004	5.9300e-004

tblVehicleEF	MCY	1.59	1.64
tblVehicleEF	MCY	1.02	1.05
tblVehicleEF	MCY	0.73	0.76
tblVehicleEF	MCY	2.61	2.59
tblVehicleEF	MCY	0.63	2.02
tblVehicleEF	MCY	2.24	1.95
tblVehicleEF	MDV	9.8990e-003	4.1640e-003
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tblVehicleEF	MDV	1.15	0.92
tblVehicleEF	MDV	2.62	3.01
tblVehicleEF	MDV	458.82	406.42
tblVehicleEF	MDV	104.21	86.29
tblVehicleEF	MDV	0.13	0.09
tblVehicleEF	MDV	0.25	0.33
tblVehicleEF	MDV	1.6580e-003	1.4180e-003
tblVehicleEF	MDV	2.3780e-003	1.8620e-003
tblVehicleEF	MDV	1.5280e-003	1.3080e-003
tblVehicleEF	MDV	2.1870e-003	1.7120e-003
tblVehicleEF	MDV	0.11	0.10
tblVehicleEF	MDV	0.19	0.15
tblVehicleEF	MDV	0.09	0.09
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.11	0.46
tblVehicleEF	MDV	0.20	0.38
tblVehicleEF	MDV	4.5960e-003	3.8690e-003
tblVehicleEF	MDV	1.0880e-003	8.2200e-004
tblVehicleEF	MDV	0.11	0.10

tblVehicleEF	MDV	0.19	0.15
tblVehicleEF	MDV	0.09	0.09
tblVehicleEF	MDV	0.04	0.02
tblVehicleEF	MDV	0.11	0.46
tblVehicleEF	MDV	0.22	0.41
tblVehicleEF	MDV	0.01	4.6800e-003
tblVehicleEF	MDV	0.01	0.07
tblVehicleEF	MDV	1.41	1.10
tblVehicleEF	MDV	2.31	2.51
tblVehicleEF	MDV	498.05	428.48
tblVehicleEF	MDV	104.21	85.29
tblVehicleEF	MDV	0.13	0.08
tblVehicleEF	MDV	0.24	0.31
tblVehicleEF	MDV	1.6580e-003	1.4180e-003
tblVehicleEF	MDV	2.3780e-003	1.8620e-003
tblVehicleEF	MDV	1.5280e-003	1.3080e-003
tblVehicleEF	MDV	2.1870e-003	1.7120e-003
tblVehicleEF	MDV	0.21	0.19
tblVehicleEF	MDV	0.22	0.17
tblVehicleEF	MDV	0.16	0.17
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.11	0.45
tblVehicleEF	MDV	0.17	0.32
tblVehicleEF	MDV	4.9910e-003	4.0790e-003
tblVehicleEF	MDV	1.0820e-003	8.1200e-004
tblVehicleEF	MDV	0.21	0.19
tblVehicleEF	MDV	0.22	0.17

tblVehicleEF	MDV	0.16	0.17
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.45
tblVehicleEF	MDV	0.19	0.35
tblVehicleEF	MDV	9.5100e-003	4.0920e-003
tblVehicleEF	MDV	0.02	0.08
tblVehicleEF	MDV	1.08	0.89
tblVehicleEF	MDV	2.68	2.99
tblVehicleEF	MDV	447.05	402.69
tblVehicleEF	MDV	104.21	86.25
tblVehicleEF	MDV	0.13	0.08
tblVehicleEF	MDV	0.25	0.33
tblVehicleEF	MDV	1.6580e-003	1.4180e-003
tblVehicleEF	MDV	2.3780e-003	1.8620e-003
tblVehicleEF	MDV	1.5280e-003	1.3080e-003
tblVehicleEF	MDV	2.1870e-003	1.7120e-003
tblVehicleEF	MDV	0.08	0.10
tblVehicleEF	MDV	0.20	0.16
tblVehicleEF	MDV	0.08	0.09
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.13	0.52
tblVehicleEF	MDV	0.20	0.38
tblVehicleEF	MDV	4.4770e-003	3.8330e-003
tblVehicleEF	MDV	1.0890e-003	8.2100e-004
tblVehicleEF	MDV	0.08	0.10
tblVehicleEF	MDV	0.20	0.16
tblVehicleEF	MDV	0.08	0.09

tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.13	0.53
tblVehicleEF	MDV	0.22	0.41
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tblVehicleEF	MH	0.02	0.00
tblVehicleEF	MH	2.00	0.33
tblVehicleEF	MH	5.24	0.00
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tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	9.7800e-004	0.00
tblVehicleEF	MH	3.2460e-003	4.0000e-003
tblVehicleEF	MH	0.04	0.13
tblVehicleEF	MH	8.9900e-004	0.00
tblVehicleEF	MH	1.38	0.00
tblVehicleEF	MH	0.08	0.00
tblVehicleEF	MH	0.49	0.00
tblVehicleEF	MH	0.07	0.07
tblVehicleEF	MH	0.02	0.00
tblVehicleEF	MH	0.31	0.00
tblVehicleEF	MH	9.8680e-003	8.7860e-003
tblVehicleEF	MH	6.6300e-004	0.00
tblVehicleEF	MH	1.38	0.00
tblVehicleEF	MH	0.08	0.00

tblVehicleEF	MH	0.49	0.00
tblVehicleEF	MH	0.10	0.08
tblVehicleEF	MH	0.02	0.00
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tblVehicleEF	MH	0.02	3.2740e-003
tblVehicleEF	MH	0.02	0.00
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tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	9.7800e-004	0.00
tblVehicleEF	MH	3.2460e-003	4.0000e-003
tblVehicleEF	MH	0.04	0.13
tblVehicleEF	MH	8.9900e-004	0.00
tblVehicleEF	MH	2.52	0.00
tblVehicleEF	MH	0.09	0.00
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tblVehicleEF	MH	0.08	0.07
tblVehicleEF	MH	0.02	0.00
tblVehicleEF	MH	0.30	0.00
tblVehicleEF	MH	9.8690e-003	8.7860e-003
tblVehicleEF	MH	6.5700e-004	0.00
tblVehicleEF	MH	2.52	0.00

tblVehicleEF	MH	0.09	0.00
tblVehicleEF	MH	0.94	0.00
tblVehicleEF	MH	0.10	0.08
tblVehicleEF	MH	0.02	0.00
tblVehicleEF	MH	0.32	0.00
tblVehicleEF	MH	0.02	3.2740e-003
tblVehicleEF	MH	0.02	0.00
tblVehicleEF	MH	1.99	0.33
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tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	9.7800e-004	0.00
tblVehicleEF	MH	3.2460e-003	4.0000e-003
tblVehicleEF	MH	0.04	0.13
tblVehicleEF	MH	8.9900e-004	0.00
tblVehicleEF	MH	1.38	0.00
tblVehicleEF	MH	0.09	0.00
tblVehicleEF	MH	0.47	0.00
tblVehicleEF	MH	0.07	0.07
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.31	0.00
tblVehicleEF	MH	9.8680e-003	8.7860e-003
tblVehicleEF	MH	6.6300e-004	0.00

tblVehicleEF	MH	1.38	0.00
tblVehicleEF	MH	0.09	0.00
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tblVehicleEF	MH	0.10	0.08
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tblVehicleEF	MHD	1.3500e-004	4.3400e-004
tblVehicleEF	MHD	2.6660e-003	9.4670e-003
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tblVehicleEF	MHD	0.02	0.02

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tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	7.6500e-004	2.2800e-004
tblVehicleEF	MHD	0.03	0.01
tblVehicleEF	MHD	0.02	0.07
tblVehicleEF	MHD	0.34	0.04
tblVehicleEF	MHD	0.02	2.6270e-003
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tblVehicleEF	MHD	1.1400e-004	3.6900e-004

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tblVehicleEF	MHD	0.02	0.01
tblVehicleEF	MHD	1.4710e-003	4.4600e-004
tblVehicleEF	MHD	0.02	9.6090e-003
tblVehicleEF	MHD	0.02	0.07
tblVehicleEF	MHD	0.30	0.04
tblVehicleEF	MHD	1.5100e-003	6.3800e-004
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tblVehicleEF	MHD	0.21	0.12

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tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	5.9600e-004	2.3900e-004

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tblVehicleEF	MHD	0.02	0.08
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tblVehicleEF	OBUS	1.9500e-003	8.4680e-003
tblVehicleEF	OBUS	8.7100e-004	2.1800e-004
tblVehicleEF	OBUS	1.1000e-005	7.2000e-005
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tblVehicleEF	OBUS	8.0000e-004	2.0100e-004
tblVehicleEF	OBUS	2.0910e-003	2.6670e-003
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tblVehicleEF	OBUS	0.03	0.05
tblVehicleEF	OBUS	9.0600e-004	1.1770e-003
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tblVehicleEF	OBUS	1.9500e-003	8.4680e-003
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tblVehicleEF	OBUS	0.03	0.04
tblVehicleEF	OBUS	0.05	0.29
tblVehicleEF	OBUS	0.36	0.13
tblVehicleEF	OBUS	0.01	8.4630e-003
tblVehicleEF	OBUS	5.6610e-003	5.4160e-003
tblVehicleEF	OBUS	0.03	0.02
tblVehicleEF	OBUS	0.25	0.49
tblVehicleEF	OBUS	0.39	0.70
tblVehicleEF	OBUS	5.57	2.67
tblVehicleEF	OBUS	64.36	65.29
tblVehicleEF	OBUS	1,085.33	1,335.50

tblVehicleEF	OBUS	69.49	21.26
tblVehicleEF	OBUS	0.13	0.24
tblVehicleEF	OBUS	0.35	0.89
tblVehicleEF	OBUS	2.06	0.68
tblVehicleEF	OBUS	1.5000e-005	8.7000e-005
tblVehicleEF	OBUS	1.9500e-003	8.4680e-003
tblVehicleEF	OBUS	8.7100e-004	2.1800e-004
tblVehicleEF	OBUS	1.4000e-005	8.3000e-005
tblVehicleEF	OBUS	1.8490e-003	8.0880e-003
tblVehicleEF	OBUS	8.0000e-004	2.0100e-004
tblVehicleEF	OBUS	1.7990e-003	2.7830e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.03	0.04
tblVehicleEF	OBUS	8.3400e-004	1.2520e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.05	0.31
tblVehicleEF	OBUS	0.35	0.13
tblVehicleEF	OBUS	6.2600e-004	6.2400e-004
tblVehicleEF	OBUS	0.01	0.01
tblVehicleEF	OBUS	7.9300e-004	2.1000e-004
tblVehicleEF	OBUS	1.7990e-003	2.7830e-003
tblVehicleEF	OBUS	0.02	0.03
tblVehicleEF	OBUS	0.05	0.06
tblVehicleEF	OBUS	8.3400e-004	1.2520e-003
tblVehicleEF	OBUS	0.03	0.04
tblVehicleEF	OBUS	0.05	0.31
tblVehicleEF	OBUS	0.38	0.14

tblVehicleEF	SBUS	0.82	0.09
tblVehicleEF	SBUS	9.5650e-003	6.6030e-003
tblVehicleEF	SBUS	0.06	8.0990e-003
tblVehicleEF	SBUS	7.84	3.43
tblVehicleEF	SBUS	0.57	0.55
tblVehicleEF	SBUS	6.44	1.08
tblVehicleEF	SBUS	1,128.57	369.74
tblVehicleEF	SBUS	1,093.03	1,096.55
tblVehicleEF	SBUS	55.12	6.92
tblVehicleEF	SBUS	8.81	3.32
tblVehicleEF	SBUS	3.97	4.42
tblVehicleEF	SBUS	12.20	0.78
tblVehicleEF	SBUS	8.4250e-003	3.3040e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	5.0000e-004	4.8000e-005
tblVehicleEF	SBUS	8.0610e-003	3.1610e-003
tblVehicleEF	SBUS	2.6870e-003	2.6500e-003
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	4.6000e-004	4.4000e-005
tblVehicleEF	SBUS	5.0680e-003	1.5760e-003
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	0.93	0.41
tblVehicleEF	SBUS	2.4310e-003	7.9200e-004
tblVehicleEF	SBUS	0.10	0.09
tblVehicleEF	SBUS	0.02	0.07
tblVehicleEF	SBUS	0.36	0.05

tblVehicleEF	SBUS	0.01	3.5360e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.6300e-004	6.9000e-005
tblVehicleEF	SBUS	5.0680e-003	1.5760e-003
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	1.34	0.59
tblVehicleEF	SBUS	2.4310e-003	7.9200e-004
tblVehicleEF	SBUS	0.12	0.11
tblVehicleEF	SBUS	0.02	0.07
tblVehicleEF	SBUS	0.39	0.05
tblVehicleEF	SBUS	0.82	0.09
tblVehicleEF	SBUS	9.7050e-003	6.6880e-003
tblVehicleEF	SBUS	0.05	6.7520e-003
tblVehicleEF	SBUS	7.74	3.39
tblVehicleEF	SBUS	0.58	0.56
tblVehicleEF	SBUS	4.67	0.77
tblVehicleEF	SBUS	1,179.47	378.98
tblVehicleEF	SBUS	1,093.03	1,096.56
tblVehicleEF	SBUS	55.12	6.42
tblVehicleEF	SBUS	9.10	3.40
tblVehicleEF	SBUS	3.73	4.16
tblVehicleEF	SBUS	12.17	0.77
tblVehicleEF	SBUS	7.1020e-003	2.7930e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	5.0000e-004	4.8000e-005
tblVehicleEF	SBUS	6.7950e-003	2.6720e-003

tblVehicleEF	SBUS	2.6870e-003	2.6500e-003
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	4.6000e-004	4.4000e-005
tblVehicleEF	SBUS	9.1290e-003	2.7600e-003
tblVehicleEF	SBUS	0.04	0.01
tblVehicleEF	SBUS	0.92	0.41
tblVehicleEF	SBUS	4.4980e-003	1.4670e-003
tblVehicleEF	SBUS	0.10	0.09
tblVehicleEF	SBUS	0.02	0.06
tblVehicleEF	SBUS	0.30	0.04
tblVehicleEF	SBUS	0.01	3.6240e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.3300e-004	6.3000e-005
tblVehicleEF	SBUS	9.1290e-003	2.7600e-003
tblVehicleEF	SBUS	0.04	0.01
tblVehicleEF	SBUS	1.34	0.59
tblVehicleEF	SBUS	4.4980e-003	1.4670e-003
tblVehicleEF	SBUS	0.12	0.11
tblVehicleEF	SBUS	0.02	0.06
tblVehicleEF	SBUS	0.33	0.04
tblVehicleEF	SBUS	0.82	0.09
tblVehicleEF	SBUS	9.5210e-003	6.6020e-003
tblVehicleEF	SBUS	0.06	8.2440e-003
tblVehicleEF	SBUS	8.00	3.48
tblVehicleEF	SBUS	0.57	0.55
tblVehicleEF	SBUS	6.79	1.10
tblVehicleEF	SBUS	1,058.28	356.98

tblVehicleEF	SBUS	1,093.03	1,096.55
tblVehicleEF	SBUS	55.12	6.96
tblVehicleEF	SBUS	8.43	3.21
tblVehicleEF	SBUS	3.93	4.35
tblVehicleEF	SBUS	12.21	0.78
tblVehicleEF	SBUS	0.01	4.0110e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	0.02	0.03
tblVehicleEF	SBUS	5.0000e-004	4.8000e-005
tblVehicleEF	SBUS	9.8080e-003	3.8370e-003
tblVehicleEF	SBUS	2.6870e-003	2.6500e-003
tblVehicleEF	SBUS	0.02	0.02
tblVehicleEF	SBUS	4.6000e-004	4.4000e-005
tblVehicleEF	SBUS	4.3640e-003	1.4840e-003
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	0.93	0.41
tblVehicleEF	SBUS	2.3310e-003	8.1800e-004
tblVehicleEF	SBUS	0.10	0.09
tblVehicleEF	SBUS	0.02	0.08
tblVehicleEF	SBUS	0.37	0.05
tblVehicleEF	SBUS	0.01	3.4160e-003
tblVehicleEF	SBUS	0.01	0.01
tblVehicleEF	SBUS	6.6900e-004	6.9000e-005
tblVehicleEF	SBUS	4.3640e-003	1.4840e-003
tblVehicleEF	SBUS	0.03	0.01
tblVehicleEF	SBUS	1.34	0.59
tblVehicleEF	SBUS	2.3310e-003	8.1800e-004

tblVehicleEF	SBUS	0.12	0.11
tblVehicleEF	SBUS	0.02	0.08
tblVehicleEF	SBUS	0.40	0.05
tblVehicleEF	UBUS	1.36	3.04
tblVehicleEF	UBUS	0.08	0.02
tblVehicleEF	UBUS	7.52	23.60
tblVehicleEF	UBUS	13.83	1.86
tblVehicleEF	UBUS	1,788.21	1,635.62
tblVehicleEF	UBUS	153.17	22.96
tblVehicleEF	UBUS	3.79	0.30
tblVehicleEF	UBUS	12.24	0.22
tblVehicleEF	UBUS	0.49	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.04	2.1820e-003
tblVehicleEF	UBUS	1.4880e-003	2.2400e-004
tblVehicleEF	UBUS	0.21	0.04
tblVehicleEF	UBUS	3.0000e-003	5.0570e-003
tblVehicleEF	UBUS	0.04	2.0670e-003
tblVehicleEF	UBUS	1.3680e-003	2.0600e-004
tblVehicleEF	UBUS	9.0420e-003	2.8050e-003
tblVehicleEF	UBUS	0.10	0.02
tblVehicleEF	UBUS	4.5390e-003	1.1470e-003
tblVehicleEF	UBUS	0.42	0.05
tblVehicleEF	UBUS	0.02	0.08
tblVehicleEF	UBUS	1.09	0.10
tblVehicleEF	UBUS	9.5090e-003	6.3200e-003
tblVehicleEF	UBUS	1.7820e-003	2.2700e-004

tblVehicleEF	UBUS	9.0420e-003	2.8050e-003
tblVehicleEF	UBUS	0.10	0.02
tblVehicleEF	UBUS	4.5390e-003	1.1470e-003
tblVehicleEF	UBUS	1.82	3.11
tblVehicleEF	UBUS	0.02	0.08
tblVehicleEF	UBUS	1.19	0.10
tblVehicleEF	UBUS	1.36	3.04
tblVehicleEF	UBUS	0.07	0.02
tblVehicleEF	UBUS	7.58	23.60
tblVehicleEF	UBUS	11.85	1.58
tblVehicleEF	UBUS	1,788.21	1,635.63
tblVehicleEF	UBUS	153.17	22.49
tblVehicleEF	UBUS	3.53	0.30
tblVehicleEF	UBUS	12.16	0.21
tblVehicleEF	UBUS	0.49	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.04	2.1820e-003
tblVehicleEF	UBUS	1.4880e-003	2.2400e-004
tblVehicleEF	UBUS	0.21	0.04
tblVehicleEF	UBUS	3.0000e-003	5.0570e-003
tblVehicleEF	UBUS	0.04	2.0670e-003
tblVehicleEF	UBUS	1.3680e-003	2.0600e-004
tblVehicleEF	UBUS	0.02	4.9810e-003
tblVehicleEF	UBUS	0.13	0.02
tblVehicleEF	UBUS	9.0520e-003	2.2660e-003
tblVehicleEF	UBUS	0.43	0.05
tblVehicleEF	UBUS	0.02	0.07

tblVehicleEF	UBUS	0.99	0.09
tblVehicleEF	UBUS	9.5110e-003	6.3200e-003
tblVehicleEF	UBUS	1.7480e-003	2.2300e-004
tblVehicleEF	UBUS	0.02	4.9810e-003
tblVehicleEF	UBUS	0.13	0.02
tblVehicleEF	UBUS	9.0520e-003	2.2660e-003
tblVehicleEF	UBUS	1.83	3.11
tblVehicleEF	UBUS	0.02	0.07
tblVehicleEF	UBUS	1.09	0.09
tblVehicleEF	UBUS	1.36	3.04
tblVehicleEF	UBUS	0.08	0.02
tblVehicleEF	UBUS	7.51	23.60
tblVehicleEF	UBUS	14.02	1.85
tblVehicleEF	UBUS	1,788.21	1,635.62
tblVehicleEF	UBUS	153.17	22.93
tblVehicleEF	UBUS	3.75	0.30
tblVehicleEF	UBUS	12.25	0.22
tblVehicleEF	UBUS	0.49	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.04	2.1820e-003
tblVehicleEF	UBUS	1.4880e-003	2.2400e-004
tblVehicleEF	UBUS	0.21	0.04
tblVehicleEF	UBUS	3.0000e-003	5.0570e-003
tblVehicleEF	UBUS	0.04	2.0670e-003
tblVehicleEF	UBUS	1.3680e-003	2.0600e-004
tblVehicleEF	UBUS	8.1990e-003	2.8430e-003
tblVehicleEF	UBUS	0.12	0.02

tblVehicleEF	UBUS	4.1400e-003	1.2010e-003
tblVehicleEF	UBUS	0.42	0.05
tblVehicleEF	UBUS	0.03	0.09
tblVehicleEF	UBUS	1.10	0.09
tblVehicleEF	UBUS	9.5090e-003	6.3200e-003
tblVehicleEF	UBUS	1.7850e-003	2.2700e-004
tblVehicleEF	UBUS	8.1990e-003	2.8430e-003
tblVehicleEF	UBUS	0.12	0.02
tblVehicleEF	UBUS	4.1400e-003	1.2010e-003
tblVehicleEF	UBUS	1.82	3.11
tblVehicleEF	UBUS	0.03	0.09
tblVehicleEF	UBUS	1.20	0.10
tblVehicleTrips	HW_TL	14.70	11.50
tblVehicleTrips	HW_TL	14.70	11.50
tblVehicleTrips	ST_TR	7.16	8.14
tblVehicleTrips	ST_TR	6.39	4.91
tblVehicleTrips	SU_TR	6.07	6.28
tblVehicleTrips	SU_TR	5.86	4.09
tblVehicleTrips	WD_TR	6.59	7.33
tblVehicleTrips	WD_TR	6.65	5.44
tblWoodstoves	NumberCatalytic	3.75	0.00
tblWoodstoves	NumberCatalytic	8.10	0.00
tblWoodstoves	NumberNoncatalytic	3.75	0.00
tblWoodstoves	NumberNoncatalytic	8.10	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	5.4281	83.8963	28.0542	0.2037	21.9792	2.6472	24.6264	10.3848	2.4354	12.8202	0.0000	21,210.4884	21,210.4884	2.2895	0.0000	21,267.7267
2022	77.0190	34.9816	26.7702	0.0816	3.0555	1.2977	4.3533	0.8181	1.2111	2.0291	0.0000	8,039.2415	8,039.2415	1.2688	0.0000	8,070.9613
2023	76.9882	1.8447	3.9569	8.8100e-003	0.5477	0.0975	0.6452	0.1453	0.0973	0.2425	0.0000	858.8261	858.8261	0.0325	0.0000	859.6381
Maximum	**77.0190**	**83.8963**	**28.0542**	**0.2037**	**21.9792**	**2.6472**	**24.6264**	**10.3848**	**2.4354**	**12.8202**	**0.0000**	**21,210.4884**	**21,210.4884**	**2.2895**	**0.0000**	**21,267.7267**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	5.4281	83.8963	28.0542	0.2037	21.9792	2.6472	24.6264	10.3848	2.4354	12.8202	0.0000	21,210.4884	21,210.4884	2.2895	0.0000	21,267.7267
2022	77.0190	34.9816	26.7702	0.0816	3.0555	1.2977	4.3533	0.8181	1.2111	2.0291	0.0000	8,039.2415	8,039.2415	1.2688	0.0000	8,070.9613
2023	76.9882	1.8447	3.9569	8.8100e-003	0.5477	0.0975	0.6452	0.1453	0.0973	0.2425	0.0000	858.8261	858.8261	0.0325	0.0000	859.6381
Maximum	**77.0190**	**83.8963**	**28.0542**	**0.2037**	**21.9792**	**2.6472**	**24.6264**	**10.3848**	**2.4354**	**12.8202**	**0.0000**	**21,210.4884**	**21,210.4884**	**2.2895**	**0.0000**	**21,267.7267**

	ROG	NOx	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	6.2259	4.1573	21.2738	0.0261		0.4263	0.4263		0.4263	0.4263	0.0000	5,054.1241	5,054.1241	0.1303	0.0920	5,084.8010
Energy	0.1053	0.9000	0.3830	5.7400e-003		0.0728	0.0728		0.0728	0.0728		1,148.9858	1,148.9858	0.0220	0.0211	1,155.8137
Mobile	3.3387	8.5068	30.8316	0.1069	9.5347	0.0994	9.6341	2.5486	0.0937	2.6423		11,306.2319	11,306.2319	0.4058		11,316.3774
Total	**9.6699**	**13.5641**	**52.4884**	**0.1387**	**9.5347**	**0.5984**	**10.1331**	**2.5486**	**0.5927**	**3.1414**	**0.0000**	**17,509.3417**	**17,509.3417**	**0.5581**	**0.1131**	**17,556.9920**

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	6.2259	4.1573	21.2738	0.0261		0.4263	0.4263		0.4263	0.4263	0.0000	5,054.1241	5,054.1241	0.1303	0.0920	5,084.8010
Energy	0.1053	0.9000	0.3830	5.7400e-003		0.0728	0.0728		0.0728	0.0728		1,148.9858	1,148.9858	0.0220	0.0211	1,155.8137
Mobile	3.3387	8.5068	30.8316	0.1069	9.5347	0.0994	9.6341	2.5486	0.0937	2.6423		11,306.2319	11,306.2319	0.4058		11,316.3774
Total	**9.6699**	**13.5641**	**52.4884**	**0.1387**	**9.5347**	**0.5984**	**10.1331**	**2.5486**	**0.5927**	**3.1414**	**0.0000**	**17,509.3417**	**17,509.3417**	**0.5581**	**0.1131**	**17,556.9920**

	ROG	NOx	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	Crushing	Demolition	10/16/2021	11/12/2021	5	20	
2	Site Preparation	Site Preparation	11/13/2021	11/26/2021	5	10	
3	Grading	Grading	11/27/2021	12/24/2021	5	20	
4	Building Construction	Building Construction	12/25/2021	11/11/2022	5	230	
5	Paving	Paving	11/12/2022	12/9/2022	5	20	
6	Architectural Coating	Architectural Coating	12/10/2022	1/6/2023	5	20	

Acres of Grading (Site Preparation Phase): 35

Acres of Grading (Grading Phase): 50

Acres of Paving: 0.82

Residential Indoor: 479,925; Residential Outdoor: 159,975; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 10,272 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Crushing	Concrete/Industrial Saws	0	8.00	81	0.73
Crushing	Excavators	0	8.00	158	0.38
Crushing	Generator Sets	1	8.00	1050	0.74
Crushing	Rubber Tired Dozers	0	8.00	247	0.40
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
Grading	Crawler Tractors	3	8.00	212	0.43
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
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
Crushing	1	3.00	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
Grading	6	15.00	0.00	3,750.00	14.70	6.90	23.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	243.00	53.00	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	49.00	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 Crushing - 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	3.0149	46.2097	14.5262	0.0685		0.9593	0.9593		0.9593	0.9593		7,787.9458	7,787.9458	0.2604		7,794.4552
Total	**3.0149**	**46.2097**	**14.5262**	**0.0685**		**0.9593**	**0.9593**		**0.9593**	**0.9593**		**7,787.9458**	**7,787.9458**	**0.2604**		**7,794.4552**

3.2 Crushing - 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	0.0142	8.1000e-003	0.1109	3.2000e-004	0.0335	2.0000e-004	0.0337	8.8900e-003	1.8000e-004	9.0800e-003		31.9425	31.9425	7.6000e-004		31.9616
Total	**0.0142**	**8.1000e-003**	**0.1109**	**3.2000e-004**	**0.0335**	**2.0000e-004**	**0.0337**	**8.8900e-003**	**1.8000e-004**	**9.0800e-003**		**31.9425**	**31.9425**	**7.6000e-004**		**31.9616**

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	3.0149	46.2097	14.5262	0.0685		0.9593	0.9593		0.9593	0.9593	0.0000	7,787.9458	7,787.9458	0.2604		7,794.4552
Total	**3.0149**	**46.2097**	**14.5262**	**0.0685**		**0.9593**	**0.9593**		**0.9593**	**0.9593**	**0.0000**	**7,787.9458**	**7,787.9458**	**0.2604**		**7,794.4552**

3.2 Crushing - 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	0.0142	8.1000e-003	0.1109	3.2000e-004	0.0335	2.0000e-004	0.0337	8.8900e-003	1.8000e-004	9.0800e-003		31.9425	31.9425	7.6000e-004		31.9616
Total	**0.0142**	**8.1000e-003**	**0.1109**	**3.2000e-004**	**0.0335**	**2.0000e-004**	**0.0337**	**8.8900e-003**	**1.8000e-004**	**9.0800e-003**		**31.9425**	**31.9425**	**7.6000e-004**		**31.9616**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					21.7780	0.0000	21.7780	10.3315	0.0000	10.3315			0.0000			0.0000
Off-Road	5.3428	60.7861	21.8537	0.0570		2.6460	2.6460		2.4343	2.4343		5,523.5047	5,523.5047	1.7864		5,568.1651
Total	**5.3428**	**60.7861**	**21.8537**	**0.0570**	**21.7780**	**2.6460**	**24.4240**	**10.3315**	**2.4343**	**12.7658**		**5,523.5047**	**5,523.5047**	**1.7864**		**5,568.1651**

3.3 Site Preparation - 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	0.0853	0.0486	0.6655	1.9200e-003	0.2012	1.1900e-003	0.2024	0.0534	1.0900e-003	0.0545		191.6552	191.6552	4.5700e-003		191.7694
Total	**0.0853**	**0.0486**	**0.6655**	**1.9200e-003**	**0.2012**	**1.1900e-003**	**0.2024**	**0.0534**	**1.0900e-003**	**0.0545**		**191.6552**	**191.6552**	**4.5700e-003**		**191.7694**

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					21.7780	0.0000	21.7780	10.3315	0.0000	10.3315			0.0000			0.0000
Off-Road	5.3428	60.7861	21.8537	0.0570		2.6460	2.6460		2.4343	2.4343	0.0000	5,523.5047	5,523.5047	1.7864		5,568.1651
Total	**5.3428**	**60.7861**	**21.8537**	**0.0570**	**21.7780**	**2.6460**	**24.4240**	**10.3315**	**2.4343**	**12.7658**	**0.0000**	**5,523.5047**	**5,523.5047**	**1.7864**		**5,568.1651**

3.3 Site Preparation - 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	0.0853	0.0486	0.6655	1.9200e-003	0.2012	1.1900e-003	0.2024	0.0534	1.0900e-003	0.0545		191.6552	191.6552	4.5700e-003		191.7694
Total	**0.0853**	**0.0486**	**0.6655**	**1.9200e-003**	**0.2012**	**1.1900e-003**	**0.2024**	**0.0534**	**1.0900e-003**	**0.0545**		**191.6552**	**191.6552**	**4.5700e-003**		**191.7694**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.8633	0.0000	8.8633	3.6253	0.0000	3.6253			0.0000			0.0000
Off-Road	3.3813	39.9534	16.3820	0.0439		1.6111	1.6111		1.4822	1.4822		4,250.3144	4,250.3144	1.3746		4,284.6803
Total	**3.3813**	**39.9534**	**16.3820**	**0.0439**	**8.8633**	**1.6111**	**10.4744**	**3.6253**	**1.4822**	**5.1074**		**4,250.3144**	**4,250.3144**	**1.3746**		**4,284.6803**

3.4 Grading - 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	0.9967	43.9024	5.9258	0.1583	3.7712	0.1418	3.9130	1.0337	0.1357	1.1694		16,800.4614	16,800.4614	0.9111		16,823.2385
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	**1.0678**	**43.9429**	**6.4804**	**0.1599**	**3.9388**	**0.1428**	**4.0817**	**1.0782**	**0.1366**	**1.2148**		**16,960.1740**	**16,960.1740**	**0.9149**		**16,983.0464**

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					8.8633	0.0000	8.8633	3.6253	0.0000	3.6253			0.0000			0.0000
Off-Road	3.3813	39.9534	16.3820	0.0439		1.6111	1.6111		1.4822	1.4822	0.0000	4,250.3144	4,250.3144	1.3746		4,284.6803
Total	**3.3813**	**39.9534**	**16.3820**	**0.0439**	**8.8633**	**1.6111**	**10.4744**	**3.6253**	**1.4822**	**5.1074**	**0.0000**	**4,250.3144**	**4,250.3144**	**1.3746**		**4,284.6803**

3.4 Grading - 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	0.9967	43.9024	5.9258	0.1583	3.7712	0.1418	3.9130	1.0337	0.1357	1.1694		16,800.4614	16,800.4614	0.9111		16,823.2385
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	**1.0678**	**43.9429**	**6.4804**	**0.1599**	**3.9388**	**0.1428**	**4.0817**	**1.0782**	**0.1366**	**1.2148**		**16,960.1740**	**16,960.1740**	**0.9149**		**16,983.0464**

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	0.1237	4.9046	0.8751	0.0137	0.3394	9.3300e-003	0.3487	0.0977	8.9200e-003	0.1066		1,448.2304	1,448.2304	0.1036		1,450.8206
Worker	1.1521	0.6563	8.9840	0.0260	2.7162	0.0160	2.7322	0.7203	0.0147	0.7351		2,587.3447	2,587.3447	0.0617		2,588.8870
Total	**1.2758**	**5.5609**	**9.8591**	**0.0397**	**3.0556**	**0.0253**	**3.0809**	**0.8181**	**0.0237**	**0.8417**		**4,035.5751**	**4,035.5751**	**0.1653**		**4,039.7076**

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	0.1237	4.9046	0.8751	0.0137	0.3394	9.3300e-003	0.3487	0.0977	8.9200e-003	0.1066		1,448.2304	1,448.2304	0.1036		1,450.8206
Worker	1.1521	0.6563	8.9840	0.0260	2.7162	0.0160	2.7322	0.7203	0.0147	0.7351		2,587.3447	2,587.3447	0.0617		2,588.8870
Total	**1.2758**	**5.5609**	**9.8591**	**0.0397**	**3.0556**	**0.0253**	**3.0809**	**0.8181**	**0.0237**	**0.8417**		**4,035.5751**	**4,035.5751**	**0.1653**		**4,039.7076**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7963	29.7637	17.6698	0.0430		1.2743	1.2743		1.1892	1.1892		4,110.5322	4,110.5322	1.1153		4,138.4135
Total	**2.7963**	**29.7637**	**17.6698**	**0.0430**		**1.2743**	**1.2743**		**1.1892**	**1.1892**		**4,110.5322**	**4,110.5322**	**1.1153**		**4,138.4135**

3.5 Building Construction - 2022

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	0.1154	4.6273	0.8139	0.0136	0.3394	7.8400e-003	0.3472	0.0977	7.5000e-003	0.1052		1,435.9035	1,435.9035	0.0981		1,438.3565
Worker	1.0776	0.5906	8.2866	0.0250	2.7162	0.0156	2.7318	0.7203	0.0144	0.7347		2,492.8059	2,492.8059	0.0554		2,494.1913
Total	**1.1930**	**5.2180**	**9.1005**	**0.0386**	**3.0555**	**0.0234**	**3.0790**	**0.8181**	**0.0219**	**0.8399**		**3,928.7093**	**3,928.7093**	**0.1535**		**3,932.5478**

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	2.7963	29.7637	17.6698	0.0430		1.2743	1.2743		1.1892	1.1892	0.0000	4,110.5322	4,110.5322	1.1153		4,138.4135
Total	**2.7963**	**29.7637**	**17.6698**	**0.0430**		**1.2743**	**1.2743**		**1.1892**	**1.1892**	**0.0000**	**4,110.5322**	**4,110.5322**	**1.1153**		**4,138.4135**

3.5 Building Construction - 2022

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	0.1154	4.6273	0.8139	0.0136	0.3394	7.8400e-003	0.3472	0.0977	7.5000e-003	0.1052		1,435.9035	1,435.9035	0.0981		1,438.3565
Worker	1.0776	0.5906	8.2866	0.0250	2.7162	0.0156	2.7318	0.7203	0.0144	0.7347		2,492.8059	2,492.8059	0.0554		2,494.1913
Total	**1.1930**	**5.2180**	**9.1005**	**0.0386**	**3.0555**	**0.0234**	**3.0790**	**0.8181**	**0.0219**	**0.8399**		**3,928.7093**	**3,928.7093**	**0.1535**		**3,932.5478**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.1074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2102**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**		**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

3.6 Paving - 2022

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	0.0665	0.0365	0.5115	1.5400e-003	0.1677	9.6000e-004	0.1686	0.0445	8.9000e-004	0.0454		153.8769	153.8769	3.4200e-003		153.9624
Total	**0.0665**	**0.0365**	**0.5115**	**1.5400e-003**	**0.1677**	**9.6000e-004**	**0.1686**	**0.0445**	**8.9000e-004**	**0.0454**		**153.8769**	**153.8769**	**3.4200e-003**		**153.9624**

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	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225	0.0000	2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.1074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2102**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**	**0.0000**	**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

3.6 Paving - 2022

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	0.0665	0.0365	0.5115	1.5400e-003	0.1677	9.6000e-004	0.1686	0.0445	8.9000e-004	0.0454		153.8769	153.8769	3.4200e-003		153.9624
Total	**0.0665**	**0.0365**	**0.5115**	**1.5400e-003**	**0.1677**	**9.6000e-004**	**0.1686**	**0.0445**	**8.9000e-004**	**0.0454**		**153.8769**	**153.8769**	**3.4200e-003**		**153.9624**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	76.5290					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2727	1.8780	2.4181	3.9600e-003		0.1090	0.1090		0.1090	0.1090		375.2641	375.2641	0.0244		375.8749
Total	**76.8017**	**1.8780**	**2.4181**	**3.9600e-003**		**0.1090**	**0.1090**		**0.1090**	**0.1090**		**375.2641**	**375.2641**	**0.0244**		**375.8749**

3.7 Architectural Coating - 2022

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	0.2173	0.1191	1.6710	5.0400e-003	0.5477	3.1400e-003	0.5509	0.1453	2.8900e-003	0.1482		502.6646	502.6646	0.0112		502.9439
Total	**0.2173**	**0.1191**	**1.6710**	**5.0400e-003**	**0.5477**	**3.1400e-003**	**0.5509**	**0.1453**	**2.8900e-003**	**0.1482**		**502.6646**	**502.6646**	**0.0112**		**502.9439**

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	76.5290					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2727	1.8780	2.4181	3.9600e-003		0.1090	0.1090		0.1090	0.1090	0.0000	375.2641	375.2641	0.0244		375.8749
Total	**76.8017**	**1.8780**	**2.4181**	**3.9600e-003**		**0.1090**	**0.1090**		**0.1090**	**0.1090**	**0.0000**	**375.2641**	**375.2641**	**0.0244**		**375.8749**

3.7 Architectural Coating - 2022

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	0.2173	0.1191	1.6710	5.0400e-003	0.5477	3.1400e-003	0.5509	0.1453	2.8900e-003	0.1482		502.6646	502.6646	0.0112		502.9439
Total	**0.2173**	**0.1191**	**1.6710**	**5.0400e-003**	**0.5477**	**3.1400e-003**	**0.5509**	**0.1453**	**2.8900e-003**	**0.1482**		**502.6646**	**502.6646**	**0.0112**		**502.9439**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	76.5290					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2556	1.7373	2.4148	3.9600e-003		0.0944	0.0944		0.0944	0.0944		375.2641	375.2641	0.0225		375.8253
Total	**76.7845**	**1.7373**	**2.4148**	**3.9600e-003**		**0.0944**	**0.0944**		**0.0944**	**0.0944**		**375.2641**	**375.2641**	**0.0225**		**375.8253**

3.7 Architectural Coating - 2023

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	0.2037	0.1074	1.5421	4.8500e-003	0.5477	3.0700e-003	0.5508	0.1453	2.8200e-003	0.1481		483.5620	483.5620	0.0100		483.8127
Total	**0.2037**	**0.1074**	**1.5421**	**4.8500e-003**	**0.5477**	**3.0700e-003**	**0.5508**	**0.1453**	**2.8200e-003**	**0.1481**		**483.5620**	**483.5620**	**0.0100**		**483.8127**

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	76.5290					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2556	1.7373	2.4148	3.9600e-003		0.0944	0.0944		0.0944	0.0944	0.0000	375.2641	375.2641	0.0225		375.8253
Total	**76.7845**	**1.7373**	**2.4148**	**3.9600e-003**		**0.0944**	**0.0944**		**0.0944**	**0.0944**	**0.0000**	**375.2641**	**375.2641**	**0.0225**		**375.8253**

3.7 Architectural Coating - 2023

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	0.2037	0.1074	1.5421	4.8500e-003	0.5477	3.0700e-003	0.5508	0.1453	2.8200e-003	0.1481		483.5620	483.5620	0.0100		483.8127
Total	**0.2037**	**0.1074**	**1.5421**	**4.8500e-003**	**0.5477**	**3.0700e-003**	**0.5508**	**0.1453**	**2.8200e-003**	**0.1481**		**483.5620**	**483.5620**	**0.0100**		**483.8127**

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	3.3387	8.5068	30.8316	0.1069	9.5347	0.0994	9.6341	2.5486	0.0937	2.6423		11,306.2319	11,306.2319	0.4058		11,316.3774
Unmitigated	3.3387	8.5068	30.8316	0.1069	9.5347	0.0994	9.6341	2.5486	0.0937	2.6423		11,306.2319	11,306.2319	0.4058		11,316.3774

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	549.75	610.50	471.00	1,642,400	1,642,400
Apartments Mid Rise	881.28	795.42	662.58	2,514,638	2,514,638
Parking Lot	0.00	0.00	0.00		
Total	1,431.03	1,405.92	1,133.58	4,157,039	4,157,039

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	11.50	5.90	8.70	40.20	19.20	40.60	86	11	3
Apartments Mid Rise	11.50	5.90	8.70	40.20	19.20	40.60	86	11	3
Parking Lot	16.60	8.40	6.90	0.00	0.00	0.00	0	0	0

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Apartments Mid Rise	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Parking Lot	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898

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	0.1053	0.9000	0.3830	5.7400e-003		0.0728	0.0728		0.0728	0.0728		1,148.9858	1,148.9858	0.0220	0.0211	1,155.8137
NaturalGas Unmitigated	0.1053	0.9000	0.3830	5.7400e-003		0.0728	0.0728		0.0728	0.0728		1,148.9858	1,148.9858	0.0220	0.0211	1,155.8137

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	3200.24	0.0345	0.2949	0.1255	1.8800e-003		0.0238	0.0238		0.0238	0.0238		376.4988	376.4988	7.2200e-003	6.9000e-003	378.7361
Apartments Mid Rise	6566.14	0.0708	0.6051	0.2575	3.8600e-003		0.0489	0.0489		0.0489	0.0489		772.4870	772.4870	0.0148	0.0142	777.0775
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.1053**	**0.9000**	**0.3830**	**5.7400e-003**		**0.0728**	**0.0728**		**0.0728**	**0.0728**		**1,148.9858**	**1,148.9858**	**0.0220**	**0.0211**	**1,155.8137**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	3.20024	0.0345	0.2949	0.1255	1.8800e-003		0.0238	0.0238		0.0238	0.0238		376.4988	376.4988	7.2200e-003	6.9000e-003	378.7361
Apartments Mid Rise	6.56614	0.0708	0.6051	0.2575	3.8600e-003		0.0489	0.0489		0.0489	0.0489		772.4870	772.4870	0.0148	0.0142	777.0775
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.1053**	**0.9000**	**0.3830**	**5.7400e-003**		**0.0728**	**0.0728**		**0.0728**	**0.0728**		**1,148.9858**	**1,148.9858**	**0.0220**	**0.0211**	**1,155.8137**

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	6.2259	4.1573	21.2738	0.0261		0.4263	0.4263		0.4263	0.4263	0.0000	5,054.1241	5,054.1241	0.1303	0.0920	5,084.8010
Unmitigated	6.2259	4.1573	21.2738	0.0261		0.4263	0.4263		0.4263	0.4263	0.0000	5,054.1241	5,054.1241	0.1303	0.0920	5,084.8010

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	0.4193					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.7532					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.4601	3.9314	1.6729	0.0251		0.3179	0.3179		0.3179	0.3179	0.0000	5,018.8235	5,018.8235	0.0962	0.0920	5,048.6479
Landscaping	0.5932	0.2258	19.6009	1.0400e-003		0.1084	0.1084		0.1084	0.1084		35.3006	35.3006	0.0341		36.1531
Total	**6.2259**	**4.1573**	**21.2738**	**0.0261**		**0.4263**	**0.4263**		**0.4263**	**0.4263**	**0.0000**	**5,054.1241**	**5,054.1241**	**0.1303**	**0.0920**	**5,084.8010**

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	0.4193					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.7532					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.4601	3.9314	1.6729	0.0251		0.3179	0.3179		0.3179	0.3179	0.0000	5,018.8235	5,018.8235	0.0962	0.0920	5,048.6479
Landscaping	0.5932	0.2258	19.6009	1.0400e-003		0.1084	0.1084		0.1084	0.1084		35.3006	35.3006	0.0341		36.1531
Total	**6.2259**	**4.1573**	**21.2738**	**0.0261**		**0.4263**	**0.4263**		**0.4263**	**0.4263**	**0.0000**	**5,054.1241**	**5,054.1241**	**0.1303**	**0.0920**	**5,084.8010**

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

12585 Crestview Apartments
Riverside-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Parking Lot	428.00	Space	0.82	171,200.00	0
Apartments Low Rise	75.00	Dwelling Unit	4.69	75,000.00	239
Apartments Mid Rise	162.00	Dwelling Unit	4.26	162,000.00	515

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.4	**Precipitation Freq (Days)**	28
Climate Zone	10			**Operational Year**	2023
Utility Company	Riverside Public Utilities				
CO2 Intensity (lb/MWhr)	1325.65	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics -
Land Use - Consistent with DEIR's model.
Construction Phase - See SWAPE comment about phase lengths.
Off-road Equipment - Consistent with DEIR's model.
Off-road Equipment - Consistent with DEIR's model.
Off-road Equipment - Consistent with DEIR's model.
Off-road Equipment - Consistent with DEIR's model.
Off-road Equipment - Consistent with DEIR's model.
Off-road Equipment -
Off-road Equipment - Consistent with DEIR's model.
Trips and VMT - Consistent with DEIR's model.
Grading - Consistent with DEIR's model.
Vehicle Trips - Consistent with DEIR's model.
Vehicle Emission Factors - Consistent with DEIR's model.
Vehicle Emission Factors - Consistent with DEIR's model.
Vehicle Emission Factors - Consistent with DEIR's model.
Woodstoves - Consistent with DEIR's model.
Energy Use - See SWAPE comment about energy use values.
Construction Off-road Equipment Mitigation - Consistent with DEIR's model.

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	PhaseEndDate	7/19/2022	1/6/2023
tblConstructionPhase	PhaseEndDate	5/24/2022	11/11/2022
tblConstructionPhase	PhaseEndDate	5/25/2021	11/12/2021
tblConstructionPhase	PhaseEndDate	7/6/2021	12/24/2021
tblConstructionPhase	PhaseEndDate	6/21/2022	12/9/2022
tblConstructionPhase	PhaseEndDate	6/8/2021	11/26/2021

tblConstructionPhase	PhaseStartDate	6/22/2022	12/10/2022
tblConstructionPhase	PhaseStartDate	7/7/2021	12/25/2021
tblConstructionPhase	PhaseStartDate	4/28/2021	10/16/2021
tblConstructionPhase	PhaseStartDate	6/9/2021	11/27/2021
tblConstructionPhase	PhaseStartDate	5/25/2022	11/12/2022
tblConstructionPhase	PhaseStartDate	5/26/2021	11/13/2021
tblFireplaces	NumberGas	63.75	75.00
tblFireplaces	NumberGas	137.70	162.00
tblFireplaces	NumberNoFireplace	7.50	0.00
tblFireplaces	NumberNoFireplace	16.20	0.00
tblFireplaces	NumberWood	3.75	0.00
tblFireplaces	NumberWood	8.10	0.00
tblGrading	AcresOfGrading	40.00	50.00
tblGrading	AcresOfGrading	20.00	35.00
tblGrading	MaterialExported	0.00	10,000.00
tblGrading	MaterialImported	0.00	20,000.00
tblLandUse	LotAcreage	3.85	0.82
tblLandUse	Population	215.00	239.00
tblLandUse	Population	463.00	515.00
tblOffRoadEquipment	HorsePower	84.00	1,050.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	1.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	2.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	0.00
tblOffRoadEquipment	OffRoadEquipmentUnitAmount	3.00	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
tblTripsAndVMT	HaulingTripLength	20.00	23.00
tblVehicleEF	HHD	0.96	0.02
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	0.08	0.00
tblVehicleEF	HHD	2.07	6.43
tblVehicleEF	HHD	0.41	0.24
tblVehicleEF	HHD	1.44	4.3850e-003
tblVehicleEF	HHD	6,147.84	1,065.92
tblVehicleEF	HHD	1,399.88	1,272.83
tblVehicleEF	HHD	4.72	0.04
tblVehicleEF	HHD	17.43	5.31
tblVehicleEF	HHD	0.97	1.96
tblVehicleEF	HHD	20.29	2.50
tblVehicleEF	HHD	5.1890e-003	2.3650e-003
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	5.1440e-003	0.02
tblVehicleEF	HHD	3.9000e-005	0.00
tblVehicleEF	HHD	4.9650e-003	2.2630e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8620e-003	8.8060e-003
tblVehicleEF	HHD	4.9210e-003	0.02
tblVehicleEF	HHD	3.6000e-005	0.00
tblVehicleEF	HHD	7.3000e-005	3.0000e-006
tblVehicleEF	HHD	2.3430e-003	9.7000e-005

tblVehicleEF	HHD	0.55	0.44
tblVehicleEF	HHD	4.3000e-005	2.0000e-006
tblVehicleEF	HHD	0.04	0.02
tblVehicleEF	HHD	1.5400e-004	4.4400e-004
tblVehicleEF	HHD	0.04	1.0000e-006
tblVehicleEF	HHD	0.06	0.01
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	7.1000e-005	0.00
tblVehicleEF	HHD	7.3000e-005	3.0000e-006
tblVehicleEF	HHD	2.3430e-003	9.7000e-005
tblVehicleEF	HHD	0.63	0.50
tblVehicleEF	HHD	4.3000e-005	2.0000e-006
tblVehicleEF	HHD	0.08	0.05
tblVehicleEF	HHD	1.5400e-004	4.4400e-004
tblVehicleEF	HHD	0.04	1.0000e-006
tblVehicleEF	HHD	0.91	0.02
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	0.08	0.00
tblVehicleEF	HHD	1.50	6.35
tblVehicleEF	HHD	0.41	0.24
tblVehicleEF	HHD	1.38	4.1390e-003
tblVehicleEF	HHD	6,513.09	1,052.83
tblVehicleEF	HHD	1,399.88	1,272.83
tblVehicleEF	HHD	4.72	0.04
tblVehicleEF	HHD	17.99	5.06
tblVehicleEF	HHD	0.91	1.85
tblVehicleEF	HHD	20.28	2.50

tblVehicleEF	HHD	4.3760e-003	2.0780e-003
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	5.1440e-003	0.02
tblVehicleEF	HHD	3.9000e-005	0.00
tblVehicleEF	HHD	4.1860e-003	1.9880e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8620e-003	8.8060e-003
tblVehicleEF	HHD	4.9210e-003	0.02
tblVehicleEF	HHD	3.6000e-005	0.00
tblVehicleEF	HHD	1.4000e-004	5.0000e-006
tblVehicleEF	HHD	2.6540e-003	1.0600e-004
tblVehicleEF	HHD	0.51	0.46
tblVehicleEF	HHD	8.2000e-005	3.0000e-006
tblVehicleEF	HHD	0.04	0.02
tblVehicleEF	HHD	1.5700e-004	4.4900e-004
tblVehicleEF	HHD	0.04	1.0000e-006
tblVehicleEF	HHD	0.06	9.8850e-003
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	7.0000e-005	0.00
tblVehicleEF	HHD	1.4000e-004	5.0000e-006
tblVehicleEF	HHD	2.6540e-003	1.0600e-004
tblVehicleEF	HHD	0.59	0.53
tblVehicleEF	HHD	8.2000e-005	3.0000e-006
tblVehicleEF	HHD	0.08	0.05
tblVehicleEF	HHD	1.5700e-004	4.4900e-004
tblVehicleEF	HHD	0.04	1.0000e-006

tblVehicleEF	HHD	1.04	0.02
tblVehicleEF	HHD	0.03	8.2000e-004
tblVehicleEF	HHD	0.08	0.00
tblVehicleEF	HHD	2.85	6.51
tblVehicleEF	HHD	0.41	0.15
tblVehicleEF	HHD	1.46	4.3390e-003
tblVehicleEF	HHD	5,643.45	1,077.40
tblVehicleEF	HHD	1,399.88	1,253.68
tblVehicleEF	HHD	4.72	0.04
tblVehicleEF	HHD	16.66	5.62
tblVehicleEF	HHD	0.96	1.92
tblVehicleEF	HHD	20.29	2.50
tblVehicleEF	HHD	6.3140e-003	2.7000e-003
tblVehicleEF	HHD	0.06	0.06
tblVehicleEF	HHD	0.04	0.04
tblVehicleEF	HHD	5.1440e-003	0.02
tblVehicleEF	HHD	3.9000e-005	0.00
tblVehicleEF	HHD	6.0400e-003	2.5830e-003
tblVehicleEF	HHD	0.03	0.03
tblVehicleEF	HHD	8.8620e-003	8.7520e-003
tblVehicleEF	HHD	4.9210e-003	0.02
tblVehicleEF	HHD	3.6000e-005	0.00
tblVehicleEF	HHD	5.5000e-005	3.0000e-006
tblVehicleEF	HHD	2.4340e-003	1.0800e-004
tblVehicleEF	HHD	0.59	0.40
tblVehicleEF	HHD	3.6000e-005	2.0000e-006
tblVehicleEF	HHD	0.04	0.02

tblVehicleEF	HHD	1.6500e-004	4.7200e-004
tblVehicleEF	HHD	0.04	1.0000e-006
tblVehicleEF	HHD	0.05	0.01
tblVehicleEF	HHD	0.01	0.01
tblVehicleEF	HHD	7.1000e-005	0.00
tblVehicleEF	HHD	5.5000e-005	3.0000e-006
tblVehicleEF	HHD	2.4340e-003	1.0800e-004
tblVehicleEF	HHD	0.68	0.46
tblVehicleEF	HHD	3.6000e-005	2.0000e-006
tblVehicleEF	HHD	0.08	0.02
tblVehicleEF	HHD	1.6500e-004	4.7200e-004
tblVehicleEF	HHD	0.04	1.0000e-006
tblVehicleEF	LDA	3.3240e-003	1.8870e-003
tblVehicleEF	LDA	4.1920e-003	0.04
tblVehicleEF	LDA	0.51	0.56
tblVehicleEF	LDA	0.96	2.04
tblVehicleEF	LDA	235.32	258.31
tblVehicleEF	LDA	54.50	53.65
tblVehicleEF	LDA	0.04	0.03
tblVehicleEF	LDA	0.06	0.17
tblVehicleEF	LDA	1.5540e-003	1.3120e-003
tblVehicleEF	LDA	2.2370e-003	1.7690e-003
tblVehicleEF	LDA	1.4310e-003	1.2090e-003
tblVehicleEF	LDA	2.0570e-003	1.6270e-003
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.03	0.04

tblVehicleEF	LDA	8.3520e-003	6.9510e-003
tblVehicleEF	LDA	0.03	0.19
tblVehicleEF	LDA	0.06	0.19
tblVehicleEF	LDA	2.3560e-003	2.4590e-003
tblVehicleEF	LDA	5.6100e-004	5.1100e-004
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.03	0.19
tblVehicleEF	LDA	0.06	0.21
tblVehicleEF	LDA	3.7650e-003	2.1290e-003
tblVehicleEF	LDA	3.6350e-003	0.04
tblVehicleEF	LDA	0.62	0.68
tblVehicleEF	LDA	0.85	1.71
tblVehicleEF	LDA	256.22	279.26
tblVehicleEF	LDA	54.50	53.02
tblVehicleEF	LDA	0.04	0.03
tblVehicleEF	LDA	0.06	0.15
tblVehicleEF	LDA	1.5540e-003	1.3120e-003
tblVehicleEF	LDA	2.2370e-003	1.7690e-003
tblVehicleEF	LDA	1.4310e-003	1.2090e-003
tblVehicleEF	LDA	2.0570e-003	1.6270e-003
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDA	0.06	0.07
tblVehicleEF	LDA	9.4470e-003	7.7550e-003

tblVehicleEF	LDA	0.03	0.19
tblVehicleEF	LDA	0.05	0.16
tblVehicleEF	LDA	2.5670e-003	2.6590e-003
tblVehicleEF	LDA	5.5900e-004	5.0500e-004
tblVehicleEF	LDA	0.09	0.09
tblVehicleEF	LDA	0.10	0.10
tblVehicleEF	LDA	0.06	0.07
tblVehicleEF	LDA	0.01	0.01
tblVehicleEF	LDA	0.03	0.19
tblVehicleEF	LDA	0.05	0.18
tblVehicleEF	LDA	3.2080e-003	1.8550e-003
tblVehicleEF	LDA	4.3060e-003	0.04
tblVehicleEF	LDA	0.48	0.54
tblVehicleEF	LDA	0.98	2.02
tblVehicleEF	LDA	229.53	254.78
tblVehicleEF	LDA	54.50	53.62
tblVehicleEF	LDA	0.04	0.03
tblVehicleEF	LDA	0.06	0.16
tblVehicleEF	LDA	1.5540e-003	1.3120e-003
tblVehicleEF	LDA	2.2370e-003	1.7690e-003
tblVehicleEF	LDA	1.4310e-003	1.2090e-003
tblVehicleEF	LDA	2.0570e-003	1.6270e-003
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.10	0.09
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	8.0650e-003	6.8280e-003
tblVehicleEF	LDA	0.04	0.22

tblVehicleEF	LDA	0.06	0.19
tblVehicleEF	LDA	2.2980e-003	2.4260e-003
tblVehicleEF	LDA	5.6100e-004	5.1100e-004
tblVehicleEF	LDA	0.04	0.05
tblVehicleEF	LDA	0.10	0.09
tblVehicleEF	LDA	0.03	0.04
tblVehicleEF	LDA	0.01	9.9440e-003
tblVehicleEF	LDA	0.04	0.22
tblVehicleEF	LDA	0.06	0.21
tblVehicleEF	LDT1	9.2940e-003	5.7490e-003
tblVehicleEF	LDT1	0.01	0.07
tblVehicleEF	LDT1	1.18	1.23
tblVehicleEF	LDT1	2.73	2.29
tblVehicleEF	LDT1	295.40	306.77
tblVehicleEF	LDT1	68.37	65.39
tblVehicleEF	LDT1	0.11	0.10
tblVehicleEF	LDT1	0.17	0.26
tblVehicleEF	LDT1	2.2770e-003	1.9040e-003
tblVehicleEF	LDT1	3.3510e-003	2.5710e-003
tblVehicleEF	LDT1	2.0960e-003	1.7520e-003
tblVehicleEF	LDT1	3.0820e-003	2.3640e-003
tblVehicleEF	LDT1	0.18	0.16
tblVehicleEF	LDT1	0.30	0.22
tblVehicleEF	LDT1	0.12	0.11
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.18	0.73
tblVehicleEF	LDT1	0.19	0.37

tblVehicleEF	LDT1	2.9680e-003	2.9210e-003
tblVehicleEF	LDT1	7.3100e-004	6.2300e-004
tblVehicleEF	LDT1	0.18	0.16
tblVehicleEF	LDT1	0.30	0.23
tblVehicleEF	LDT1	0.12	0.11
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.18	0.74
tblVehicleEF	LDT1	0.21	0.40
tblVehicleEF	LDT1	0.01	6.4140e-003
tblVehicleEF	LDT1	0.01	0.06
tblVehicleEF	LDT1	1.43	1.45
tblVehicleEF	LDT1	2.40	1.92
tblVehicleEF	LDT1	320.93	328.53
tblVehicleEF	LDT1	68.37	64.60
tblVehicleEF	LDT1	0.11	0.09
tblVehicleEF	LDT1	0.16	0.24
tblVehicleEF	LDT1	2.2770e-003	1.9040e-003
tblVehicleEF	LDT1	3.3510e-003	2.5710e-003
tblVehicleEF	LDT1	2.0960e-003	1.7520e-003
tblVehicleEF	LDT1	3.0820e-003	2.3640e-003
tblVehicleEF	LDT1	0.36	0.30
tblVehicleEF	LDT1	0.37	0.26
tblVehicleEF	LDT1	0.24	0.22
tblVehicleEF	LDT1	0.03	0.03
tblVehicleEF	LDT1	0.18	0.72
tblVehicleEF	LDT1	0.16	0.31
tblVehicleEF	LDT1	3.2270e-003	3.1280e-003

tblVehicleEF	LDT1	7.2500e-004	6.1500e-004
tblVehicleEF	LDT1	0.36	0.30
tblVehicleEF	LDT1	0.37	0.26
tblVehicleEF	LDT1	0.24	0.22
tblVehicleEF	LDT1	0.04	0.04
tblVehicleEF	LDT1	0.18	0.72
tblVehicleEF	LDT1	0.18	0.34
tblVehicleEF	LDT1	8.9360e-003	5.6560e-003
tblVehicleEF	LDT1	0.01	0.07
tblVehicleEF	LDT1	1.11	1.19
tblVehicleEF	LDT1	2.78	2.28
tblVehicleEF	LDT1	287.77	303.10
tblVehicleEF	LDT1	68.37	65.36
tblVehicleEF	LDT1	0.11	0.10
tblVehicleEF	LDT1	0.17	0.26
tblVehicleEF	LDT1	2.2770e-003	1.9040e-003
tblVehicleEF	LDT1	3.3510e-003	2.5710e-003
tblVehicleEF	LDT1	2.0960e-003	1.7520e-003
tblVehicleEF	LDT1	3.0820e-003	2.3640e-003
tblVehicleEF	LDT1	0.16	0.16
tblVehicleEF	LDT1	0.33	0.26
tblVehicleEF	LDT1	0.10	0.11
tblVehicleEF	LDT1	0.02	0.02
tblVehicleEF	LDT1	0.21	0.86
tblVehicleEF	LDT1	0.19	0.36
tblVehicleEF	LDT1	2.8910e-003	2.8860e-003
tblVehicleEF	LDT1	7.3200e-004	6.2200e-004

tblVehicleEF	LDT1	0.16	0.16
tblVehicleEF	LDT1	0.33	0.26
tblVehicleEF	LDT1	0.10	0.11
tblVehicleEF	LDT1	0.03	0.04
tblVehicleEF	LDT1	0.21	0.86
tblVehicleEF	LDT1	0.21	0.40
tblVehicleEF	LDT2	4.7540e-003	3.1840e-003
tblVehicleEF	LDT2	5.7630e-003	0.06
tblVehicleEF	LDT2	0.68	0.79
tblVehicleEF	LDT2	1.27	2.60
tblVehicleEF	LDT2	330.23	322.49
tblVehicleEF	LDT2	76.02	69.04
tblVehicleEF	LDT2	0.06	0.06
tblVehicleEF	LDT2	0.10	0.26
tblVehicleEF	LDT2	1.6020e-003	1.3550e-003
tblVehicleEF	LDT2	2.3660e-003	1.8060e-003
tblVehicleEF	LDT2	1.4730e-003	1.2480e-003
tblVehicleEF	LDT2	2.1760e-003	1.6600e-003
tblVehicleEF	LDT2	0.06	0.08
tblVehicleEF	LDT2	0.10	0.12
tblVehicleEF	LDT2	0.05	0.07
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.06	0.39
tblVehicleEF	LDT2	0.08	0.28
tblVehicleEF	LDT2	3.3070e-003	3.0700e-003
tblVehicleEF	LDT2	7.8100e-004	6.5700e-004
tblVehicleEF	LDT2	0.06	0.08

tblVehicleEF	LDT2	0.10	0.12
tblVehicleEF	LDT2	0.05	0.07
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.39
tblVehicleEF	LDT2	0.09	0.31
tblVehicleEF	LDT2	5.3890e-003	3.5750e-003
tblVehicleEF	LDT2	5.0030e-003	0.05
tblVehicleEF	LDT2	0.83	0.95
tblVehicleEF	LDT2	1.13	2.17
tblVehicleEF	LDT2	359.32	343.18
tblVehicleEF	LDT2	76.02	68.20
tblVehicleEF	LDT2	0.06	0.06
tblVehicleEF	LDT2	0.10	0.24
tblVehicleEF	LDT2	1.6020e-003	1.3550e-003
tblVehicleEF	LDT2	2.3660e-003	1.8060e-003
tblVehicleEF	LDT2	1.4730e-003	1.2480e-003
tblVehicleEF	LDT2	2.1760e-003	1.6600e-003
tblVehicleEF	LDT2	0.12	0.15
tblVehicleEF	LDT2	0.12	0.14
tblVehicleEF	LDT2	0.10	0.13
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.06	0.39
tblVehicleEF	LDT2	0.07	0.24
tblVehicleEF	LDT2	3.6000e-003	3.2670e-003
tblVehicleEF	LDT2	7.7900e-004	6.4900e-004
tblVehicleEF	LDT2	0.12	0.15
tblVehicleEF	LDT2	0.12	0.14

tblVehicleEF	LDT2	0.10	0.13
tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.06	0.39
tblVehicleEF	LDT2	0.07	0.27
tblVehicleEF	LDT2	4.5710e-003	3.1320e-003
tblVehicleEF	LDT2	5.9350e-003	0.06
tblVehicleEF	LDT2	0.63	0.77
tblVehicleEF	LDT2	1.30	2.58
tblVehicleEF	LDT2	321.50	318.99
tblVehicleEF	LDT2	76.02	69.01
tblVehicleEF	LDT2	0.06	0.06
tblVehicleEF	LDT2	0.10	0.25
tblVehicleEF	LDT2	1.6020e-003	1.3550e-003
tblVehicleEF	LDT2	2.3660e-003	1.8060e-003
tblVehicleEF	LDT2	1.4730e-003	1.2480e-003
tblVehicleEF	LDT2	2.1760e-003	1.6600e-003
tblVehicleEF	LDT2	0.05	0.08
tblVehicleEF	LDT2	0.11	0.13
tblVehicleEF	LDT2	0.04	0.07
tblVehicleEF	LDT2	0.01	0.01
tblVehicleEF	LDT2	0.07	0.46
tblVehicleEF	LDT2	0.08	0.28
tblVehicleEF	LDT2	3.2190e-003	3.0370e-003
tblVehicleEF	LDT2	7.8200e-004	6.5700e-004
tblVehicleEF	LDT2	0.05	0.08
tblVehicleEF	LDT2	0.11	0.13
tblVehicleEF	LDT2	0.04	0.07

tblVehicleEF	LDT2	0.02	0.02
tblVehicleEF	LDT2	0.07	0.46
tblVehicleEF	LDT2	0.09	0.31
tblVehicleEF	LHD1	4.9950e-003	4.5410e-003
tblVehicleEF	LHD1	8.5970e-003	4.4200e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	0.17
tblVehicleEF	LHD1	0.81	0.60
tblVehicleEF	LHD1	2.14	0.89
tblVehicleEF	LHD1	9.25	9.36
tblVehicleEF	LHD1	596.36	619.96
tblVehicleEF	LHD1	29.33	9.99
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	1.91	1.39
tblVehicleEF	LHD1	0.93	0.28
tblVehicleEF	LHD1	9.6600e-004	1.0130e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	7.9000e-004	2.1100e-004
tblVehicleEF	LHD1	9.2400e-004	9.6900e-004
tblVehicleEF	LHD1	2.5590e-003	2.5170e-003
tblVehicleEF	LHD1	0.01	9.8330e-003
tblVehicleEF	LHD1	7.2700e-004	1.9400e-004
tblVehicleEF	LHD1	3.6750e-003	2.3920e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.8430e-003	1.2620e-003

tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.31	0.44
tblVehicleEF	LHD1	0.23	0.07
tblVehicleEF	LHD1	9.2000e-005	9.0000e-005
tblVehicleEF	LHD1	5.8420e-003	6.0260e-003
tblVehicleEF	LHD1	3.3400e-004	9.9000e-005
tblVehicleEF	LHD1	3.6750e-003	2.3920e-003
tblVehicleEF	LHD1	0.10	0.07
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.8430e-003	1.2620e-003
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	0.31	0.44
tblVehicleEF	LHD1	0.25	0.07
tblVehicleEF	LHD1	4.9950e-003	4.5540e-003
tblVehicleEF	LHD1	8.7610e-003	4.4900e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	0.17
tblVehicleEF	LHD1	0.82	0.61
tblVehicleEF	LHD1	2.04	0.84
tblVehicleEF	LHD1	9.25	9.36
tblVehicleEF	LHD1	596.36	619.98
tblVehicleEF	LHD1	29.33	9.91
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	1.80	1.31
tblVehicleEF	LHD1	0.90	0.27
tblVehicleEF	LHD1	9.6600e-004	1.0130e-003
tblVehicleEF	LHD1	0.01	0.01

tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	7.9000e-004	2.1100e-004
tblVehicleEF	LHD1	9.2400e-004	9.6900e-004
tblVehicleEF	LHD1	2.5590e-003	2.5170e-003
tblVehicleEF	LHD1	0.01	9.8330e-003
tblVehicleEF	LHD1	7.2700e-004	1.9400e-004
tblVehicleEF	LHD1	6.8550e-003	4.2440e-003
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	3.4810e-003	2.4050e-003
tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.32	0.44
tblVehicleEF	LHD1	0.22	0.06
tblVehicleEF	LHD1	9.2000e-005	9.0000e-005
tblVehicleEF	LHD1	5.8420e-003	6.0270e-003
tblVehicleEF	LHD1	3.3200e-004	9.8000e-005
tblVehicleEF	LHD1	6.8550e-003	4.2440e-003
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	3.4810e-003	2.4050e-003
tblVehicleEF	LHD1	0.09	0.07
tblVehicleEF	LHD1	0.32	0.44
tblVehicleEF	LHD1	0.24	0.07
tblVehicleEF	LHD1	4.9950e-003	4.5430e-003
tblVehicleEF	LHD1	8.5850e-003	4.4280e-003
tblVehicleEF	LHD1	0.02	0.01
tblVehicleEF	LHD1	0.14	0.17

tblVehicleEF	LHD1	0.81	0.60
tblVehicleEF	LHD1	2.14	0.88
tblVehicleEF	LHD1	9.25	9.36
tblVehicleEF	LHD1	596.36	619.96
tblVehicleEF	LHD1	29.33	9.98
tblVehicleEF	LHD1	0.09	0.08
tblVehicleEF	LHD1	1.89	1.37
tblVehicleEF	LHD1	0.92	0.28
tblVehicleEF	LHD1	9.6600e-004	1.0130e-003
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	0.01	0.01
tblVehicleEF	LHD1	7.9000e-004	2.1100e-004
tblVehicleEF	LHD1	9.2400e-004	9.6900e-004
tblVehicleEF	LHD1	2.5590e-003	2.5170e-003
tblVehicleEF	LHD1	0.01	9.8330e-003
tblVehicleEF	LHD1	7.2700e-004	1.9400e-004
tblVehicleEF	LHD1	3.2380e-003	2.4970e-003
tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.02
tblVehicleEF	LHD1	1.6810e-003	1.3210e-003
tblVehicleEF	LHD1	0.07	0.05
tblVehicleEF	LHD1	0.33	0.47
tblVehicleEF	LHD1	0.23	0.07
tblVehicleEF	LHD1	9.2000e-005	9.0000e-005
tblVehicleEF	LHD1	5.8420e-003	6.0260e-003
tblVehicleEF	LHD1	3.3400e-004	9.9000e-005
tblVehicleEF	LHD1	3.2380e-003	2.4970e-003

tblVehicleEF	LHD1	0.11	0.08
tblVehicleEF	LHD1	0.02	0.03
tblVehicleEF	LHD1	1.0810e-003	1.3210e-003
tblVehicleEF	LHD1	0.08	0.07
tblVehicleEF	LHD1	0.33	0.47
tblVehicleEF	LHD1	0.25	0.07
tblVehicleEF	LHD2	3.3070e-003	2.7700e-003
tblVehicleEF	LHD2	3.5370e-003	3.2040e-003
tblVehicleEF	LHD2	6.6670e-003	7.1790e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.40	0.44
tblVehicleEF	LHD2	1.03	0.48
tblVehicleEF	LHD2	14.34	14.92
tblVehicleEF	LHD2	592.89	614.92
tblVehicleEF	LHD2	22.93	6.42
tblVehicleEF	LHD2	0.11	0.12
tblVehicleEF	LHD2	1.29	1.52
tblVehicleEF	LHD2	0.48	0.16
tblVehicleEF	LHD2	1.2850e-003	1.5130e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5700e-004	9.8000e-005
tblVehicleEF	LHD2	1.2290e-003	1.4470e-003
tblVehicleEF	LHD2	2.7020e-003	2.7370e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.2800e-004	8.1000e-005
tblVehicleEF	LHD2	1.3090e-003	1.1190e-003

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tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	7.0300e-004	6.1300e-004
tblVehicleEF	LHD2	0.05	0.06
tblVehicleEF	LHD2	0.07	0.10
tblVehicleEF	LHD2	0.09	0.04
tblVehicleEF	LHD2	1.4000e-004	1.4200e-004
tblVehicleEF	LHD2	5.7620e-003	5.9160e-003
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tblVehicleEF	LHD2	1.3090e-003	1.1190e-003
tblVehicleEF	LHD2	0.03	0.03
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	7.0300e-004	6.1300e-004
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.07	0.18
tblVehicleEF	LHD2	0.10	0.04
tblVehicleEF	LHD2	3.3070e-003	2.7770e-003
tblVehicleEF	LHD2	3.5730e-003	3.2860e-003
tblVehicleEF	LHD2	8.4430e-003	6.9030e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.40	0.45
tblVehicleEF	LHD2	0.08	0.46
tblVehicleEF	LHD2	14.34	14.82
tblVehicleEF	LHD2	592.89	614.93
tblVehicleEF	LHD2	22.03	6.38
tblVehicleEF	LHD2	0.11	0.12
tblVehicleEF	LHD2	1.22	1.43

tblVehicleEF	LHD2	0.45	0.15
tblVehicleEF	LHD2	1.2850e-003	1.5130e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5700e-004	9.8000e-005
tblVehicleEF	LHD2	1.2290e-003	1.4470e-003
tblVehicleEF	LHD2	2.7020e-003	2.7370e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.2800e-004	9.1000e-005
tblVehicleEF	LHD2	2.4680e-003	1.9920e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	1.3130e-003	1.1680e-003
tblVehicleEF	LHD2	0.05	0.06
tblVehicleEF	LHD2	0.07	0.20
tblVehicleEF	LHD2	0.09	0.03
tblVehicleEF	LHD2	1.4000e-004	1.4200e-004
tblVehicleEF	LHD2	5.7620e-003	5.9160e-003
tblVehicleEF	LHD2	2.4700e-004	6.3000e-005
tblVehicleEF	LHD2	2.4680e-003	1.9920e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	1.3130e-003	1.1680e-003
tblVehicleEF	LHD2	0.06	0.06
tblVehicleEF	LHD2	0.07	0.20
tblVehicleEF	LHD2	0.10	0.04
tblVehicleEF	LHD2	3.3070e-003	2.7710e-003

tblVehicleEF	LHD2	3.5300e-003	3.2670e-003
tblVehicleEF	LHD2	6.7050e-003	7.1290e-003
tblVehicleEF	LHD2	0.12	0.13
tblVehicleEF	LHD2	0.40	0.44
tblVehicleEF	LHD2	1.03	0.47
tblVehicleEF	LHD2	14.34	14.92
tblVehicleEF	LHD2	592.89	614.92
tblVehicleEF	LHD2	22.93	6.42
tblVehicleEF	LHD2	0.11	0.12
tblVehicleEF	LHD2	1.28	1.49
tblVehicleEF	LHD2	0.46	0.16
tblVehicleEF	LHD2	1.2850e-003	1.5130e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.5700e-004	9.8000e-005
tblVehicleEF	LHD2	1.2290e-003	1.4470e-003
tblVehicleEF	LHD2	2.7020e-003	2.7370e-003
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	3.2800e-004	9.1000e-005
tblVehicleEF	LHD2	1.0230e-003	1.1350e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.01	0.01
tblVehicleEF	LHD2	5.9800e-004	6.3500e-004
tblVehicleEF	LHD2	0.05	0.06
tblVehicleEF	LHD2	0.08	0.21
tblVehicleEF	LHD2	0.09	0.03
tblVehicleEF	LHD2	1.4000e-004	1.4200e-004

tblVehicleEF	LHD2	5.7620e-003	5.9160e-003
tblVehicleEF	LHD2	2.4800e-004	6.3000e-005
tblVehicleEF	LHD2	1.0230e-003	1.1350e-003
tblVehicleEF	LHD2	0.04	0.04
tblVehicleEF	LHD2	0.02	0.02
tblVehicleEF	LHD2	5.9800e-004	6.3500e-004
tblVehicleEF	LHD2	0.08	0.06
tblVehicleEF	LHD2	0.08	0.21
tblVehicleEF	LHD2	0.10	0.04
tblVehicleEF	MCY	0.43	0.31
tblVehicleEF	MCY	0.15	0.24
tblVehicleEF	MCY	18.81	18.85
tblVehicleEF	MCY	8.70	8.64
tblVehicleEF	MCY	168.71	207.60
tblVehicleEF	MCY	45.35	60.35
tblVehicleEF	MCY	1.12	1.13
tblVehicleEF	MCY	0.31	0.20
tblVehicleEF	MCY	1.8530e-003	1.7970e-003
tblVehicleEF	MCY	3.2930e-003	2.7750e-003
tblVehicleEF	MCY	1.7410e-003	1.6800e-003
tblVehicleEF	MCY	3.0870e-003	2.6090e-003
tblVehicleEF	MCY	1.69	1.43
tblVehicleEF	MCY	0.83	0.78
tblVehicleEF	MCY	0.92	0.76
tblVehicleEF	MCY	2.11	2.11
tblVehicleEF	MCY	0.55	1.77
tblVehicleEF	MCY	2.05	1.83

tblVehicleEF	MCY	2.0360e-003	2.0540e-003
tblVehicleEF	MCY	6.7200e-004	6.9700e-004
tblVehicleEF	MCY	1.89	1.43
tblVehicleEF	MCY	0.83	0.79
tblVehicleEF	MCY	0.92	0.75
tblVehicleEF	MCY	2.61	2.61
tblVehicleEF	MCY	0.55	1.77
tblVehicleEF	MCY	2.23	2.00
tblVehicleEF	MCY	0.42	0.91
tblVehicleEF	MCY	0.13	0.21
tblVehicleEF	MCY	19.51	18.03
tblVehicleEF	MCY	9.10	7.00
tblVehicleEF	MCY	188.71	207.41
tblVehicleEF	MCY	46.36	68.44
tblVehicleEF	MCY	0.97	0.97
tblVehicleEF	MCY	0.29	0.25
tblVehicleEF	MCY	1.8630e-003	1.7970e-003
tblVehicleEF	MCY	3.2830e-003	2.7750e-003
tblVehicleEF	MCY	1.7410e-003	1.6830e-003
tblVehicleEF	MCY	3.0870e-003	2.6090e-003
tblVehicleEF	MCY	3.35	2.75
tblVehicleEF	MCY	1.23	1.09
tblVehicleEF	MCY	2.09	1.72
tblVehicleEF	MCY	2.09	2.07
tblVehicleEF	MCY	0.55	1.74
tblVehicleEF	MCY	1.84	1.61
tblVehicleEF	MCY	2.0460e-003	2.0530e-003

tblVehicleEF	MCY	6.5600e-004	5.7800e-004
tblVehicleEF	MCY	3.35	2.75
tblVehicleEF	MCY	1.29	1.00
tblVehicleEF	MCY	2.09	1.72
tblVehicleEF	MCY	2.59	2.56
tblVehicleEF	MCY	0.55	1.74
tblVehicleEF	MCY	2.00	1.76
tblVehicleEF	MCY	0.42	0.31
tblVehicleEF	MCY	0.16	0.24
tblVehicleEF	MCY	18.37	18.30
tblVehicleEF	MCY	8.67	8.43
tblVehicleEF	MCY	168.71	208.64
tblVehicleEF	MCY	46.36	69.88
tblVehicleEF	MCY	1.12	1.09
tblVehicleEF	MCY	0.31	0.20
tblVehicleEF	MCY	1.8630e-003	1.7870e-003
tblVehicleEF	MCY	3.2830e-003	2.7750e-003
tblVehicleEF	MCY	1.7410e-003	1.6800e-003
tblVehicleEF	MCY	3.0870e-003	2.6090e-003
tblVehicleEF	MCY	1.59	1.64
tblVehicleEF	MCY	1.02	1.05
tblVehicleEF	MCY	0.73	0.76
tblVehicleEF	MCY	2.11	2.08
tblVehicleEF	MCY	0.63	2.02
tblVehicleEF	MCY	2.06	1.70
tblVehicleEF	MCY	2.0290e-003	2.0450e-003
tblVehicleEF	MCY	6.7200e-004	5.9300e-004

tblVehicleEF	MCY	1.59	1.64
tblVehicleEF	MCY	1.02	1.05
tblVehicleEF	MCY	0.73	0.75
tblVehicleEF	MCY	2.61	2.59
tblVehicleEF	MCY	0.03	2.02
tblVehicleEF	MCY	2.24	1.95
tblVehicleEF	MDV	9.8000e-003	4.1040e-003
tblVehicleEF	MDV	0.01	0.08
tblVehicleEF	MDV	1.15	0.92
tblVehicleEF	MDV	2.62	3.01
tblVehicleEF	MDV	458.82	406.42
tblVehicleEF	MDV	104.21	88.29
tblVehicleEF	MDV	0.13	0.09
tblVehicleEF	MDV	0.25	0.33
tblVehicleEF	MDV	1.6560e-003	1.4180e-003
tblVehicleEF	MDV	2.3780e-003	1.9820e-003
tblVehicleEF	MDV	1.5280e-003	1.3080e-003
tblVehicleEF	MDV	2.1870e-003	1.7120e-003
tblVehicleEF	MDV	0.11	0.10
tblVehicleEF	MDV	0.19	0.15
tblVehicleEF	MDV	0.09	0.09
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.11	0.46
tblVehicleEF	MDV	0.20	0.38
tblVehicleEF	MDV	4.6960e-003	3.8690e-003
tblVehicleEF	MDV	1.0880e-003	8.2200e-004
tblVehicleEF	MDV	0.11	0.10

tblVehicleEF	MDV	0.10	0.16
tblVehicleEF	MDV	0.09	0.09
tblVehicleEF	MDV	0.04	0.02
tblVehicleEF	MDV	0.11	0.46
tblVehicleEF	MDV	0.22	0.41
tblVehicleEF	MDV	0.01	4.6800e-003
tblVehicleEF	MDV	0.01	0.07
tblVehicleEF	MDV	1.41	1.10
tblVehicleEF	MDV	2.31	2.51
tblVehicleEF	MDV	498.05	428.48
tblVehicleEF	MDV	104.21	85.29
tblVehicleEF	MDV	0.13	0.08
tblVehicleEF	MDV	0.24	0.31
tblVehicleEF	MDV	1.6560e-003	1.4180e-003
tblVehicleEF	MDV	2.3780e-003	1.8620e-003
tblVehicleEF	MDV	1.5280e-003	1.3080e-003
tblVehicleEF	MDV	2.1870e-003	1.7120e-003
tblVehicleEF	MDV	0.21	0.16
tblVehicleEF	MDV	0.22	0.17
tblVehicleEF	MDV	0.16	0.17
tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.11	0.46
tblVehicleEF	MDV	0.17	0.32
tblVehicleEF	MDV	4.9910e-003	4.0790e-003
tblVehicleEF	MDV	1.0820e-003	8.1200e-004
tblVehicleEF	MDV	0.21	0.19
tblVehicleEF	MDV	0.22	0.17

tblVehicleEF	MDV	0.10	0.17
tblVehicleEF	MDV	0.04	0.03
tblVehicleEF	MDV	0.11	0.46
tblVehicleEF	MDV	0.19	0.35
tblVehicleEF	MDV	9.5100e-003	4.0920e-003
tblVehicleEF	MDV	0.02	0.08
tblVehicleEF	MDV	1.00	0.89
tblVehicleEF	MDV	2.68	2.99
tblVehicleEF	MDV	447.05	402.69
tblVehicleEF	MDV	104.21	80.25
tblVehicleEF	MDV	0.13	0.08
tblVehicleEF	MDV	0.25	0.33
tblVehicleEF	MDV	1.0580e-003	1.4180e-003
tblVehicleEF	MDV	2.3780e-003	1.8620e-003
tblVehicleEF	MDV	1.5280e-003	1.9080e-003
tblVehicleEF	MDV	2.1870e-003	1.7120e-003
tblVehicleEF	MDV	0.08	0.10
tblVehicleEF	MDV	0.20	0.16
tblVehicleEF	MDV	0.08	0.09
tblVehicleEF	MDV	0.02	0.02
tblVehicleEF	MDV	0.13	0.52
tblVehicleEF	MDV	0.20	0.38
tblVehicleEF	MDV	4.4770e-003	3.8930e-003
tblVehicleEF	MDV	1.0890e-003	8.2100e-004
tblVehicleEF	MDV	0.08	0.10
tblVehicleEF	MDV	0.20	0.16
tblVehicleEF	MDV	0.08	0.09

tblVehicleEF	MDV	0.03	0.02
tblVehicleEF	MDV	0.13	0.53
tblVehicleEF	MDV	0.22	0.41
tblVehicleEF	MH	0.02	3.2740e-003
tblVehicleEF	MH	0.02	0.00
tblVehicleEF	MH	2.00	0.33
tblVehicleEF	MH	5.24	0.00
tblVehicleEF	MH	995.46	929.33
tblVehicleEF	MH	57.13	0.00
tblVehicleEF	MH	1.48	4.27
tblVehicleEF	MH	0.79	0.00
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	9.7800e-004	0.00
tblVehicleEF	MH	3.2460e-003	4.0000e-003
tblVehicleEF	MH	0.04	0.13
tblVehicleEF	MH	8.9900e-004	0.00
tblVehicleEF	MH	1.38	0.00
tblVehicleEF	MH	0.08	0.00
tblVehicleEF	MH	0.49	0.00
tblVehicleEF	MH	0.07	0.07
tblVehicleEF	MH	0.02	0.00
tblVehicleEF	MH	0.31	0.00
tblVehicleEF	MH	9.8680e-003	8.7860e-003
tblVehicleEF	MH	6.6300e-004	0.00
tblVehicleEF	MH	1.38	0.00
tblVehicleEF	MH	0.08	0.00

tblVehicleEF	MH	0.49	0.00
tblVehicleEF	MH	0.10	0.08
tblVehicleEF	MH	0.02	0.00
tblVehicleEF	MH	0.34	0.00
tblVehicleEF	MH	0.02	3.2740e-003
tblVehicleEF	MH	0.02	0.00
tblVehicleEF	MH	2.06	0.33
tblVehicleEF	MH	4.88	0.00
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tblVehicleEF	MH	1.37	4.03
tblVehicleEF	MH	0.76	0.00
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	9.7800e-004	0.00
tblVehicleEF	MH	3.2460e-003	4.0000e-003
tblVehicleEF	MH	0.04	0.13
tblVehicleEF	MH	8.9900e-004	0.00
tblVehicleEF	MH	2.52	0.00
tblVehicleEF	MH	0.09	0.00
tblVehicleEF	MH	0.04	0.00
tblVehicleEF	MH	0.08	0.07
tblVehicleEF	MH	0.02	0.00
tblVehicleEF	MH	0.30	0.00
tblVehicleEF	MH	9.8890e-003	8.7880e-003
tblVehicleEF	MH	6.6700e-004	0.00
tblVehicleEF	MH	2.52	0.00

tblVehicleEF	MH	0.09	0.00
tblVehicleEF	MH	0.94	0.00
tblVehicleEF	MH	0.10	0.08
tblVehicleEF	MH	0.02	0.00
tblVehicleEF	MH	0.32	0.00
tblVehicleEF	MH	0.02	3.2740e-003
tblVehicleEF	MH	0.02	0.00
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tblVehicleEF	MH	0.79	0.00
tblVehicleEF	MH	0.01	0.02
tblVehicleEF	MH	0.04	0.14
tblVehicleEF	MH	9.7800e-004	0.00
tblVehicleEF	MH	3.2460e-003	4.0000e-003
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tblVehicleEF	MH	8.9900e-004	0.00
tblVehicleEF	MH	1.38	0.00
tblVehicleEF	MH	0.09	0.00
tblVehicleEF	MH	0.47	0.00
tblVehicleEF	MH	0.07	0.07
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.31	0.00
tblVehicleEF	MH	9.8680e-003	8.7860e-003
tblVehicleEF	MH	6.6300e-004	0.00

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tblVehicleEF	MH	0.09	0.00
tblVehicleEF	MH	0.47	0.00
tblVehicleEF	MH	0.10	0.08
tblVehicleEF	MH	0.03	0.00
tblVehicleEF	MH	0.34	0.00
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tblVehicleEF	MHD	2.5650e-003	8.7300e-004
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tblVehicleEF	MHD	2.6660e-003	9.4670e-003
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tblVehicleEF	MHD	0.01	8.6560e-003
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tblVehicleEF	MHD	0.04	0.01
tblVehicleEF	MHD	0.03	0.02
tblVehicleEF	MHD	7.6500e-004	2.2800e-004
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tblVehicleEF	MHD	1.1400e-004	3.0600e-004

tblVehicleEF	MHD	2.6660e-003	9.4670e-003
tblVehicleEF	MHD	7.3000e-004	8.3000e-005
tblVehicleEF	MHD	1.0900e-004	3.5300e-004
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tblVehicleEF	MHD	0.02	0.01
tblVehicleEF	MHD	1.4710e-003	4.4600e-004
tblVehicleEF	MHD	0.02	9.6090e-003
tblVehicleEF	MHD	0.02	0.07
tblVehicleEF	MHD	0.30	0.04
tblVehicleEF	MHD	1.5100e-003	6.3800e-004
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tblVehicleEF	MHD	7.3000e-004	8.3000e-005
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tblVehicleEF	MHD	5.9600e-004	2.3900e-004

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tblVehicleEF	MHD	0.02	0.08
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tblVehicleEF	OBUS	1.0500e-003	8.4080e-003
tblVehicleEF	OBUS	8.7100e-004	2.1800e-004
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tblVehicleEF	UBUS	13.83	1.86
tblVehicleEF	UBUS	1,788.21	1,635.62
tblVehicleEF	UBUS	153.17	22.96
tblVehicleEF	UBUS	3.79	0.30
tblVehicleEF	UBUS	12.24	0.22
tblVehicleEF	UBUS	0.49	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.04	2.1820e-003
tblVehicleEF	UBUS	1.4880e-003	2.2400e-004
tblVehicleEF	UBUS	0.21	0.04
tblVehicleEF	UBUS	3.0000e-003	5.0570e-003
tblVehicleEF	UBUS	0.04	2.0670e-003
tblVehicleEF	UBUS	1.3680e-003	2.0600e-004
tblVehicleEF	UBUS	9.0420e-003	2.8050e-003
tblVehicleEF	UBUS	0.10	0.02
tblVehicleEF	UBUS	4.5390e-003	1.1470e-003
tblVehicleEF	UBUS	0.42	0.05
tblVehicleEF	UBUS	0.02	0.08
tblVehicleEF	UBUS	1.09	0.10
tblVehicleEF	UBUS	9.5090e-003	6.3200e-003
tblVehicleEF	UBUS	1.7820e-003	2.2700e-004

tblVehicleEF	UBUS	9.0420e-003	2.8050e-003
tblVehicleEF	UBUS	0.10	0.02
tblVehicleEF	UBUS	4.5390e-003	1.1470e-003
tblVehicleEF	UBUS	1.82	3.11
tblVehicleEF	UBUS	0.02	0.08
tblVehicleEF	UBUS	1.10	0.10
tblVehicleEF	UBUS	1.38	3.04
tblVehicleEF	UBUS	0.07	0.02
tblVehicleEF	UBUS	7.58	23.80
tblVehicleEF	UBUS	11.85	1.58
tblVehicleEF	UBUS	1,788.21	1,835.63
tblVehicleEF	UBUS	163.17	22.49
tblVehicleEF	UBUS	3.53	0.30
tblVehicleEF	UBUS	12.16	0.21
tblVehicleEF	UBUS	0.49	0.09
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.04	2.1820e-003
tblVehicleEF	UBUS	1.4880e-003	2.2400e-004
tblVehicleEF	UBUS	0.21	0.04
tblVehicleEF	UBUS	3.0000e-003	5.0570e-003
tblVehicleEF	UBUS	0.04	2.0870e-003
tblVehicleEF	UBUS	1.3680e-003	2.0600e-004
tblVehicleEF	UBUS	0.02	4.9810e-003
tblVehicleEF	UBUS	0.13	0.02
tblVehicleEF	UBUS	9.0520e-003	2.2880e-003
tblVehicleEF	UBUS	0.43	0.06
tblVehicleEF	UBUS	0.02	0.07

tblVehicleEF	UBUS	0.00	0.00
tblVehicleEF	UBUS	9.5110e-003	6.3200e-003
tblVehicleEF	UBUS	1.7480e-003	2.2300e-004
tblVehicleEF	UBUS	0.02	4.9810e-003
tblVehicleEF	UBUS	0.13	0.02
tblVehicleEF	UBUS	6.0520e-003	2.2660e-003
tblVehicleEF	UBUS	1.83	3.11
tblVehicleEF	UBUS	0.02	0.07
tblVehicleEF	UBUS	1.09	0.09
tblVehicleEF	UBUS	1.36	3.04
tblVehicleEF	UBUS	0.08	0.02
tblVehicleEF	UBUS	7.51	23.60
tblVehicleEF	UBUS	14.02	1.86
tblVehicleEF	UBUS	1,788.21	1,835.82
tblVehicleEF	UBUS	163.17	22.93
tblVehicleEF	UBUS	3.75	0.30
tblVehicleEF	UBUS	12.25	0.22
tblVehicleEF	UBUS	0.40	0.00
tblVehicleEF	UBUS	0.01	0.02
tblVehicleEF	UBUS	0.04	2.1820e-003
tblVehicleEF	UBUS	1.4880e-003	2.2400e-004
tblVehicleEF	UBUS	0.21	0.04
tblVehicleEF	UBUS	3.0000e-003	6.0670e-003
tblVehicleEF	UBUS	0.04	2.0670e-003
tblVehicleEF	UBUS	1.3080e-003	2.0600e-004
tblVehicleEF	UBUS	8.1990e-003	2.6430e-003
tblVehicleEF	UBUS	0.12	0.02

tblVehicleEF	UBUS	4.1400e-003	1.2010e-003
tblVehicleEF	UBUS	0.42	0.05
tblVehicleEF	UBUS	0.03	0.09
tblVehicleEF	UBUS	1.10	0.09
tblVehicleEF	UBUS	6.5000e-003	6.3200e-003
tblVehicleEF	UBUS	1.7850e-003	2.2700e-004
tblVehicleEF	UBUS	8.1960e-003	2.8430e-003
tblVehicleEF	UBUS	0.12	0.02
tblVehicleEF	UBUS	4.1400e-003	1.2010e-003
tblVehicleEF	UBUS	1.82	3.11
tblVehicleEF	UBUS	0.03	0.09
tblVehicleEF	UBUS	1.20	0.10
tblVehicleTrips	HW_TL	14.70	11.60
tblVehicleTrips	HW_TL	14.70	11.60
tblVehicleTrips	ST_TR	7.16	8.14
tblVehicleTrips	ST_TR	6.39	4.01
tblVehicleTrips	SU_TR	6.07	6.28
tblVehicleTrips	SU_TR	5.80	4.09
tblVehicleTrips	WD_TR	6.59	7.33
tblVehicleTrips	WD_TR	6.05	5.44
tblWoodstoves	NumberCatalytic	3.75	0.00
tblWoodstoves	NumberCatalytic	8.10	0.00
tblWoodstoves	NumberNoncatalytic	3.75	0.00
tblWoodstoves	NumberNoncatalytic	8.10	0.00

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	5.4265	84.3384	26.4822	0.2000	21.9792	2.6472	24.6264	10.3848	2.4354	12.8202	0.0000	20,817.4981	20,817.4981	2.3709	0.0000	20,876.7695
2022	77.0155	34.9552	25.3148	0.0785	3.0555	1.2980	4.3535	0.8181	1.2113	2.0294	0.0000	7,728.5445	7,728.5445	1.2729	0.0000	7,760.3677
2023	76.9857	1.8483	3.6559	8.3100e-003	0.5477	0.0975	0.6452	0.1453	0.0973	0.2425	0.0000	809.1160	809.1160	0.0312	0.0000	809.8958
Maximum	**77.0155**	**84.3384**	**26.4822**	**0.2000**	**21.9792**	**2.6472**	**24.6264**	**10.3848**	**2.4354**	**12.8202**	**0.0000**	**20,817.4981**	**20,817.4981**	**2.3709**	**0.0000**	**20,876.7695**

Mitigated Construction

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2021	5.4265	84.3384	26.4822	0.2000	21.9792	2.6472	24.6264	10.3848	2.4354	12.8202	0.0000	20,817.4981	20,817.4981	2.3709	0.0000	20,876.7695
2022	77.0155	34.9552	25.3148	0.0785	3.0555	1.2980	4.3535	0.8181	1.2113	2.0294	0.0000	7,728.5445	7,728.5445	1.2729	0.0000	7,760.3677
2023	76.9857	1.8483	3.6559	8.3100e-003	0.5477	0.0975	0.6452	0.1453	0.0973	0.2425	0.0000	809.1160	809.1160	0.0312	0.0000	809.8958
Maximum	**77.0155**	**84.3384**	**26.4822**	**0.2000**	**21.9792**	**2.6472**	**24.6264**	**10.3848**	**2.4354**	**12.8202**	**0.0000**	**20,817.4981**	**20,817.4981**	**2.3709**	**0.0000**	**20,876.7695**

12585 Crestview Apartments - Riverside-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	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	6.2259	4.1573	21.2738	0.0261		0.4263	0.4263		0.4263	0.4263	0.0000	5,054.1241	5,054.1241	0.1303	0.0920	5,084.8010
Energy	0.1053	0.9000	0.3830	5.7400e-003		0.0728	0.0728		0.0728	0.0728		1,148.9858	1,148.9858	0.0220	0.0211	1,155.8137
Mobile	3.1873	8.9377	27.9049	0.1013	9.5336	0.0995	9.6331	2.5482	0.0938	2.6420		10,686.8612	10,686.8612	0.3659		10,696.0080
Total	**9.5185**	**13.9950**	**49.5617**	**0.1332**	**9.5336**	**0.5985**	**10.1321**	**2.5482**	**0.5928**	**3.1411**	**0.0000**	**16,889.9711**	**16,889.9711**	**0.5182**	**0.1131**	**16,936.6227**

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	6.2259	4.1573	21.2738	0.0261		0.4263	0.4263		0.4263	0.4263	0.0000	5,054.1241	5,054.1241	0.1303	0.0920	5,084.8010
Energy	0.1053	0.9000	0.3830	5.7400e-003		0.0728	0.0728		0.0728	0.0728		1,148.9858	1,148.9858	0.0220	0.0211	1,155.8137
Mobile	3.1873	8.9377	27.9049	0.1013	9.5336	0.0995	9.6331	2.5482	0.0938	2.6420		10,686.8612	10,686.8612	0.3659		10,696.0080
Total	**9.5185**	**13.9950**	**49.5617**	**0.1332**	**9.5336**	**0.5985**	**10.1321**	**2.5482**	**0.5928**	**3.1411**	**0.0000**	**16,889.9711**	**16,889.9711**	**0.5182**	**0.1131**	**16,936.6227**

12585 Crestview Apartments - Riverside-South Coast County, Winter

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	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	Crushing	Demolition	10/18/2021	11/12/2021	5	20	
2	Site Preparation	Site Preparation	11/13/2021	11/26/2021	5	10	
3	Grading	Grading	11/27/2021	12/24/2021	5	20	
4	Building Construction	Building Construction	12/25/2021	11/11/2022	5	230	
5	Paving	Paving	11/12/2022	12/9/2022	5	20	
6	Architectural Coating	Architectural Coating	12/10/2022	1/6/2023	5	20	

Acres of Grading (Site Preparation Phase): 35

Acres of Grading (Grading Phase): 50

Acres of Paving: 0.82

Residential Indoor: 479,925; Residential Outdoor: 159,975; Non-Residential Indoor: 0; Non-Residential Outdoor: 0; Striped Parking Area: 10,272 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Crushing	Concrete/Industrial Saws	0	8.00	81	0.73
Crushing	Excavators	0	8.00	158	0.38
Crushing	Generator Sets	1	8.00	1050	0.74
Crushing	Rubber Tired Dozers	0	8.00	247	0.40
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
Grading	Crawler Tractors	3	8.00	212	0.43
Grading	Excavators	1	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
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
Crushing	1	3.00	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
Grading	8	15.00	0.00	3,750.00	14.70	6.90	23.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	243.00	63.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	8	15.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	49.00	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 Crushing - 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	3.0149	46.2097	14.5262	0.0685		0.9593	0.9593		0.9593	0.9593		7,787.9458	7,787.9458	0.2604		7,794.4552
Total	3.0149	46.2097	14.5262	0.0685		0.9593	0.9593		0.9593	0.9593		7,787.9458	7,787.9458	0.2604		7,794.4552

3.2 Crushing - 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	0.0140	8.3800e-003	0.0895	2.9000e-004	0.0335	2.0000e-004	0.0337	8.8900e-003	1.8000e-004	9.0800e-003		28.6558	28.6558	6.6000e-004		28.6724
Total	**0.0140**	**8.3800e-003**	**0.0895**	**2.9000e-004**	**0.0335**	**2.0000e-004**	**0.0337**	**8.8900e-003**	**1.8000e-004**	**9.0800e-003**		**28.6558**	**28.6558**	**6.6000e-004**		**28.6724**

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	3.0149	46.2097	14.5262	0.0685		0.9593	0.9593		0.9593	0.9593	0.0000	7,787.9458	7,787.9458	0.2604		7,794.4552
Total	**3.0149**	**46.2097**	**14.5262**	**0.0685**		**0.9593**	**0.9593**		**0.9593**	**0.9593**	**0.0000**	**7,787.9458**	**7,787.9458**	**0.2604**		**7,794.4552**

3.2 Crushing - 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	0.0140	8.3800e-003	0.0895	2.9000e-004	0.0335	2.0000e-004	0.0337	8.8900e-003	1.8000e-004	9.0800e-003		28.6558	28.6558	6.6000e-004		28.6724
Total	**0.0140**	**8.3800e-003**	**0.0895**	**2.9000e-004**	**0.0335**	**2.0000e-004**	**0.0337**	**8.8900e-003**	**1.8000e-004**	**9.0800e-003**		**28.6558**	**28.6558**	**6.6000e-004**		**28.6724**

3.3 Site Preparation - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					21.7780	0.0000	21.7780	10.3315	0.0000	10.3315			0.0000			0.0000
Off-Road	5.3428	60.7861	21.8537	0.0570		2.6460	2.6460		2.4343	2.4343		5,523.5047	5,523.5047	1.7864		5,568.1651
Total	**5.3428**	**60.7861**	**21.8537**	**0.0570**	**21.7780**	**2.6460**	**24.4240**	**10.3315**	**2.4343**	**12.7658**		**5,523.5047**	**5,523.5047**	**1.7864**		**5,568.1651**

3.3 Site Preparation - 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	0.0838	0.0503	0.5372	1.7200e-003	0.2012	1.1900e-003	0.2024	0.0534	1.0900e-003	0.0545		171.9348	171.9348	3.9700e-003		172.0342
Total	**0.0838**	**0.0503**	**0.5372**	**1.7200e-003**	**0.2012**	**1.1900e-003**	**0.2024**	**0.0534**	**1.0900e-003**	**0.0545**		**171.9348**	**171.9348**	**3.9700e-003**		**172.0342**

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					21.7780	0.0000	21.7780	10.3315	0.0000	10.3315			0.0000			0.0000
Off-Road	5.3428	60.7861	21.8537	0.0570		2.6460	2.6460		2.4343	2.4343	0.0000	5,523.5047	5,523.5047	1.7864		5,568.1651
Total	**5.3428**	**60.7861**	**21.8537**	**0.0570**	**21.7780**	**2.6460**	**24.4240**	**10.3315**	**2.4343**	**12.7658**	**0.0000**	**5,523.5047**	**5,523.5047**	**1.7864**		**5,568.1651**

3.3 Site Preparation - 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	0.0838	0.0503	0.5372	1.7200e-003	0.2012	1.1900e-003	0.2024	0.0534	1.0900e-003	0.0545		171.9348	171.9348	3.9700e-003		172.0342
Total	**0.0838**	**0.0503**	**0.5372**	**1.7200e-003**	**0.2012**	**1.1900e-003**	**0.2024**	**0.0534**	**1.0900e-003**	**0.0545**		**171.9348**	**171.9348**	**3.9700e-003**		**172.0342**

3.4 Grading - 2021

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.8633	0.0000	8.8633	3.6253	0.0000	3.6253			0.0000			0.0000
Off-Road	3.3813	39.9534	16.3820	0.0439		1.6111	1.6111		1.4822	1.4822		4,250.3144	4,250.3144	1.3746		4,284.6803
Total	**3.3813**	**39.9534**	**16.3820**	**0.0439**	**8.8633**	**1.6111**	**10.4744**	**3.6253**	**1.4822**	**5.1074**		**4,250.3144**	**4,250.3144**	**1.3746**		**4,284.6803**

3.4 Grading - 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	1.0444	44.3431	6.8156	0.1547	3.7712	0.1436	3.9148	1.0337	0.1374	1.1711		16,423.9047	16,423.9047	0.9929		16,448.7274
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	**1.1142**	**44.3850**	**7.2632**	**0.1562**	**3.9388**	**0.1446**	**4.0835**	**1.0782**	**0.1383**	**1.2165**		**16,567.1838**	**16,567.1838**	**0.9962**		**16,592.0892**

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					8.8633	0.0000	8.8633	3.6253	0.0000	3.6253			0.0000			0.0000
Off-Road	3.3813	39.9534	16.3820	0.0439		1.6111	1.6111		1.4822	1.4822	0.0000	4,250.3144	4,250.3144	1.3746		4,284.6803
Total	**3.3813**	**39.9534**	**16.3820**	**0.0439**	**8.8633**	**1.6111**	**10.4744**	**3.6253**	**1.4822**	**5.1074**	**0.0000**	**4,250.3144**	**4,250.3144**	**1.3746**		**4,284.6803**

3.4 Grading - 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	1.0444	44.3431	6.6156	0.1547	3.7712	0.1436	3.9148	1.0337	0.1374	1.1711		16,423.9047	16,423.9047	0.9929		16,448.7274
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	0.0696	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	1.1142	44.3850	7.2632	0.1562	3.9388	0.1446	4.0835	1.0782	0.1383	1.2165		16,567.1838	16,567.1838	0.9962		16,592.0892

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	33.0609	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	33.8639	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	0.1314	4.8623	1.0352	0.0132	0.3394	9.6100e-003	0.3490	0.0977	9.1900e-003	0.1069		1,393.7581	1,393.7581	0.1154		1,396.6442
Worker	1.1306	0.6787	7.2518	0.0233	2.7162	0.0160	2.7322	0.7203	0.0147	0.7351		2,321.1203	2,321.1203	0.0536		2,322.4612
Total	**1.2620**	**5.5411**	**8.2870**	**0.0365**	**3.0556**	**0.0256**	**3.0812**	**0.8181**	**0.0239**	**0.8420**		**3,714.8784**	**3,714.8784**	**0.1691**		**3,719.1054**

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	0.1314	4.8623	1.0352	0.0132	0.3394	9.6100e-003	0.3490	0.0977	9.1900e-003	0.1069		1,393.7581	1,393.7581	0.1154		1,396.6442
Worker	1.1306	0.6787	7.2518	0.0233	2.7162	0.0160	2.7322	0.7203	0.0147	0.7351		2,321.1203	2,321.1203	0.0536		2,322.4612
Total	**1.2620**	**5.5411**	**8.2870**	**0.0365**	**3.0556**	**0.0256**	**3.0812**	**0.8181**	**0.0239**	**0.8420**		**3,714.8784**	**3,714.8784**	**0.1691**		**3,719.1054**

3.5 Building Construction - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	2.7963	29.7637	17.6698	0.0430		1.2743	1.2743		1.1892	1.1892		4,110.5322	4,110.5322	1.1153		4,138.4135
Total	**2.7963**	**29.7637**	**17.6698**	**0.0430**		**1.2743**	**1.2743**		**1.1892**	**1.1892**		**4,110.5322**	**4,110.5322**	**1.1153**		**4,138.4135**

3.5 Building Construction - 2022

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	0.1227	4.5810	0.9663	0.0131	0.3394	8.1000e-003	0.3475	0.0977	7.7400e-003	0.1055		1,381.5888	1,381.5888	0.1095		1,384.3250
Worker	1.0606	0.6106	6.6787	0.0224	2.7162	0.0156	2.7318	0.7203	0.0144	0.7347		2,236.4235	2,236.4235	0.0482		2,237.6293
Total	**1.1833**	**5.1916**	**7.6450**	**0.0355**	**3.0555**	**0.0237**	**3.0792**	**0.8181**	**0.0221**	**0.8401**		**3,618.0123**	**3,618.0123**	**0.1577**		**3,621.9542**

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	2.7963	29.7637	17.6698	0.0430		1.2743	1.2743		1.1892	1.1892	0.0000	4,110.5322	4,110.5322	1.1153		4,138.4135
Total	**2.7963**	**29.7637**	**17.6698**	**0.0430**		**1.2743**	**1.2743**		**1.1892**	**1.1892**	**0.0000**	**4,110.5322**	**4,110.5322**	**1.1153**		**4,138.4135**

3.5 Building Construction - 2022

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	0.1227	4.5810	0.9663	0.0131	0.3394	8.1000e-003	0.3475	0.0977	7.7400e-003	0.1055		1,381.5888	1,381.5888	0.1095		1,384.3250
Worker	1.0606	0.6106	6.6787	0.0224	2.7162	0.0156	2.7318	0.7203	0.0144	0.7347		2,236.4235	2,236.4235	0.0482		2,237.6293
Total	**1.1833**	**5.1916**	**7.6450**	**0.0355**	**3.0555**	**0.0237**	**3.0792**	**0.8181**	**0.0221**	**0.8401**		**3,618.0123**	**3,618.0123**	**0.1577**		**3,621.9542**

3.6 Paving - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225		2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.1074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2102**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**		**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

3.6 Paving - 2022

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	0.0655	0.0377	0.4123	1.3800e-003	0.1677	9.6000e-004	0.1686	0.0445	8.9000e-004	0.0454		138.0508	138.0508	2.9800e-003		138.1253
Total	**0.0655**	**0.0377**	**0.4123**	**1.3800e-003**	**0.1677**	**9.6000e-004**	**0.1686**	**0.0445**	**8.9000e-004**	**0.0454**		**138.0508**	**138.0508**	**2.9800e-003**		**138.1253**

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	1.1028	11.1249	14.5805	0.0228		0.5679	0.5679		0.5225	0.5225	0.0000	2,207.6603	2,207.6603	0.7140		2,225.5104
Paving	0.1074					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.2102**	**11.1249**	**14.5805**	**0.0228**		**0.5679**	**0.5679**		**0.5225**	**0.5225**	**0.0000**	**2,207.6603**	**2,207.6603**	**0.7140**		**2,225.5104**

3.6 Paving - 2022

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	0.0655	0.0377	0.4123	1.3800e-003	0.1677	9.6000e-004	0.1686	0.0445	8.9000e-004	0.0454		138.0508	138.0508	2.9800e-003		138.1253
Total	**0.0655**	**0.0377**	**0.4123**	**1.3800e-003**	**0.1677**	**9.6000e-004**	**0.1686**	**0.0445**	**8.9000e-004**	**0.0454**		**138.0508**	**138.0508**	**2.9800e-003**		**138.1253**

3.7 Architectural Coating - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	76.5290					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2727	1.8780	2.4181	3.9600e-003		0.1090	0.1090		0.1090	0.1090		375.2641	375.2641	0.0244		375.8749
Total	**76.8017**	**1.8780**	**2.4181**	**3.9600e-003**		**0.1090**	**0.1090**		**0.1090**	**0.1090**		**375.2641**	**375.2641**	**0.0244**		**375.8749**

3.7 Architectural Coating - 2022

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	0.2139	0.1231	1.3467	4.5200e-003	0.5477	3.1400e-003	0.5509	0.1453	2.8900e-003	0.1482		450.9661	450.9661	9.7300e-003		451.2092
Total	**0.2139**	**0.1231**	**1.3467**	**4.5200e-003**	**0.5477**	**3.1400e-003**	**0.5509**	**0.1453**	**2.8900e-003**	**0.1482**		**450.9661**	**450.9661**	**9.7300e-003**		**451.2092**

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	76.5290					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2727	1.8780	2.4181	3.9600e-003		0.1090	0.1090		0.1090	0.1090	0.0000	375.2641	375.2641	0.0244		375.8749
Total	**76.8017**	**1.8780**	**2.4181**	**3.9600e-003**		**0.1090**	**0.1090**		**0.1090**	**0.1090**	**0.0000**	**375.2641**	**375.2641**	**0.0244**		**375.8749**

3.7 Architectural Coating - 2022

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	0.2139	0.1231	1.3467	4.5200e-003	0.5477	3.1400e-003	0.5509	0.1453	2.8900e-003	0.1482		450.9661	450.9661	9.7300e-003		451.2092
Total	**0.2139**	**0.1231**	**1.3467**	**4.5200e-003**	**0.5477**	**3.1400e-003**	**0.5509**	**0.1453**	**2.8900e-003**	**0.1482**		**450.9661**	**450.9661**	**9.7300e-003**		**451.2092**

3.7 Architectural Coating - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	76.5290					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2556	1.7373	2.4148	3.9600e-003		0.0944	0.0944		0.0944	0.0944		375.2641	375.2641	0.0225		375.8253
Total	**76.7845**	**1.7373**	**2.4148**	**3.9600e-003**		**0.0944**	**0.0944**		**0.0944**	**0.0944**		**375.2641**	**375.2641**	**0.0225**		**375.8253**

3.7 Architectural Coating - 2023

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	0.2012	0.1110	1.2411	4.3500e-003	0.5477	3.0700e-003	0.5508	0.1453	2.8200e-003	0.1481		433.8519	433.8519	8.7400e-003		434.0705
Total	**0.2012**	**0.1110**	**1.2411**	**4.3500e-003**	**0.5477**	**3.0700e-003**	**0.5508**	**0.1453**	**2.8200e-003**	**0.1481**		**433.8519**	**433.8519**	**8.7400e-003**		**434.0705**

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	76.5290					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.2556	1.7373	2.4148	3.9600e-003		0.0944	0.0944		0.0944	0.0944	0.0000	375.2641	375.2641	0.0225		375.8253
Total	**76.7845**	**1.7373**	**2.4148**	**3.9600e-003**		**0.0944**	**0.0944**		**0.0944**	**0.0944**	**0.0000**	**375.2641**	**375.2641**	**0.0225**		**375.8253**

3.7 Architectural Coating - 2023

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	0.2012	0.1110	1.2411	4.3500e-003	0.5477	3.0700e-003	0.5508	0.1453	2.8200e-003	0.1481		433.8519	433.8519	8.7400e-003		434.0705
Total	**0.2012**	**0.1110**	**1.2411**	**4.3500e-003**	**0.5477**	**3.0700e-003**	**0.5508**	**0.1453**	**2.8200e-003**	**0.1481**		**433.8519**	**433.8519**	**8.7400e-003**		**434.0705**

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	3.1873	8.9377	27.9049	0.1013	9.5336	0.0995	9.6331	2.5462	0.0938	2.6420		10,696.88 12	10,696.88 12	0.3859		10,696.00 80
Unmitigated	3.1873	8.9377	27.9049	0.1013	9.5336	0.0995	9.6331	2.5462	0.0938	2.6420		10,696.88 12	10,696.88 12	0.3859		10,696.00 80

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	549.76	610.50	471.00	1,642,400	1,642,400
Apartments Mid Rise	881.28	795.42	662.58	2,514,638	2,514,638
Parking Lot	0.00	0.00	0.00		
Total	1,431.03	1,405.92	1,133.58	4,157,039	4,157,039

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Low Rise	11.50	5.90	8.70	40.20	10.20	40.60	86	11	3
Apartments Mid Rise	11.50	5.90	8.70	40.20	10.20	40.60	86	11	3
Parking Lot	16.60	8.40	6.00	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
Apartments Low Rise	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Apartments Mid Rise	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898
Parking Lot	0.548600	0.036250	0.186898	0.112544	0.014284	0.004806	0.017604	0.070134	0.001409	0.001147	0.004508	0.000918	0.000898

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	0.1053	0.9000	0.3830	5.7400e-003		0.0728	0.0728		0.0728	0.0728		1,148.9858	1,148.9858	0.0220	0.0211	1,155.8137
NaturalGas Unmitigated	0.1053	0.9000	0.3830	5.7400e-003		0.0728	0.0728		0.0728	0.0728		1,148.9858	1,148.9858	0.0220	0.0211	1,155.8137

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	3200.24	0.0345	0.2949	0.1255	1.8800e-003		0.0238	0.0238		0.0238	0.0238		376.4988	376.4988	7.2200e-003	6.9000e-003	378.7361
Apartments Mid Rise	6566.14	0.0708	0.6051	0.2575	3.8600e-003		0.0489	0.0489		0.0489	0.0489		772.4870	772.4870	0.0148	0.0142	777.0775
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.1053**	**0.9000**	**0.3830**	**5.7400e-003**		**0.0728**	**0.0728**		**0.0728**	**0.0728**		**1,148.9858**	**1,148.9858**	**0.0220**	**0.0211**	**1,155.8137**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	3.20024	0.0345	0.2949	0.1255	1.8800e-003		0.0238	0.0238		0.0238	0.0238		376.4988	376.4988	7.2200e-003	6.9000e-003	378.7361
Apartments Mid Rise	6.56614	0.0708	0.6051	0.2575	3.8600e-003		0.0489	0.0489		0.0489	0.0489		772.4870	772.4870	0.0148	0.0142	777.0775
Parking Lot	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
Total		**0.1053**	**0.9000**	**0.3830**	**5.7400e-003**		**0.0728**	**0.0728**		**0.0728**	**0.0728**		**1,148.9858**	**1,148.9858**	**0.0220**	**0.0211**	**1,155.8137**

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	6.2259	4.1573	21.2738	0.0261		0.4263	0.4263		0.4263	0.4263	0.0000	5,054.1241	5,054.1241	0.1303	0.0620	5,084.8010
Unmitigated	6.2259	4.1573	21.2738	0.0261		0.4263	0.4263		0.4263	0.4263	0.0000	5,054.1241	5,054.1241	0.1303	0.0620	5,084.8010

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	0.4103					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.7532					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.4601	3.9014	1.6729	0.0251		0.3179	0.3179		0.3179	0.3179	0.0000	5,018.023 5	5,018.023 5	0.0952	0.0920	5,048.647 0
Landscaping	0.5932	0.2259	19.6009	1.0400e-003		0.1084	0.1084		0.1084	0.1084		35.3006	35.3006	0.0341		36.1531
Total	6.2239	4.1573	21.2738	0.0261		0.4263	0.4263		0.4263	0.4263	0.0000	5,054.124 1	5,054.124 1	0.1293	0.0920	5,084.801 0

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	0.4193					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	4.7532					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.4601	3.9314	1.6729	0.0251		0.3179	0.3179		0.3179	0.3179	0.0000	5,018.023 5	5,018.023 5	0.0962	0.0920	5,048.647 8
Landscaping	0.5932	0.2258	19.6009	1.0400e-003		0.1084	0.1084		0.1084	0.1084		35.3000	35.3000	0.0341		36.1551
Total	6.2258	4.1573	21.2738	0.0261		0.4263	0.4263		0.4263	0.4263	0.0000	5,054.124 1	5,054.124 1	0.1303	0.0920	5,084.801 6

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

Attachment C

```
Start date and time  04/26/21 14:23:45

                          AERSCREEN 16216


Crestview Apartments


            Crestview Apartments



         -----------------  DATA ENTRY VALIDATION  -----------------

                       METRIC              ENGLISH

 ** AREADATA **  ---------------     ----------------


 Emission Rate:    0.348E-02 g/s         0.276E-01 lb/hr

 Area Height:           3.00 meters           9.84 feet

 Area Source Length:  260.00 meters         853.02 feet

 Area Source Width:   147.00 meters         482.28 feet

 Vertical Dimension:    1.50 meters           4.92 feet

 Model Mode:           URBAN

 Population:          326414

 Dist to Ambient Air:           1.0 meters             3. feet



 ** BUILDING DATA **
```

```
No Building Downwash Parameters


** TERRAIN DATA **

No Terrain Elevations
Source Base Elevation:   0.0 meters        0.0  feet

Probe distance:   5000. meters       16404. feet

No flagpole receptors

No discrete receptors used


** FUMIGATION DATA **

No fumigation requested


** METEOROLOGY DATA **

Min/Max Temperature:  250.0 / 310.0 K   -9.7 /  98.3 Deg F

Minimum Wind Speed:     0.5 m/s
```

```
 Anemometer Height:   10.000 meters

 Dominant Surface Profile: Urban
 Dominant Climate Type:    Average Moisture

 Surface friction velocity (u*): not adjusted

DEBUG OPTION ON

 AERSCREEN output file:
 2021.04.26_Crestview_Construction.out

 *** AERSCREEN Run is Ready to Begin

 No terrain used, AERMAP will not be run
**************************************************

SURFACE CHARACTERISTICS & MAKEMET
Obtaining surface characteristics...
```

```
Using AERMET seasonal surface characteristics for Urban with Average Moisture

Season              Albedo     Bo       zo

Winter               0.35     1.50     1.000

Spring               0.14     1.00     1.000

Summer               0.16     2.00     1.000

Autumn               0.18     2.00     1.000


Creating met files aerscreen_01_01.sfc & aerscreen_01_01.pfl


Creating met files aerscreen_02_01.sfc & aerscreen_02_01.pfl


Creating met files aerscreen_03_01.sfc & aerscreen_03_01.pfl


Creating met files aerscreen_04_01.sfc & aerscreen_04_01.pfl


Buildings and/or terrain present or rectangular area source, skipping probe


FLOWSECTOR   started 04/26/21 14:24:33
 *******************************************


  Running AERMOD

 Processing Winter


Processing surface roughness sector  1
```

```
*****************************************************
Processing wind flow sector   1

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector   0

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

*****************************************************
Processing wind flow sector   2

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector   5

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

*****************************************************
Processing wind flow sector   3

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  10

    ********   WARNING MESSAGES   ********
               ***  NONE  ***
```

```
*****************************************************
Processing wind flow sector   4

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  15

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

*****************************************************
Processing wind flow sector   5

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  20

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

*****************************************************
Processing wind flow sector   6

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  25

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

*****************************************************
```

```
Processing wind flow sector   7

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  30

    ********   WARNING MESSAGES   ********

               ***  NONE  ***

 ********************************************

  Running AERMOD

 Processing Spring

Processing surface roughness sector  1

*******************************************************

Processing wind flow sector   1

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector   0

    ********   WARNING MESSAGES   ********

               ***  NONE  ***

*******************************************************

Processing wind flow sector   2

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector   5
```

```
    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   3


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  10


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   4


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  15


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   5


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  20
```

```
    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   6


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  25


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   7


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  30


    ********   WARNING MESSAGES   ********

               ***  NONE  ***

 *******************************************


  Running AERMOD

 Processing Summer


Processing surface roughness sector  1
```

```
****************************************************
Processing wind flow sector   1

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector   0

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

****************************************************
Processing wind flow sector   2

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector   5

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

****************************************************
Processing wind flow sector   3

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  10

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

****************************************************
```

```
Processing wind flow sector   4

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  15

    ********   WARNING MESSAGES   ********

               ***  NONE  ***

****************************************************
Processing wind flow sector   5

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  20

    ********   WARNING MESSAGES   ********

               ***  NONE  ***

****************************************************
Processing wind flow sector   6

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  25

    ********   WARNING MESSAGES   ********

               ***  NONE  ***

****************************************************
Processing wind flow sector   7
```

```
 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  30

    ********   WARNING MESSAGES   ********

               ***  NONE  ***

 ********************************************

  Running AERMOD

 Processing Autumn

Processing surface roughness sector  1

*******************************************************

Processing wind flow sector   1

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector   0

    ********   WARNING MESSAGES   ********

               ***  NONE  ***

*******************************************************

Processing wind flow sector   2

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector   5
```

```
    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   3


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  10


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   4


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  15


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   5


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  20


    ********   WARNING MESSAGES   ********
```

```
                ***  NONE  ***

****************************************************
Processing wind flow sector   6

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  25

    ********   WARNING MESSAGES   ********
                ***  NONE  ***

****************************************************
Processing wind flow sector   7

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  30

    ********   WARNING MESSAGES   ********
                ***  NONE  ***

FLOWSECTOR   ended 04/26/21 14:24:49

REFINE       started 04/26/21 14:24:49

 AERMOD Finishes Successfully for REFINE stage 3 Winter sector   0

    ********   WARNING MESSAGES   ********
```

```
                *** NONE ***

REFINE       ended 04/26/21 14:24:51

 **********************************************
 AERSCREEN Finished Successfully
 With no errors or warnings
 Check log file for details
 **********************************************

 Ending date and time  04/26/21 14:24:53
```

```
 Concentration     Distance Elevation  Diag  Season/Month   Zo sector       Date
 H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF WS     HT
REF TA     HT
   0.25886E+01         1.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.27843E+01        25.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.29589E+01        50.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.31100E+01        75.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.32435E+01       100.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.33641E+01       125.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
*  0.33912E+01       131.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.31455E+01       150.00      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.22614E+01       175.00      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.18211E+01       200.00      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.15297E+01       225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.13478E+01       250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.12006E+01       275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10782E+01       300.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.97603E+00       325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.88945E+00       350.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
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310.0    2.0
   0.81462E+00       375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.75044E+00       400.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.69458E+00       425.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.64508E+00       450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.60160E+00       475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.56309E+00       500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.52843E+00       525.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.49732E+00       550.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.46930E+00       575.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.44371E+00       600.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.42060E+00       625.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.39963E+00       650.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.38040E+00       675.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.36240E+00       700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.34589E+00       725.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.33070E+00       750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.31669E+00       775.00      0.00   0.0        Winter       0-360   10011001
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-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.30373E+00       800.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.29164E+00       825.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.28026E+00       850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.26965E+00       875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.25971E+00       900.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.25036E+00       925.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.24160E+00       950.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.23338E+00       975.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.22565E+00      1000.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.21836E+00      1025.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.21144E+00      1050.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.20486E+00      1075.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.19863E+00      1100.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.19274E+00      1125.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.18715E+00      1150.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.18184E+00      1175.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
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   0.17679E+00      1200.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.17199E+00      1225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.16741E+00      1250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.16301E+00      1275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.15881E+00      1300.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.15479E+00      1325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.15096E+00      1350.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.14728E+00      1375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.14377E+00      1400.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.14035E+00      1425.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.13708E+00      1450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.13394E+00      1475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.13093E+00      1500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.12803E+00      1525.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.12525E+00      1550.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.12257E+00      1575.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.11999E+00      1600.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
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310.0    2.0
   0.11750E+00      1625.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.11511E+00      1650.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.11279E+00      1675.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.11055E+00      1700.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10839E+00      1725.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10630E+00      1750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10429E+00      1775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10234E+00      1800.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10046E+00      1825.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.98631E-01      1850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.96864E-01      1875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.95153E-01      1900.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.93492E-01      1925.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.91873E-01      1950.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.90303E-01      1975.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.88780E-01      2000.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.87300E-01      2025.00      0.00   0.0        Winter       0-360   10011001
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-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.85864E-01      2050.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.84467E-01      2075.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.83101E-01      2100.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.81773E-01      2125.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.80482E-01      2150.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.79226E-01      2175.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.78004E-01      2200.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.76814E-01      2225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.75656E-01      2250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.74528E-01      2275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.73433E-01      2300.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.72364E-01      2325.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.71320E-01      2350.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.70302E-01      2375.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.69309E-01      2400.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.68340E-01      2425.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
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   0.67395E-01      2450.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.66476E-01      2475.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.65578E-01      2500.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.64702E-01      2525.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.63844E-01      2550.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.63002E-01      2575.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.62180E-01      2600.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.61377E-01      2625.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.60591E-01      2650.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.60396E-01      2675.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.59632E-01      2700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.58884E-01      2725.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.58153E-01      2750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.57437E-01      2775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.56736E-01      2800.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.56049E-01      2825.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.55377E-01      2850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
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310.0    2.0
   0.54719E-01      2875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.54075E-01      2900.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.53443E-01      2925.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.52824E-01      2950.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.52217E-01      2975.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.51622E-01      3000.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.51039E-01      3025.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.50468E-01      3050.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.49907E-01      3075.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.49357E-01      3100.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.48817E-01      3125.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.48288E-01      3150.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.47768E-01      3175.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.47258E-01      3200.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.46757E-01      3225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.46266E-01      3250.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.45783E-01      3275.00      0.00   0.0        Winter       0-360   10011001
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-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.45309E-01      3300.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.44843E-01      3325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.44386E-01      3350.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.43936E-01      3375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.43495E-01      3400.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.43061E-01      3425.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.42635E-01      3450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.42215E-01      3475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.41803E-01      3500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.41398E-01      3525.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.41000E-01      3550.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.40608E-01      3575.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.40222E-01      3600.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.39843E-01      3625.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.39470E-01      3650.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.39103E-01      3675.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
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   0.38742E-01      3700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.38387E-01      3725.00      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.38037E-01      3750.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.37693E-01      3775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.37354E-01      3800.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.37020E-01      3825.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.36692E-01      3850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.36368E-01      3875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.36050E-01      3900.00      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.35736E-01      3925.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.35427E-01      3950.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.35122E-01      3975.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.34822E-01      4000.00      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.34527E-01      4025.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.34235E-01      4050.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.33948E-01      4075.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.33665E-01      4100.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
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310.0    2.0
   0.33387E-01      4125.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.33112E-01      4149.99      0.00  20.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.32841E-01      4175.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.32574E-01      4200.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.32310E-01      4225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.32051E-01      4250.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.31794E-01      4275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.31542E-01      4300.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.31293E-01      4325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.31047E-01      4350.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.30804E-01      4375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.30565E-01      4400.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.30329E-01      4425.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.30096E-01      4449.99      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.29866E-01      4475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.29640E-01      4500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.29416E-01      4525.00      0.00  10.0        Winter       0-360   10011001
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-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.29195E-01      4550.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.28977E-01      4575.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.28762E-01      4600.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.28549E-01      4625.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.28340E-01      4650.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.28133E-01      4675.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.27928E-01      4700.00      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.27726E-01      4725.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.27527E-01      4750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.27330E-01      4775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.27135E-01      4800.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.26943E-01      4825.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.26753E-01      4850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.26566E-01      4875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.26380E-01      4900.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.26198E-01      4925.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
```

```
   0.26017E-01      4950.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.25838E-01      4975.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.25661E-01      5000.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
```

```
Start date and time  04/26/21 14:25:04

                            AERSCREEN 16216


Crestview Apartments Operation


            Crestview Apartments Operation



         -----------------  DATA ENTRY VALIDATION  -----------------

                       METRIC              ENGLISH

 ** AREADATA **  ---------------     ----------------


 Emission Rate:    0.125E-02 g/s         0.992E-02 lb/hr

 Area Height:           3.00 meters           9.84 feet

 Area Source Length:  260.00 meters         853.02 feet

 Area Source Width:   147.00 meters         482.28 feet

 Vertical Dimension:    1.50 meters           4.92 feet

 Model Mode:           URBAN

 Population:          326414

 Dist to Ambient Air:           1.0 meters             3. feet



 ** BUILDING DATA **
```

```
No Building Downwash Parameters


** TERRAIN DATA **

No Terrain Elevations
Source Base Elevation:   0.0 meters        0.0  feet

Probe distance:   5000. meters       16404. feet

No flagpole receptors

No discrete receptors used


** FUMIGATION DATA **

No fumigation requested


** METEOROLOGY DATA **

Min/Max Temperature:  250.0 / 310.0 K   -9.7 /  98.3 Deg F

Minimum Wind Speed:     0.5 m/s
```

```
 Anemometer Height:   10.000 meters

 Dominant Surface Profile: Urban
 Dominant Climate Type:    Average Moisture

 Surface friction velocity (u*): not adjusted

DEBUG OPTION ON



 AERSCREEN output file:
 2021.04.26_Crestview_Operation.out


 *** AERSCREEN Run is Ready to Begin



 No terrain used, AERMAP will not be run
**************************************************

SURFACE CHARACTERISTICS & MAKEMET
Obtaining surface characteristics...
```

```
Using AERMET seasonal surface characteristics for Urban with Average Moisture

Season              Albedo     Bo       zo

Winter               0.35     1.50     1.000

Spring               0.14     1.00     1.000

Summer               0.16     2.00     1.000

Autumn               0.18     2.00     1.000


Creating met files aerscreen_01_01.sfc & aerscreen_01_01.pfl


Creating met files aerscreen_02_01.sfc & aerscreen_02_01.pfl


Creating met files aerscreen_03_01.sfc & aerscreen_03_01.pfl


Creating met files aerscreen_04_01.sfc & aerscreen_04_01.pfl


Buildings and/or terrain present or rectangular area source, skipping probe


FLOWSECTOR   started 04/26/21 14:25:55
 *******************************************


  Running AERMOD

 Processing Winter


Processing surface roughness sector  1
```

```
*****************************************************
Processing wind flow sector   1

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector   0

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

*****************************************************
Processing wind flow sector   2

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector   5

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

*****************************************************
Processing wind flow sector   3

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  10

    ********   WARNING MESSAGES   ********
               ***  NONE  ***
```

```
*****************************************************
Processing wind flow sector   4

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  15

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

*****************************************************
Processing wind flow sector   5

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  20

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

*****************************************************
Processing wind flow sector   6

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  25

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

*****************************************************
```

```
Processing wind flow sector   7

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Winter sector  30

    ********   WARNING MESSAGES   ********
               ***  NONE  ***
 ********************************************

  Running AERMOD
 Processing Spring

Processing surface roughness sector  1

*****************************************************
Processing wind flow sector   1

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector   0

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

*****************************************************
Processing wind flow sector   2

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector   5
```

```
    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   3


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  10


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   4


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  15


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


*****************************************************

Processing wind flow sector   5


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  20
```

```
    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   6


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  25


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************

Processing wind flow sector   7


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Spring sector  30


    ********   WARNING MESSAGES   ********

               ***  NONE  ***

 *******************************************


  Running AERMOD

 Processing Summer


Processing surface roughness sector  1
```

```
*****************************************************
Processing wind flow sector   1

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector   0

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

*****************************************************
Processing wind flow sector   2

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector   5

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

*****************************************************
Processing wind flow sector   3

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  10

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

*****************************************************
```

```
Processing wind flow sector   4

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  15

    ********   WARNING MESSAGES   ********

               ***  NONE  ***

*****************************************************
Processing wind flow sector   5

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  20

    ********   WARNING MESSAGES   ********

               ***  NONE  ***

*****************************************************
Processing wind flow sector   6

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  25

    ********   WARNING MESSAGES   ********

               ***  NONE  ***

*****************************************************
Processing wind flow sector   7
```

```
 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Summer sector  30

    ********   WARNING MESSAGES   ********
               ***  NONE  ***
 ********************************************

  Running AERMOD
 Processing Autumn

Processing surface roughness sector  1

*****************************************************
Processing wind flow sector   1

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector   0

    ********   WARNING MESSAGES   ********
               ***  NONE  ***

*****************************************************
Processing wind flow sector   2

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector   5
```

```
    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************
Processing wind flow sector   3


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  10


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************
Processing wind flow sector   4


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  15


    ********   WARNING MESSAGES   ********

               ***  NONE  ***


****************************************************
Processing wind flow sector   5


 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  20


    ********   WARNING MESSAGES   ********
```

```
                ***  NONE  ***

****************************************************
Processing wind flow sector   6

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  25

    ********   WARNING MESSAGES   ********
                ***  NONE  ***

****************************************************
Processing wind flow sector   7

 AERMOD Finishes Successfully for FLOWSECTOR stage 2 Autumn sector  30

    ********   WARNING MESSAGES   ********
                ***  NONE  ***

FLOWSECTOR   ended 04/26/21 14:26:12

REFINE       started 04/26/21 14:26:12

 AERMOD Finishes Successfully for REFINE stage 3 Winter sector   0

    ********   WARNING MESSAGES   ********
```

```
                *** NONE ***

REFINE       ended 04/26/21 14:26:14

 ***********************************************
 AERSCREEN Finished Successfully
 With no errors or warnings
 Check log file for details
 ************************************************

 Ending date and time  04/26/21 14:26:16
```

```
 Concentration     Distance Elevation  Diag  Season/Month   Zo sector       Date
 H0     U*     W*  DT/DZ ZICNV ZIMCH  M-O LEN    Z0  BOWEN ALBEDO  REF WS     HT
REF TA     HT
   0.92997E+00         1.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10003E+01        25.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10630E+01        50.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.11173E+01        75.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.11652E+01       100.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.12086E+01       125.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
*  0.12183E+01       131.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.11300E+01       150.00      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.81240E+00       175.00      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.65422E+00       200.00      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.54956E+00       225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.48420E+00       250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.43132E+00       275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.38736E+00       300.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.35064E+00       325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.31954E+00       350.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
```

```
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10912E+00       800.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10477E+00       825.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10068E+00       850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.96874E-01       875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.93302E-01       900.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.89943E-01       925.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.86797E-01       950.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.83843E-01       975.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.81064E-01      1000.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.78447E-01      1025.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.75961E-01      1050.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.73596E-01      1075.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.71360E-01      1100.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.69242E-01      1125.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.67234E-01      1150.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.65326E-01      1175.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
```

```
   0.63513E-01      1200.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.61787E-01      1225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.60143E-01      1250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.58561E-01      1275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.57052E-01      1300.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.55610E-01      1325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.54231E-01      1350.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.52912E-01      1375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.51648E-01      1400.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.50422E-01      1425.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.49247E-01      1450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.48119E-01      1475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.47036E-01      1500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.45995E-01      1525.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.44997E-01      1550.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.44035E-01      1575.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.43107E-01      1600.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
```

```
310.0    2.0
   0.42213E-01      1625.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.41352E-01      1650.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.40519E-01      1675.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.39714E-01      1700.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.38938E-01      1725.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.38190E-01      1750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.37466E-01      1775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.36766E-01      1800.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.36089E-01      1825.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.35434E-01      1850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.34799E-01      1875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.34184E-01      1900.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.33587E-01      1925.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.33006E-01      1950.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.32442E-01      1975.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.31894E-01      2000.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.31363E-01      2025.00      0.00   0.0        Winter       0-360   10011001
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-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.30847E-01      2050.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.30345E-01      2075.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.29854E-01      2100.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.29377E-01      2125.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.28913E-01      2150.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.28462E-01      2175.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.28023E-01      2200.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.27596E-01      2225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.27180E-01      2250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.26774E-01      2275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.26381E-01      2300.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.25997E-01      2325.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.25622E-01      2350.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.25256E-01      2375.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.24899E-01      2400.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.24551E-01      2425.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
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   0.24212E-01      2450.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.23882E-01      2475.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.23559E-01      2500.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.23245E-01      2525.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.22936E-01      2550.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.22634E-01      2575.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.22339E-01      2600.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.22050E-01      2625.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.21768E-01      2650.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.21698E-01      2675.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.21423E-01      2700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.21154E-01      2725.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.20892E-01      2750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.20634E-01      2775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.20382E-01      2800.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.20136E-01      2825.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.19894E-01      2850.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
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310.0    2.0
   0.19658E-01      2875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.19427E-01      2900.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.19199E-01      2925.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.18977E-01      2950.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.18759E-01      2975.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.18545E-01      3000.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.18336E-01      3025.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.18131E-01      3050.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.17929E-01      3075.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.17732E-01      3100.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.17538E-01      3125.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.17347E-01      3150.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.17161E-01      3175.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.16978E-01      3200.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.16798E-01      3225.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.16621E-01      3250.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.16448E-01      3275.00      0.00   0.0        Winter       0-360   10011001
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-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.16277E-01      3300.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.16110E-01      3325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.15946E-01      3350.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.15784E-01      3375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.15626E-01      3400.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.15470E-01      3425.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.15317E-01      3450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.15166E-01      3475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.15018E-01      3500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.14872E-01      3525.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.14729E-01      3550.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.14589E-01      3575.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.14450E-01      3600.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.14314E-01      3625.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.14180E-01      3650.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.14048E-01      3675.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
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   0.13918E-01      3700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.13791E-01      3725.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.13665E-01      3750.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.13541E-01      3775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.13419E-01      3800.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.13300E-01      3825.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.13182E-01      3849.99      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.13065E-01      3875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.12951E-01      3900.00      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.12838E-01      3925.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.12727E-01      3950.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.12618E-01      3975.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.12510E-01      4000.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.12404E-01      4025.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.12299E-01      4050.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.12196E-01      4075.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.12094E-01      4100.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
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310.0    2.0
   0.11994E-01      4125.00      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.11896E-01      4150.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.11798E-01      4175.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.11702E-01      4200.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.11608E-01      4225.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.11514E-01      4250.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.11422E-01      4275.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.11331E-01      4300.00      0.00  10.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.11242E-01      4325.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.11154E-01      4350.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.11067E-01      4375.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10981E-01      4400.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10896E-01      4425.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10812E-01      4450.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10730E-01      4475.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10648E-01      4500.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10568E-01      4525.00      0.00   0.0        Winter       0-360   10011001
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-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10488E-01      4550.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10410E-01      4575.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10333E-01      4600.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10256E-01      4625.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10181E-01      4650.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10107E-01      4675.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.10033E-01      4700.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.99607E-02      4725.00      0.00  25.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.98890E-02      4750.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.98183E-02      4775.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.97484E-02      4800.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.96794E-02      4825.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.96112E-02      4850.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.95438E-02      4875.00      0.00   0.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.94773E-02      4900.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.94115E-02      4924.99      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
```

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   0.93466E-02      4950.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.92824E-02      4975.00      0.00  15.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
   0.92190E-02      5000.00      0.00   5.0        Winter       0-360   10011001
-1.30  0.043 -9.000  0.020 -999.   21.      6.0 1.000   1.50   0.35    0.50   10.0
310.0    2.0
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Attachment D

SWAPE Technical Consultation, Data Analysis and Litigation Support for the Environment

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Paul Rosenfeld, Ph.D.

Chemical Fate and Transport & Air Dispersion Modeling

Principal Environmental Chemist

Risk Assessment & Remediation Specialist

Education

Ph.D. Soil Chemistry, University of Washington, 1999. Dissertation on volatile organic compound filtration.

M.S. Environmental Science, U.C. Berkeley, 1995. Thesis on organic waste economics.

B.A. Environmental Studies, U.C. Santa Barbara, 1991. Thesis on wastewater treatment.

Professional Experience

Dr. Rosenfeld has over 25 years' experience conducting environmental investigations and risk assessments for evaluating impacts to human health, property, and ecological receptors. His expertise focuses on the fate and transport of environmental contaminants, human health risk, exposure assessment, and ecological restoration. Dr. Rosenfeld has evaluated and modeled emissions from unconventional oil drilling operations, oil spills, landfills, boilers and incinerators, process stacks, storage tanks, confined animal feeding operations, and many other industrial and agricultural sources. His project experience ranges from monitoring and modeling of pollution sources to evaluating impacts of pollution on workers at industrial facilities and residents in surrounding communities.

Dr. Rosenfeld has investigated and designed remediation programs and risk assessments for contaminated sites containing lead, heavy metals, mold, bacteria, particulate matter, petroleum hydrocarbons, chlorinated solvents, pesticides, radioactive waste, dioxins and furans, semi- and volatile organic compounds, PCBs, PAHs, perchlorate, asbestos, per- and poly-fluoroalkyl substances (PFOA/PFOS), unusual polymers, fuel oxygenates (MTBE), among other pollutants. Dr. Rosenfeld also has experience evaluating greenhouse gas emissions from various projects and is an expert on the assessment of odors from industrial and agricultural sites, as well as the evaluation of odor nuisance impacts and technologies for abatement of odorous emissions. As a principal scientist at SWAPE, Dr. Rosenfeld directs air dispersion modeling and exposure assessments. He has served as an expert witness and testified about pollution sources causing nuisance and/or personal injury at dozens of sites and has testified as an expert witness on more than ten cases involving exposure to air contaminants from industrial sources.

Professional History:

Soil Water Air Protection Enterprise (SWAPE); 2003 to present; Principal and Founding Partner
UCLA School of Public Health; 2007 to 2011; Lecturer (Assistant Researcher)
UCLA School of Public Health; 2003 to 2006; Adjunct Professor
UCLA Environmental Science and Engineering Program; 2002-2004; Doctoral Intern Coordinator
UCLA Institute of the Environment, 2001-2002; Research Associate
Komex H_2O Science, 2001 to 2003; Senior Remediation Scientist
National Groundwater Association, 2002-2004; Lecturer
San Diego State University, 1999-2001; Adjunct Professor
Anteon Corp., San Diego, 2000-2001; Remediation Project Manager
Ogden (now Amec), San Diego, 2000-2000; Remediation Project Manager
Bechtel, San Diego, California, 1999 – 2000; Risk Assessor
King County, Seattle, 1996 – 1999; Scientist
James River Corp., Washington, 1995-96; Scientist
Big Creek Lumber, Davenport, California, 1995; Scientist
Plumas Corp., California and USFS, Tahoe 1993-1995; Scientist
Peace Corps and World Wildlife Fund, St. Kitts, West Indies, 1991-1993; Scientist

Publications:

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Rosenfeld, P. E. (October 15-18, 2007). The Repeated Trespass of Tritium-Contaminated Water Into A Surrounding Community Form Repeated Waste Spills From A Nuclear Power Plant. *The 23rd Annual International Conferences on Soils Sediment and Water*. Platform lecture conducted from University of Massachusetts, Amherst MA.

Rosenfeld, P. E. (October 15-18, 2007). Somerville Community Exposure To Contaminants From Wood Treatment Facility Emissions. The *23rd Annual International Conferences on Soils Sediment and Water*. Lecture conducted from University of Massachusetts, Amherst MA.

Rosenfeld P. E. (March 2007). Production, Chemical Properties, Toxicology, & Treatment Case Studies of 1,2,3-Trichloropropane (TCP). *The Association for Environmental Health and Sciences (AEHS) Annual Meeting*. Lecture conducted from San Diego, CA.

Rosenfeld P. E. (March 2007). Blood and Attic Sampling for Dioxin/Furan, PAH, and Metal Exposure in Florala, Alabama. *The AEHS Annual Meeting*. Lecture conducted from San Diego, CA.

Hensley A.R., Scott, A., **Rosenfeld P.E.**, Clark, J.J.J. (August 21 – 25, 2006). Dioxin Containing Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility. *The 26th International Symposium on Halogenated Persistent Organic Pollutants – DIOXIN2006*. Lecture conducted from Radisson SAS Scandinavia Hotel in Oslo Norway.

Hensley A.R., Scott, A., **Rosenfeld P.E.**, Clark, J.J.J. (November 4-8, 2006). Dioxin Containing Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility. *APHA 134 Annual Meeting & Exposition*. Lecture conducted from Boston Massachusetts.

Paul Rosenfeld Ph.D. (October 24-25, 2005). Fate, Transport and Persistence of PFOA and Related Chemicals. Mealey's C8/PFOA. *Science, Risk & Litigation Conference*. Lecture conducted from The Rittenhouse Hotel, Philadelphia, PA.

Paul Rosenfeld Ph.D. (September 19, 2005). Brominated Flame Retardants in Groundwater: Pathways to Human Ingestion, *Toxicology and Remediation PEMA Emerging Contaminant Conference*. Lecture conducted from Hilton Hotel, Irvine California.

Paul Rosenfeld Ph.D. (September 19, 2005). Fate, Transport, Toxicity, And Persistence of 1,2,3-TCP. *PEMA Emerging Contaminant Conference*. Lecture conducted from Hilton Hotel in Irvine, California.

Paul Rosenfeld Ph.D. (September 26-27, 2005). Fate, Transport and Persistence of PDBEs. *Mealey's Groundwater Conference*. Lecture conducted from Ritz Carlton Hotel, Marina Del Ray, California.

Paul Rosenfeld Ph.D. (June 7-8, 2005). Fate, Transport and Persistence of PFOA and Related Chemicals. *International Society of Environmental Forensics: Focus On Emerging Contaminants*. Lecture conducted from Sheraton Oceanfront Hotel, Virginia Beach, Virginia.

Paul Rosenfeld Ph.D. (July 21-22, 2005). Fate Transport, Persistence and Toxicology of PFOA and Related Perfluorochemicals. *2005 National Groundwater Association Ground Water And Environmental Law Conference*. Lecture conducted from Wyndham Baltimore Inner Harbor, Baltimore Maryland.

Paul Rosenfeld Ph.D. (July 21-22, 2005). Brominated Flame Retardants in Groundwater: Pathways to Human Ingestion, Toxicology and Remediation. *2005 National Groundwater Association Ground Water and Environmental Law Conference*. Lecture conducted from Wyndham Baltimore Inner Harbor, Baltimore Maryland.

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Paul Rosenfeld, Ph.D. (March 2004). Perchlorate Toxicology. *Meeting of the American Groundwater Trust*. Lecture conducted from Phoenix Arizona.

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Paul Rosenfeld, Ph.D. (April 7, 2004). A National Damage Assessment Model For PCE and Dry Cleaners. *Drycleaner Symposium. California Ground Water Association*. Lecture conducted from Radison Hotel, Sacramento, California.

Rosenfeld, P. E., Grey, M., (June 2003) Two stage biofilter for biosolids composting odor control. *Seventh International In Situ And On Site Bioremediation Symposium Battelle Conference* Orlando, FL.

Paul Rosenfeld, Ph.D. and James Clark Ph.D. (February 20-21, 2003) Understanding Historical Use, Chemical Properties, Toxicity and Regulatory Guidance of 1,4 Dioxane. *National Groundwater Association. Southwest Focus Conference. Water Supply and Emerging Contaminants*.. Lecture conducted from Hyatt Regency Phoenix Arizona.

Paul Rosenfeld, Ph.D. (February 6-7, 2003). Underground Storage Tank Litigation and Remediation. *California CUPA Forum*. Lecture conducted from Marriott Hotel, Anaheim California.

Paul Rosenfeld, Ph.D. (October 23, 2002) Underground Storage Tank Litigation and Remediation. *EPA Underground Storage Tank Roundtable*. Lecture conducted from Sacramento California.

Rosenfeld, P.E. and Suffet, M. (October 7- 10, 2002). Understanding Odor from Compost, *Wastewater and Industrial Processes. Sixth Annual Symposium On Off Flavors in the Aquatic Environment. International Water Association*. Lecture conducted from Barcelona Spain.

Rosenfeld, P.E. and Suffet, M. (October 7- 10, 2002). Using High Carbon Wood Ash to Control Compost Odor. *Sixth Annual Symposium On Off Flavors in the Aquatic Environment. International Water Association*. Lecture conducted from Barcelona Spain.

Rosenfeld, P.E. and Grey, M. A. (September 22-24, 2002). Biocycle Composting For Coastal Sage Restoration. *Northwest Biosolids Management Association*. Lecture conducted from Vancouver Washington..

Rosenfeld, P.E. and Grey, M. A. (November 11-14, 2002). Using High-Carbon Wood Ash to Control Odor at a Green Materials Composting Facility. *Soil Science Society Annual Conference*. Lecture conducted from Indianapolis, Maryland.

Rosenfeld. P.E. (September 16, 2000). Two stage biofilter for biosolids composting odor control. *Water Environment Federation*. Lecture conducted from Anaheim California.

Rosenfeld. P.E. (October 16, 2000). Wood ash and biofilter control of compost odor. *Biofest*. Lecture conducted from Ocean Shores, California.

Rosenfeld, P.E. (2000). Bioremediation Using Organic Soil Amendments. *California Resource Recovery Association*. Lecture conducted from Sacramento California.

Rosenfeld, P.E., C.L. Henry, R. Harrison. (1998). Oat and Grass Seed Germination and Nitrogen and Sulfur Emissions Following Biosolids Incorporation With High-Carbon Wood-Ash. *Water Environment Federation 12th Annual Residuals and Biosolids Management Conference Proceedings*. Lecture conducted from Bellevue Washington.

Rosenfeld, P.E., and C.L. Henry. (1999). An evaluation of ash incorporation with biosolids for odor reduction. *Soil Science Society of America*. Lecture conducted from Salt Lake City Utah.

Rosenfeld, P.E., C.L. Henry, R. Harrison. (1998). Comparison of Microbial Activity and Odor Emissions from Three Different Biosolids Applied to Forest Soil. *Brown and Caldwell*. Lecture conducted from Seattle Washington.

Rosenfeld, P.E., C.L. Henry. (1998). Characterization, Quantification, and Control of Odor Emissions from Biosolids Application To Forest Soil. *Biofest*. Lecture conducted from Lake Chelan, Washington.

Rosenfeld, P.E, C.L. Henry, R. Harrison. (1998). Oat and Grass Seed Germination and Nitrogen and Sulfur Emissions Following Biosolids Incorporation With High-Carbon Wood-Ash. Water Environment Federation 12th Annual Residuals and Biosolids Management Conference Proceedings. Lecture conducted from Bellevue Washington.

Rosenfeld, P.E., C.L. Henry, R. B. Harrison, and R. Dills. (1997). Comparison of Odor Emissions From Three Different Biosolids Applied to Forest Soil. *Soil Science Society of America*. Lecture conducted from Anaheim California.

Teaching Experience:

UCLA Department of Environmental Health (Summer 2003 through 20010) Taught Environmental Health Science 100 to students, including undergrad, medical doctors, public health professionals and nurses. Course focused on the health effects of environmental contaminants.

National Ground Water Association, Successful Remediation Technologies. Custom Course in Sante Fe, New Mexico. May 21, 2002. Focused on fate and transport of fuel contaminants associated with underground storage tanks.

National Ground Water Association; Successful Remediation Technologies Course in Chicago Illinois. April 1, 2002. Focused on fate and transport of contaminants associated with Superfund and RCRA sites.

California Integrated Waste Management Board, April and May, 2001. Alternative Landfill Caps Seminar in San Diego, Ventura, and San Francisco. Focused on both prescriptive and innovative landfill cover design.

UCLA Department of Environmental Engineering, February 5, 2002. Seminar on Successful Remediation Technologies focusing on Groundwater Remediation.

University Of Washington, Soil Science Program, Teaching Assistant for several courses including: Soil Chemistry, Organic Soil Amendments, and Soil Stability.

U.C. Berkeley, Environmental Science Program Teaching Assistant for Environmental Science 10.

Academic Grants Awarded:

California Integrated Waste Management Board. $41,000 grant awarded to UCLA Institute of the Environment. Goal: To investigate effect of high carbon wood ash on volatile organic emissions from compost. 2001.

Synagro Technologies, Corona California: $10,000 grant awarded to San Diego State University.
Goal: investigate effect of biosolids for restoration and remediation of degraded coastal sage soils. 2000.

King County, Department of Research and Technology, Washington State. $100,000 grant awarded to University of Washington: Goal: To investigate odor emissions from biosolids application and the effect of polymers and ash on VOC emissions. 1998.

Northwest Biosolids Management Association, Washington State. $20,000 grant awarded to investigate effect of polymers and ash on VOC emissions from biosolids. 1997.

James River Corporation, Oregon: $10,000 grant was awarded to investigate the success of genetically engineered Poplar trees with resistance to round-up. 1996.

United State Forest Service, Tahoe National Forest: $15,000 grant was awarded to investigating fire ecology of the Tahoe National Forest. 1995.

Kellogg Foundation, Washington D.C. $500 grant was awarded to construct a large anaerobic digester on St. Kitts in West Indies. 1993

Deposition and/or Trial Testimony:

In the United States District Court For The Southern District of Illinois
Duarte et al, *Plaintiffs*, vs. United States Metals Refining Company et. al. *Defendant.*
Case No.: 3:19-cv-00302-SMY-GCS
Rosenfeld Deposition. 2-19-2020

In the Circuit Court of Jackson County, Missouri
Karen Cornwell, *Plaintiff*, vs. Marathon Petroleum, LP, *Defendant.*
Case No.: 1716-CV10006
Rosenfeld Deposition. 8-30-2019

In the United States District Court For The District of New Jersey
Duarte et al, *Plaintiffs*, vs. United States Metals Refining Company et. al. *Defendant.*
Case No.: 2:17-cv-01624-ES-SCM
Rosenfeld Deposition. 6-7-2019

In the United States District Court of Southern District of Texas Galveston Division
M/T Carla Maersk, *Plaintiffs*, vs. Conti 168., Schiffahrts-GMBH & Co. Bulker KG MS "Conti Perdido" *Defendant.*
Case No.: 3:15-CV-00106 consolidated with 3:15-CV-00237
Rosenfeld Deposition. 5-9-2019

In The Superior Court of the State of California In And For The County Of Los Angeles – Santa Monica
Carole-Taddeo-Bates et al., vs. Ifran Khan et al., Defendants
Case No.: No. BC615636
Rosenfeld Deposition, 1-26-2019

In The Superior Court of the State of California In And For The County Of Los Angeles – Santa Monica
The San Gabriel Valley Council of Governments et al. vs El Adobe Apts. Inc. et al., Defendants
Case No.: No. BC646857
Rosenfeld Deposition, 10-6-2018; Trial 3-7-19

In United States District Court For The District of Colorado
Bells et al. Plaintiff vs. The 3M Company et al., Defendants
Case: No 1:16-cv-02531-RBJ
Rosenfeld Deposition, 3-15-2018 and 4-3-2018

In The District Court Of Regan County, Texas, 112th Judicial District
Phillip Bales et al., Plaintiff vs. Dow Agrosciences, LLC, et al., Defendants
Cause No 1923
Rosenfeld Deposition, 11-17-2017

In The Superior Court of the State of California In And For The County Of Contra Costa
Simons et al., Plaintiffs vs. Chevron Corporation, et al., Defendants
Cause No C12-01481
Rosenfeld Deposition, 11-20-2017

In The Circuit Court Of The Twentieth Judicial Circuit, St Clair County, Illinois
Martha Custer et al., Plaintiff vs. Cerro Flow Products, Inc., Defendants
Case No.: No. 0i9-L-2295
Rosenfeld Deposition, 8-23-2017

In United States District Court For The Southern District of Mississippi
Guy Manuel vs. The BP Exploration et al., Defendants
Case: No 1:19-cv-00315-RHW
Rosenfeld Deposition, 4-22-2020

In The Superior Court of the State of California, For The County of Los Angeles
Warrn Gilbert and Penny Gilber, Plaintiff vs. BMW of North America LLC
Case No.: LC102019 (c/w BC582154)
Rosenfeld Deposition, 8-16-2017, Trail 8-28-2018

In the Northern District Court of Mississippi, Greenville Division
Brenda J. Cooper, et al., *Plaintiffs*, vs. Meritor Inc., et al., *Defendants*
Case Number: 4:16-cv-52-DMB-JVM
Rosenfeld Deposition: July 2017

In The Superior Court of the State of Washington, County of Snohomish
Michael Davis and Julie Davis et al., Plaintiff vs. Cedar Grove Composting Inc., Defendants
Case No.: No. 13-2-03987-5
Rosenfeld Deposition, February 2017
Trial, March 2017

In The Superior Court of the State of California, County of Alameda
Charles Spain., Plaintiff vs. Thermo Fisher Scientific, et al., Defendants
Case No.: RG14711115
Rosenfeld Deposition, September 2015

In The Iowa District Court In And For Poweshiek County
Russell D. Winburn, et al., Plaintiffs vs. Doug Hoksbergen, et al., Defendants
Case No.: LALA002187
Rosenfeld Deposition, August 2015

In The Iowa District Court For Wapello County
Jerry Dovico, et al., Plaintiffs vs. Valley View Sine LLC, et al., Defendants
Law No,: LALA105144 - Division A
Rosenfeld Deposition, August 2015

In The Iowa District Court For Wapello County
Doug Pauls, et al.,, et al., Plaintiffs vs. Richard Warren, et al., Defendants
Law No,: LALA105144 - Division A
Rosenfeld Deposition, August 2015

In The Circuit Court of Ohio County, West Virginia
Robert Andrews, et al. v. Antero, et al.
Civil Action N0. 14-C-30000
Rosenfeld Deposition, June 2015

In The Third Judicial District County of Dona Ana, New Mexico
Betty Gonzalez, et al. Plaintiffs vs. Del Oro Dairy, Del Oro Real Estate LLC, Jerry Settles and Deward DeRuyter, Defendants
Rosenfeld Deposition: July 2015

In The Iowa District Court For Muscatine County
Laurie Freeman et. al. Plaintiffs vs. Grain Processing Corporation, Defendant
Case No 4980
Rosenfeld Deposition: May 2015

Attachment E

SWAPE Technical Consultation, Data Analysis and Litigation Support for the Environment

2656 29th Street, Suite 201
Santa Monica, CA 90405

Matt Hagemann, P.G, C.Hg.
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Matthew F. Hagemann, P.G., C.Hg., QSD, QSP

Geologic and Hydrogeologic Characterization
Investigation and Remediation Strategies
Litigation Support and Testifying Expert
Industrial Stormwater Compliance
CEQA Review

Education:

M.S. Degree, Geology, California State University Los Angeles, Los Angeles, CA, 1984.
B.A. Degree, Geology, Humboldt State University, Arcata, CA, 1982.

Professional Certifications:

California Professional Geologist
California Certified Hydrogeologist
Qualified SWPPP Developer and Practitioner

Professional Experience:

Matt has 30 years of experience in environmental policy, contaminant assessment and remediation, stormwater compliance, and CEQA review. He spent nine years with the U.S. EPA in the RCRA and Superfund programs and served as EPA's Senior Science Policy Advisor in the Western Regional Office where he identified emerging threats to groundwater from perchlorate and MTBE. While with EPA, Matt also served as a Senior Hydrogeologist in the oversight of the assessment of seven major military facilities undergoing base closure. He led numerous enforcement actions under provisions of the Resource Conservation and Recovery Act (RCRA) and directed efforts to improve hydrogeologic characterization and water quality monitoring. For the past 15 years, as a founding partner with SWAPE, Matt has developed extensive client relationships and has managed complex projects that include consultation as an expert witness and a regulatory specialist, and a manager of projects ranging from industrial stormwater compliance to CEQA review of impacts from hazardous waste, air quality and greenhouse gas emissions.

Positions Matt has held include:

- Founding Partner, Soil/Water/Air Protection Enterprise (SWAPE) (2003 – present);
- Geology Instructor, Golden West College, 2010 – 2104, 2017;
- Senior Environmental Analyst, Komex H2O Science, Inc. (2000 -- 2003);

- Executive Director, Orange Coast Watch (2001 – 2004);
- Senior Science Policy Advisor and Hydrogeologist, U.S. Environmental Protection Agency (1989–1998);
- Hydrogeologist, National Park Service, Water Resources Division (1998 – 2000);
- Adjunct Faculty Member, San Francisco State University, Department of Geosciences (1993 – 1998);
- Instructor, College of Marin, Department of Science (1990 – 1995);
- Geologist, U.S. Forest Service (1986 – 1998); and
- Geologist, Dames & Moore (1984 – 1986).

Senior Regulatory and Litigation Support Analyst:

With SWAPE, Matt's responsibilities have included:

- Lead analyst and testifying expert in the review of over 300 environmental impact reports and negative declarations since 2003 under CEQA that identify significant issues with regard to hazardous waste, water resources, water quality, air quality, greenhouse gas emissions, and geologic hazards. Make recommendations for additional mitigation measures to lead agencies at the local and county level to include additional characterization of health risks and implementation of protective measures to reduce worker exposure to hazards from toxins and Valley Fever.
- Stormwater analysis, sampling and best management practice evaluation at more than 150 industrial facilities.
- Expert witness on numerous cases including, for example, perfluorooctanoic acid (PFOA) contamination of groundwater, MTBE litigation, air toxins at hazards at a school, CERCLA compliance in assessment and remediation, and industrial stormwater contamination.
- Technical assistance and litigation support for vapor intrusion concerns.
- Lead analyst and testifying expert in the review of environmental issues in license applications for large solar power plants before the California Energy Commission.
- Manager of a project to evaluate numerous formerly used military sites in the western U.S.
- Manager of a comprehensive evaluation of potential sources of perchlorate contamination in Southern California drinking water wells.
- Manager and designated expert for litigation support under provisions of Proposition 65 in the review of releases of gasoline to sources drinking water at major refineries and hundreds of gas stations throughout California.

With Komex H2O Science Inc., Matt's duties included the following:

- Senior author of a report on the extent of perchlorate contamination that was used in testimony by the former U.S. EPA Administrator and General Counsel.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of MTBE use, research, and regulation.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of perchlorate use, research, and regulation.
- Senior researcher in a study that estimates nationwide costs for MTBE remediation and drinking water treatment, results of which were published in newspapers nationwide and in testimony against provisions of an energy bill that would limit liability for oil companies.
- Research to support litigation to restore drinking water supplies that have been contaminated by MTBE in California and New York.

- Expert witness testimony in a case of oil production-related contamination in Mississippi.
- Lead author for a multi-volume remedial investigation report for an operating school in Los Angeles that met strict regulatory requirements and rigorous deadlines.
- Development of strategic approaches for cleanup of contaminated sites in consultation with clients and regulators.

Executive Director:

As Executive Director with Orange Coast Watch, Matt led efforts to restore water quality at Orange County beaches from multiple sources of contamination including urban runoff and the discharge of wastewater. In reporting to a Board of Directors that included representatives from leading Orange County universities and businesses, Matt prepared issue papers in the areas of treatment and disinfection of wastewater and control of the discharge of grease to sewer systems. Matt actively participated in the development of countywide water quality permits for the control of urban runoff and permits for the discharge of wastewater. Matt worked with other nonprofits to protect and restore water quality, including Surfrider, Natural Resources Defense Council and Orange County CoastKeeper as well as with business institutions including the Orange County Business Council.

Hydrogeology:

As a Senior Hydrogeologist with the U.S. Environmental Protection Agency, Matt led investigations to characterize and cleanup closing military bases, including Mare Island Naval Shipyard, Hunters Point Naval Shipyard, Treasure Island Naval Station, Alameda Naval Station, Moffett Field, Mather Army Airfield, and Sacramento Army Depot. Specific activities were as follows:

- Led efforts to model groundwater flow and contaminant transport, ensured adequacy of monitoring networks, and assessed cleanup alternatives for contaminated sediment, soil, and groundwater.
- Initiated a regional program for evaluation of groundwater sampling practices and laboratory analysis at military bases.
- Identified emerging issues, wrote technical guidance, and assisted in policy and regulation development through work on four national U.S. EPA workgroups, including the Superfund Groundwater Technical Forum and the Federal Facilities Forum.

At the request of the State of Hawaii, Matt developed a methodology to determine the vulnerability of groundwater to contamination on the islands of Maui and Oahu. He used analytical models and a GIS to show zones of vulnerability, and the results were adopted and published by the State of Hawaii and County of Maui.

As a hydrogeologist with the EPA Groundwater Protection Section, Matt worked with provisions of the Safe Drinking Water Act and NEPA to prevent drinking water contamination. Specific activities included the following:

- Received an EPA Bronze Medal for his contribution to the development of national guidance for the protection of drinking water.
- Managed the Sole Source Aquifer Program and protected the drinking water of two communities through designation under the Safe Drinking Water Act. He prepared geologic reports, conducted

public hearings, and responded to public comments from residents who were very concerned about the impact of designation.

- Reviewed a number of Environmental Impact Statements for planned major developments, including large hazardous and solid waste disposal facilities, mine reclamation, and water transfer.

Matt served as a hydrogeologist with the RCRA Hazardous Waste program. Duties were as follows:

- Supervised the hydrogeologic investigation of hazardous waste sites to determine compliance with Subtitle C requirements.
- Reviewed and wrote "part B" permits for the disposal of hazardous waste.
- Conducted RCRA Corrective Action investigations of waste sites and led inspections that formed the basis for significant enforcement actions that were developed in close coordination with U.S. EPA legal counsel.
- Wrote contract specifications and supervised contractor's investigations of waste sites.

With the National Park Service, Matt directed service-wide investigations of contaminant sources to prevent degradation of water quality, including the following tasks:

- Applied pertinent laws and regulations including CERCLA, RCRA, NEPA, NRDA, and the Clean Water Act to control military, mining, and landfill contaminants.
- Conducted watershed-scale investigations of contaminants at parks, including Yellowstone and Olympic National Park.
- Identified high-levels of perchlorate in soil adjacent to a national park in New Mexico and advised park superintendent on appropriate response actions under CERCLA.
- Served as a Park Service representative on the Interagency Perchlorate Steering Committee, a national workgroup.
- Developed a program to conduct environmental compliance audits of all National Parks while serving on a national workgroup.
- Co-authored two papers on the potential for water contamination from the operation of personal watercraft and snowmobiles, these papers serving as the basis for the development of nation-wide policy on the use of these vehicles in National Parks.
- Contributed to the Federal Multi-Agency Source Water Agreement under the Clean Water Action Plan.

Policy:

Served senior management as the Senior Science Policy Advisor with the U.S. Environmental Protection Agency, Region 9.

Activities included the following:

- Advised the Regional Administrator and senior management on emerging issues such as the potential for the gasoline additive MTBE and ammonium perchlorate to contaminate drinking water supplies.
- Shaped EPA's national response to these threats by serving on workgroups and by contributing to guidance, including the Office of Research and Development publication, Oxygenates in Water: Critical Information and Research Needs.
- Improved the technical training of EPA's scientific and engineering staff.
- Earned an EPA Bronze Medal for representing the region's 300 scientists and engineers in negotiations with the Administrator and senior management to better integrate scientific

principles into the policy-making process.
- Established national protocol for the peer review of scientific documents.

Geology:

With the U.S. Forest Service, Matt led investigations to determine hillslope stability of areas proposed for timber harvest in the central Oregon Coast Range. Specific activities were as follows:

- Mapped geology in the field, and used aerial photographic interpretation and mathematical models to determine slope stability.
- Coordinated his research with community members who were concerned with natural resource protection.
- Characterized the geology of an aquifer that serves as the sole source of drinking water for the city of Medford, Oregon.

As a consultant with Dames and Moore, Matt led geologic investigations of two contaminated sites (later listed on the Superfund NPL) in the Portland, Oregon, area and a large hazardous waste site in eastern Oregon. Duties included the following:

- Supervised year-long effort for soil and groundwater sampling.
- Conducted aquifer tests.
- Investigated active faults beneath sites proposed for hazardous waste disposal.

Teaching:

From 1990 to 1998, Matt taught at least one course per semester at the community college and university levels:

- At San Francisco State University, held an adjunct faculty position and taught courses in environmental geology, oceanography (lab and lecture), hydrogeology, and groundwater contamination.
- Served as a committee member for graduate and undergraduate students.
- Taught courses in environmental geology and oceanography at the College of Marin.

Matt is currently a part time geology instructor at Golden West College in Huntington Beach, California where he taught from 2010 to 2014 and in 2017.

Invited Testimony, Reports, Papers and Presentations:

Hagemann, M.F., 2008. Disclosure of Hazardous Waste Issues under CEQA. Presentation to the Public Environmental Law Conference, Eugene, Oregon.

Hagemann, M.F., 2008. Disclosure of Hazardous Waste Issues under CEQA. Invited presentation to U.S. EPA Region 9, San Francisco, California.

Hagemann, M.F., 2005. Use of Electronic Databases in Environmental Regulation, Policy Making and Public Participation. Brownfields 2005, Denver, Coloradao.

Hagemann, M.F., 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Nevada and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Las Vegas, NV (served on conference organizing committee).

Hagemann, M.F., 2004. Invited testimony to a California Senate committee hearing on air toxins at schools in Southern California, Los Angeles.

Brown, A., Farrow, J., Gray, A. and **Hagemann, M.**, 2004. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to the Ground Water and Environmental Law Conference, National Groundwater Association.

Hagemann, M.F., 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Arizona and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Phoenix, AZ (served on conference organizing committee).

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in the Southwestern U.S. Invited presentation to a special committee meeting of the National Academy of Sciences, Irvine, CA.

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a tribal EPA meeting, Pechanga, CA.

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a meeting of tribal repesentatives, Parker, AZ.

Hagemann, M.F., 2003. Impact of Perchlorate on the Colorado River and Associated Drinking Water Supplies. Invited presentation to the Inter-Tribal Meeting, Torres Martinez Tribe.

Hagemann, M.F., 2003. The Emergence of Perchlorate as a Widespread Drinking Water Contaminant. Invited presentation to the U.S. EPA Region 9.

Hagemann, M.F., 2003. A Deductive Approach to the Assessment of Perchlorate Contamination. Invited presentation to the California Assembly Natural Resources Committee.

Hagemann, M.F., 2003. Perchlorate: A Cold War Legacy in Drinking Water. Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. From Tank to Tap: A Chronology of MTBE in Groundwater. Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. A Chronology of MTBE in Groundwater and an Estimate of Costs to Address Impacts to Groundwater. Presentation to the annual meeting of the Society of Environmental Journalists.

Hagemann, M.F., 2002. An Estimate of the Cost to Address MTBE Contamination in Groundwater (and Who Will Pay). Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to a meeting of the U.S. EPA and State Underground Storage Tank Program managers.

Hagemann, M.F., 2001. From Tank to Tap: A Chronology of MTBE in Groundwater. Unpublished report.

Hagemann, M.F., 2001. Estimated Cleanup Cost for MTBE in Groundwater Used as Drinking Water. Unpublished report.

Hagemann, M.F., 2001. Estimated Costs to Address MTBE Releases from Leaking Underground Storage Tanks. Unpublished report.

Hagemann, M.F., and VanMouwerik, M., 1999. Potential Water Quality Concerns Related to Snowmobile Usage. Water Resources Division, National Park Service, Technical Report.

VanMouwerik, M. and **Hagemann, M.F.** 1999, Water Quality Concerns Related to Personal Watercraft Usage. Water Resources Division, National Park Service, Technical Report.

Hagemann, M.F., 1999, Is Dilution the Solution to Pollution in National Parks? The George Wright Society Biannual Meeting, Asheville, North Carolina.

Hagemann, M.F., 1997, The Potential for MTBE to Contaminate Groundwater. U.S. EPA Superfund Groundwater Technical Forum Annual Meeting, Las Vegas, Nevada.

Hagemann, M.F., and Gill, M., 1996, Impediments to Intrinsic Remediation, Moffett Field Naval Air Station, Conference on Intrinsic Remediation of Chlorinated Hydrocarbons, Salt Lake City.

Hagemann, M.F., Fukunaga, G.L., 1996, The Vulnerability of Groundwater to Anthropogenic Contaminants on the Island of Maui, Hawaii. Hawaii Water Works Association Annual Meeting, Maui, October 1996.

Hagemann, M. F., Fukanaga, G. L., 1996, Ranking Groundwater Vulnerability in Central Oahu, Hawaii. Proceedings, Geographic Information Systems in Environmental Resources Management, Air and Waste Management Association Publication VIP-61.

Hagemann, M.F., 1994. Groundwater Characterization and Cleanup at Closing Military Bases in California. Proceedings, California Groundwater Resources Association Meeting.

Hagemann, M.F. and Sabol, M.A., 1993. Role of the U.S. EPA in the High Plains States Groundwater Recharge Demonstration Program. Proceedings, Sixth Biennial Symposium on the Artificial Recharge of Groundwater.

Hagemann, M.F., 1993. U.S. EPA Policy on the Technical Impracticability of the Cleanup of DNAPL-contaminated Groundwater. California Groundwater Resources Association Meeting.

Hagemann, M.F., 1992. Dense Nonaqueous Phase Liquid Contamination of Groundwater: An Ounce of Prevention... Proceedings, Association of Engineering Geologists Annual Meeting, v. 35.

Other Experience:

Selected as subject matter expert for the California Professional Geologist licensing examinations, 2009-2011.

Letter 5a – DeLano & DeLano

Commenter: Rachel Blackburn

Date: May 3, 2021

Response 5a.1:

The commenter provides a a general summary and the commenter's interpretation of CEQA. However, the commenter makes no specific comment on how these relate to either the Project's DEIR or analysis contained therein. This comment does not relate to the adequacy or content of the DEIR, does not provide new information or evidence related to the analysis in the DEIR, and does not affect the analysis completed or conclusions provided in the DEIR. This comment is noted for the record and revisions to the DEIR are not required.

Response 5a.2:

The commenter states the DEIR failed to apply the threshold for scenic vistas. The commenter goes on to state that the DEIR analysis of aesthetics impacts avoids the Project's impacts to views of and from the Quail Run Open Space (QROS) Park.

The DEIR does in fact analyze potential impacts to scenic vistas (p. 5.1-23). The DEIR provides the definition of scenic vistas as "a viewpoint that provides expansive views of a highly valued landscape for the benefit of the general public" (p. 5.1-23). In addition, the DEIR notes the two ways in which scenic vistas may be impacted by development: if the development blocks views of a scenic vista and/or if the development alters a scenic vista (p. 5.1-23). As described in the DEIR (p. 5.1-23 and 5.1-24):

> The Project area, in general, is located near the base of Box Springs Mountains and is elevated above Downtown Riverside. This general area provides a scenic vista of the Downtown Riverside area and Mount Rubidoux and the Jurupa Hills as a backdrop to the northwest, and to Mount San Antonio of the Angeles National Forest further in the north (on clear days).
>
> The building heights of the proposed structures are anticipated to result in partial obstructions of the views from the project site itself and immediate surrounding are to Mt. Rubidoux, Jurupa Hills, and Mt. San Antonio. However, due to the fact that the existing hill already partially obstructs views of these areas and the proposed highest building elevations are only up to 12 feet higher than the existing cut/hill, the proposed buildings are not anticipated to substantially affect existing views from the Project site itself and immediate surrounding area. Therefore, the proposed Project structures will not block the view of a vista.
>
> The Project site itself is not located up on a hilltop and does not constitute a scenic vista. Therefore, the Project site is not a vista itself that would be altered (i.e., development on a scenic hillside) by the proposed Project.

As identified in the GP 2025, there are no designated scenic vistas near the Project site. (p. 5.1-25.) Thus, the QROS Park is not considered a scenic vista in the City. As outlined above, those areas deemed to constitute scenic vistas in the DEIR included views of the Downtown Riverside

area, Mount Rubidoux, and Jurupa Hills to the northwest, and to Mount San Antonio further northwest, and views of the Box Springs Mountains. However, construction of the proposed Project would also not significantly block and/or obscure views of the QROS Park, located west of the Project site. The commenter states that "since the Project site is currently vacant, the view of the Park is unobscured from several angles." However, the commenter does not provide any evidence of what angles provide unobscured public views of the QROS Park.

Nonetheless, views of the QROS Park are most accessible/available to the general public (pedestrians using the sidewalk, and those riding bikes or in vehicles on the roadway) along Central Avenue adjacent to QROS Park, south of the Project site. The reference street-level photo 1 below shows an unobscured view of QROS Park from Central Avenue at Lochmoor Drive (see Response 5a.2 Reference Photos 1). As the proposed Project is located east of this location it would not obstruct this view of the Park as well as the view from Central Avenue for the length of its frontage adjacent to the Park. The view from Sycamore Canyon Boulevard across the vacant site is shown in photo 2 (Response 5a.2 Reference Photo 2). As the QROS Park is primarily at a lower elevation than the Project site, it is also largely not visible from Sycamore Canyon Boulevard without the proposed Project and therefore the proposed Project would not block a view of the QROS Park from the public right of way on Sycamore Canyon Boulevard. Views from Sycamore Canyon Boulevard along the northern boundary of the Park are largely blocked by a slope/hillside.

The commenter indicates "The project is proposing a Grading Exception as allowed under Chapter 17.32 of the RMC in order to construct retaining walls greater than 3 feet in height in an area open to the public view and greater than 6 feet in an area open to the public view. DEIR at 5.6-17." The Project is proposing a wall greater than 6 feet in an area not open to the public as identified in the DEIR Project Description, Section 3.3.8 (page 3.0-21). The sentence on page 5.6-17 quoted above has an inadvertent omission of "not" and is corrected as part of the errata, for consistency with the Project Description as follows:

> The project is proposing a Grading Exception as allowed under Chapter 17.32 of the RMC in order to construct retaining walls greater than 3 feet in height in an area open to the public view and greater than 6 feet in an area <u>not</u> open to the public view.

Therefore, the DEIR does in fact apply the threshold for scenic vistas and would not have a substantial adverse effect on views of the QROS Park. This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and revisions to the DEIR are not warranted.

Response 5a.2 reference photo 1: street-level/sidewalk public view of QROS Park from Central Avenue at Lochmoor Drive, facing north.

Response 5a.2 reference photo 2: street-level public view from Sycamore Canyon Boulevard on the east of the Project site facing west over the Project site. QROS Park is not visible from this public vantage point as the Park is at a lower elevation than the Project site.

Response 5a.3:

The commenter states the DEIR fails to support its conclusion that the proposed Project would not degrade the existing visual character or quality of public views of the proposed Project site with substantial evidence. The commenter additionally states that compliance with the City's Design Guidelines and the Zoning Code does not provide evidence that the proposed Project would not degrade the existing visual quality of public views of the QROS Park and that the proposed Project would "inevitably destroy the visual open space that gives the community a view of [QROS] Park" (Comment Letter 5a). The content of this comment relates to the following CEQA threshold (which is Threshold C in the DEIR):

> **Threshold C:** *In non-urbanized areas, would the Project 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 a 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?*

To address the CEQA threshold, if a project is in a non-urbanized areas the analysis should pertain to the first part of the threshold question and if the project is in an urbanized areas the analysis should pertain to the second part of the threshold question. An "urbanized area" is defined as "a central city or group of contiguous cities with a population of 50,000 or more, together with adjacent densely populated areas having a population density of at least 1,000 people per square mile." (State CEQA Guidelines, § 15387.) The City meets this criteria and is identified as an urbanized area by the U.S. Bureau of the Census. (https://www.census.gov/programs-surveys/geography/guidance/geo-areas/urban-rural/2010-urban-rural.html). Thus, the Project site is within an urbanized area for purpose of analysis, but in order to best serve as an information document for the public, the analysis contained in the DEIR for Threshold C, analyzed both portions of this CEQA threshold question due to the presence of the QROS Park to the west of the Project site.

DEIR p. 5.1-26 (response to Threshold B) also acknowledges that the proposed Project site is adjacent to the QROS Park; however, the DEIR's statement that the proposed Project site is in an urbanized area still holds true as the QROS Park is the only open space area/non-urbanized area in the immediate vicinity of the proposed Project and the Project is within an "urbanized area" as defined by CEQA. As DEIR p. 5.1-26 further states, the proposed Project site is adjacent to the SR-60/I-215 freeway and has residential developments to the west, across from QROS Park, and to the south of Central Avenue, with the QROS Park identified/serving as the only open-space/non-urbanized area in immediate area. Therefore, the existing visual character of the proposed Project area is more urbanized than open space. The proposed Project would thus not conflict with this existing overall urbanized visual character of the area, nor would the proposed Project "destroy" or significantly obstruct the visual open space that provides publicly accessible views of the QROS Park (see Response 5a.2).

Nonetheless, the DEIR also analyzes whether the project would substantially degrade the existing visual character or quality of the public views of the site and its surrounding. The DEIR indicates (p. 5.1-26) that there will be a change in the visual characteristic of the Project site from a vacant property that has been heavily disturbed from past grading and construction staging activities and

has low visual quality. Further, as the proposed Project would comply with the City's Design Guidelines and Zoning Code, and includes an aesthetically pleasing design that fits into, and is complimentary to, the existing combined partially open space/natural and partially urbanized surrounding, as shown in Figures 3.0-7 and 3.0-8 and Figures 5.1-2 through 5.1-13, it would not degrade the existing visual character of the area.

The Project does not include any alterations or impacts to the QROS Park and will not destroy the visual open space that it currently provides. One of the Project objectives is to incorporate design and landscaping elements that complement and are responsive to the Canyon Crest community and edge conditions that buffer the Project's effect on nearby natural environments, including the City of Riverside's Quail Run Open Space and the Sycamore Canyon Wilderness Park. (pp. 1.0-3 – 1.0-4.) In terms of complementing and responding to the visual character of the site adjacent to the QROS Park, the Project will not disturb natural features of the Project site that complement the QROS Park. Specifically, there is a rock outcropping located along the western edge of the property, which is partially located within the Project property line and largely located in the adjacent property, the City's Quail Run Open Space Park. Within the Project property line this area will not be graded or disturbed but left in place and preserved. (p. 5.1-26.) The Project will utilize the more flat and disturbed portions of the site for the apartment buildings, amenities and infrastructure. The western boundary is largely undisturbed with a large knoll near the northwesterly corner and a deep, vegetated ravine near the southwestern corner. These areas with the greatest extent of topographic relief and lack of disturbance will not be graded or impacted by the proposed development but will be preserved and left in place. (pp. 5.8-13, 5.8-15.)

As outlined in Response 5a.2, the Project will not obstruct public views of the adjacent QROS Park. This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and revisions to the DEIR are not warranted.

Response 5a.4:

The commenter states that while the proposed Project site has an average natural slope of 25.9%, the proposed Project is not included in the Residential Conservation Zone applicable to all properties with an average natural slope of 15% or more, per Section IV of Measure R. The commenter then states the DEIR must address environmental impacts caused by the proposed Project's alleged conflict with Measure R.

As the commenter correctly notes, in 1979, Riverside voters approved Measure R (or Proposition R): "Taxpayer's Initiative to Reduce Costly Urban Sprawl by Preserving Riverside's Citrus and Agricultural lands, Its Unique Hills, Arroyos and Victoria Avenue." The two main features of Measure R relate to: 1) preservation of agriculture through application of the RA-5 - Residential Agricultural Zone to specific areas of the City; and 2) protection of hillside areas through application of the RC - Residential Conservation Zone to areas of the City based on slopes over 15 percent. The two areas of the City which were zoned RA-5 are: 1) the Arlington Heights Greenbelt, in the south and central portion of the City; and 2) an area commonly known as Rancho La Sierra lying on a bluff above the Santa Ana River and bordered by Tyler Street on the east and

Arlington Avenue on the west. (Riverside General Plan, OS-13.) The Project site is not located within either of the two specified areas and thus the first feature of Measure R does not apply.

In 1987, Riverside voters passed Measure C, a bolstering amendment to Proposition R, entitled "Citizens' Rights Initiative to Reduce Costly Urban Sprawl, to Reduce Traffic Congestion, to Minimize Utility Rate Increases and to Facilitate Preservation of Riverside's Citrus and Agricultural Lands, its Scenic Hills, Ridgelines, Arroyos and Wildlife Areas". (Riverside General Plan, OS-14.) Measure C had a variety of functions, among them: (a) Amending Measure R so as to delete the authority of the City's council to amend or repeal Measure R; (b) amending Measure R so as to further promote and encourage agriculture by protecting agricultural lands from premature development; and (c) requiring the City to develop a general plan for those areas within the City's sphere of influence that had not already been encompassed by the City's extant general plan.

Measure C required the City to initiate a planning process leading to the development and adoption of a plan for the ultimate development of the City's Sphere of Influence (Measure C, Section 7.) The plan was to expand the provisions of Measure R to the Sphere of Influence Area, including Measure R's application of the RC Zone to all property having an average natural slope of 15 percent or more, and limiting development to one single family dwelling per two acres for lots having an average natural slope of 15 to 30 percent. (Measure R, Section 4; Riverside Municipal Code § 19.100.050(A)(3).)

The Project site was formerly located within the City's Northern Sphere of Influence (Riverside General Plan, Figure LU-1). Pursuant to the City's General Plan, the Project site was not identified as within an area noted as major hills and canyons or an arroyo. (Riverside General Plan, Figure LU-3.) Please refer to FEIR Appendix L which includes Planning Commission Memorandum for Case Numbers P14-0246 (ANX), P14-1059 (GPA), and P14-0901 (Pre-Zoning), dated May 21, 2015, and City of Riverside City Council Memorandum for Annexation 118. As stated in both documents, at the time of its annexation from Riverside County to the City, the proposed Project site held a County General Plan land use designation of CR – Commercial Retail, and subsequently a City land use designation of C – Commercial. Further, the County zoning at the time of the site's annexation was C-P-S – Scenic Highway Commercial and the subsequent City zoning was CG – Commercial General. Thus, even though the City's General Plan designated much of the *surrounding* property as HR - Hillside Residential land use designation with a RC - Residential Conservation Zoning designation, *the proposed Project site* was not designated by the County or City of Riverside as residential, and the parcel was not included in the City's Residential Conservation (RC) Zone as part of the annexation into the City. The land use designation and zoning for the site, at the time it was annexed into the City, was not challenged and the statute of limitations for a challenge has since expired. As the Project site is not, and has never been zoned RC, there is no conflict between the site's proposed zoning and Measure R/ the RC Zone.

Further, although the DEIR indicates "per the City records, the Project site has an average natural slope (ANS) of 25.9 percent," that information was from City data that is automatically calculated based on topographic contours from 1998, and therefore, represents a prior site condition to what exists today. Also, the Project site conditions existing today would be what existed at the time of the annexation in 2015, as the disturbance to the site for the realignment of Sycamore Canyon

Boulevard occurred in 2005-2006, prior to the annexation. An updated Average Natural Slope (ANS) calculation for the Project parcel was prepared in July 2021 by the Civil Engineer in accordance with the formula in the Riverside Municipal Code (RMC), Title 17 – Grading, Chapter 17.08 Definitions, to determine the Project site's current ANS, which is 14.8 percent. This calculation was made using topo of the site flown in October 2018 at 40 scale 1 foot accuracy. The City Public Works Department reviewed and accepted the calculation as it was found consistent with Public Works standards and with common engineering practice. Therefore, as the Project site does not have an ANS over 15 percent, the RC - Residential Conservation Zone would not be applicable.

The DEIR is revised to reflect the most accurate ANS calculation of 14.8 percent for the Project site, as follows on pages 3.0-4, 4.0-1, 5.1-23, 5.1-24 of the DEIR: ~~Per City records, the~~

The Project site has an average natural slope (ANS) of 14.8 ~~25.9~~ percent.

It should be noted that even with this revision to the DEIR, no change to the significance conclusions presented in the DEIR will result. Accordingly, this comment and the subsequent DEIR revisions do not affect the analysis completed or conclusions provided in the DEIR, do not provide new information or evidence related to the analysis completed in the DEIR, and do not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR have been made as noted above.

Response 5a.5:

The commenter states the DEIR will impact a portion of the blue line stream. The commenter then states the drainage feature is a California Department Fish and Wildlife streambed. Lastly, the commenter claims the Project failed to explain how the application of Section 17.28.020 to the Project impacts the affected blue line stream.

The commenter references language found in Page 2.0-9 of the DEIR under Table 2.0-1: NOP and Scoping Meeting Comments. The language cited refers to a comment received from a public individual, Jennifer Becker, where she states, **"**The project will destroy a portion of one of the few remaining blue line streams in the City," but is not a statement made in the DEIR analysis or by regulatory agencies with expertise in this matter. The "blue-line stream" identified on the USGS topographical map in the southwest corner of the site is also identified in the *Habitat Assessment and Western Riverside County Multiple Species Habitat Conservation Plan Consistency Analysis* and the *Project Delineation of State and Federal Jurisdictional Waters*, as a CDFW jurisdictional feature. Refer to Section 5.3 Biological Resources of the DEIR (p. 5.3-26):

> There are no on-site water features within the upland portion of the Project site. The majority of the Project site does not support any discernible drainage courses, inundated areas, wetland vegetation, or hydric soils that would be considered jurisdictional. However, the willow riparian plant community and its associated drainage on the southwest corner of the Project site would qualify as a jurisdictional feature under the regulatory authority of the Corps, Regional Board, and the CDFW, and riparian/riverine habitat under the MSHCP. Based on design plans, no temporary or permanent impacts are anticipated to occur to the willow riparian plant community or its associated drainage on the southwest corner of the Project site. Therefore, development of the Project site will not result in impacts to Corps, Regional Board, or CDFW jurisdiction and regulatory approvals will not be required. As the Project will not result in impacts to riparian/riverine areas, a DBESP will not be required for impacts to riparian/riverine habitat (ELMT(a) p. 40) or wetlands.

Per Figure 5.3-4 under Section 5.3 Biological Resources of the DEIR, the existing drainage course consists of 0.003 acres of US Army Corps of Engineers (Corps)/Regional Board/CDFW Jurisdictional Streambed and 0.16 acres of CDFW Associated Streambed. Section 17.28.020 – Hillside/arroyo grading, discusses grading requirements where grading is proposed. To be specific, Section 17.28.020 states, "*Grading requirements*. Where grading is proposed on any parcel having an average natural slope of ten percent or greater, or which is zoned Residential Conservation (RC), or which is located within or adjacent to the Mockingbird Canyon, Woodcrest, Prenda, Alessandro, Tequesquite, or Springbrook Arroyos, or a blue line stream identified on USGS Maps, or other significant arroyo, the grading must be confined per this chapter and limited to the minimum grading necessary to provide for a house, driveway, garage and limited level yard."

Due to the average natural slope of the project site and the presence of the blue line stream, the Project is required to comply with the Hillside/Arroyo Grading Ordinance, Section 17.28.020 of the Riverside Municipal Code. The Project is proposing a Grading Exception as allowed under Chapter 17.32 of the RMC in order to construct retaining walls greater than 3 feet in height in an area open to the public view and greater than 6 feet in height in an area not open to the public view. A Grading Exception is also being requested for slopes to exceed 20 feet in height where an existing hill in the northern part of the site will be partially recontoured. (DEIR p. 5.6-17) Thus, the Project will comply with the City's Hillside Grading Ordinance, with the approval of the Grading Exceptions. The EIR thus fully addresses the grading proposed by the Project and compliance with City regulations put in place to, in part, "preserve prominent landforms within the community" (RMC § 17.04.010.). Consistent with the City's General Plan Policy LU-4.2 regarding enforcement of the hillside grading provisions in the City's Code (Title 17), the Project would utilize the more flat and disturbed portions of the site created previously by undocumented grading operations. Areas with the greatest extent of topographic relief and lack of disturbance on the site would not be graded or impacted by the proposed development but will be preserved and left in place. (DEIR p. 5.8-16.) This includes the drainage course (blue line stream) in the southwest portion of the site.

As stated above and in the DEIR (p. 5.3-26), the proposed Project has been designed to avoid the blue line stream/ drainage feature and associated riparian habitat. Compliance with RMC

Section 17.28.020 does not impact the blue line stream – it avoids it. The DEIR also contains mitigation measures to ensure that the blue line stream is not impacted (see **MM BIO-3, MM BIO-7, MM BIO-10, MM BIO-11, MM BIO-14,** and **MM BIO-15**.) Therefore, this comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and revisions to the DEIR are not warranted.

Response 5a.6:

The commenter states the DEIR improperly deferred analysis of impacts. The commenter then states the DEIR does not discuss why or why not a Determination of Biologically Equivalent or Superior Preservation was not drafted and does not include the Determination in the EIR if necessary.

Section 5.3 Biological Resources of the DEIR p. 5.3-26 states

> "Any alteration or loss of riparian/riverine habitat from development of a Project will require the preparation of a Determination of Biologically Equivalent or Superior Preservation (DBESP) analysis to ensure the replacement of any lost functions and values of habitats in regard to the listed species."

However, on the same page of the DEIR it also states,

> "Based on the design plans, no temporary or permanent disturbance impacts are anticipated to occur to the willow riparian plant community or its associated drainage course/streambed on the southwest corner of the Project site. Therefore, a DBESP will not be required for impacts to riparian/riverine habitat. (ELMT(a) p. 22)".

The DEIR also provides a number of mitigation measures designed to protect the willow riparian plant community and preclude any alteration or loss. (pp. 5.3-27 – 5.3-28.) For this reason, a DBESP analysis was not required. Therefore, this comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and revisions to the DEIR are not warranted.

Response 5a.7:

The commenter stated the DEIR failed to adequately analyze impacts to wildlife movement corridors.

As outlined in the Habitat Assessment and MSHCP Consistency Analysis report pages 35-36:

> Exhibit 7, *MSHCP Criteria Area and Targeted Conservation*, shows the location of the project site within Criteria Cell 721 and the targeted conservation area for cell 721. Conservation within this Cell is planned as needed for the assemblage of Proposed Constrained Linkage 7.

The entire project site is located within Criteria Cell 721, which is an independent Cell that is not affiliated with any Cell Group. Conservation within Criteria Cell 721 will contribute to the assembly of Proposed Constrained Linkage 7, with an emphasis on the conservation of coastal sage scrub habitat and riparian scrub, woodlands and forest. Areas conserved within Criteria Cell 721 will be connected to coastal sage scrub habitat proposed for conservation to the north in Criteria Cell 635 and to the west in Criteria Cell 719. Conservation within Criteria Cell 721 will range from 35 to 45 percent of the Cell, focusing on its northeastern and central portions.

Using the mid-range area described for conservation (40%) within Criteria Cell 721, approximately 64 acres are described for conservation within this approximate 160-acre Criteria Cell. To date, it is assumed that none of these acres have been conserved. There are approximately 96 acres of developable lands within in Criteria Cell 721 located outside of the northeastern and central portions (35%-45%) of this Criteria Cell that are not described for conservation. Based on the graphic depiction shown in Exhibit 7, the proposed project site is not located within the targeted conservation area and would not conflict with the conservation goals for Criteria Cell 721 or the assembly of Proposed Constrained Linkage 7.

The project site is located immediately north of the targeted conservation area for Proposed Constrained Linkage 7 and is separated from the targeted conservation area by Central Avenue. The majority of the other undeveloped areas, outside of the area target conservation area provide minimal habitat for target species. Most of the area outside of the target conservation area are developed or have been subject to existing development and/or anthropogenic disturbances. Further, the willow forest plant community and associated drainage on the southwest corner of the project site will not be impacted, and will continue to provide a wildlife movement corridor under Central Avenue south and west of the project site. It should be noted that Proposed Constrained Linkage 7 has been confined by prior freeway expansion and residential development on Lochmoor Drive, and has been re-routed up and over Central Avenue and across the southwest corner of the site. The proposed project will provide 0.53 acre of conservation in the southwest corner of the site for the re-routed Proposed Constrained Linkage 7, as identified in Exhibit 8, *MSHCP Conservation Area*.

Potential indirect impacts to Proposed Constrained Linkage 7 (i.e., noise, lighting, etc.) will be minimized with implementation of the MSHCP Urbans Wildlands Guidelines described in Section 5.3.4 above and with implementation of the mitigation measures listed in Section 7.4 below.

As stated above, the Proposed Constrained Linkage 7 has been confined by freeway expansion and residential development on Lockmoor Drive and has been re-routed up and over Central Avenue and across the southwest corner of the site.

As outlined in the DEIR page 5.3-27,

> The Project site is located immediately north of the MSHCP Proposed Constrained Linkage 7, which connects Sycamore Canyon Wilderness Park to the south to the Box Springs Reserve to the east (east of Interstate 215/State Route 60) and is generally constrained by urban development. Habitat on the Project site is heavily disturbed and there is little to no incentive for bobcats to occur on the upland portion of the Project site, as it is surrounded on three sides by development (primarily transportation land uses). Box Spring Canyon, located south of the Project site (south of Central Avenue), and the small portion of willow riparian plant community on southwest corner of the Project site, have the potential to be used by migrating or dispersing wildlife, including birds and mammals. (ELMT(a) p. 42)

Per the MSHCP Volume I, Section 3, pages 3-79-3-80:

> As shown in the table below, areas not affected by edge within this Linkage total approximately 65 acres of the total 175 acres of the Linkage. Since this Linkage is affected by edge, it is anticipated that treatment and management of edge conditions along this Linkage will be necessary to ensure that it provides Habitat and movement functions for species using the Linkage. Guidelines Pertaining to Urban/Wildlands Interface for the management of edge factors such as lighting, urban runoff, toxics, and domestic predators are presented in *Section 6.1* of this document. The Linkage is constrained by existing urban Development and roadways. Adjacent planned community Development, urbanized areas of the City of Riverside and proposed widening activity of I-215 may affect bobcat movement through this Constrained Linkage. Maintenance of an adequate wildlife undercrossing at least 10-20 feet wide with fencing and vegetative cover will be important to accommodate bobcat movement.

PROPOSED CONSTRAINED LINKAGE 7						
Approximate Dimension Data for Linkage						
Approx. Total (ac.)	Approx. Edge (ac.)	Approx. Interior (ac.)	Approx. Perimeter/ Area Ratio (ft/ac)	Planning Species	Adjacent Proposed General Plan Land Use	Major Covered Activities Potentially Affecting Linkage
175	110	65	118	Bell's sage sparrow, cactus wren, and bobcat	City (Riverside) and Community Development	I-215

As outlined above, the I-215 widening was a major covered activity project (planned project at the time the MSHCP was developed and has since been completed) that was expressly identified as potentially affecting bobcat movement through this Constrained Linkage. As outlined above, the project site is located immediately north of the targeted conservation area for Proposed Constrained Linkage 7 and is separated from the targeted conservation area by Central Avenue. The riparian plant community and associated drainage on the southwest corner of the project site will not be impacted and will continue to provide a wildlife movement corridor under Central Avenue south and west of the project site. Alternatively, wildlife not utilizing the culvert under Central Avenue could cross over Central Avenue roadway and continue along the drainage and

associated vegetation within and beyond the project boundaries. The project will provide 0.53 acre of conservation in the southwest corner of the site for the re-routed Proposed Constrained Linkage 7.

Furthermore, the Regional Conservation Authority (RCA) conducted a consistency conclusion, as identified in the Joint Project Review of the Project (JPR # 08-01-29-01, dated 11/18/2020), contained in Appendix C of the DEIR, and found "*Consistency Conclusion: The project is consistent with both the Criteria and other Plan requirements*." The JPR was submitted to the US Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) as well for their review and also determined the project to be consistent with the requirements of the MSHCP.

Therefore, the Project will not conflict with the stated goals of the MSHCP, including for the Proposed Constrained Linkage 7 and as outlined in the MSHCP, Volume 1, Section 6, page 6-3:

"Payment of the mitigation fee and compliance with the requirements of Section 6.0 are intended to provide full mitigation under the California Environmental Quality Act (CEQA), National Environmental Policy Act (NEPA), Federal Endangered Species Act, and California Endangered Species Act for impacts to the species and habitats covered by the MSHCP pursuant to agreements with the US Fish and Wildlife Service, the California Department of Fish and Game and/or any other appropriate participating regulatory agencies and as set for tin the Implementing Agreement for the MSHCP."

Therefore, the Project did fully analyze impacts to wildlife movement corridors. This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR are not warranted.

Response 5a.8:

The commenter references an attached letter containing comments from Soil/Water/Air Protection Enterprise, or "SWAPE" (Letter 5b) regarding the commenter's claims of the DEIR's failure to adequately evaluate air quality, GHG emissions, and health risk impacts and failure to adequately mitigate impacts.

Responses 5b.4 through 5b.17 provide responses to each of the SWAPE comments the commenter references. Please see Responses 5b.4 through 5b.17 for the discussions that address SWAPE's claims that the DEIR has not adequately evaluated impacts or adequately mitigated for impacts. As the outlined in Responses 5b.4 through 5b.17, the DEIR has fully evaluated potential air quality, GHG emissions, and health risk impacts based upon appropriately applied methodologies and screening thresholds. Further, it is shown that all potential impacts as they relate to air quality, GHG emissions, and health risk impacts were correctly found to be less than significant; thus, no mitigation is required.

Therefore, the Project did adequately analyze impacts related to air quality, GHG emissions and health risks. This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the

DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR are not warranted.

Response 5a.9:

The commenter states that the DEIR fails to address the Project's contribution to an existing air quality violation for fine particulate matter under both State and Federal standards and the State standard for coarse dust particles.

As stated on DEIR p. 5.2-25, "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.). The California Emissions Estimator Model (CalEEMod) v2016.3.2 was utilized to calculate fugitive dust emissions resulting from this phase of activity [grading]." Additionally, DEIR Table 5.2-7 – Overall Construction Emissions Summary (without Mitigation), includes projected Project emissions for both particulate matter (PM) 10 and 2.5 and shows that neither Project PM_{10} nor $PM_{2.5}$ emissions would exceed maximum daily emissions thresholds. The EIR also examined localized construction emissions. As stated on DEIR p. 5.2-27, 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). 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. As shown on Table 5.2-9 – Localized Significance Summary of Construction, neither Project PM_{10} nor $PM_{2.5}$ emissions would exceed applicable LSTs.

In fact, none of the Project's construction emissions would exceed maximum daily emissions thresholds or LSTs, and as explained in DEIR Section 5.22.5, the Project would not result in or cause National Ambient Air Quality Standards (NAAQS) or California Ambient Air Quality Standards (CAAQS) violations. Thus, the Project has appropriately accounted for fugitive dust emissions in its air quality analysis methodology (see DEIR Appendix B for the Project's Air Quality Impact Analysis) and has analyzed the Project's potential for air quality violations due to fine particulate matter.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and revisions to the DEIR are not warranted.

Response 5a.10:

The commenter states that the DEIR does not cite to the authority for the 3,000 metric tons per year threshold for GHG for small projects or demonstrate how the Project qualifies as a small project under the screening threshold.

The DEIR does in fact cite the source and reasoning for use of this threshold as outlined on page 5.7-34:

Conclusions

The City has not adopted its own numeric threshold of significance for determining impacts with respect to GHG emissions. A screening threshold of 3,000 $MTCO_2e$ per year to determine if additional analysis is required is an acceptable approach for small projects. This approach is a widely accepted screening threshold used by the City and numerous cities in the Basin and is based on the SCAQMD staff's proposed GHG screening threshold for stationary source emissions for non-industrial projects, as described in the SCAQMD's *Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans* ("SCAQMD Interim GHG Threshold"). The SCAQMD Interim GHG Threshold identifies a screening threshold to determine whether additional analysis is required.

As outlined in the GHG Analysis, pages 37 and 38:

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 proposed Project is residential land use and thus, the Tier 3 screening value of 3,000 MT CO2e per year was appropriately applied, without any requirement to determine if a project qualifies as a "small project."

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and revisions to the DEIR are not warranted.

Response 5a.11:

The commenter states the proposed Project is required to comply with the mandatory requirements of Title 24 Part 6 Section 110.10 for solar-ready buildings and that the proposed Project does not state whether the Project has incorporated photovoltaic systems or a solar zone.

The DEIR indicates (p. 5.5-11) that "The Project would adhere to applicable California Code Title 24, Part 6 energy efficiency standards..." (See also p. 5.5-24; Energy Analysis Report, Appendix E, p. 38; GHG Report, Appendix G, p. 52 regarding adherence to Title 24.)

Per Title 24 Section 110.10 – Mandatory Requirements for Solar Ready Buildings, which states that covered occupancy types include both low-rise residential buildings and high-rise residential buildings (10 habitable stories or less), the Project is required to be solar ready pursuant to Title 24. The City has adopted the California Green Building Standards Code, and thus the Project must comply with Title 24 provisions, including the requirement for solar PV systems on multifamily buildings three stories or less. Therefore, the Project is required to provide solar panels on buildings 1-5 and on the 2-story portion of building 7. (RMC § 16.07.020.)

Therefore, this comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and revisions to the DEIR are not warranted.

Response 5a.12:

The commenter expresses that the DEIR states that the Project will implement energy-saving features and operational programs, consistent with the reduction measures set forth in the RRG CAP. The commenter adds that the DEIR neither describes which of these designs and programs are to be implemented nor discusses their impact on energy consumption relative to other feasible designs and programs. Lastly, the commenter indicates that the DEIR provides no quantified analysis or evidence to support its conclusion that the Project would decrease overall "per capital [sic]" energy consumption, reliance on natural gas, and increase reliance on renewable energy sources.

Per the DEIR p. 5.5-11, under the section titled City of Riverside Restorative GrowthPrint Climate Action Plan, the RRG CAP collaborates with the Western Riverside Council of Governments (WRCOG) by building on the WRCOG Subregional CAP commitments and provides the City GHG reduction goals beyond 2020 to 2035. Furthermore, the RRG-CAP contains measures that promote energy efficiency and renewable energy for municipal operations and the community. The DEIR, Section 5.7 Greenhouse Gas Emissions, Table 5.7-8 – RRG CAP Project Consistency (DEIR pp. 5.7-43 – 5.7-47) describes the Project's consistency with RRG CAP including measures that would reduce GHG emissions in the City. Table 5.7-8 also outlines the Project's consistency with energy efficiency measures, including but not limited to, state and regulatory measure SR-2, local reduction measures E-3 and W-1 to the extent they apply to the Project. (*Id.*) The conclusion on p. 5.5-23 is thus supported by substantial evidence.

The DEIR finds the Project would decrease overall per capita energy consumption, reliance on fossil fuels such as coal, natural gas, and oil, and increase reliance on renewable energy sources. (p. 5.5-24.) As stated on DEIR pp. 5.5-23 – 5.5-24, "As previously stated, the proposed Project is subject to California Building Code requirements. New buildings must achieve compliance with 2019 Building and Energy Efficiency Standards and the 2019 California Green Building Standards requirements. As discussed in Section 3.3.1 Project Description, the residential units of the Project would include five 3-story buildings and two 2-4 split-story buildings. Per Energy Code definitions, multifamily buildings of three (3) habitable stories or less above grade are addressed in the residential requirements of the Energy Code, while multifamily buildings four (4) habitable stories or more above grade are addressed in the non-residential requirements of the Energy Code (Ace Resources 2021). Therefore, the Project is partially considered residential and partially considered multifamily per the Code definitions. As discussed, the 2019 Title 24 standards require solar PV systems for all low-rise residential buildings (single family homes and multifamily buildings three stories or less). Therefore, the Project is required to provide solar panels on buildings 1-5 and on the 2-story portion of building 7. (RMC § 16.07.020.) Further, for residential buildings, the standards encourage demand responsive technologies, including heat pump water heaters and improvement of buildings' thermal envelopes through walls and windows to improve energy savings. For non-residential buildings, the standards update indoor and outdoor lighting and make maximum use of LED technology. Overall, adherence to the 2019 Title 24 standards would increase building efficiency and affect the energy grid less (CEC 2018)."

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and

does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and revisions to the DEIR are not warranted. **Response 5a.13:**

The commenter states that reliance upon proposed Project compliance with California Building Code requirements is insufficient in determining that potential impacts from wasteful energy use would be insignificant. The commenter cites the following from *Center for Biological Diversity v. Dept. of Fish and Wildlife* (2015) 62 Cal.4th 204, 229 to support the comment's argument: "That a project is designed to meet high building efficiency and conservation standards, for example, does not establish that its greenhouse gas emissions from transportation activities lack significant impacts."

The commenter's use of *Center for Biological Diversity v. Dept. of Fish and Wildlife* (2015) is out of context in terms of serving as support for the comment's argument that the DEIR provides insufficient evidence in determining that the proposed Project would not result in significant impacts due to wasteful energy use. Both the case and the commenter's chosen quotation from the case are more focused on whether or not the Department of Fish and Wildlife's EIR adequately determined the project's discharge of greenhouse gases would not significantly impact the environment, which is an arguably separate issue in relation to wasteful energy use. While it is understood the commenter may be using the case to make the argument that the proposed Project's DEIR could not primarily rely on compliance with applicable building code requirements and/or energy standards to state the Project would not result in significant wasteful energy use, the conclusion of the case must be taken into account as well. Per section 62 Cal.4th 213, the Supreme Court states:

> *We conclude, first, that as to greenhouse gas emissions the environmental impact report employs a legally permissible criterion of significance – whether the project was consistent with meeting statewide emission reduction goals – but the report's finding that the project's emissions would not be significant under that criterion is not supported by a reasoned explanation based on substantive evidence*.

In the context of the proposed Project, the DEIR's analysis does not solely or primarily rely upon Project compliance with California Building Code requirements as a means of determining whether the Project will result in significant impacts due to wasteful energy use. The proposed Project's Energy Analysis (DEIR Appendix B, p. 35) as well as DEIR p. 5.5-22 state,

> "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 residential projects of similar scale and configuration."

The DEIR goes on to state that with implementation of Project design features (DEIR p. 5.5-22),

> "including required Title 24 standards will ensure that the Project energy demands would not be considered inefficient, wasteful, or otherwise unnecessary."

These statements are supported by DEIR Section 5.5.6 (DEIR pp. 5.5-13 – 5.5-22), which provides a summary of Project Energy Analysis data and findings (DEIR Appendix E). The Project Energy Analysis provides quantitative analyses of projected Project energy consumption, which supports the DEIR Energy section's overall conclusion that the proposed Project would not result

in wasteful energy use. Thus, the DEIR has in fact provided substantial evidence via quantitative analysis, in addition to Project compliance with required Title 24 building standards, to conclude that the proposed Project would not result in significant impacts due to wasteful energy use.

Furthermore, in an appropriate case, a determination that a new building will meet or exceed the Title 24 standards can support a finding that the building's energy use impacts will not be significant (*Tracy First v. City of Tracy* (2009) 177 Cal.App.4th 912) so long as supported by substantial evidence (*Spring Valley Lake Ass'n v. City of Victorville* (2016) 248 Cal.App.4th 91, 103.). As stated above, the DEIR's conclusions are supported by substantial evidence by means of a quantitative analysis of projected Project energy consumption. (DEIR Appendix E.) Thus, the DEIR appropriately relied upon compliance with Title 24 standards in concluding the Project's energy use would not result in significant impacts.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and revisions to the DEIR are not warranted.

Response 5a.14:

The commenter incorrectly states that the DEIR fails to adequately analyze impacts to transportation in regard to the Project's traffic contribution to the intersection of Sycamore Canyon Boulevard and Central Avenue. The commenter states that this contribution exceeds the City's criteria. However, the DEIR states in Section 5.10.2.1, pg. 5.10-20,

> "As of July 1, 2020 the CEQA Guidelines promulgated under SB 743 changed the way that public agencies evaluate the transportation impacts of Projects under CEQA, recognizing that roadway congestion, while an inconvenience to drivers, is not itself an environmental impact (Public Resource Code, § 21099, subd. (b)(2)). In addition to new exemptions for projects consistent with specific plans, the updated CEQA Guidelines proposed by the Office of Planning and Research replace congestion-based metrics, such as auto delay and LOS, with Vehicle Miles Traveled as the basis for determining significant impacts, unless the Guidelines provide specific exceptions."

Additionally, per the Office of Planning and Research,

"Even if a General lan contains a LOS standard and a project is found to exceed that standard, that conflict should not be analyzed under CEQA. CEQA is focused on planning conflicts that lead to environmental impacts. (The Highway 68 Coalition v. County of Monterey (2017) 14 Cal.App.5th 883; see, e.g., Appendix G, IX(b) [asking whether the project will "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?"].) Auto delay, on its own, is no longer an environmental impact under CEQA." (https://www.opr.ca.gov/ceqa/updates/sb-743/faq.html#general-plans-with- los)

The DEIR was prepared while the State and City were transitioning from LOS to VMT as a CEQA impact. While the DEIR includes LOS and VMT analysis, the Office of Planning and Research confirms that auto delay, on its own, is no longer an environmental impact under CEQA. By including a LOS analysis, the DEIR goes above and beyond CEQA requirements when analyzing

transportation related deficiencies. As such, the Project does not have environmental impacts related to transportation and Mitigation Measures **MM LAND USE-1** through **MM LAND USE-3** are not required to lessen environmental impacts. However, the City will still require the Project to pay its fair share contribution as Conditions of Approval, as a general community benefit contribution. The commenter correctly states the City of Riverside does not have a fair share program to collect fair share payments. However, as a Condition of Approval, the City will require the applicant to pay its fair share of 8.6 percent of the cost of modifying a traffic signal at the intersection of Sycamore Canyon Boulevard and Central Avenue to the jurisdictions Caltrans and the County of Riverside. Such a condition is not mitigation required to lessen a significant transportation impact.

The DEIR is revised to indicate Mitigation Measures **MM LAND USE-1** through **MM LAND USE-3** are Conditions of Approval (COA), as follows on pages 5.8-14 through 5.8-27 of the DEIR:

As outlined in the Transportation section, Section 5.10.5, based on the City's deficiency criteria, the following intersection was found to be deficient:

- Sycamore Canyon Boulevard & Central Avenue (#3) – The addition of Project traffic increases the pre-project delay by more than 2.0 seconds during the AM peak hour resulting in a cumulative deficiency.

Intersection improvements are required to alleviate this Project-related deficiency at the intersection of Sycamore Canyon Boulevard & Central Avenue (#3) in order to achieve consistency with GP 2025 goals and policies for transportation within the Circulation and Community Mobility Element. Where the Project will result in LOS deficiencies at intersections or roadway segments, below the standards set forth in the General Plan Circulation Element, the Project would conflict with General Plan policies addressing the circulation system. Implementation of ~~mitigation measure~~ ~~**MM**~~ **Condition of Approval (COA) LAND USE-1** through ~~**MM**~~ **COA LAND USE-3** is required to ensure the Project is consistent with GP 2025 Circulation and Community Mobility Element goals and policies. ~~Mitigation measure~~ ~~**MM**~~ **COA LAND USE-1** through ~~**MM**~~ **COA LAND USE-3** are detailed in Section 5.8.5 below. Potential impacts from conflict with GP 2025 Circulation and Community Mobility Element policies is ~~to~~ **less than significant with implementation of ~~mitigation measure MM~~ COA LAND USE-1 through ~~MM~~ COA LAND USE-3.**

With implementation of ~~mitigation measure~~ ~~**MM**~~ **COA LAND USE-1** through ~~**MM**~~ **COA LAND USE-3,** the Project will not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect and potential impacts are **less than significant**.

5.8.6 Proposed Mitigation Measures

An EIR is required to describe feasible mitigation measures which could minimize significant adverse impacts (State CEQA Guidelines, Section 15126.4). The following conditions of approval ~~mitigation measures~~ are based on the improvements needed under Opening Year Cumulative (2022) and Horizon Year (2040) traffic conditions, ~~mitigation measures~~ ~~**MM**~~ **COA LAND USE-1** through ~~**MM**~~ **COA LAND USE-3,** to meet LOS standards set forth in the General Plan Circulation

Element and not conflict with the General Plan. While the Traffic Analysis examined LOS within the Project vicinity, a deficiency in LOS is no longer considered a significant traffic related impact pursuant to updated CEQA guidelines. Instead, the assessment of LOS is intended to identify key access, circulation and operational issues within the Project area, and to confirm consistency with, and reduce potential impacts associated with conflict with, the City's land use/General Plan consistency analysis. Horizon Year (2040) traffic conditions are analyzed in Section 5.10.7. The improvements needed to address Opening Year Cumulative deficiencies are typically a sub-set of those improvements recommended under Horizon Year (2040) traffic conditions.

~~MM~~ COA LAND USE-1: In order to alleviate an LOS deficiency and associated conflict with GP policies, the Sycamore Canyon Boulevard and Central Avenue intersection traffic signal shall be modified to implement overlap phasing on the northbound (NB) right turn lane. The Project will not be conditioned to pay fair share for these improvements as the adjacent Sycamore Commercial Development will construct them.

~~MM~~ COA LAND USE-2: In order to alleviate an LOS deficiency and associated conflict with GP policies, the Sycamore Canyon Boulevard and Central Avenue intersection traffic signal shall be modified to add a 2nd NB right turn lane and to implement overlap phasing on the eastbound (EB) right turn lane. The Project shall contribute its fair share of 8.6% of the cost to the County of Riverside.

~~MM~~ COA LAND USE-3: In order to alleviate an LOS deficiency and associated conflict with GP policies, Watkins Drive & SR-60/I-215 Westbound (WB) on-ramp shall be improved with installation of a traffic signal, addition of a 2nd NB left turn lane, and addition of a 2nd Southbound (SB) through lane. The Project shall contribute its fair share of 4.2% of the cost to the County of Riverside and Caltrans.

While the Traffic Analysis examined LOS within the Project vicinity, a deficiency in LOS is no longer considered a significant traffic related impact pursuant to updated CEQA guidelines. Instead, the assessment of LOS is intended to identify key access, circulation and operational issues within the Project area, and to confirm consistency with, and reduce potential impacts associated with conflict with, the City's land use/General Plan consistency analysis. The Project will contribute to the following intersection that is anticipated to operate at a deficient LOS during peak hours for Opening Year Cumulative (2022) without the Project:

- Sycamore Canyon Boulevard & Central Avenue (#3) – LOS E AM peak hour only

With implementation of ~~mitigation measure~~ **~~MM~~ COA LAND USE-1**, the intersection would operate at acceptable LOS standard as set forth in the General Plan Circulation Element. The effectiveness of the proposed recommended intersection improvements from **~~MM~~ COA LAND USE-1 to meet LOS** standards is presented in Table 5.10-15 below for Opening Year Cumulative (2022) traffic conditions.

With the implementation of the intersection recommendations in **~~MM~~ COA LAND USE-1**, there are no Project-related deficiencies anticipated to the study area intersections. **~~MM~~ COA LAND USE-1** is required to ensure the Project is consistent with GP 2025 Circulation and Community Mobility Element goals and policies. The Project would not conflict with General Plan policies

addressing the circulation system and potential impacts would be **less than significant without mitigation**.

It should be noted that even with this revision to the DEIR, no change to the significance conclusions presented in the DEIR will result. Accordingly, this comment and the subsequent DEIR revisions do not affect the analysis completed or conclusions provided in the DEIR, do not provide new information or evidence related to the analysis completed in the DEIR, and do not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR have been made as noted above.

Response 5a.15:

The commenter incorrectly states that the DEIR fails to adequately analyze impacts to transportation caused by the Project's impact with the circulation system plan, as outlined in Response 5a.14 above.

Per the Office of Planning and Research, "Even if a general plan contains a LOS standard and a project is found to exceed that standard, that conflict should not be analyzed under CEQA." The DEIR was prepared while the State and City were transitioning from LOS to VMT as a CEQA impact. While the DEIR includes LOS and VMT impacts, the Office of Planning and Research confirms that auto delay, on its own, is no longer an environmental impact under CEQA. The commenter's statement that "The DEIR incorrectly states that all the study area roadway segments are anticipated to continue to operate at an acceptable LOS with the addition of Project traffic. DEIR at 5.10-30" is a misrepresentation as the complete sentence was not quoted, which reads (DEIR p. 5.10-30):

"As shown in Table 5.10-6, all the study area roadway segments are anticipated to continue to operate at an acceptable LOS under E + P conditions with the addition of the Project traffic, with the exception of Sycamore Canyon Boulevard south of Central Avenue."

In addition to specifically analyzing the roadway segment cited by the commenter, the DEIR did in fact analyze the Project's effect on LOS as it conflicts with the City of Riverside General Plan 2025 Circulation and Community Mobility Element policies, not in Section 5.10 Transportation, but more appropriately in Section 5.8 Land Use and Planning. As outlined in the DEIR, page 5.8-14:

Intersection improvements are required to alleviate this Project-related deficiency at the intersection of Sycamore Canyon Boulevard & Central Avenue (#3) in order to achieve consistency with GP 2025 goals and policies for transportation within the Circulation and Community Mobility Element. Where the Project will result in LOS deficiencies at intersections or roadway segments, below the standards set forth in the General Plan Circulation Element, the Project would conflict with General Plan policies addressing the circulation system ~~and would be considered significant~~. Implementation of ~~mitigation measure~~ ~~**MM**~~ **Condition of Approval (COA) LAND USE-1** through ~~**MM**~~ **COA LAND USE-3** is required to ensure the Project is consistent with GP 2025 Circulation and Community Mobility Element goals and policies. ~~Mitigation measure~~ ~~**MM**~~ **COA LAND USE-1** through ~~**MM**~~ **COA LAND USE-3** are detailed in Section 5.8.5 below. Potential

impacts from conflict with GP 2025 Circulation and Community Mobility Element policies is ~~reduced to~~ **less than significant with implementation of ~~mitigation measure MM~~ COA LAND USE-1 through ~~MM~~ COA LAND USE-3.**

Thus, the DEIR did analyze any LOS deficiencies resulting from the Project and provides Conditions of Approval (COAs) to reduce potential impacts from conflict with the City's Circulation and Community Mobility Element of the General Plan to less than significant levels. And as outlined further in response 5a.14 above, the DEIR was prepared while the State and City were transitioning from LOS to VMT as a CEQA impact. While the DEIR includes LOS and VMT impacts, the Office of Planning and Research confirms that auto delay, on its own, is no longer an environmental impact under CEQA. By including a LOS analysis, the DEIR goes above and beyond CEQA requirements when analyzing transportation related deficiencies. As such, the Project does not have environmental impacts related to transportation and Conditions of Approval **COA LAND USE-1** through **COA LAND USE-3** are not required to lessen environmental impacts. However, the City is imposing these COAs including a fair share contribution, as a general community benefit contribution. Such conditions are not mitigation required to lessen a significant transportation impact.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Response 5a.16:

The commenter provides a summary and reference to CEQA case law, which represents the commenter's interpretation of the referenced case. However, the commenter makes no specific comment on how it relates to either the Project's DEIR or cumulative analysis contained therein. This comment does not relate to the adequacy or content of the DEIR, does not provide new information or evidence related to the analysis in the DEIR, and does not affect the analysis completed or conclusions provided in the DEIR. This comment is noted for the record and revisions to the DEIR are not required.

Response 5a.17:

The commenter provides various references to and abbreviated excerpts related to the CEQA Guidelines. These represent the commenter's interpretation of CEQA Guidelines related to cumulative impacts. However, the commenter makes no specific comment on how these relate to either the Project's DEIR or cumulative analysis contained therein. This comment does not relate to the adequacy or content of the DEIR, does not provide new information or evidence related to the analysis in the DEIR, and does not affect the analysis completed or conclusions provided in the DEIR. This comment is noted for the record and revisions to the DEIR are not required.

Response 5a.18:

The commenter asserts deficiencies regarding the cumulative analysis related to air quality and aesthetics. The commenter first states that the DEIR fails to analyze the combined emissions of construction with other proposed or reasonably foreseeable future projects as part of the analysis to determine whether the Project will contribute to a significant cumulative impact. As noted by the commenter, the DEIR does summarize cumulative development in the City and surrounding cities and county to include residential development, warehouses, commercial, office, and public facilities (DEIR p. 5.2-33) as a means of establishing the cumulative environmental setting. As is discussed on DEIR p. 5.2-1 and throughout DEIR sections 5.2.2.2, 5.2.2.3, and 5.2.2.4, the proposed Project site is located in the South Coast Air Basin (Basin) and is within the jurisdiction of the South Coast Air Quality Management District (SCAQMD). Thus, the proposed Project's Air Quality Impact Analysis (DEIR Appendix B) and DEIR Section 5.2.6 have deferred to the AQMD's *White Paper on Potential Control Strategies to Address Cumulative Impacts from Air Pollution* (2003). As stated on p. D-3 of the *White Paper* and as cited on DEIR Appendix B p. 47:

> *the AQMD uses the same significance thresholds for project specific and cumulative impacts for all environmental topics analyzed in and Environmental Assessment or Environmental Impact Report (EIR)… Projects that exceed the project-specific significance thresholds are considered by the SCAQMD to be cumulatively considerable. This is the reason project-specific and cumulative significance thresholds are the same. Conversely, projects that do not exceed the project-specific thresholds are generally not considered to be cumulatively significant.*

Therefore, the DEIR has not failed in its analysis of determining whether or not the proposed Project would contribute to a significant cumulative impact by not specifically analyzing Project construction emissions with other proposed or reasonably foreseeable future projects. Rather, the DEIR has analyzed potential cumulative air quality impacts based on SCAQMD *White Paper* guidance. The Project does not exceed project-specific significance thresholds (pp. 5.2-25 – 5.2-29.) As such, the Project does not result in cumulatively considerable air quality impacts. (pp. 5.2-29, 5.2-34.)

The commenter then states that the DEIR fails to provide substantial evidence that the proposed Project will not have a substantial cumulative effect on a scenic vista. As the commenter notes, the DEIR does state that cumulative development in the City and the surrounding area would modify the visual character of the surrounding area through development of vacant lots or through redevelopment (DEIR p. 5.1-28). However, the DEIR does go on to also state that those planned and pending projects in the immediate vicinity of the proposed Project include a currently undeveloped but recently approved drive-thru restaurant and convenience store/gas station to the east, across Sycamore Canyon Boulevard (DEIR p. 5.1-28). Moreover, as discussed in Response 5a.3 and DEIR p. 5.1-26, the proposed Project site is adjacent to the SR-60/I-215 freeway and has residential developments to the west, across from QROS Park, and to the south of Central Avenue, with the QROS Park identified/serving as the only open-space/non-urbanized area in immediate area. Therefore, the existing visual character of the immediate proposed Project area is more urbanized than open space and the Project would not significantly or cumulatively impact the visual character of this area (see Response 5a.3 for further discussion). Similarly, as discussed in Responses 5a.2 and 9.5, the proposed Project would not significantly impact or obstruct scenic vista views from the sidewalk along Central Avenue or from Sycamore

Canyon Wilderness Park (see Responses 5a.2 and 9.5 for further discussion and accompanying reference figures). Additionally, the DEIR does discuss potential impacts to scenic vistas (DEIR pp. 5.1-23 – 5.1-25) and provides analysis to conclude the proposed Project would not result in significant changes to the currently existing viewshed of the proposed Project area or on scenic vistas directly or cumulatively.

Therefore, this comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and revisions to the DEIR are not warranted.

Response 5a.19:

The commenter states that the DEIR analyzed emissions based on daily estimates of construction and operational emissions, but that the DEIR fails to analyze the combined daily emissions to determine whether impacts to the implementation of an applicable air quality plan would be significant. The commenter concludes that the proposed Project lacks substantial evidence that the Project is consistent with the 2016 Air Quality Management Plan (AQMP).

The commenter fails to support their claim that no analysis of combined daily emissions would cause the Project to be inconsistent with the 2016 AQMP. DEIR response to Threshold A of Section 5.2.5 (DEIR pp. 5.2-25 – 5.2-29) explains that the Project's consistency analysis for the 2016 AQMP was performed using criteria from SCAQMD's CEQA Air Quality Handbook and goes on to provide a summary of quantitative data and analysis from the Project's Air Quality Report (DEIR Appendix B) to support Project consistency. As noted by the commenter, the DEIR analyzes emissions based on daily estimates of construction and operational emissions per the methodology described in the Project's Air Quality Report (DEIR Appendix B) and summarized on DEIR pp. 5.2-25 – 5.2-29. The commenter fails to provide evidence for why the methodologies implemented to assess Project emissions and consistency with the 2016 AQMP are insufficient even though it is stated in both the Air Quality Report and DEIR that the consistency analysis was performed per CEQA Air Quality Handbook criteria. Further, as shown on DEIR pp. 5.2-25 – 5.2-29, all Project construction and operational emissions were found to be less (significantly less in some cases) than regional and local thresholds and it was determined the Project would not exceed assumptions in the AQMP based on the years of Project build-out phase (DEIR pp. 5.2-28 – 5.2-29). Thus, the proposed Project DEIR provides substantial evidence according to CEQA Air Quality Handbook criteria that the Project would be consistent with the 2016 AQMP.

Therefore, this comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and revisions to the DEIR are not warranted.

Response 5a.20:

The commenter states that construction noise cannot be directed away from any sensitive receivers as sensitive receivers are located around the Project site perimeter. The commenter further states that equipment such as a tamper for deep dynamic compaction cannot be directed away from sensitive receivers.

In addressing the commenter's comment, it is key to distinguish between the sensitive receptors in proximity to the proposed Project site, which the commenter has failed to do and which the DEIR and accompanying Project-specific Noise Study (DEIR Appendix H) are express in denoting when discussing potential noise impacts. DEIR Appendix H p. 53 identifies four (4) residential receiver locations (denoted as receivers R1, R2, R3, and R4) and two potential sensitive biological receiver locations (denoted as BIO-1 and BIO-2). The locations of these receivers in proximity to the proposed Project are provided on DEIR Figure 5.9-4: Sensitive Receiver Locations (DEIR p. 5.9-27). It should be noted that the commenter refers to seven (7) air quality sensitive receivers identified in the Project's Air Quality Impact Analysis and Freeway Health Risk Assessment (DEIR Appendix B). However, these air quality sensitive receivers the commenter cites were identified in the context of air quality and thus one additional sensitive receiver, denoted as R5 to the immediate northeast of the Project site (see DEIR Appendix B p. 39) is identified. It appears the commenter may have chosen to cite these identified air quality sensitive receivers to incorrectly support his or her inaccurate claim that "sensitive receivers are located around the entire Project site perimeter" in the context of sensitive noise receptors. However, per DEIR Figure 5.9-4: Sensitive Receiver Locations (DEIR p. 5.9-27), as well as Noise Study Exhibit 9-A, it is not accurate to state sensitive noise receptors are located around the entire Project perimeter "such that noise cannot be directed away from sensitive [noise] receivers" as no sensitive noise receivers are identified to the northeast of the Project as the commenter inaccurately suggests in referencing figures and/or Project technical study data information out of context.

Moreover, as is discussed and supported by quantitative analysis summarized from the Project's Noise Study (DEIR Appendix H), Project traffic, construction, operational, and blasting-related noise levels would not result in the generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the Project in excess of applicable Federal Transit Authority (FTA) standards or exceed any applicable noise thresholds at the nearest sensitive residential receptors (DEIR pp. 5.9-21 – 5.9-35). Thus, mitigation for potential noise impacts to the nearest sensitive residential receptors is not required or necessary. The commenter appears to have grouped potential noise impacts to and proposed mitigation measures for biological receptors (discussed further in the next paragraph) to inaccurately include all sensitive receptors to support their claim that "noise cannot be directed away from any sensitive receptors." In actuality, no such mitigation involving directing noise away from residential receptors is required.

Further, the DEIR acknowledges that sensitive biological receivers would be located in closer proximity to the limits of construction than the residential sensitive receivers; thus, appropriate biological mitigation measures must be implemented to ensure construction noise and vibration impacts are reduced to less than significant levels (DEIR p. 5.9-35). The commenter appears to specifically reference the condition of mitigation measure **MM BIO-5** that states, "Any jackhammers, pneumatic equipment, and all other portable stationary noise sources shall be shielded and noise shall be directed away from sensitive [biological] receptors" (DEIR p. 5.9-39) and argues that directing noise away from these sensitive receptors would not be possible. As discussed in the paragraphs above, the commenter's assertion was found to be at fault as it was inaccurately stated that noise sensitive receptors are located around the entirety of the Project site. Moreover, the conditions of **MM BIO-5** would be implemented with **MM BIO-4** and **MM BIO-**

6, which also include measures to ensure potential impacts to noise sensitive biological receptors are less than significant.

Lastly, the commenter states that equipment such as a tamper for deep dynamic compaction cannot be directed away from sensitive receivers. It has previously been established that per DEIR pp. 5.9-21 – 5.9-35, construction noise, including that of construction equipment, would not exceed any applicable thresholds for nearby sensitive residential receptors. It has additionally been established that appropriate biological resources mitigation measures would be implemented to ensure sensitive biological receptors are not significantly impacted by construction noise. Per DEIR pp. 5.9-38 – 3.9-39, these biological mitigation measures include measures for reducing construction equipment-based noise. Further, DEIR p. 5.9-36 states:

> "Since the actual equipment used to support the Project construction may include deep dynamic compaction or rapid impact compaction, the Project's Noise Study conservatively relies on the highest worst-case impact pile driving reference vibration source levels to describe the Project vibration levels."

Thus, the Project's Noise Study (Appendix H) and DEIR have accounted for potential deep dynamic compaction-level vibration source levels in its analysis. Project construction vibration levels would not exceed maximum vibration level thresholds and as previously stated, the implementation of appropriate biological resources mitigation measures would ensure potential impacts to sensitive biological receptors are less than significant. Therefore, the commenter's concern that equipment such as a tamper cannot be directed away from sensitive receptors is unwarranted as these potential impacts have been fully accounted for in the DEIR analysis.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and revisions to the DEIR are not warranted.

Response 5a.21:

The commenter provides their interpretation of law and incorrectly states that the DEIR utilizes "exclusive reliance" on regulation of cumulative projects by Title 24 Energy Standards and that this reliance is not substantial evidence the Project would not contribute to significant cumulative impacts.

Refer to Response 5a.13 above. The Project does not solely rely on compliance with Title 24 Energy Standards. The DEIR's conclusion that Project energy demands in total would be comparable to, or less than, other residential projects of similar scale and configuration and would not result in wasteful energy use or contribute to cumulatively significant energy impacts is supported by quantitative data analysis in addition to Project compliance with required Title 24 building standards (DEIR 5.5-24).

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and revisions to the DEIR are not warranted.

Response 5a.22:

The commenter provides various references to and abbreviated excerpts related to CEQA case law. These represent the commenter's interpretation of CEQA case law related to feasible mitigation and alternatives. However, the commenter makes no specific comment on how these relate to either the Project's DEIR mitigation measures or alternatives analysis contained therein. The commenter states that the EIR is required to consider, and the City is required to adopt feasible mitigation and alternatives that can lessen or avoid the significant impact.

The DEIR does in fact identify many mitigation measures to reduce potential environmental impacts, and all impacts were deemed less than significant without the need for mitigation or after implementation of identified mitigation measures. The DEIR did not identify any significant and unavoidable impacts. The mitigation measures are identified in Section 5 Environmental Impact Analysis, within each issue topic, 5.1 Aesthetics, 5.2 Air Quality, etc. Mitigation measures are also included in Table ES-1 Summary of Environmental Impacts, Mitigation Measures, and Residual Impacts, in which a total of 41mitigation measures are listed. The Alternatives analysis that meets CEQA requirements, is included in Section 8.0 of the DEIR (pp. 8.00-1- 8.0-19).

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR are not required.

Response 5a.23

The commenter provides a various references/summary of the CEQA Guidelines. These represent the commenter's interpretation of CEQA Guidelines related to modifications to the project in order to lessen the significant environmental effects. However, the commenter makes no specific comment on how these relate to either the Project's DEIR mitigation measures or alternatives analysis contained therein.

The DEIR does in fact identify modifications, in the form of Project Design Considerations, that were incorporated into the Project in order to avoid or reduce potential environmental impacts. The Project Design Considerations are identified in Section 5 Environmental Impact Analysis, within each issue topic, 5.1 Aesthetics, 5.2 Air Quality, etc.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR are not required.

Response 5a.24:

The commenter provides various references to and abbreviated excerpts related to Public Resources Code, CEQA case law, and CEQA Guidelines. These represent the commenter's interpretation of them. However, the commenter makes no specific comment on how these relate to either the Project's DEIR mitigation measures contained therein. The commenter states that "claims of infeasibility [are not] supported by substantial evidence," particularly where the DEIR fails even to discuss or consider possible mitigation. As outlined in Response 5a.22 above, the DEIR does in fact identify a number of mitigation measures to reduce potential environmental

impacts. The mitigation measures are identified in Section 5 Environmental Impact Analysis, within each issue topic, 5.1 Aesthetics, 5.2 Air Quality, etc. Mitigation measures are also included in Table ES-1 Summary of Environmental Impacts, Mitigation Measures, and Residual Impacts, in which a total of 41 mitigation measures are listed.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR are not required.

Response 5a.25:

The commenter states the DEIR failed to consider mitigation for GHG emissions based on what the commenter identifies as an "unsupported conclusion" that the Project would not exceed significance thresholds.

As is further discussed in Responses 5b.13 through 5b.17, the DEIR and underlying technical studies adequately evaluated Project GHG emissions utilizing the most applicable and appropriate methodologies and screening threshold. Thus, as is further elaborated upon in Responses 5b.13 through 5b.17, the DEIR's and underlying technical studies' conclusions that the Project would not exceed GHG significance thresholds have been adequately supported with substantial evidence.

Therefore, this comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR are not required.

Response 5a.26:

The commenter states that per mitigation measure **MM BIO-8**, the Project would continue to construct on windy days despite the City of Riverside General Plan requirement to suspend all grading operations when wind speeds exceed 25 miles per hour.

Per DEIR p. 5.2-24, Air Quality Element Policy AQ-4.5 (Require the suspension of all grading operations when wind speeds [as instantaneous gusts] exceed 25 miles per hour) is acknowledged as a City General Plan policy relevant to the Project. As the Project is located within the City with the City acting as the Project's lead agency, the Project would be required to abide by and be consistent with applicable General Plan policies, including Policy AQ-4.5. The implementation of **MM BIO-8** does not implicitly or explicitly suggest that the Project would continue grading activities during windy day conditions (wind speeds exceeding 25 miles per hour) that would be in violation with Policy AQ-4.5. The proposed Project would be required to cease grading activities when wind speeds exceed 25 miles per hour per Policy AQ-4.5. The measures described under **MM BIO-8** (DEIR 5.3-37) would be implemented on windy days when wind speeds *do not* (emphasis added) exceed the 25 mile per hour threshold stated in the policy and when conditions still allow for construction activities to continue. The purpose of **MM BIO-8** would be to help reduce any fugitive dust emissions during windy day conditions when construction activities such as grading are still permissible.

The commenter also claims the DEIR fails to discuss impacts associated with a claimed violation of General Plan Policies AQ-4.2, AQ-4.3, and AQ-4.4 in addition to AQ-4.5 addressed above. The commenter provides no specific violations or examples of how the DEIR violates these policies. Regarding compliance with Policy AQ-4.2 regarding the reduction of particulate matter from construction (which is the only activity listed applicable to the Project), the DEIR includes Standard Regulatory Requirements/Best Available Control Measures (BACMs), even though no Project-specific air quality mitigation measures were found to be required. BACM AQ-1, set forth below, requires the contractor to adhere to applicable measures contained in Table 1 of Rule 403, and thus the Project is consistent with Policy AQ-4.2.

BACM AQ-1: The contractor shall adhere to applicable measures contained in Table 1 of Rule 403 including, but not limited to:

• 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. (p. 5.2-33.)

Similarly, the DEIR provides BACMs that illustrate the Project's consistency with Policies AQ-4.3 (support the reduction of all particulates potential sources) and AQ-4.4 (support programs that reduce emissions from building materials and methods that generate excessive pollutants through incentives and/or regulations). As set forth below, BACM AQ-2 illustrates compliance with Policy AQ-4, as it reduces emissions from building materials, and BACM AQ-3 illustrates the Project's compliance with Policy AQ-4.3, as it prohibits the use of wood burning stoves and fireplaces, which are sources of particulates.

BACM AQ-2: The following measures shall be incorporated into Project plans and specifications as implementation of SCAQMD Rule 1113:

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

BACM AQ-3: The Project is required to comply with SCAQMD Rule 445, which prohibits the use of wood burning stoves and fireplaces in new development. (p. 5.2-33.)Therefore, this comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR are not required.

Response 5a.27:

The commenter states the DEIR notes a non-toxic chemical stabilizer may be applied to all stockpiles and failed to identify what chemical stabilizer the Project will utilize. The commenter is concerned of potential environmental impacts from this non-toxic chemical.

As stated in the DEIR (pp. 5.3-37 - 5.3-38) mitigation measure **MM BIO-8** applies to the Project**:**

MM BIO-8: During soil excavation, grading, or other subsurface disturbances, the construction contractor shall supervise provision and maintenance of all standard dust control Best

Management Practices (BMPs) to reduce fugitive dust emissions, including but not limited to the following actions:

- Water any exposed soil areas a minimum of twice per day, or as allowed under any imposed drought restrictions. On windy days or when fugitive dust can be observed leaving the construction site, additional water shall be applied at a frequency to be determined by the on-site construction superintendent.
- Pave, periodically water, or apply chemical stabilizer to construction access/egress points.
- Minimize the amount of area disturbed by clearing, grading, earthmoving, or excavation operations at all times.
- Operate all vehicles on graded areas at speeds less than 15 miles per hour.
- Cover all stockpiles that would not be utilized within three days with plastic or equivalent material, to be determined by the on-site construction superintendent, or spray them with a non-toxic chemical stabilizer.

MM BIO-8 does not require that a non-toxic stabilizer is used to cover stockpiles, it is an option identified if not covered with plastic or equivalent material. Therefore, it is not certain that a non-toxic stabilizer would be used on site. The intent of identifying the chemical stabilizer as "non-toxic" is to indicate that only stabilizers that would not be toxic or hazardous to the environment (including biological and water resources) would be allowed.

Further, as stated in the DEIR (pp. 5.3-38 - 5.3-39) mitigation measure **MM BIO-10**, the purpose of the measure is to prevent pollutants from the site to be carried in runoff to downstream areas:

MM BIO-10: To address potential short-term impacts to water quality within the on-site drainages from construction runoff that may carry storm water pollutants, a Stormwater Pollution Prevention Plan (SWPPP) shall be implemented by the construction contractor as required by the California General Construction Storm Water Permit pursuant the Regional Board regulations prior to grading permit issuance. The SWPPP shall identify BMPs related to the control of toxic substances, including construction fuels, oils, and other liquids. These BMPs would be implemented by the construction contractor prior to the start of any ground clearing activity, shall be subject to periodic inspections by the City and the Project's hydrological consultant, shall be

maintained throughout the construction period and remain in place until all landscape and permanent BMPs are in place. BMPs shall be monitored and repaired if necessary, to ensure maximum erosion, sediment, and pollution control.

- The use of erosion control materials potentially harmful to fish and wildlife species, such as mono-filament netting (erosion control matting) or similar material, within and adjacent to conserved riparian habitat shall be prohibited.
- All fiber roles,[1] straw waddles, and/or hay bales utilized within and adjacent to the Project site shall be free of non-native plant materials.
- Construction contractor shall comply with all litter and pollution laws. All contractors, subcontractors, and employees shall also obey these laws.
- Water containing mud, silt, or other pollutants from grading, aggregate washing, or other activities shall not be allowed to enter the conserved riparian habitat or be placed in locations that may be subjected to high storm flows.
- Spoil sites shall not be located within jurisdictional areas and MSHCP Conservation Areas or locations that may be subjected to high storm flows, where spoil shall be washed back into the conserved riparian habitat where it would impact streambed habitat and aquatic or riparian vegetation.
- Raw cement/concrete or washings thereof, asphalt, paint, or other coating material, oil or other petroleum products, or any other substances which could be hazardous to fish and wildlife resources resulting from Project related activities shall be prevented from contaminating the soil and/or entering the conserved riparian habitat. These materials, placed within or where they may enter the conserved riparian habitat or any party working under contract to the construction contractor, shall be removed immediately.
- No equipment maintenance shall be done within or near the conserved riparian habitat where petroleum products or other pollutants from the equipment may enter these areas under any flow.

The Project is required to comply with the National Pollution Discharge Elimination System (NPDES) Statewide General Construction Permit (Order No. 09-09-DWQ). The permit requires preparation of an effective Storm Water Pollution Prevention Plan (SWPPP), which describes erosion and sediment control BMPs to prevent stormwater pollution during construction. The SWPPP must be prepared by a Qualified SWPPP Developer and implemented on site by a Qualified SWPPP Practitioner to ensure all General Construction Permit requirements and SWPPP BMPs are being met and implemented during construction activities. The non-toxic chemical stabilizer would only be allowed if included as an appropriate and approved BMP in the Project's SWPPP. In order to ensure, no non-toxic chemical that could be harmful to the environment is used pursuant to **MM BIO-8**, it is revised to further clarify only those identified in the SWPPP shall be allowed, as follows on page 5.3-38 of the DEIR:

MM BIO-8: During soil excavation, grading, or other subsurface disturbances, the construction contractor shall supervise provision and maintenance of all standard dust control Best

Management Practices (BMPs) to reduce fugitive dust emissions, including but not limited to the following actions:

- Water any exposed soil areas a minimum of twice per day, or as allowed under any imposed drought restrictions. On windy days or when fugitive dust can be observed leaving the construction site, additional water shall be applied at a frequency to be determined by the on-site construction superintendent.
- Pave, periodically water, or apply acceptable non-toxic chemical stabilizer as identified in the SWPPP to construction access/egress points.
- Minimize the amount of area disturbed by clearing, grading, earthmoving, or excavation operations at all times.
- Operate all vehicles on graded areas at speeds less than 15 miles per hour.
- Cover all stockpiles that would not be utilized within three days with plastic or equivalent material, to be determined by the on-site construction superintendent, or spray them with an acceptable non-toxic chemical stabilizer as identified in the SWPPP.

It should be noted that even with this revision to the DEIR, no change to the significance conclusions presented in the DEIR will result. Accordingly, this comment and the subsequent DEIR revisions do not affect the analysis completed or conclusions provided in the DEIR, do not provide new information or evidence related to the analysis completed in the DEIR, and do not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR have been made as noted above.

Response 5a.28:

The commenter stated that the DEIR focused only on impacts to wildlife within the Multiple Species Habitat Conservation Plan caused by noise from construction equipment (DEIR at 5.3-32). The commenter adds that all the measures the DEIR selected to mitigate noise impacts are temporary because they correlate to construction noise (DEIR at 5.3-36 – 5.5-38). Lastly, the commenter indicates the DEIR must analyze and determine what mitigation would be necessary to reduce any significant environmental impacts caused from operational noise.

The potential impacts that may result from noise are discussed in Section 5.9 Noise subsection 5.9.5 Environmental Impacts (DEIR pp 5.9-20 – 5.9-21). This section indicates that:

> "...there is no single noise increase that renders the noise impact significant."

Furthermore Table 5.9-6 – Significance Criteria Summary on pp. 5.9-22 of the DEIR describes the significance criteria summary matrix that includes the allowable criteria used to identify potentially significant incremental noise level increase. Then under the section entitled Construction Noise Levels (DEIR pp. 5.9-31 – 5.9-33), it is states:

> "...potential impacts due to the Project's typical construction noise is considered less than significant at all the noise sensitive residential received locations." Table 5.9-15 – Typical Construction Noise Level Compliance on DEIR pp 5.9-33 also summarizes this information as well. Please also refer to Response 5a.20 for a full discussion on potential noise impacts to noise sensitive biological receivers.

The DEIR also provides an analysis of operational noise impacts (pp. 5.9-26 – 5.9-30.)). Table 5.9-11 – Operational Noise Level Compliance, lists the Project noise levels at the two BIO receivers as 40.4 dBA and 41.7 dBA respectively. (p. 5.9-29.) As provided in Section 5.3.4 of the Project's MSHCP Consistency Analysis, "As outlined in the Noise Impact Analysis, Section 10 Operational Impacts, prepared for the project (Urban Crossroads, September 15, 2020), the operational noise analysis is intended to describe noise levels associated with the expected typical daytime and nighttime residential activities from the project. The on-site project-related noise sources are expected to include roof-top air conditioning units, trash enclosure activity, dog park activity, pool/spa activity and parking lot vehicle movements. These noise sources are anticipated to be 41.7 dBA Leq (for all sources) at the MSHCP Conservation Area in the southwest portion of the site. The operational noise levels associated with Crestview Apartments project will not exceed the City of Riverside 55 dBA Leq daytime and 45 dBA Leq nighttime exterior residential noise level standards. No further mitigation is proposed for operational noise." (Habitat Assessment MSHCP, JD, and JPR, Appendix C, p. 27.)

Thus, the DEIR does contain an analysis of construction noise, finding that the Project's operational noise levels will not exceed the City's applicable standards at the MSHCP Conservation Area, and thus no mitigation is required.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR are not required.

Response 5a.29:

The commenter provides a collection of various references to and abbreviated excerpts from the Public Resources Code, CEQA Guidelines, and CEQA case law. These represent the commenter's interpretation of them. The commenter states the formulation of mitigation measures shall not be deferred until some future time and claims the DEIR improperly defers mitigation of erosion impacts and water quality impacts.

As outlined in Response 5a.2727 above, the Project is required to comply with the National Pollution Discharge Elimination System (NPDES) Statewide General Construction Permit (Order No. 09-09-DWQ). The permit requires preparation of an effective Storm Water Pollution Prevention Plan (SWPPP), which describes erosion and sediment control BMPs to prevent stormwater pollution during construction. The SWPPP must be prepared by a Qualified SWPPP Developer and implemented on site by a Qualified SWPPP Practitioner to ensure all General Construction Permit requirements and SWPPP BMPs are being met and implemented during construction activities. The SWPPP is required identify BMPs related to the control of toxic substances, including construction fuels, oils, and other liquids. Preparation of the SWPPP is a federal and state requirement, but was also incorporated into **MM BIO-10**, for tracking purposes and the City to ensure it is prepared. Mitigation measure **MM BIO-10** is fully enforceable as it contains a number of specific performance standards and does not defer mitigation. Please also refer to Response 8.7 regarding deferral of mitigation measures.

Accordingly, the EIR did not defer the analysis of any potential impacts. This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR are not required.

Response 5a.30:

The commenter states the DEIR improperly defers mitigation of impacts from lighting and the Project will have significant impacts to the Conservation Plan area from direct night lighting. The commenter states the DEIR has proposed lighting that still needs to be confirmed.

Mitigation Measure **MM AES-1** requires approval of a photometric (lighting) plan by the City and compliance with the MSHCP. To minimize indirect impacts to species protected under Section 6.1.2 of the MSHCP, Mitigation Measures **MM BIO-4**, **MM BIO-5**, and **MM BIO-6** are required to ensure construction noise and vibration impacts on sensitive biological receivers are reduced to less than significant levels (DEIR, p.5.9-38). Prior to construction, the proposed Project must have an approved photometric plan. A Site Lighting Photometric Plan has been prepared for the Project, shown in FEIR Figure 2.0-1 below, identifies the exterior light types, locations, quantity, description, lumens per lamp, and that the proposed lighting will not "spill" beyond the development pad/footprint. As stated in the DEIR, Section 5.1.6 (p. 5.1-28), within Mitigation Measure **MM AES-1** outlined below, the Project shall be designed in such a manner as to prevent light spillage from the Project to the adjacent and nearby open space areas and the purpose of the photometric plan is to enable the City to ensure that the approved light design requirements are included in the final building plan sheets, prior to issuance of building permits. Further, **MM AES-1** contains a number of performance standards, including that Project lighting levels shall comply with Chapter 19.556 of the Riverside Municipal Code, shielding be employed where feasible, night lighting be directed away from natural open space and will be directed downward towards the center of development, lights shall not blink, flash, oscillate, or be of an unusually high brightness or intensity, energy efficient LPS or HPS lamps shall be used exclusively, and exterior lights shall be only "warm" LED lights. Mitigation Measure **MM AES-1** clearly sets forth the criteria the City will apply in determining that the impact is mitigated, including the type of lamps to be used, their intensity, and the direction lighting will face.

Therefore, neither the EIR as a whole, nor **MM AES-1** defers mitigation. Please also refer to Response 8.7. This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR are not required.

Response 5a.31:

The commenter incorrectly states that the mitigation measures selected to minimize short-term noise levels caused by construction are improperly deferred as noise-reduction devices have not been specifically identified and noise attenuation techniques are to be employed as needed.

Per DEIR pp. 5.3-36 – 5.3-37, mitigation measures **MM BIO-4** and **MM BIO-5** identify specific noise reduction devices and attenuation techniques, including the installation of a 12-foot-high temporary noise barrier at the perimeter of the limits of disturbance between construction activities and adjacent riparian habitat. It is also identified that heavy grade rubber mats/pads would be used within beds of trucks to help attenuate initial impact noise generated from excavators dropping rocks and debris into the trucks.

The commenter is referring to **MM BIO-9** in which it is stated the Project would, "Employ additional noise attenuation techniques, as needed, to reduce excessive noise levels… such as the placement of temporary sound barriers or sound blankets." (DEIR p. 5.3-38). The implementation of **MM BIO-9** would be in addition to the specified noise-reduction and attenuation techniques described in **MM BIO-4** and **MM BIO-5. MM BIO-9** also includes a number of specific measures to minimize short-term noise from construction activities including:

- Properly outfit and maintain construction equipment with manufacturer-recommended noise-reduction devices to minimize construction-generated noise.
- Operate all diesel equipment with closed engine doors and equip with factory-recommended mufflers.
- Use electrical power, when feasible, to operate air compressors and similar power tools
- Locate construction staging areas at least 100 feet from the conserved riparian habitat. (DEIR p. 5.3-38).

Further, **MM BIO-9** does identify additional noise techniques as including temporary sound barriers or sound blankets. The fact that **MM BIO-9** employs additional noise attenuation techniques as needed does not constitute improper deferral as the commenter claims. Deferral may be appropriate when the nature or extent of mitigation that may be required depends on the result of later study. (*Save Panoche Valley v. San Benito Count*y (2013) 217 Cal.App4th 503, 524; *Laurel Heights Improvement Ass'n v. Regents of Univ. of Cal.* (1988) 47 Cal.3d 376, 418 [mitigation measure for noise impacts required evaluation of specific noise control techniques to ensure compliance with noise performance standards once ventilation system had been designed].)

As provided herein, the DEIR contains a number of specific measures to reduce construction noise. Once such measures are employed, it is unknown to what extent any further noise attenuation techniques will be required. The need for the additional measures set forth in **MM BIO-9** will be determined once all other measures are employed. This is proper under CEQA.

Therefore, this comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR are not required.

Response 5a.32:

The commenter states the project would interfere substantially with the movement of wildlife in corridors. The commenter then states Mitigation Measures **MM BIO-2** through **MM BIO-15** do not adequately address the Project's impacts to wildlife movement. The commenter also states that

none of the measures **MM BIO-7** describes relates to the fact that the Project will cause wildlife to lose access to a travel route.

Please see Response 5a.7. Additionally, and to summarize, per the DEIR, Section 5.3 Biological Resources (p. 5.3-16):

> "Habitat on the Project site is heavily disturbed and there is little to no incentive for bobcats to occur on the upland portion of the Project site, as it is surrounded on three (3) sides by development (primarily transportation land uses). Box Spring Canyon located south of the Project site (south of Central Avenue), and the small portion of willow riparian on southwest corner of the Project site has the potential to be used by migrating or dispersing wildlife, including birds and mammals. (ELMT(a), p.18)"

As provided in the DEIR, the Project will not directly impact, prevent or restrict the use of Box Spring Canyon or the willow riparian plant community as a corridor by wildlife. Disturbances from the Project are not expected to directly or indirectly impact wildlife movement opportunities through this area. The MSHCP urban/wildlands interface guidelines will be implemented to help reduce potential indirect effects to wildlife movement. (ELMT(a) p. 42; DEIR p. 5.3-27.) **MM BIO-2** through **MM BIO-15** thus reduce potential indirect effects to wildlife movement. **MM BIO-7** does not relate to the loss of a travel route because the Project will not cause loss of a travel route – disturbances from the Project are not expected to directly or indirectly impact wildlife movement opportunities through this area.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR are not required.

Response 5a.33:

The commenter provides a collection of various references to and abbreviated excerpts from the CEQA Guidelines and CEQA case law. These represent the commenter's interpretation of them. The commenter claims the DEIR's discussion of alternatives is insufficient because it did not explain why a reduced density alternative was rejected from further consideration.

As outlined in Section 8.0 of the DEIR, the Project meaningfully considered three alternatives, specifically Section 8.2.1 Alternative 1 – No Project/No Development (p. 8.0-3), Section 8.2.2 Alternative 2 – Commercial Development (p. 8.0-6), and Section 8.2.3 Alternative 3 – Mixed Use Development (p. 8.0-12). The commenter fails to specify what, if any, portions of the three alternatives considered did not follow meaningful consideration.

Per CEQA Guidelines Section 15126.6(a), "An EIR shall describe a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project and evaluate the comparative merits of the alternatives." The analysis contained in the DEIR did not identify any significant effects of the project; all potential effects were either below the level of significance without the need of mitigation measures or were reduced to less

than significant levels with incorporation of mitigation measures. As such, identification of alternatives to avoid or substantially lessen significant environmental impacts was not warranted, such as a reduced density alternative.

The commenter states while the DEIR "weighed the possibility of an increased density alternative," the DEIR "did not explain why a reduced density alternative was rejected from further consideration." Per DEIR p. 8.0-1, which cites CEQA Guidelines Section 15126.6, "alternatives must focus on those that are potentially feasible, and which attain most of the basic objectives of the project." As described in DEIR p. 8.0-1, among the Project's basic objectives is to:

> *Provide housing to increase the type and amount of housing available consistent with the goals of the City's Housing Element and to assist the City in meeting project housing demand as part of the City's growth projections. Per Regional Housing Need Allocation (RHNA), the City will need to make space for a minimum of 18,458 housing units, with an anticipated goal of 24,000 units, by 2029.*

As stated on DEIR p. 3.0-13, the proposed Project would provide 237 one-, two-, and three-bedroom residential apartment units, which are in line with the City's projections and RHNA goals to provide 24,000 units by 2029. Thus, the Project's objectives are not "defined too narrowly" as claimed by the commenter; rather, the Project's objectives are appropriately defined and reflective of City goals to meet housing demand. That the DEIR does not include a discussion of a reduced density alternative does not reflect "a narrowing of the consideration of alternatives to the Project." The City, as lead agency, is responsible for selecting a range of Project alternatives to be discussed, and there is no iron-clad rule other than the "rule of reason" (CEQA Guidelines Section 15126.6(a)). Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries, and whether the proponent can reasonably acquire, control, or otherwise have access to an alternative. (CEQA Guidelines Section 15126.6 (f)(1)). (p. 8.0-2.)

The City took into account its Housing Element and RHNA obligation in appropriately developing a reasonable range of alternatives. The DEIR's alternatives appropriately considered those which were potentially feasible and which would attain most of the basic objectives of the Project, which included consideration of an increased density alternative that would have included increased housing units, and which did not include a lower density alternative which would not have met Project objectives or City housing goals to the same degree and is not required as no significant impacts from the Project were identified.

Therefore, this comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Response 5a.34:

The commenter incorrectly asserts the DEIR failed to provide substantial evidence of its analysis for the comparison of alternatives.

Section 15126.6(a) of the CEQA Guidelines states, “There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason.” The DEIR (p. 8.0-2, Section 8.2 – Rationale for Alternative Selection), does in fact provide a discussion of both applicable CEQA Guidelines for alternatives selection as well as an overview of and reasoning for each alternative’s selection. As stated in DEIR p. 8.0-2, the “no project” alternative was included and evaluated per CEQA Guideline requirements (Section 15126.6(e)). As further stated, the Commercial Development alternative was selected for evaluation as it would have been in line with the site’s current land use and zoning designations for commercial uses (DEIR p. 8.0-2). Lastly, it is stated that the Mixed-Use Development alternative, which would have included both residential and commercial uses, was selected due to the site’s location, which is in close proximity to the freeway network and the University of California, Riverside (DEIR p. 8.0-2). Thus, the DEIR has in fact provided substantial evidence and reasoning for its selection and analysis for the comparison of alternatives as the nature and scope of the alternatives discussed was based on reason and feasibility.

As outlined above, CEQA Guidelines Section 15126.6(a) indicate that the DEIR shall evaluate the comparative merits of the alternatives. The DEIR, in Section 8.0, pages 8.0-1 to 8.0-21 includes consideration and discussion of alternatives to the proposed Project in accordance with CEQA, including a comparison of merits. The CEQA Guidelines do not indicate that an alternatives analysis needs to demonstrate which of the objectives each alternative would or would not be realized, and thus it is not required. Nonetheless, a summary of which objectives each alternative achieves is included in the table below for information.

Project Objectives	Alternative 1 No Project/ No Development	Alternative 2 Commercial Development	Alternative 3 Mixed Use Development
	Achieve the Project Objectives?		
Provide a high-quality residential development in close proximity to the University of California, Riverside, Downtown Riverside and high-quality transit corridors.	No	No	Yes - Partially
Increase the type and amount of housing available consistent with the goals of the City’s Housing Element.	No	No	Yes - Partially
Provide new residential development to assist the City of Riverside in meeting its Regional Housing Needs Assessment (RHNA) allocation of 18,419 new housing units for the 2021-2029 Housing	No	No	Yes - Partially

Element Cycle and the State's current housing crisis			
Use land resources more efficiently by providing a well-planned, infill development on a currently vacant and largely disturbed site.	No	Yes	Yes
Implement green building practices and other sustainable development methods throughout the project, consistent with the City's Climate Action Plan.	No	Yes	Yes
Preserve the existing natural bed and bank of the drainage course and associated sensitive vegetation outside of the development footprint to maintain its hydrologic and biological function for water flow conveyance and wildlife movement.	Yes	Yes	Yes
Incorporate design and landscaping elements that complement and are responsive to the Canyon Crest community and edge conditions that buffer the project's effect on the nearby natural environments, including the City of Riverside's Quail Run Open Space Park and the Sycamore Canyon Wilderness Park.	No	Yes	Yes

Therefore, this comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Response 5a.35:

The commenter asserts that neither the commercial development nor the mixed-use development are within a reasonable range of alternatives and that the applicant's inability to find a tenant for a commercial development is not substantial evidence for why the alternative is infeasible.

Per the CEQA Guidelines Section 15126.6(b) states "Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly."

Section 8.3 of the DEIR, pg. 8.0-19 states, "Based on the alternative's analysis provided above, Alternative 1: No Project/Development Alternative, would be the environmentally superior

alternative. The No Project/Development Alternative would either avoid or lessen the severity of all significant impacts of the proposed project, as nothing would be constructed. However, the No Project Alternative would not fulfill the objectives of the proposed project.

When the "No Project/Development" alternative is determined to be environmentally superior, State CEQA Guidelines also requires identification of the environmentally superior alternative among the development options. Of the other alternatives evaluated in this EIR, Alternative 2: Commercial Development, is determined to be the environmentally superior alternative; however; it is not consistent with the proposed Project's Objectives and Goals.

Alternative 2 Commercial Development is within a reasonable range of alternatives as it is specifically spelled out in the CEQA Guidelines as a "no Project" alternative. Per the CEQA Guidelines, Section 15126.6(e)(3),

> "A discussion of the "no project" alternative will usually proceed along one of two lines:
>
> (A) When the project is a revision of an existing land use or regulatory plan, policy or ongoing operation, the "no Project" alternative will be the continuation of the existing plan, policy or operation into the future..."
>
> (B) If the project is other than a land use or regulatory plan, for example a development project on identifiable property, the "no Project" alternative is the circumstance under which the project does not proceed..."

As the Project includes a general plan land use amendment and a zone change, a "no Project" alternative would be a Project that would not require a land use designation amendment or zone change as it would be consistent with the existing land use designation and zoning. As outlined in the DEIR, Section 8.2.2 (p. 8.0-6) "This discussion analyzes alternative development of the site that remains in accordance with the current land use and zoning designations. Under this alternative, the land use designation and zoning would remain as is, and the Project site would be under a CG – Commercial General zoning designation. Therefore, as Alternative 2 Commercial Development was included and analyzed consistent with CEQA Guidelines 15126.6(e)(3), it is within a reasonable range of alternatives.

As outlined in the DEIR Section 8.2.3 (p. 8.0-12), "The Project applicant previously considered development of the site as mixed use and had a conceptual site plan prepared, refer to Figure 8.0-2 – Alternative 3 Mixed Use Development Conceptual Site Plan." In addition, a mixed-use development project would incorporate both the City's vision for the site as commercial in the GP 2025, and residential that would assist the City in meeting housing demand as part of the City's growth projections. As the applicant actually considered development of the site as mixed use and hired a firm to prepare a conceptual site plan, which constitutes substantial evidence that they did consider this alternative and would also be partially consistent with the GP 2025 and also assist the City in meeting housing demand, the Mixed-Use Development alternative is within a range of reasonable alternatives.

The CEQA Guidelines Section 15126.6(f)(1) define feasibility:

> "Feasibility. Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitation, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent). No one of these factors establishes a fixed limit on the scope of reasonable alternatives."

The DEIR, Section 8.3 (p. 8.0-19) indicates that the applicant tried to solicit tenants for the commercial development and was not able to do so. A commercial development project would not be economically viable if there are no tenants. As outlined above, economic viability is a factor identified in the CEQA guidelines for determining an alternative to be feasible or not feasible. Therefore, the commercial development was eliminated as a feasible alternative as it was determined not economically viable.

Therefore, this comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Response 5a.36:

The commenter asserts that the DEIR is lacking and the only way to fix the issues is to revise it and recirculate an adequate report. For all the reasons set forth above in Responses to Comments 5a.1 through 5a.35, no new information of substantial importance has been added to the EIR, and no new significant environmental impacts or substantial increases in existing significance impacts exist. Accordingly, recirculation of the DEIR is not required. (State CEQA Guidelines 15088.5)

Therefore, this comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Response 5a.37:

The commenter urges the Project and DEIR as proposed to be rejected.

This comment reflects the commenter's opinion and does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Letter 5b – SWAPE

Commenter: Matt Hagemann and Paul E. Rosenfield

Date: May 3, 2021

Response 5b.1:

This introductory comment summarizes the project description and no specific comment or request for additional information is made; therefore, no further response is required.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Response 5b.2:

The commenter claims that the DEIR's air quality, health risk, and greenhouse gas impacts are underestimated and requests preparation of an updated EIR based on the subsequent comments. The commenter does not provide specific examples or facts to support their opinion. To the extent this comment is introductory to the commenter's later arguments, please refer to Responses 5b.4 through 5b.17.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Response 5b.3:

The commenter summarizes their understanding of CalEEMod input parameters and claims that the emissions calculations using CalEEMod are not substantiated and are underestimated based on the subsequent comments. The commenter does not provide any specific examples of claimed inconsistencies, enabling a response. Please refer to Responses 5b.4 through 5b.7 below for responses to commenter's specific claims.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Response 5b.4:

The commenter states the DEIR includes an unsubstantiated reduction to parking land use size.

The *CalEEMod User's Guide* states that "if actual lot acreage data is available, the user should override the default value." However, at the time the model run for the Air Quality analysis was conducted, specific site information regarding the footprint of the apartment structures or the dimensions of the parking lot were being refined. CalEEMod default parameters for the development footprint equal 8.95 acres for the residential land uses, 237,000 square feet of

building and 152,862 square feet of other uses, including open space, common areas, parking, and driveways associated with any similar development of this size. In order to accurately model the Project site area, the total development footprint (8.95 acres) assumed by CalEEMod was subtracted from the total site area (9.77 acres[1]) and the remainder was used to represent additional parking lot area (0.82 acres or 35,719 square feet). This would represent 188,581 square feet for parking, open space, common area. Thus, the modification to CalEEMod defaults associated with the parking area was correct.

As to the assertion the emissions are under represented by the smaller footprint, if the CalEEMod default for the parking lot was used, the total lot acreage analyzed would be 12.80 acres which would not correctly represent the total site area and would overestimate total ground disturbance activity as well as emissions associated with equipment usage. Notwithstanding the acreage issue, even if the analysis assumed the additional 3.3 acres of parking lot area as identified by SWAPE, no changes to the conclusions would occur and a nominal increase in paving volatile organic compounds (VOC) emissions would change from 0.11 pounds per day (in the DEIR) to 0.52 pounds per day. This nominal increase would not affect the findings and conclusions of the DEIR and underlying technical studies. As such, the analysis in the DEIR and underlying technical studies is correct and no changes are needed.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Response 5b.5:

The commenter states the DEIR includes unsubstantiated changes to individual construction phase lengths.

As noted in the DEIR's Appendix B, *Air Quality Impact Analysis* (see Page 111, 189), the construction duration and equipment utilized represents a "reasonable approximation" of the expected construction activity as required by CEQA. While CalEEMod includes some defaults based on a limited number of surveys conducted by the SCAQMD, the CalEEMod user manual states, "if the user has more detailed site-specific equipment and phase information, the user should override the default values." Thus, the specific construction schedule and associated equipment list were modified from the CalEEMod defaults based on information provided by the Project Applicant as recommend by CalEEMod. The commenter claims that changing the number of days of activity somehow necessitates changing the assumed equipment utilized in the modeling; however, there is no substantiation provided by the commenter for this claim. Furthermore, the phases that were modified were lengthened indicating the activity would require less intense activity and thus less equipment to accomplish the same task over a longer period

[1] 9.77- acres is larger than the 9.44 -acre parcel as it also includes areas outside of the parcel within the street right-of-way along Central Avenue and Sycamore Canyon Boulevard that will be disturbed with grading and improvements such as driveways and sidewalks.

as opposed to shortening of the schedule which may necessitate additional equipment to accomplish the same task in a short period. Therefore, emissions associated with equipment required during construction was not discounted. As noted in the DEIR and associated technical Appendix B, the construction schedule and equipment list are based on a reasonable approximation and information provided by the Project Applicant. As such, the analysis in the DEIR and underlying technical studies is correct and no changes are needed.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Response 5b.6:

The commenter states the DEIR includes unsubstantiated reductions to energy use values.

As noted in the DEIR and underlying technical appendices, the 2019 version of Title 24, which became effective on January 1, 2020, results in approximately 53% less energy demand for non-residential buildings and this reduction is a published improvement identified by the State of California. It is therefore appropriate to reduce the CalEEMod defaults (which are based on the prior 2016 Title 24 standards) by 53% to account for compliance with the newer regulation. The commenter provides no substantial evidence as to why these reductions are improper and claims that the reductions from Title 24 do not "guarantee" a reduction – to the contrary, the Project will be subject to, at a minimum, implementation of 2019 Title 24 standards by law. The DEIR provides under Project Design Considerations, that the Project would adhere to applicable California Title 24, Part 6, energy efficiency standards described in Section 5.5.2.2 of the DEIR. (DEIR, p. 5.5-11.) Section 5.5.2.2. provides that after implementation of solar PV systems, homes built under the 2019 standards will about 53% less energy than homes built under the 2016 standards. (DEIR, p. 5.5-9.) Thus, with implementation of PV solar systems, which the Project will implement, the 53% reduction in the CalEEMod defaults is appropriate. Additionally, CAPCOA has recently released an updated CalEEMod which includes similar reductions in energy use and further substantiate the appropriateness of the applied energy demand reductions. As such, the analysis in the DEIR and underlying technical studies is correct and no changes are needed.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Response 5b.7:

The commenter states that the emissions modeling performed by SWAPE indicates a significant air quality impact.

The commenter attempts to provide updated modeling and claims it is based on information in the DEIR; however, the commenter does not provide the values that they used in the modeling or the justification for using each. All of the commenter's claims of underestimating the Project's

emissions and impacts have been refuted by substantial evidence in Responses 5b.4-5b.7, 5b.9-5b.17.

Furthermore, CEQA discusses disagreement between experts[2] and states in Guidelines Section 15151: "Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure." As discussed in Response to Comments 5b.4 through 5b.6 above, the DEIR contains an adequate and complete analysis, which supports that the DEIR and underlying technical studies are correct, and no significant impact would occur from implementation of the Project.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Response 5b.8:

The commenter summarizes the results of the freeway-based operational health risk assessment and then goes on to discuss the need for a construction-related HRA. The commenter then states that the DEIR's conclusion for a less than significant impact is flawed for three reasons. The commenter does not provide specific examples or specify its claimed issues with the Project's health risk assessment enabling a response. The comment is introductory and specific responses to each of the three reasons presented follows in Responses 5b.9 through 5b.11 below.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Response 5b.9:

The commenter claims the Project's DEIR fails to quantitatively evaluate the Project's construction-related and operational toxic air contaminant (TAC) emissions or connect those emissions to potential health risks for existing sensitive receptors. The commenter claims that a

[2] Dr. Rosenfeld and Mr. Hagemann can be considered scientists and the resumes for each, provided in Attachments D and E respectively, demonstrate extensive though very general backgrounds in research in the western United States, research that is only marginally related and not directly applicable to the specific issues of this Project within its geographic and environmental setting. Each of these commenters has worked at environmental organizations and have published many papers, however, neither has specific experience with land development projects or issues specifically in Riverside or San Bernardino Counties (i.e. the Inland Empire or IE). The only local experience demonstrated by the commenters is their private organization from the Bay Area has been hired in the past to make similar comments on other types of projects in the IE that were being challenged by union organizations. Neither commenter appears to have actual research-oriented experience in this area, only indirect experience commenting on other projects. In addition, neither commenter visited the Project site or surrounding area to familiarize themselves with actual local conditions or constraints. Based on this information, it is difficult to determine if these individuals are actually experts within the definition of CEQA (i.e., with knowledge and experience directly applicable to the issues raised in the EIR and the project site).

construction HRA should be prepared and goes so far to attempt to prepare a screening-level HRA (please also refer to Response 5b.12). The commenter's screening-level HRA has several critical flaws. The commenter utilizes the AERSCREEN model, which is not the most appropriate model for determining concentrations from construction activity for risk calculation. AERSCREEN is a screening model "used to provide a maximum concentration that is biased toward overestimation of public exposure." AERSCREEN only produces estimates of "worst-case" 1-hour concentrations from a single source, without site specific meteorological data, and can only estimate "worst-case" 3-hour, 8-hour, 24-hour, and annual concentrations from conversion factors that are purposefully conservative in nature to avoid under estimating emissions. Additionally, the averaging periods should be estimated based on the maximum 1-hour average concentration in consultation and approval of the responsible air district. Because of variations in local meteorology, the exact factor selected may vary from one district to another. Thus, simply applying the AERSCEEN recommended 10% conversion factor may not be appropriate. Lastly, SWAPE's emission factor calculation is severely flawed; SWAPE takes the total daily emissions and divides them over a 24-hour period – effectively assuming that construction occurs 24 hours per day, 7 days per week. Per the City of Riverside Municipal Code Tile 7, Noise Control, construction is prohibited from occurring 24 hours per day. This critical flaw, along with the aforementioned errors, results in a significant overestimation of the potential risk estimates from construction activity.

The DEIR concluded that construction emissions would not exceed SCAQMD thresholds established to protect public health and air quality, and therefore the health risk associated with construction emissions for the surrounding sensitive land uses would be less than significant. (DEIR, p. 5.2-31.) However, to address the commenter's concerns regarding construction emissions, a focused screening-level construction HRA has been prepared and included in the FEIR utilizing the appropriate AERMOD modeling software (the same model used in the DEIR for operational Freeway HRA), which allows for calculation of annual average concentrations and allows for the geospatial placing of the source and receptors. The screening-level construction HRA utilizes the durations identified in SWAPE's comment along with the emissions estimates and number of days identified by SWAPE. The primary difference in the emissions is they are now appropriately divided over an average 8-hour per day construction period versus the inappropriate 24-hour per day assumption from SWAPE. Use of an 8-hour per day construction period is based on substantial evidence established through the construction surveys that are the basis for the 8-hour per day operations for construction equipment in CalEEMod. Further, an 8-hour workday is a reasonable assumption of construction work based on a typical 40-hour work week and is a recognized typical workday by SCAQMD. SCAQMD's Fact Sheet for Applying CalEEMod to LST thresholds is based on the maximum area a given piece of equipment can pass over in an 8-hour workday, as noted in the DEIR the analysis, and assumes that each piece of anticipated construction equipment will operate for 8 hours per day which, in reality, already would overestimate construction emissions. For example, during grading operations, water trucks would not operate continuously for an 8-hour period but would instead be deployed as necessary – usually three to four times per day – to minimize fugitive dust. In fact, most pieces of equipment would likely operate for fewer hours per day than indicated in the DEIR. Based on the screening-level construction HRA calculations, the maximum estimated risk would be 1.01 in one million

which is less than the applicable threshold of 10 in one million. As such, no significant impact would occur and the DEIR finding of less than significant health risks is appropriate. Appendix M to the FEIR includes the risk calculation and AERMOD output files.

Additionally, SWAPE incorrectly identifies Diesel Particulate Matter (DPM) emissions associated with operational activities. SWAPE inappropriately categorizes the exhaust PM10 emissions from operational activity as DPM. For a residential land use, like the proposed Project, there is typically not a substantive amount of DPM associated with operational activity versus an industrial land use that generates/attracts a significant amount of diesel trucks. This is disclosed in the DEIR, which states "High-volume TAC generators identified as potential health risk sources include the operation of commercial diesel engines and truck stops, landfills and incinerators, and chemical manufacturers. The Project, as a residential development project, does not include any of the operations listed above and would not be a high-volume TAC generator. As such, an Air Toxic and Criteria Pollutant Health Risk Assessment (HRA) is not warranted for Project operations and thus was not prepared." (*Id.*) As such, SWAPE's inclusion of operational DPM emissions is not supported by any fact and SWAPE does not provide any justification for inclusion of operational-related DPM emissions.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Response 5b.10:

The commenter recommends that an analysis of health risk impacts posed to nearby sensitive receptors from Project-generated DPM emissions be included in an updated DEIR for the Project. Please see the response to 5a.9 above in which DPM emissions are discussed/addressed. A quantified operational HRA study is not required to make the determination of the Project having less than significant health risks because the type of use being proposed does not meet the established recommendations by the California Air Resources Board, in their Air Quality and Land Use Handbook: A Community Health Perspective, April 2005. This document indicates that residential and commercial land use projects are not significant stationary source polluters and sources of toxic air contaminants that would pose significant risk.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Response 5b.11:

The commenter summarizes the need for preparation of a freeway-based operational health risk assessment – which has already been prepared. It should be noted that this is not a specific CEQA requirement and is presented for informational purposes. This issue was the topic of the

CBIA vs. BAAQMD California Supreme Court case in 2015[3], which concluded that CEQA does not generally require an agency to consider the effects of existing environmental conditions on a proposed project's future uses or residents. The case did find that there may be certain special circumstances where the project risks exacerbating existing conditions would require the "reverse-CEQA" analysis. Although these special circumstances do not pertain to the proposed Project, an HRA was performed as an informative practice and for the purpose of disclosure under CEQA of how existing conditions might affect the Project's future residents. As stated on page 5.2-31, paragraph 5 and 6, the maximally exposed residential receptor is estimated to have a risk of 3.45 in one million and non-carcinogenic hazard index was less than 1. Thus, no significant carcinogenic or non-carcinogenic impacts were identified. While the assessment and significance determination are not required for the proposed Project's environmental analysis, they have been provided in the DEIR for disclosure purposes.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Response 5b.12:

The commenter states that the AERSCREEN screening-level analysis conducted by SWAPE indicates a potentially significant health risk impact and describes the commenter's methodology. Please Response 5b.9 above in which it is discussed why the AERSCREEN screening model was not appropriately applied by SWAPE in the context of performing a screening-level risk analysis for the Project. As discussed in Response 5b.9, a focused screening-level construction HRA has been prepared and included in the FEIR as Appendix M. The focused screening-level construction HRA utilizes the appropriate AERMOD modeling software (the same model used in the DEIR for operational Freeway HRA), which allows for calculation of annual average concentrations and allows for the geospatial placing of the source and receptors. As discussed in Responses 5b.9 and 5.10 above, a quantified operational HRA is not warranted due to the residential nature of the Project. However, to address the commenter's concerns regarding construction emissions, a focused screening-level construction HRA has been prepared and included in the FEIR utilizing the appropriate AERMOD modeling software (the same model used in the DEIR for operational Freeway HRA), which allows for calculation of annual average concentrations and allows for the geospatial placing of the source and receptors. Based on the screening-level construction HRA calculations, the maximum estimated risk would be 1.01 in one million which is less than the applicable threshold of 10 in one million. As such, no significant impact would occur and the DEIR finding of less than significant health risks is appropriate. Appendix M to the FEIR includes the risk calculation and AERMOD output files.

As discussed in Response 5b.7, CEQA discusses disagreement between experts and states in Guidelines Section 15151: "Disagreement among experts does not make an EIR inadequate, but the EIR should summarize the main points of disagreement among the experts. The courts have

[3] California Building Industry Association v. Bay Area Air Quality Management District. December 2015. Available at: https://caselaw.findlaw.com/ca-supreme-court/1721100.html

looked not for perfection but for adequacy, completeness, and a good faith effort at full disclosure." As set forth herein and in Responses 5b.9 and 5b.10 above, the DEIR contains an adequate and complete analysis and no significant impact would occur from implementation of the Project. The screening-level construction HRA included as Appendix M further supports this conclusion.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Response 5b.13:

The commenter erroneously claims that the DEIR incorrectly evaluates the Project's Greenhouse Gas Impacts, but does not provide specific reasons why or evidence to support its claims in this comment. Contrary to the commenter's assertion, the DEIR and underlying technical appendix provide a detailed analysis of the Project's potential GHG impacts. The Project was found to have a less than significant impact since it does not exceed the applicable 3,000 MT CO_2e per year emission threshold. (DEIR, p. 5.7-34.)

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Response 5b.14:

The commenter erroneously claims that the DEIR's analysis relies on incorrect and unsubstantiated modeling, relies on an incorrect threshold, and that the unsubstantiated air model indicates a potentially significant impact. However, as there is no significant impact, no mitigation is required. The commenter's claims regarding the proper threshold for a GHG analysis and the Project's potentially significant impacts are addressed in Responses 5b.15 and 5b.16 respectively.

The commenter erroneously claims that the DEIR's analysis relies on incorrect and unsubstantiated modeling. However, as stated in Responses 5b.4 through 5b.12, the underlying modeling is correct and all of the commenter's claims have been refuted (please see Responses 5b.4 through 5b.12 for further discussion). No additional changes are required and no change to the findings, conclusions, or underlying technical analysis is warranted.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Response 5b.15:

The commenter states that the SCAQMD's 3,000 MT CO_2e/year threshold is outdated as it developed when AB 32 was the governing statute for GHG emissions in California. The

commenter claims that as AB 32 required California to reduce GHG emissions to 1990 levels by 2020, it was not applicable to the Project at the time the comment was written (April 2021).

The DEIR and underlying technical study correctly rely on SCAQMD's recommendation, as documented in their September 2010 meeting minutes, to use 3,000 $MTCO_2e$ as an appropriate threshold to determine if additional analysis is warranted. Based on the supporting analysis outlined in SCAQMD's draft GHG guidance and meeting notes, this 3,000 $MTCO_2e$ level would capture 90 percent of GHG emissions from new residential or commercial projects in the region. This type of market capture analysis captures a substantial fraction of the emissions from future development to accommodate for future population and job growth and excludes small development projects that would contribute a relatively small fraction of the cumulative statewide GHG emissions.

The lead agency has discretion to formulate standards of significance for use in the EIR, and the agency's choice of the appropriate threshold must be based to the extent possible on scientific and factual data. (State CEQA Guidelines, § 15064(b)(1). As the City does not have its own thresholds regarding GHG emissions, the City relies on SCAQMD's 3,000 MT CO_2e/year threshold because it has been recommended by SCAQMD and SCAQMD is the expert agency and regional authority for air quality in the South Coast Air Basin. Further, the Interim Thresholds document provides substantial evidence that the thresholds are consistent with the policy goals and GHG reduction targets set by the State. Specifically, the thresholds were set to achieve the ultimate goal of Executive Order S-3-05, i.e., reducing GHG emission by 80 percent by 2050. To achieve the reductions the screening threshold was set at levels that capture 90 percent of the GHG emissions from "…projects [that] would be subject to a CEQA analysis, including a negative declaration, a mitigated negative declaration, or an environmental impact report, which includes analyzing feasible alternatives and imposing feasible mitigation measures". The SCAQMD found this reduction is consistent with the Executive Order S-3-05 target of reducing GHGs to 80 percent below 1990 levels by 2050. (See GHG Report, DEIR Appendix G, pp. 39-40.) Furthermore, the Tier 3 screening method was intended as the primary method of determining significance[4]. There is no requirement to use the presented service population-based threshold set forth in the Association of Environmental Professional's guidance identified by the commenter. Additionally, the identified service population threshold was developed as part of a general guidance to practitioners and agencies, it was not developed for, or intended for use by, any jurisdiction. It is not based on the City or region, thus as it is based on statewide averages and emissions, it is not locally appropriate. Thus, the DEIR and underlying technical study correctly utilize the locally appropriate SCAQMD-recommended 3,000 $MTCO_2e$ per year numeric threshold.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

[4] SCAQMD Interim CEQA GHG Significance Threshold for Stationary Sources, Rules and Plans, Pg. 4 and 5. http://www.aqmd.gov/docs/default-source/ceqa/handbook/greenhouse-gases-(ghg)-ceqa-significance-thresholds/ghgboardsynopsis.pdf?sfvrsn=2

Response 5b.16:

The commenter states that the DEIR fails to identify a potentially significant GHG impact. Please see Response 5b.15 for a discussion of the appropriateness of utilizing SCAQMD's 3,000 MT CO_2e/year threshold and how significant GHG impacts would not occur as a result of the Project.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Response 5b.17:

The commenter states that as SWAPE's analysis demonstrates potentially significant air quality, health risk, and GHG impacts, SWAPE has recommended feasible mitigation measures.

As summarized in the DEIR and underlying technical studies, the Project would not result in a significant air quality or greenhouse gas impact. As such, there is no nexus to require mitigation and no mitigation is required. The commenter's claims that the DEIR fails to disclose impacts has been refuted in Responses 5b.1 through 5b.16; please refer to these responses for discussions on how the Project would not result in the types of impacts alleged by the commenter.

Although mitigation is not required for the Project, the Project is incorporating the following measures identified by the commenter in the Project:

The Project will install programmable thermostats in all dwelling units.

The Project will have all HVAC systems commissioned by a third party.

The Project will establish on-site renewable energy consistent with Title 24 2019.

The Project will provide an internal pedestrian network.

The Project will provide marked crosswalk.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Comment Letter 6 – Kevin Dawson

Comment letter 6 commences on the next page.

From: Kevin Dawson
To: Assadzadeh, Candice
Cc: Richard Block; Gurumantra Khalsa; Everett DeLano
Subject: [External] Crestview DEIR comments- Kevin Dawson
Date: Monday, May 3, 2021 2:06:47 PM

City of Riverside
Community & Economic Development Department
Planning Division
3900 Main Street, 3rd Floor
Riverside, California 92522
Attn: Candice Assadzadeh, Senior Planner
(951) 826-5667
cassadzadeh@riversideca.gov

Dear Staff,

Please include these comments for the Crestview DEIR, located at Sycamore and Central.

6.1 I am concerned the traffic study is inadequate. The project site is unfortunately located in a natural regional choke zone, where freeway traffic is regularly gridlocked, forcing frantic commuters to seek alternative routes along adjacent surface streets. The intersections of Central, Watkins, Sycamore and the 60/215 should be viewed as a pinch point, similar as that of the middle of an hour glass. Many grains of sand may want to pass through, but the physical reality of the narrow space imposes a limit.
Just a few years ago, Cal trans spent billions to upgrade this traffic corridor. The construction took years and imposed harsh impacts upon local residents. Within a few months of reopening, the traffic was as impacted, as before.

6.2 I believe the traffic study has failed to assess the impacts the Moreno Valley Fairview Highlands warehouse project will have on traffic around the project site. I believe that project is supposed to add 10,000 trucks to the 60 freeway! The added air pollution might require greater setback of residences from the freeway corridor.
Greater number of trucks, traveling slower due to traffic, should equate greater air quality impacts, than if traffic was flowing faster. Given the steep grade, air quality impacts are greater still, as Diesel engines emit greater particulate matter when under extreme load, such as when accelerating or climbing a steep grade. The air quality study should reflect the impacts grade and volume would have on the corridor.

6.3 I believe the traffic study failed to adequately address the true impacts of UCR upon regional traffic. UCR is currently at 22,500, current enrollment, and that does not include staff and faculty. The campus is planning to increase enrollment to 36,000, and the Chancellor has told the UC Regents, that he envisions growing the campus to 60-70k. The campus is just completing a new 1200 stall, four story parking structure, that will increase traffic on the east side of campus, on Watkins drive.

UCR has just finished four massive new dormitories, from which traffic impacts are yet to be determine but will feed onto Blaine and Watkins.

UCR is building a new medical school building, for which parking will be at the new parking structure on Big Springs.

6.3 Cont'd

Riverside Unified School District is planning a new 1200 student high school, on the UCR campus at the conner of Canyon Crest and Blaine. The location doesn't have adequate land for on site parking, so most student will be bused.

There is a proposal for three more warehouses near Rustin and Marlborough , and one at Spruce. Currently there is already a tremendous commuter traffic load from the Hunter business center, via Rustin to Spruce to Watkins, to Central. This load will increase with the added warehouses.

6.4

There should be an acknowledgment and attempt to assess the impact third party driving apps will have on traffic patterns, as these different projects imposes their traffic loads onto the streets and freeways. During an evening of heavy traffic load on Watkins drive, I walked along the backed up line of vehicles and asked if they were using a driving app that had guided them, and informally about 1/3 indicated yes.

6.5

I believe the Crestview DEIR failed to include many of these impacts on traffic and air quality. The cumulative impacts have yet to be studied or determined. Too many of these projects are either in planning, construction, or pre-opening phase, for any true measure of impacts can be accurately assessed. UCR and other businesses have yet to reopen from the COVID closures, for any accurate measure can be made. Will the post COVID world go back to pre-COVID loads, or will it be more or less? One thing is for certain, 10,000 more trucks a day, to and from Fairview-Highland, is going have a huge impact on the region, and especially at the Crestview project site choke point.

6.6

Below are photos illustrating the very typical commuter traffic on Watkins Dr. The location is Watkins and Big Springs. The photos are pre-COVID closure, but also pre-UCR parking Structure, pre-UCR medschool building, pre-UCR new dormitories, and pre- new warehouses on Spruce/Rustin/Marlborough.

Respectfully,

Kevin Dawson

269 Goins Ct.
Riverside, CA 92507

951-850-7398 c

Letter 6 – Kevin Dawson, Individual

Commenter: Kevin Dawson

Date: May 3, 2021

Response 6.1:

The commenter states concern the traffic study is inadequate and specifies the intersections of Central Avenue, Watkins Drive, Sycamore Canyon Boulevard and the 60/215 freeway interchange. The commenter also notes a previous Caltrans project and claims within a few months of reopening, the traffic was again impacted. The Focused Traffic Analysis (TA), contained in Appendix I of the DEIR, was prepared by a licensed engineer employed by Urban Crossroads and in accordance with the City of Riverside Public Works Department Traffic Impact Analysis Preparation Guide (January 2016) and the California Department of Transportation (Caltrans) Guide for the Preparation of Traffic Impact Studies (December 2002), and consultation with City staff during the traffic study scoping process. (Focused Traffic Analysis, p. 1.) The TA analyzed each of the streets and interchanges noted by the commenter, specifically the following intersections: (1) Driveway 1 & Sycamore Canyon Boulevard – Future Intersection; (2) Sycamore Canyon Boulevard & Driveway 2 – Future Intersection; (3) Sycamore Canyon Boulevard & Central Avenue; (4) Central Avenue & SR-60 Eastbound Ramps; (5) Central Avenue & SR-60 Westbound Off-Ramp; and (6) Watkins Drive/Central Avenue & SR-60 Westbound On-Ramp. The TA also analyzed four roadway segments, including three along Sycamore Canyon Boulevard as well as the segment of Central Avenue west of Sycamore Canyon Boulevard. The TA found that the addition of Project traffic to existing conditions would not result in a project-specific traffic deficiency. (Focused Traffic Analysis, p. 6.) The commenter does not state which elements of the traffic study's discussion of the intersections are inadequate,, and therefore the City is unable to evaluate any claimed defects or omissions and no further responses is possible.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Response 6.2:

The commenter states the traffic study failed to assess the impacts of the Moreno Valley Fairview Highlands warehouse project, also known as the World Logistics Center (WLC). It is unlikely that the WLC project located within the City of Moreno Valley would open by the proposed Project's opening year of 2022. For this reason, the WLC project was not included as a cumulative project for the near-term analysis. However, the Horizon Year (2040) traffic volumes evaluated in the traffic study were developed based on post-processing long-range model forecasts from the Riverside County Transportation Analysis Model (RivTAM), which is standard practice for developing long-range traffic volumes within the City of Riverside. Furthermore, these raw post-processed turning volumes were then compared to near-term cumulative turning movement volumes and also took into consideration the year-to-year average SCAG Regional Transportation Plan (RTP) growth for the City to adjust the Horizon Year (2040) traffic forecasts

used for the analysis. The Horizon Year (2040) forecasts evaluated in the traffic study includes traffic attributable to the WLC project (along with other projects that may not otherwise be disclosed on the cumulative project map but would likely contribute nominal amounts of traffic to the study area). Accordingly, the analysis presented in the EIR already accounts for impacts associated with WLC. The SCAG RTP forecasts (contained in Appendix N) and these numbers can be compared to the data identified on page 55 of the Crestview Apartments Focused Traffic Analysis. It should be further noted that the SCAG RTP that was adopted in September 2020 has even lower growth projections for the City of Riverside (only an average of 0.77% per year (SoCal Connect RTP 2020 attachment is also provided).

More specifically, the traffic volumes utilized in the traffic study are represented in actual vehicles (with trucks accounted for in the analysis software as a percentage of total traffic) while the WLC traffic study has translated their volumes into passenger car equivalents (PCE) for all analysis scenarios. Section 3.5 (page 40) of the Crestview Apartments Focused Traffic Analysis identifies heavy trucks are accounted in the operations analysis as percentage of total traffic while page 34 of the WLC TIA Report identifies traffic volumes in the traffic study are reflected in PCE. Based on a comparison of the total intersection volume for the 3 overlapping intersections along Central Avenue at Sycamore Canyon Boulevard and the two SR-60 Freeway Ramps, the actual vehicle-based volumes in the traffic study are greater than the PCE-based volumes utilized in the WLC traffic study[5]. On average, the Horizon Year (2040) volumes evaluated in the traffic study are 6.5% greater than those evaluated in the WLC traffic study for both peak hours. The Horizon Year (2040) forecasts developed for the traffic study identify an average annual growth of 1.70% per year between existing and long-range traffic conditions, whereas the WLC traffic study identifies an average annual growth of 1.36% per year at the same 3 overlapping study area intersections. As such, the Horizon Year (2040) forecasts utilized for the peak hour intersection operations analyses in the traffic study are considered conservative and inclusive of the WLC project. As the analysis presented in the EIR already accounts for impacts associated with WLC for traffic, it also already accounts for the impacts associated with air quality.

		Crestview TIA[1]				WLC TIA[2]			
#	Intersection	2019 AM	2019 PM	2040 AM	2040 PM	2018 AM	2018 PM	2040 AM	2040 PM
1	Sycamore Canyon Bl. & Central Av.	2,621	2,615	3,971	4,043	2,717	2,754	3,650	3,620
2	SR-60 EB Ramps & Central Av.	2,131	2,306	3,120	3,175	2,147	2,199	2,990	2,900
3	SR-60 WB Ramps & Central Av.	2,266	1,995	2,933	2,717	2,366	1,744	2,920	2,600

[1] Source: Crestview Apartments Focused Traffic Analysis, dated August 27, 2020, Urban Crossroads, Inc., pages 41 and 81.
[2] Source: Traffic Impact Analysis Report for The World Logistics Center, dated July 2018, WSP, pages 56 and 291.

				Average Annual Growth[2]			
		Net Change in Vols[1]		Crestview TIA		WLC TIA	
#	Intersection	2040 AM	2040 PM	AM	PM	AM	PM
1	Sycamore Canyon Bl. & Central Av.	321	423	2.00%	2.10%	1.35%	1.25%
2	SR-60 EB Ramps & Central Av.	130	275	1.83%	1.53%	1.52%	1.27%
3	SR-60 WB Ramps & Central Av.	13	117	1.24%	1.48%	0.96%	1.83%
			Average:		1.70%		1.36%

[1] Positive value indicates volumes from Crestview TIA are greater than WLC TIA volumes for 2040 traffic conditions.
[2] Average annual growth determined between Existing and 2040 conditions for each respective TIA.

[5] World Logistics Center (WLC) documents available at http://www.moval.org/cdd/documents/about-projects.html

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Response 6.3:

The commenter believes the traffic study failed to adequately address the impacts to regional traffic of the University of California Riverside (UCR). The commenter lists a number of projects and plans for UCR, as well as a Riverside Unified School District project and additional warehouse projects. In addition to the below response, please see Response 6.2 above. Although the commenter did not provide the exact location of each of the UCR projects they identified, based on the information provided by the commenter, it is anticipated that these are generally occurring on the east side of campus, occurring on the side opposite of the Project, and would therefore not be expected to worsen localized traffic from the Project.

The cumulative project list evaluated in the Traffic Analysis is identified as part of the *Scoping Agreement for Traffic Impact Study* which was approved by the City of Riverside in June 2019, prior to initiation of the Traffic Analysis. The UCR 2021 Long Range Development Plan (LRDP) Initial Study (dated July 2020) and scoping meeting occurred on July 29, 2020. As such, the UC Riverside project was not identified as a cumulative project for the near-term traffic analysis. It is a long-range plan for the University. Long-range plans for the school's expansion include accommodating approximately 35,000 students by the year 2035, with plans to reduce future traffic and parking demand by increasing the student housing on campus up to 40% of the projected enrollment in 2035. The current enrollment is approximately 25,000 students. The Initial Study indicates the proposed 2021 LRDP would incrementally accommodate approximately 13,884 people by the 2035 horizon year and that the SCAG RTP forecasts that the City's population will increase by 58,499 in the year 2040 from 2019. This increase of 13,884 residents would contribute to approximately 24 percent of the City's projected population (or 13,884 UCR-affiliated population / 58,499 City population growth). The Initial Study indicates that it is likely that a portion of the additional students and staff would commute to the campus from neighboring cities or within the City of Riverside, resulting in less direct population growth. The Horizon Year (2040) traffic volumes evaluated in the traffic study were developed based on post-processing long-range model forecasts from the RivTAM, which is standard practice for developing long-range traffic volumes within the City of Riverside. It is assumed that the traffic model includes future long range regional plans/projects that were provided to Western Riverside Council of Governments (WRCOG) to be included in the RivTAM traffic model.

Furthermore, these raw post-processed turning volumes were compared to near-term cumulative turning movement volumes and also took into consideration the year-to-year average SCAG RTP growth for the City to adjust the Horizon Year (2040) traffic forecasts used for the analysis. The 2016 SCAG RTP identifies an annual growth of 0.78 percent for population within the City of Riverside. In comparison, an average growth rate of 1.56 percent per year has been utilized for

each of the study area intersections between existing and Horizon Year (2040) traffic conditions in the traffic study (see SCAG RTP attachment and table below). Even if specific projects were not included in the RivTAM, the process of refining the forecasts with near-term cumulative traffic and the SCAG RTP growth ensures that there is enough reasonable background growth that would account for these projects that are not explicitly identified. As such, the long-range forecasts used in the traffic study accounts for growth in excess of that anticipated in the SCAG RTP and would account for long-range growth associated with the UC Riverside campus, proposed RUSD high school on the UC Riverside campus, and the 3 proposed warehouse projects located to the northwest near Rustin Avenue/Marlborough Avenue and at Spruce Avenue..

		Existing (2019)		Horizon Year (2040)		Growth	
#	Intersection	AM	PM	AM	PM	AM	PM
3	Sycamore Canyon Bl. & Central Av.	2,621	2,815	3,971	4,043	2.00%	1.74%
4	Central Av. & SR-60 EB Ramps	2,131	2,306	3,120	3,175	1.83%	1.53%
5	Central Av. & SR-60 WB Off-Ramp	2,266	1,997	2,933	2,717	1.24%	1.48%
6	Central Av. & SR-60 WB On-Ramp	2,234	1,736	2,859	2,370	1.18%	1.49%
					Average:		**1.56%**

* Note: Driveway locations are not included as they do not exist and would skew the average growth between existing and future conditions.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Response 6.4:

The commenter incorrectly asserts there should be an acknowledgement and attempt to assess the impact third party driving applications will have on traffic patterns. The commenter provides informal traffic observations during an evening on Watkins Drive.

As outlined in the Focused Traffic Analysis (contained in Appendix I of the DEIR), it was prepared in accordance with the City of Riverside Public Works Department Traffic Impact Analysis Preparation Guide (January 2016) and the California Department of Transportation (Caltrans) Guide for the Preparation of Traffic Impact Studies (December 2002), and consultation with City staff during the traffic study scoping process. CEQA does not require or provide for a scientific and dependable method of analyzing impacts from third party driving applications, but instead defers to the lead agency's decision regarding the methodology to use when analyzing impacts. These guides do not include evaluation of 3rd party driving apps. The storage and use of these applications are personal information on people's devices and is not available to the public or the City of Riverside, and thus this data cannot be obtained for further evaluation.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does

not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Response 6.5:

The commenter incorrectly asserts the cumulative impacts on traffic and air quality have yet to be studied or determined because of exclusion of the aforementioned projects.

The commenter questions the accuracy of the traffic and air quality studies because UCR and other businesses have yet to be reopened from COVID-19 closures. Existing traffic counts were taken in May 2019 while local schools were still in session and prior to the COVID-19 pandemic and associated closures. The Focused Traffic Analysis was based on existing traffic counts pre-COVID-19 closures. Further, 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 2.0% per year (compounded annually over 3 years) is included in the Focused Traffic Analysis for Opening Year Cumulative (2022) traffic conditions. Therefore, the Focused Traffic Analysis was based on worst case conservative traffic volumes as compared to reduced traffic volumes during the COVID-19 pandemic and does not underestimate the Project's traffic impacts, if traffic volumes return to pre-COVID levels.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Response 6.6:

The commenter provides photos illustrating traffic on Watkins Drive near the intersection of Watkins Drive and Big Springs. The commenter claims the photos show very typical commuter traffic, however, no additional information is provided to confirm this, like date and time photos were taken. The commenters states the photos are, "pre-COVID closure, but also pre-UCR parking Structure, pre-UCR medschool building, pre-UCR new dormitories, and pre- new warehouses on Spruce/Rustin/Marlborough."

Refer to Response 6.2 related to the cumulative projects and traffic and air quality analysis.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Comment Letter 7 – DeLano & DeLano

Comment letter 7 commences on the next page.

DELANO & DELANO

May 3; 2021

VIA E-MAIL

Candice Assadzadeh
Senior Planner, City of Riverside
Community & Economic Development Department
Planning Division
3900 Main Street, 3rd Floor
Riverside, CA 92522

Re: Crestview Apartments Draft Environmental Impact Report (P20-310); SCH # 2020069047

Dear City of Riverside:

This letter is submitted on behalf of Friends of Riverside's Hills in connection with the proposed Crestview Apartments Project ("Project") and related Draft Environmental Impact Report ("DEIR"). This letter is to supplement a previous letter sent from our office on May 3, 2021.

7.1 The DEIR fails to adequately analyze impacts to transportation. Table 4-2 of the Focused Traffic Analysis and Vehicle Miles Traveled Analysis contains a summary of cumulative development projects that lacks any University of California Riverside campus development projects. Traffic Analysis at 54. Among other projects, there is a nearly complete 4-story, 1,200 space parking garage on Big Springs Road. The World Logistics Center managed by the City of Moreno Valley Community Development Department will add a significant number trucks to the area, largely on the freeway segment near the Project, and left out of the transportation analysis. If a cumulative impact of a proposed project and other activities are significant, it must be discussed; this requirement must be interpreted so as to afford the fullest possible protection of the environment within the reasonable scope of the statutory and regulatory language. *Citizens to Preserve the Ojai v. County of Ventura* (1985) 176 Cal App. 3d 421, 431-432. The DEIR must consider these projects and any contributions to cumulative impacts.

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104 W. Grand Avenue, Suite A • Escondido, CA 92025

City of Riverside
May 3, 2021
Page 2 of 2

7.2 The DEIR has not mitigated impacts to traffic. The Focused Traffic Analysis Table 1-3 notes two improvements. Traffic Analysis at 9. The amount of the improvement in delay attributed to the intersection at Sycamore Canyon Boulevard and Central Avenue is not given and the improvement for the intersection at Watkins Drive and SR-60 WB On-Ramp will not occur, if ever, until 2040. The improvements refer to right turns to or from the portions of Sycamore Canyon Boulevard south of Central Avenue. However, as shown on Table 3-2, the same 2-lane roadway was already at 98% traffic volume capacity in 2019, so the efficacy of the proposed improvements is uncertain.

For the foregoing reasons, Friends of Riverside's Hills urges you to reject the Project and DEIR as proposed. Thank you for your consideration of these concerns.

Sincerely,

Rachel Blackburn

Letter 7 – DeLano & DeLano

Commenter: Rachel Blackburn

Date: May 3, 2021

Response 7.1:

The commenter states the DEIR fails to adequately analyze impacts to transportation. The commenter states that the summary of cumulative development projects lacks any UCR campus projects that the World Logistics Center managed by the City of Moreno Valley Community Development Department was left out of the transportation analysis. The commenter states that the DEIR must consider these projects and any contributions to cumulative impacts.

Refer to Responses 6.2, 6.3 and 6.5 related to the cumulative projects and transportation impacts.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Response 7.2:

The commenter incorrectly claims the DEIR has not mitigated impacts to traffic, specifically impacts related to LOS. Refer to Response 5a.14 above related to the Project's transportation improvements. Per the Office of Planning and Research, "Even if a general plan contains an LOS standard and a project is found to exceed that standard, that conflict should not be analyzed under CEQA." The DEIR was prepared while the State and City were transitioning from LOS to VMT as a CEQA impact. While the DEIR includes LOS as a source of information for the public, along with its analysis of VMT impacts, the Office of Planning and Research confirms that auto delay, on its own, is no longer an environmental impact under CEQA.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Comment Letter 8 – Mitchell M. Tsai

Comment letter 8 commences on the next page.

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Mitchell M. Tsai
Attorney At Law

155 South El Molino Avenue
Suite 104
Pasadena, California 91101

VIA U.S. MAIL & E-MAIL

May 3, 2021

Candance Assadzadeh, Senior Planner
City of Riverside Community & Economic Development Dept.
Planning Division
3900 Main Street, 3rd Floor
Riverside, CA 92522
Em: cassadzadeh@riversideca.gov

RE: Crestview Apartments Project

Dear Ms. Assadzadeh,

8a.1

On behalf of the Southwest Regional Council of Carpenters ("**Commenter**" or "**Carpenter**"), my Office is submitting these comments on the City of Riverside's ("**City**" or "**Lead Agency**") Draft Environmental Impact Report ("**DEIR**") (SCH No. 2020069047) for the Crestview Apartments Project, a new residential development proposed for 237 residential units and supporting uses ("**Project**").

The Southwest Carpenters is a labor union representing 50,000 union carpenters in six states and has a strong interest in well ordered land use planning and addressing the environmental impacts of development projects.

Individual members of the Southwest Carpenters live, work and recreate in the City and surrounding communities and would be directly affected by the Project's environmental impacts.

Commenters expressly reserves the right to supplement these comments at or prior to hearings on the Project, and at any later hearings and proceedings related to this Project. Cal. Gov. Code § 65009(b); Cal. Pub. Res. Code § 21177(a); *Bakersfield Citizens for Local Control v. Bakersfield* (2004) 124 Cal. App. 4th 1184, 1199-1203; see *Galante Vineyards v. Monterey Water Dist.* (1997) 60 Cal. App. 4th 1109, 1121.

Commenters expressly reserves the right to supplement these comments at or prior to hearings on the Project, and at any later hearings and proceedings related to this Project. Cal. Gov. Code § 65009(b); Cal. Pub. Res. Code § 21177(a); *Bakersfield Citizens*

for Local Control v. Bakersfield (2004) 124 Cal. App. 4th 1184, 1199-1203; see *Galante Vineyards v. Monterey Water Dist.* (1997) 60 Cal. App. 4th 1109, 1121.

Commenters incorporates by reference all comments raising issues regarding the EIR submitted prior to certification of the EIR for the Project. *Citizens for Clean Energy v City of Woodland* (2014) 225 Cal. App. 4th 173, 191 (finding that any party who has objected to the Project's environmental documentation may assert any issue timely raised by other parties).

8a.1 Cont'd

Moreover, Commenter requests that the Lead Agency provide notice for any and all notices referring or related to the Project issued under the California Environmental Quality Act ("**CEQA**"), Cal Public Resources Code ("**PRC**") § 21000 *et seq*, and the California Planning and Zoning Law ("**Planning and Zoning Law**"), Cal. Gov't Code §§ 65000–65010. California Public Resources Code Sections 21092.2, and 21167(f) and Government Code Section 65092 require agencies to mail such notices to any person who has filed a written request for them with the clerk of the agency's governing body.

The City should require the Applicant provide additional community benefits such as requiring local hire and use of a skilled and trained workforce to build the Project. The City should require the use of workers who have graduated from a Joint Labor Management apprenticeship training program approved by the State of California, or have at least as many hours of on-the-job experience in the applicable craft which would be required to graduate from such a state approved apprenticeship training program or who are registered apprentices in an apprenticeship training program approved by the State of California.

8a.2

Community benefits such as local hire and skilled and trained workforce requirements can also be helpful to reduce environmental impacts and improve the positive economic impact of the Project. Local hire provisions requiring that a certain percentage of workers reside within 10 miles or less of the Project Site can reduce the length of vendor trips, reduce greenhouse gas emissions and providing localized economic benefits. Local hire provisions requiring that a certain percentage of workers reside within 10 miles or less of the Project Site can reduce the length of vendor trips, reduce greenhouse gas emissions and providing localized economic benefits. As environmental consultants Matt Hagemann and Paul E. Rosenfeld note:

> [A]ny local hire requirement that results in a decreased worker trip length from the default value has the potential to result in a reduction of construction-related GHG emissions, though the significance of the reduction would vary based on the location and urbanization level of the project site.

March 8, 2021 SWAPE Letter to Mitchell M. Tsai re Local Hire Requirements and Considerations for Greenhouse Gas Modeling.

8a.2 Cont'd

Skilled and trained workforce requirements promote the development of skilled trades that yield sustainable economic development. As the California Workforce Development Board and the UC Berkeley Center for Labor Research and Education concluded:

> . . . labor should be considered an investment rather than a cost – and investments in growing, diversifying, and upskilling California's workforce can positively affect returns on climate mitigation efforts. In other words, well trained workers are key to delivering emissions reductions and moving California closer to its climate targets.[1]

8a.3

The City should also require the Project to be built to standards exceeding the current 2019 California Green Building Code to mitigate the Project's environmental impacts and to advance progress towards the State of California's environmental goals.

I. THE PROJECT WOULD BE APPROVED IN VIOLATION OF THE CALIFORNIA ENVIRONMENTAL QUALITY ACT

A. Background Concerning the California Environmental Quality Act

8a.4

CEQA has two basic purposes. First, CEQA is designed to inform decision makers and the public about the potential, significant environmental effects of a project. 14 California Code of Regulations ("**CCR**" or "**CEQA Guidelines**") § 15002(a)(1).[2] "Its

[1] California Workforce Development Board (2020) Putting California on the High Road: A Jobs and Climate Action Plan for 2030 at p. ii, *available at https://laborcenter.berkeley.edu/wp-content/uploads/2020/09/Putting-California-on-the-High-Road.pdf*

[2] The CEQA Guidelines, codified in Title 14 of the California Code of Regulations, section 15000 *et seq*, are regulatory guidelines promulgated by the state Natural Resources Agency for the implementation of CEQA. (Cal. Pub. Res. Code § 21083.) The CEQA Guidelines are given "great weight in interpreting CEQA except when . . . clearly unauthorized or erroneous." *Center for Biological Diversity v. Department of Fish & Wildlife* (2015) 62 Cal. 4th 204, 217.

8a.4 Cont'd

purpose is to inform the public and its responsible officials of the environmental consequences of their decisions *before* they are made. Thus, the EIR 'protects not only the environment but also informed self-government.' [Citation.]" *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal. 3d 553, 564. The EIR has been described as "an environmental 'alarm bell' whose purpose it is to alert the public and its responsible officials to environmental changes before they have reached ecological points of no return." *Berkeley Keep Jets Over the Bay v. Bd. of Port Comm'rs.* (2001) 91 Cal. App. 4th 1344, 1354 ("*Berkeley Jets*"); *County of Inyo v. Yorty* (1973) 32 Cal. App. 3d 795, 810.

Second, CEQA directs public agencies to avoid or reduce environmental damage when possible by requiring alternatives or mitigation measures. CEQA Guidelines § 15002(a)(2) and (3). *See also, Berkeley Jets,* 91 Cal. App. 4th 1344, 1354; *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal. 3d 553; *Laurel Heights Improvement Ass'n v. Regents of the University of California* (1988) 47 Cal. 3d 376, 400. The EIR serves to provide public agencies and the public in general with information about the effect that a proposed project is likely to have on the environment and to "identify ways that environmental damage can be avoided or significantly reduced." CEQA Guidelines § 15002(a)(2). If the project has a significant effect on the environment, the agency may approve the project only upon finding that it has "eliminated or substantially lessened all significant effects on the environment where feasible" and that any unavoidable significant effects on the environment are "acceptable due to overriding concerns" specified in CEQA section 21081. CEQA Guidelines § 15092(b)(2)(A–B).

While the courts review an EIR using an "abuse of discretion" standard, "the reviewing court is not to 'uncritically rely on every study or analysis presented by a project proponent in support of its position.' A 'clearly inadequate or unsupported study is entitled to no judicial deference.'" *Berkeley Jets,* 91 Cal. App. 4th 1344, 1355 (emphasis added) (quoting *Laurel Heights,* 47 Cal. 3d at 391, 409 fn. 12). Drawing this line and determining whether the EIR complies with CEQA's information disclosure requirements presents a question of law subject to independent review by the courts. *Sierra Club v. Cnty. of Fresno* (2018) 6 Cal. 5th 502, 515; *Madera Oversight Coalition, Inc. v. County of Madera* (2011) 199 Cal. App. 4th 48, 102, 131. As the court stated in *Berkeley Jets,* 91 Cal. App. 4th at 1355:

> A prejudicial abuse of discretion occurs "if the failure to include relevant information precludes informed decision-making and informed public participation, thereby thwarting the statutory goals of the EIR process.

8a.4 Cont'd

The preparation and circulation of an EIR is more than a set of technical hurdles for agencies and developers to overcome. The EIR's function is to ensure that government officials who decide to build or approve a project do so with a full understanding of the environmental consequences and, equally important, that the public is assured those consequences have been considered. For the EIR to serve these goals it must present information so that the foreseeable impacts of pursuing the project can be understood and weighed, and the public must be given an adequate opportunity to comment on that presentation before the decision to go forward is made. *Communities for a Better Environment v. Richmond* (2010) 184 Cal. App. 4th 70, 80 (quoting *Vineyard Area Citizens for Responsible Growth, Inc. v. City of Rancho Cordova* (2007) 40 Cal. 4th 412, 449–450).

B. CEQA Requires Revision and Recirculation of an Environmental Impact Report When Substantial Changes or New Information Comes to Light

Section 21092.1 of the California Public Resources Code requires that "[w]hen significant new information is added to an environmental impact report after notice has been given pursuant to Section 21092 … but prior to certification, the public agency shall give notice again pursuant to Section 21092, and consult again pursuant to Sections 21104 and 21153 before certifying the environmental impact report" in order to give the public a chance to review and comment upon the information. CEQA Guidelines § 15088.5.

8a.5

Significant new information includes "changes in the project or environmental setting as well as additional data or other information" that "deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect (including a feasible project alternative)." CEQA Guidelines § 15088.5(a). Examples of significant new information requiring recirculation include "new significant environmental impacts from the project or from a new mitigation measure," "substantial increase in the severity of an environmental impact," "feasible project alternative or mitigation measure considerably different from others previously analyzed" as well as when "the draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded." *Id.*

8a.5 Cont'd

An agency has an obligation to recirculate an environmental impact report for public notice and comment due to "significant new information" regardless of whether the agency opts to include it in a project's environmental impact report. *Cadiz Land Co. v. Rail Cycle* (2000) 83 Cal. App. 4th 74, 95 [finding that in light of a new expert report disclosing potentially significant impacts to groundwater supply "the EIR should have been revised and recirculated for purposes of informing the public and governmental agencies of the volume of groundwater at risk and to allow the public and governmental agencies to respond to such information."]. If significant new information was brought to the attention of an agency prior to certification, an agency is required to revise and recirculate that information as part of the environmental impact report.

For all of the reasons outlined below, the DEIR should be revised and recirculated for additional public comment.

8a.6

C. Due to the COVID-19 Crisis, the City Must Adopt a Mandatory Finding of Significance that the Project May Cause a Substantial Adverse Effect on Human Beings and Mitigate COVID-19 Impacts

CEQA requires that an agency make a finding of significance when a Project may cause a significant adverse effect on human beings. PRC § 21083(b)(3); CEQA Guidelines § 15065(a)(4).

Public health risks related to construction work requires a mandatory finding of significance under CEQA. Construction work has been defined as a Lower to High-risk activity for COVID-19 spread by the Occupations Safety and Health Administration. Recently, several construction sites have been identified as sources of community spread of COVID-19.[3]

SWRCC recommends that the Lead Agency adopt additional CEQA mitigation measures to mitigate public health risks from the Project's construction activities. SWRCC requests that the Lead Agency require safe on-site construction work practices as well as training and certification for any construction workers on the Project Site.

[3] Santa Clara County Public Health (June 12, 2020) COVID-19 CASES AT CONSTRUCTION SITES HIGHLIGHT NEED FOR CONTINUED VIGILANCE IN SECTORS THAT HAVE REOPENED, *available at* https://www.sccgov.org/sites/covid19/Pages/press-release-06-12-2020-cases-at-construction-sites.aspx.

8a.6 Cont'd

Based upon SWRCC's experience with safe construction site work practices, SWRCC recommends that the Lead Agency require that while constructionactivities are being conducted at the Project Site:

Construction Site Design:

- The Project Site will be limited to two controlled entry points.
- Entry points will have temperature screening technicians taking temperature readings when the entry point is open.
- The Temperature Screening Site Plan shows details regarding access to the Project Site and Project Site logistics for conducting temperature screening.
- A 48-hour advance notice will be provided to all trades prior to the first day of temperature screening.
- The perimeter fence directly adjacent to the entry points will be clearly marked indicating the appropriate 6-foot social distancing position for when you approach the screening area. Please reference the Apex temperature screening site map for additional details.
- There will be clear signage posted at the project site directing you through temperature screening.
- Provide hand washing stations throughout the construction site.

Testing Procedures:

- The temperature screening being used are non-contact devices.
- Temperature readings will not be recorded.
- Personnel will be screened upon entering the testing center and should only take 1-2 seconds per individual.
- Hard hats, head coverings, sweat, dirt, sunscreen or any other cosmetics must be removed on the forehead before temperature screening.

8a.6 Cont'd

- Anyone who refuses to submit to a temperature screening or does not answer the health screening questions will be refused access to the Project Site.
- Screening will be performed at both entrances from 5:30 am to 7:30 am.; main gate [ZONE 1] and personnel gate [ZONE 2]
- After 7:30 am only the main gate entrance [ZONE 1] will continue to be used for temperature testing for anybody gaining entry to the project site such as returning personnel, deliveries, and visitors.
- If the digital thermometer displays a temperature reading above 100.0 degrees Fahrenheit, a second reading will be taken to verify an accurate reading.
- If the second reading confirms an elevated temperature, DHS will instruct the individual that he/she will not be allowed to enter the Project Site. DHS will also instruct the individual to promptly notify his/her supervisor and his/her human resources (HR) representative and provide them with a copy of Annex A.

Planning

- Require the development of an Infectious Disease Preparedness and Response Plan that will include basic infection prevention measures (requiring the use of personal protection equipment), policies and procedures for prompt identification and isolation of sick individuals, social distancing (prohibiting gatherings of no more than 10 people including all-hands meetings and all-hands lunches) communication and training and workplace controls that meet standards that may be promulgated by the Center for Disease Control, Occupational Safety and Health Administration,

Cal/OSHA, California Department of Public Health or applicable local public health agencies.[4]

8a.6 Cont'd

The United Brotherhood of Carpenters and Carpenters International Training Fund has developed COVID-19 Training and Certification to ensure that Carpenter union members and apprentices conduct safe work practices. The Agency should require that all construction workers undergo COVID-19 Training and Certification before being allowed to conduct construction activities at the Project Site.

D. The DEIR's Mitigation Measures are Impermissibly Vague and Defer Critical Details

The DEIR improperly defers critical details of mitigation measures. Feasible mitigation measures for significant environmental effects must be set forth in an EIR for consideration by the lead agency's decision makers and the public before certification of the EIR and approval of a project. The formulation of mitigation measures generally cannot be deferred until after certification of the EIR and approval of a project. CEQA Guidelines § 15126.4(a)(1)(B) ("…[f]ormulation of mitigation measures should not be deferred until some future time.").

8a.7

Deferring critical details of mitigation measures undermines CEQA's purpose as a public information and decision-making statute. "[R]eliance on tentative plans for future mitigation after completion of the CEQA process significantly undermines CEQA's goals of full disclosure and informed decisionmaking; and[,] consequently, these mitigation plans have been overturned on judicial review as constituting improper deferral of environmental assessment." *Communities for a Better Environment v. City of Richmond* (2010) 184 Cal. App. 4th 70, 92 ("*Communities*"). As the Court noted in *Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296, 307, "[a] study conducted after approval of a project will inevitably have a diminished influence on decision-making. Even if the study is subject to administrative approval, it is analogous to the

[4] *See also* The Center for Construction Research and Training, North America's Building Trades Unions (April 27 2020) NABTU and CPWR COVIC-19 Standards for U.S Constructions Sites, *available at* https://www.cpwr.com/sites/default/files/NABTU_CPWR_Standards_COVID-19.pdf; Los Angeles County Department of Public Works (2020) Guidelines for Construction Sites During COVID-19 Pandemic, *available at* https://dpw.lacounty.gov/building-and-safety/docs/pw_guidelines-construction-sites.pdf.

sort of post hoc rationalization of agency actions that has been repeatedly condemned in decisions construing CEQA."

A lead agency's adoption of an EIR's proposed mitigation measure for a significant environmental effect that merely states a "generalized goal" to mitigate a significant effect without committing to any specific criteria or standard of performance violates CEQA by improperly deferring the formulation and adoption of enforceable mitigation measures. *San Joaquin Raptor Rescue Center v. County of Merced* (2007) 149 Cal.App.4th 645, 670; *Communities*, 184 Cal.App.4th at 93 ("EIR merely proposes a generalized goal of no net increase in greenhouse gas emissions and then sets out a handful of cursorily described mitigation measures for future consideration that might serve to mitigate the [project's significant environmental effects."); cf. *Sacramento Old City Assn. v. City Council* (1991) 229 Cal.App.3d 1011, 1028-1029 (upheld EIR that set forth a range of mitigation measures to offset significant traffic impacts where performance criteria would have to be met, even though further study was needed and EIR did not specify which measures had to be adopted by city).]. 8a.7 Cont'd

Here, the DEIR features several mitigation measures which are impermissibly vague and defer critical details:

- *MM AES-1*: DEIR states a Photometric Plan *will be* drafted and reviewed by the City before issuing of building permits to prevent light spillage.
- *MM BIO-2 and MM BIO-10*: Fails to conduct and include a Burrowing Owl Protection and Relocation Plan despite the Project site having suitable habitat for burrowing owls; BIO-10 attempts to address impacts to water quality but defers drafting and submission of a Stormwater Pollution Prevention Plan until issuing of building permit to address runoff that may affect plants or wildlife. 8a.8
- *MM CUL-2*: DEIR fails to include an Archaeological Monitoring Plan and defers drafting of such plans until issuing of building permits. 8a.9

As a result of the above deficiencies in the DEIR's analysis and mitigation efforts, the DEIR needs to be revised and recirculated with plans that are subjected to public comment and an appropriate level of specificity to ensure adequacy and enforceability.

E. <u>The DEIR Fails to Support Its Findings with Substantial Evidence</u>

8a.10 When new information is brought to light showing that an impact previously discussed in the DEIR but found to be insignificant with or without mitigation in the DEIR's analysis has the potential for a significant environmental impact supported by

8a.10 Cont'd

substantial evidence, the EIR must consider and resolve the conflict in the evidence. See *Visalia Retail, L.P. v. City of Visalia* (2018) 20 Cal. App. 5th 1, 13, 17; see also *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal. App. 4th 1099, 1109. While a lead agency has discretion to formulate standards for determining significance and the need for mitigation measures—the choice of any standards or thresholds of significance must be "based to the extent possible on scientific and factual data and an exercise of reasoned judgment based on substantial evidence. CEQA Guidelines § 15064(b); *Cleveland Nat'l Forest Found. v. San Diego Ass'n of Gov'ts* (2017) 3 Cal. App. 5th 497, 515; *Mission Bay Alliance v. Office of Community Inv. & Infrastructure* (2016) 6 Cal. App. 5th 160, 206. And when there is evidence that an impact could be significant, an EIR cannot adopt a contrary finding without providing an adequate explanation along with supporting evidence. *East Sacramento Partnership for a Livable City v. City of Sacramento* (2016) 5 Cal. App. 5th 281, 302.

In addition, a determination that regulatory compliance will be sufficient to prevent significant adverse impacts must be based on a project-specific analysis of potential impacts and the effect of regulatory compliance. In *Californians for Alternatives to Toxics v. Department of Food & Agric.* (2005) 136 Cal. App. 4th 1, the court set aside an EIR for a statewide crop disease control plan because it did not include an evaluation of the risks to the environment and human health from the proposed program but simply presumed that no adverse impacts would occur from use of pesticides in accordance with the registration and labeling program of the California Department of Pesticide Regulation. *See also Ebbetts Pass Forest Watch v Department of Forestry & Fire Protection* (2008) 43 Cal. App. 4th 936, 956 (fact that Department of Pesticide Regulation had assessed environmental effects of certain herbicides in general did not excuse failure to assess effects of their use for specific timber harvesting project).

8a.11

1. The DEIR Fails to Support its Findings on Greenhouse Gas Impacts with Substantial Evidence.

CEQA Guidelines § 15064.4 allow a lead agency to determine the significance of a project's GHG impact via a qualitative analysis (e.g., extent to which a project complies with regulations or requirements of state/regional/local GHG plans), and/or a quantitative analysis (e.g., using model or methodology to estimate project emissions and compare it to a numeric threshold). So too, CEQA Guidelines allow lead agencies to select what model or methodology to estimate GHG emissions so long as the selection is supported with substantial evidence, and the lead agency "should explain

8a.11 Cont'd

the limitations of the particular model or methodology selected for use." CEQA Guidelines § 15064.4(c).

CEQA Guidelines sections 15064.4(b)(3) and 15183.5(b) allow a lead agency to consider a project's consistency with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of GHG emissions.

CEQA Guidelines §§ 15064.4(b)(3) and 15183.5(b)(1) make clear qualified GHG reduction plans or CAPs should include the following features:

> (1) **Inventory**: Quantify GHG emissions, both existing and projected over a specified time period, resulting from activities (e.g., projects) within a defined geographic area (e.g., lead agency jurisdiction);
>
> (2) **Establish GHG Reduction Goal**: Establish a level, based on substantial evidence, below which the contribution to GHG emissions from activities covered by the plan would not be cumulatively considerable;
>
> (3) **Analyze Project Types**: Identify and analyze the GHG emissions resulting from specific actions or categories of actions anticipated within the geographic area;
>
> (4) **Craft Performance Based Mitigation Measures**: Specify measures or a group of measures, including performance standards, that substantial evidence demonstrates, if implemented on a project-by-project basis, would collectively achieve the specified emissions level;
>
> (5) **Monitoring**: Establish a mechanism to monitor the CAP progress toward achieving said level and to require amendment if the plan is not achieving specified levels;

Collectively, the above-listed CAP features tie qualitative measures to quantitative results, which in turn become binding via proper monitoring and enforcement by the jurisdiction—all resulting in real GHG reductions for the jurisdiction as a whole, and the substantial evidence that the incremental contribution of an individual project is not cumulatively considerable.

Here, the DEIR's analysis of greenhouse gas emissions impacts is not supported by substantial evidence for at least the following reasons:

- The DEIR utilized an incorrect and unsubstantiated quantitative analysis of emissions; and
- The DEIR failed to identify a potentially significant GHG impact when applying a 2.6 MT CO_{2e}/SP/year threshold per AEP guidance[5].

8a.11 Cont'd

The DEIR's greenhouse gas emissions estimate is largely based upon its VMT modeling which estimates an 11.5 mile average trip length based upon the Project TAZ and RivTAM. However, this trip length is not based upon substantial evidence because it does not represent conditions at the Project site. The Project is located between the 215 freeway and SR-60 and is optimally located for long-distance commuting to surrounding jobs centers in Orange County, Los Angeles, and San Diego. The DEIR assumes that most operational Project trips will take place locally which is not substantiated by any facts or analysis in the DEIR.

2. The DEIR Fails to Support its Findings on Transportation Impacts with Substantial Evidence.

8a.12

CEQA Guidelines § 15064.3(b) requires analysis of a Project's vehicle miles traveled (VMT) impacts as part of the environmental document's transportation impacts analysis. The OPR technical guidance suggests that projects which have a VMT per capita of 15% or more below existing conditions may indicate a less than significant transportation impact relating to VMT.[6] Assuming then this is the proper methodology, the DEIR fails to demonstrate a less than significant impact with respect to VMT.

The DEIR utilizes the RivTAM estimates (Riverside County Transportation Analysis Model) for project trips and lengths for a significance determination which underestimates resident and worker trips for the Project site and is unsubstantiated. The analysis for VMT should be based upon the actual conditions at the Project site and not on any City-wide estimates for home-based VMT. Even if the DEIR determined that there would be a significant impact requiring mitigation—it does not

[5] "Beyond Newhall and 2020: A Field Guide to New CEQA Greenhouse Gas Thresholds and Climate Action Plan Targets for California." Association of Environmental Professionals (AEP), October 2016, available at: https://califaep.org/docs/AEP-2016_Final_White_Paper.pdf, p. 40.

[66] OPR Technical Advisory, On Evaluating Transportation Impacts in CEQA (Dec. 2018), available at https://opr.ca.gov/docs/20190122-743_Technical_Advisory.pdf.

8a.12 Cont'd demonstrate that MM-TRANS 1-3 would mitigate the significant effects of VMT without a more accurate analysis of VMT based upon OPR's guidance.

II. THE PROJECT VIOLATES THE STATE PLANNING AND ZONING LAW AS WELL AS THE CITY'S GENERAL PLAN

A. Background Regarding the State Planning and Zoning Law

Each California city and county must adopt a comprehensive, long-term general plan governing development. *Napa Citizens for Honest Gov. v. Napa County Bd. of Supervisors* (2001) 91 Cal. App.4th 342, 352, citing Gov. Code §§ 65030, 65300. The general plan sits at the top of the land use planning hierarchy (See *DeVita v. County of Napa* (1995) 9 Cal. App. 4th 763, 773), and serves as a "constitution" or "charter" for all future development. *Lesher Communications, Inc. v. City of Walnut Creek* (1990) 52 Cal. App. 3d 531, 540.

General plan consistency is "the linchpin of California's land use and development laws; it is the principle which infused the concept of planned growth with the force of law." See *Debottari v. Norco City Council* (1985) 171 Cal. App. 3d 1204, 1213.

8a.13 State law mandates two levels of consistency. First, a general plan must be internally or "horizontally" consistent: its elements must "comprise an integrated, internally consistent and compatible statement of policies for the adopting agency." (See Gov. Code § 65300.5; *Sierra Club v. Bd. of Supervisors* (1981) 126 Cal. App. 3d 698, 704.) A general plan amendment thus may not be internally inconsistent, nor may it cause the general plan as a whole to become internally inconsistent. See *DeVita*, 9 Cal. App. 4th at 796 fn. 12.

Second, state law requires "vertical" consistency, meaning that zoning ordinances and other land use decisions also must be consistent with the general plan. (See Gov. Code § 65860(a)(2) [land uses authorized by zoning ordinance must be "compatible with the objectives, policies, general land uses, and programs specified in the [general] plan."]; see also *Neighborhood Action Group v. County of Calaveras* (1984) 156 Cal. App. 3d 1176, 1184.) A zoning ordinance that conflicts with the general plan or impedes achievement of its policies is invalid and cannot be given effect. See *Lesher*, 52 Cal. App. 3d at 544.

State law requires that all subordinate land use decisions, including conditional use permits, be consistent with the general plan. See Gov. Code § 65860(a)(2); *Neighborhood Action Group*, 156 Cal. App. 3d at 1184.

8a.13 Cont'd

A project cannot be found consistent with a general plan if it conflicts with a general plan policy that is "fundamental, mandatory, and clear," regardless of whether it is consistent with other general plan policies. See *Endangered Habitats League v. County of Orange* (2005) 131 Cal. App. 4th 777, 782-83; *Families Unafraid to Uphold Rural El Dorado County v. Bd. of Supervisors* (1998) 62 Cal. App. 4th 1332, 1341-42 ("*FUTURE*").

Moreover, even in the absence of such a direct conflict, an ordinance or development project may not be approved if it interferes with or frustrates the general plan's policies and objectives. See *Napa Citizens*, 91 Cal. App. 4th at 378-79; see also *Lesher*, 52 Cal. App. 3d at 544 (zoning ordinance restricting development conflicted with growth-oriented policies of general plan).

8a.14

B. The DEIR is Required to Review the Project's Consistency with Regional Housing Plans, Sustainable Community Strategy and Regional Transportation Plans

CEQA Guidelines section 15125(d) requires that an environmental impact report "discuss any inconsistencies between the proposed project and applicable general plans, specific plans and regional plans. *See also Golden Door Properties, LLC v. County of San Diego* (2020) 50 Cal. App. 5th 467, 543.

1. The DEIR Fails to Demonstrate Consistency with SCAG's RTP/SCS Plan.

The Project's environmental documents fail as an informational document since the Project DEIR fails to discuss consistency with the 2020 RTP / SCS – Connect SoCal. The DEIR's entire analysis is based upon a terse discussion of the RTP/SCS plan on p. 6.0-3 of the DEIR. There, the DEIR states the Project would not conflict with Connect SoCal because certain land use and transportation mitigation measures being implemented for the Project and no conflict with plans for the local circulation system. This is not analysis so much as a conclusory statement that is not supported by fact, and does not demonstrate consistency with any plan.

8a.15

2. The DEIR Fails to Demonstrate Consistency with the State Housing Law's Regional Housing Needs Assessment Requirements and the City's Obligations to Fulfill those Requirements in its Housing Element.

State law requires that jurisdictions provide their fair share of regional housing needs and adopt a general plan for future growth (California Government Code Section 65300). The California Department of Housing and Community Development (HCD)

8a.15 Cont'd

is mandated to determine state-wide housing needs by income category for each Council of Governments (COG) throughout the state. The housing need is determined based on four broad household income categories: very low (households making less than 50 percent of median family income), low (50 to 80 percent of median family income), moderate (80 to 120 percent of median family income), and above moderate (more than 120 percent of median family income). The intent of the future needs allocation by income groups is to relieve the undue concentration of very low and low-income households in a single jurisdiction and to help allocate resources in a fair and equitable manner.

CEQA requires the DEIR analyze the Project's consistency with the State's housing goals. CEQA Guidelines section 15125(d) requires that an environmental impact report "discuss any inconsistencies between the proposed project and applicable general plans, specific plans and regional plans. *See also Golden Door Properties, LLC v. County of San Diego* (2020) 50 Cal. App. 5th 467, 543.

8a.16

The City fails to conduct any consistency analysis with SCAG's 6th Cycle RHNA Allocation Plan.[7]

The DEIR should be revised and recirculated with an analysis of how the Project is consistent with the City of Riverside's 6th Cycle RHNA allocation.

8a.17

III. CONCLUSION

Commenters request that the City revise and recirculate the Project's environmental impact report to address the aforementioned concerns. If the City has any questions or concerns, feel free to contact my Office.

Sincerely,

Mitchell M. Tsai
Attorneys for Southwest Regional
Council of Carpenters

[7] Available at https://scag.ca.gov/sites/main/files/file-attachments/6th-cycle-rhna-final-allocation-plan.pdf?1616462966.

Attached:

March 8, 2021 SWAPE Letter to Mitchell M. Tsai re Local Hire Requirements and Considerations for Greenhouse Gas Modeling (Exhibit A);

Air Quality and GHG Expert Paul Rosenfeld CV (Exhibit B); and

Air Quality and GHG Expert Matt Hagemann CV (Exhibit C);

Comment Letter 8b – Soil/Water/Air Protection Enterprise (SWAPE)

Comment letter 8b commences on the next page.

EXHIBIT A

SWAPE Technical Consultation, Data Analysis and Litigation Support for the Environment

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Mitchell M. Tsai
155 South El Molino, Suite 104
Pasadena, CA 91101

Subject: Local Hire Requirements and Considerations for Greenhouse Gas Modeling

Dear Mr. Tsai,

Soil Water Air Protection Enterprise ("SWAPE") is pleased to provide the following draft technical report explaining the significance of worker trips required for construction of land use development projects with respect to the estimation of greenhouse gas ("GHG") emissions. The report will also discuss the potential for local hire requirements to reduce the length of worker trips, and consequently, reduced or mitigate the potential GHG impacts.

Worker Trips and Greenhouse Gas Calculations

8b.1 The California Emissions Estimator Model ("CalEEMod") is a "statewide land use emissions computer model designed to provide a uniform platform for government agencies, land use planners, and environmental professionals to quantify potential criteria pollutant and greenhouse gas (GHG) emissions associated with both construction and operations from a variety of land use projects."[1] CalEEMod quantifies construction-related emissions associated with land use projects resulting from off-road construction equipment; on-road mobile equipment associated with workers, vendors, and hauling; fugitive dust associated with grading, demolition, truck loading, and on-road vehicles traveling along paved and unpaved roads; and architectural coating activities; and paving.[2]

The number, length, and vehicle class of worker trips are utilized by CalEEMod to calculate emissions associated with the on-road vehicle trips required to transport workers to and from the Project site during construction.[3]

[1] "California Emissions Estimator Model." CAPCOA, 2017, *available at:* http://www.aqmd.gov/caleemod/home.
[2] "California Emissions Estimator Model." CAPCOA, 2017, *available at:* http://www.aqmd.gov/caleemod/home.
[3] "CalEEMod User's Guide." CAPCOA, November 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 34.

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8b.2 Cont'd

number of pieces of equipment for all phases by 1.25, with the exception of worker trips required for the building construction and architectural coating phases.[9] Furthermore, the worker trip vehicle class is a 50/25/25 percent mix of light duty autos, light duty truck class 1 and light duty truck class 2, respectively."[10] Finally, the default worker trip length is consistent with the length of the operational home-to-work vehicle trips.[11] The operational home-to-work vehicle trip lengths are:

> "[B]ased on the *location* and *urbanization* selected on the project characteristic screen. These values were *supplied by the air districts or use a default average for the state*. Each district (or county) also assigns trip lengths for urban and rural settings" (emphasis added). [12]

Thus, the default worker trip length is based on the location and urbanization level selected by the User when modeling emissions. The below table shows the CalEEMod default rural and urban worker trip lengths by air basin (see excerpt below and Attachment A).[13]

Worker Trip Length by Air Basin

Air Basin	Rural (miles)	Urban (miles)
Great Basin Valleys	16.8	10.8
Lake County	16.8	10.8
Lake Tahoe	16.8	10.8
Mojave Desert	16.8	10.8
Mountain Counties	16.8	10.8
North Central Coast	17.1	12.3
North Coast	16.8	10.8
Northeast Plateau	16.8	10.8
Sacramento Valley	16.8	10.8
Salton Sea	14.6	11
San Diego	16.8	10.8
San Francisco Bay Area	10.8	10.8
San Joaquin Valley	16.8	10.8
South Central Coast	16.8	10.8
South Coast	19.8	14.7
Average	**16.47**	**11.17**
Minimum	**10.80**	**10.80**
Maximum	**19.80**	**14.70**
Range	**9.00**	**3.90**

[9] "CalEEMod User's Guide." CAPCOA, November 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4, p. 34.
[10] "Appendix A Calculation Details for CalEEMod." CAPCOA, October 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 15.
[11] "Appendix A Calculation Details for CalEEMod." CAPCOA, October 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 14.
[12] "Appendix A Calculation Details for CalEEMod." CAPCOA, October 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/02_appendix-a2016-3-2.pdf?sfvrsn=6, p. 21.
[13] "Appendix D Default Data Tables." CAPCOA, October 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/05_appendix-d2016-3-2.pdf?sfvrsn=4, p. D-84 – D-86.

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8b.2 Cont'd As demonstrated above, default rural worker trip lengths for air basins in California vary from 10.8- to 19.8-miles, with an average of 16.47 miles. Furthermore, default urban worker trip lengths vary from 10.8- to 14.7-miles, with an average of 11.17 miles. Thus, while default worker trip lengths vary by location, default urban worker trip lengths tend to be shorter in length. Based on these trends evident in the CalEEMod default worker trip lengths, we can reasonably assume that the efficacy of a local hire requirement is especially dependent upon the urbanization of the project site, as well as the project location.

8b.3

Practical Application of a Local Hire Requirement and Associated Impact

To provide an example of the potential impact of a local hire provision on construction-related GHG emissions, we estimated the significance of a local hire provision for the Village South Specific Plan ("Project") located in the City of Claremont ("City"). The Project proposed to construct 1,000 residential units, 100,000-SF of retail space, 45,000-SF of office space, as well as a 50-room hotel, on the 24-acre site. The Project location is classified as Urban and lies within the Los Angeles-South Coast County. As a result, the Project has a default worker trip length of 14.7 miles.[14] In an effort to evaluate the potential for a local hire provision to reduce the Project's construction-related GHG emissions, we prepared an updated model, reducing all worker trip lengths to 10 miles (see Attachment B). Our analysis estimates that if a local hire provision with a 10-mile radius were to be implemented, the GHG emissions associated with Project construction would decrease by approximately 17% (see table below and Attachment C).

Local Hire Provision Net Change	
Without Local Hire Provision	
Total Construction GHG Emissions (MT CO_2e)	3,623
Amortized Construction GHG Emissions (MT CO_2e/year)	120.77
With Local Hire Provision	
Total Construction GHG Emissions (MT CO2e)	3,024
Amortized Construction GHG Emissions (MT CO_2e/year)	100.80
% Decrease in Construction-related GHG Emissions	***17%***

As demonstrated above, by implementing a local hire provision requiring 10 mile worker trip lengths, the Project could reduce potential GHG emissions associated with construction worker trips. More broadly, any local hire requirement that results in a decreased worker trip length from the default value has the potential to result in a reduction of construction-related GHG emissions, though the significance of the reduction would vary based on the location and urbanization level of the project site.

This serves as an example of the potential impacts of local hire requirements on estimated project-level GHG emissions, though it does not indicate that local hire requirements would result in reduced construction-related GHG emission for all projects. As previously described, the significance of a local hire requirement depends on the worker trip length enforced and the default worker trip length for the project's urbanization level and location.

[14] "Appendix D Default Data Tables." CAPCOA, October 2017, *available at:* http://www.aqmd.gov/docs/default-source/caleemod/05_appendix-d2016-3-2.pdf?sfvrsn=4, p. D-85.

8b.4

Disclaimer

SWAPE has received limited discovery. Additional information may become available in the future; thus, we retain the right to revise or amend this report when additional information becomes available. Our professional services have been performed using that degree of care and skill ordinarily exercised, under similar circumstances, by reputable environmental consultants practicing in this or similar localities at the time of service. No other warranty, expressed or implied, is made as to the scope of work, work methodologies and protocols, site conditions, analytical testing results, and findings presented. This report reflects efforts which were limited to information that was reasonably accessible at the time of the work, and may contain informational gaps, inconsistencies, or otherwise be incomplete due to the unavailability or uncertainty of information obtained or provided by third parties.

Sincerely,

Matt Hagemann, P.G., C.Hg.

Paul E. Rosenfeld, Ph.D.

EXHIBIT B

SWAPE Technical Consultation, Data Analysis and Litigation Support for the Environment

SOIL WATER AIR PROTECTION ENTERPRISE
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Paul Rosenfeld, Ph.D.

Chemical Fate and Transport & Air Dispersion Modeling

Principal Environmental Chemist

Risk Assessment & Remediation Specialist

Education

Ph.D. Soil Chemistry, University of Washington, 1999. Dissertation on volatile organic compound filtration.

M.S. Environmental Science, U.C. Berkeley, 1995. Thesis on organic waste economics.

B.A. Environmental Studies, U.C. Santa Barbara, 1991. Thesis on wastewater treatment.

Professional Experience

8b.5 Dr. Rosenfeld has over 25 years' experience conducting environmental investigations and risk assessments for evaluating impacts to human health, property, and ecological receptors. His expertise focuses on the fate and transport of environmental contaminants, human health risk, exposure assessment, and ecological restoration. Dr. Rosenfeld has evaluated and modeled emissions from unconventional oil drilling operations, oil spills, landfills, boilers and incinerators, process stacks, storage tanks, confined animal feeding operations, and many other industrial and agricultural sources. His project experience ranges from monitoring and modeling of pollution sources to evaluating impacts of pollution on workers at industrial facilities and residents in surrounding communities.

Dr. Rosenfeld has investigated and designed remediation programs and risk assessments for contaminated sites containing lead, heavy metals, mold, bacteria, particulate matter, petroleum hydrocarbons, chlorinated solvents, pesticides, radioactive waste, dioxins and furans, semi- and volatile organic compounds, PCBs, PAHs, perchlorate, asbestos, per- and poly-fluoroalkyl substances (PFOA/PFOS), unusual polymers, fuel oxygenates (MTBE), among other pollutants. Dr. Rosenfeld also has experience evaluating greenhouse gas emissions from various projects and is an expert on the assessment of odors from industrial and agricultural sites, as well as the evaluation of odor nuisance impacts and technologies for abatement of odorous emissions. As a principal scientist at SWAPE, Dr. Rosenfeld directs air dispersion modeling and exposure assessments. He has served as an expert witness and testified about pollution sources causing nuisance and/or personal injury at dozens of sites and has testified as an expert witness on more than ten cases involving exposure to air contaminants from industrial sources.

Professional History:

Soil Water Air Protection Enterprise (SWAPE); 2003 to present; Principal and Founding Partner
UCLA School of Public Health; 2007 to 2011; Lecturer (Assistant Researcher)
UCLA School of Public Health; 2003 to 2006; Adjunct Professor
UCLA Environmental Science and Engineering Program; 2002-2004; Doctoral Intern Coordinator
UCLA Institute of the Environment, 2001-2002; Research Associate
Komex H_2O Science, 2001 to 2003; Senior Remediation Scientist
National Groundwater Association, 2002-2004; Lecturer
San Diego State University, 1999-2001; Adjunct Professor
Anteon Corp., San Diego, 2000-2001; Remediation Project Manager
Ogden (now Amec), San Diego, 2000-2000; Remediation Project Manager
Bechtel, San Diego, California, 1999 – 2000; Risk Assessor
King County, Seattle, 1996 – 1999; Scientist
James River Corp., Washington, 1995-96; Scientist
Big Creek Lumber, Davenport, California, 1995; Scientist
Plumas Corp., California and USFS, Tahoe 1993-1995; Scientist
Peace Corps and World Wildlife Fund, St. Kitts, West Indies, 1991-1993; Scientist

Publications:

Remy, L.L., Clay T., Byers, V., **Rosenfeld P. E.** (2019) Hospital, Health, and Community Burden After Oil Refinery Fires, Richmond, California 2007 and 2012. *Environmental Health.* 18:48

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Rosenfeld, P.E., and C.L. Henry. (2001). Characterization of odor emissions from three different biosolids. *Water Soil and Air Pollution*. 127(1-4), 173-191.

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Rosenfeld, P. E. (1998). Characterization, Quantification, and Control of Odor Emissions From Biosolids Application To Forest Soil. Doctoral Thesis. University of Washington College of Forest Resources.

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Rosenfeld, P. E. (1991). How to Build a Small Rural Anaerobic Digester & Uses Of Biogas In The First And Third World. Bachelors Thesis. University of California.

Presentations:

Rosenfeld, P.E., Sutherland, A; Hesse, R.; Zapata, A. (October 3-6, 2013). Air dispersion modeling of volatile organic emissions from multiple natural gas wells in Decatur, TX. *44th Western Regional Meeting, American Chemical Society.* Lecture conducted from Santa Clara, CA.

Sok, H.L.; Waller, C.C.; Feng, L.; Gonzalez, J.; Sutherland, A.J.; Wisdom-Stack, T.; Sahai, R.K.; Hesse, R.C.; **Rosenfeld, P.E.** (June 20-23, 2010). Atrazine: A Persistent Pesticide in Urban Drinking Water. *Urban Environmental Pollution.* Lecture conducted from Boston, MA.

Feng, L.; Gonzalez, J.; Sok, H.L.; Sutherland, A.J.; Waller, C.C.; Wisdom-Stack, T.; Sahai, R.K.; La, M.; Hesse, R.C.; **Rosenfeld, P.E.** (June 20-23, 2010). Bringing Environmental Justice to East St. Louis, Illinois. *Urban Environmental Pollution.* Lecture conducted from Boston, MA.

Rosenfeld, P.E. (April 19-23, 2009). Perfluoroctanoic Acid (PFOA) and Perfluoroactane Sulfonate (PFOS) Contamination in Drinking Water From the Use of Aqueous Film Forming Foams (AFFF) at Airports in the United States. *2009 Ground Water Summit and 2009 Ground Water Protection Council Spring Meeting*, Lecture conducted from Tuscon, AZ.

Rosenfeld, P.E. (April 19-23, 2009). Cost to Filter Atrazine Contamination from Drinking Water in the United States" Contamination in Drinking Water From the Use of Aqueous Film Forming Foams (AFFF) at Airports in the United States. *2009 Ground Water Summit and 2009 Ground Water Protection Council Spring Meeting*. Lecture conducted from Tuscon, AZ.

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Rosenfeld, P. E. (October 15-18, 2007). Moss Point Community Exposure To Contaminants From A Releasing Facility. *The 23rd Annual International Conferences on Soils Sediment and Water.* Platform lecture conducted from University of Massachusetts, Amherst MA.

Rosenfeld, P. E. (October 15-18, 2007). The Repeated Trespass of Tritium-Contaminated Water Into A Surrounding Community Form Repeated Waste Spills From A Nuclear Power Plant. *The 23rd Annual International Conferences on Soils Sediment and Water.* Platform lecture conducted from University of Massachusetts, Amherst MA.

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Rosenfeld P. E. (March 2007). Production, Chemical Properties, Toxicology, & Treatment Case Studies of 1,2,3-Trichloropropane (TCP). *The Association for Environmental Health and Sciences (AEHS) Annual Meeting*. Lecture conducted from San Diego, CA.

Rosenfeld P. E. (March 2007). Blood and Attic Sampling for Dioxin/Furan, PAH, and Metal Exposure in Florala, Alabama. *The AEHS Annual Meeting*. Lecture conducted from San Diego, CA.

Hensley A.R., Scott, A., **Rosenfeld P.E.**, Clark, J.J.J. (August 21 – 25, 2006). Dioxin Containing Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility. *The 26th International Symposium on Halogenated Persistent Organic Pollutants – DIOXIN2006*. Lecture conducted from Radisson SAS Scandinavia Hotel in Oslo Norway.

Hensley A.R., Scott, A., **Rosenfeld P.E.**, Clark, J.J.J. (November 4-8, 2006). Dioxin Containing Attic Dust And Human Blood Samples Collected Near A Former Wood Treatment Facility. *APHA 134 Annual Meeting & Exposition.* Lecture conducted from Boston Massachusetts.

Paul Rosenfeld Ph.D. (October 24-25, 2005). Fate, Transport and Persistence of PFOA and Related Chemicals. Mealey's C8/PFOA. *Science, Risk & Litigation Conference*. Lecture conducted from The Rittenhouse Hotel, Philadelphia, PA.

Paul Rosenfeld Ph.D. (September 19, 2005). Brominated Flame Retardants in Groundwater: Pathways to Human Ingestion, *Toxicology and Remediation PEMA Emerging Contaminant Conference*. Lecture conducted from Hilton Hotel, Irvine California.

Paul Rosenfeld Ph.D. (September 19, 2005). Fate, Transport, Toxicity, And Persistence of 1,2,3-TCP. *PEMA Emerging Contaminant Conference*. Lecture conducted from Hilton Hotel in Irvine, California.

Paul Rosenfeld Ph.D. (September 26-27, 2005). Fate, Transport and Persistence of PDBEs. *Mealey's Groundwater Conference*. Lecture conducted from Ritz Carlton Hotel, Marina Del Ray, California.

Paul Rosenfeld Ph.D. (June 7-8, 2005). Fate, Transport and Persistence of PFOA and Related Chemicals. *International Society of Environmental Forensics: Focus On Emerging Contaminants*. Lecture conducted from Sheraton Oceanfront Hotel, Virginia Beach, Virginia.

Paul Rosenfeld Ph.D. (July 21-22, 2005). Fate Transport, Persistence and Toxicology of PFOA and Related Perfluorochemicals. *2005 National Groundwater Association Ground Water And Environmental Law Conference*. Lecture conducted from Wyndham Baltimore Inner Harbor, Baltimore Maryland.

Paul Rosenfeld Ph.D. (July 21-22, 2005). Brominated Flame Retardants in Groundwater: Pathways to Human Ingestion, Toxicology and Remediation. *2005 National Groundwater Association Ground Water and Environmental Law Conference*. Lecture conducted from Wyndham Baltimore Inner Harbor, Baltimore Maryland.

Paul Rosenfeld, Ph.D. and James Clark Ph.D. and Rob Hesse R.G. (May 5-6, 2004). Tert-butyl Alcohol Liability and Toxicology, A National Problem and Unquantified Liability. *National Groundwater Association. Environmental Law Conference*. Lecture conducted from Congress Plaza Hotel, Chicago Illinois.

Paul Rosenfeld, Ph.D. (March 2004). Perchlorate Toxicology. *Meeting of the American Groundwater Trust*. Lecture conducted from Phoenix Arizona.

Hagemann, M.F., **Paul Rosenfeld, Ph.D.** and Rob Hesse (2004). Perchlorate Contamination of the Colorado River. *Meeting of tribal representatives*. Lecture conducted from Parker, AZ.

Paul Rosenfeld, Ph.D. (April 7, 2004). A National Damage Assessment Model For PCE and Dry Cleaners. *Drycleaner Symposium. California Ground Water Association.* Lecture conducted from Radison Hotel, Sacramento, California.

Rosenfeld, P. E., Grey, M., (June 2003) Two stage biofilter for biosolids composting odor control. *Seventh International In Situ And On Site Bioremediation Symposium Battelle Conference* Orlando, FL.

Paul Rosenfeld, Ph.D. and James Clark Ph.D. (February 20-21, 2003) Understanding Historical Use, Chemical Properties, Toxicity and Regulatory Guidance of 1,4 Dioxane. *National Groundwater Association. Southwest Focus Conference. Water Supply and Emerging Contaminants..* Lecture conducted from Hyatt Regency Phoenix Arizona.

Paul Rosenfeld, Ph.D. (February 6-7, 2003). Underground Storage Tank Litigation and Remediation. *California CUPA Forum.* Lecture conducted from Marriott Hotel, Anaheim California.

Paul Rosenfeld, Ph.D. (October 23, 2002) Underground Storage Tank Litigation and Remediation. *EPA Underground Storage Tank Roundtable.* Lecture conducted from Sacramento California.

Rosenfeld, P.E. and Suffet, M. (October 7- 10, 2002). Understanding Odor from Compost, *Wastewater and Industrial Processes. Sixth Annual Symposium On Off Flavors in the Aquatic Environment. International Water Association.* Lecture conducted from Barcelona Spain.

Rosenfeld, P.E. and Suffet, M. (October 7- 10, 2002). Using High Carbon Wood Ash to Control Compost Odor. *Sixth Annual Symposium On Off Flavors in the Aquatic Environment. International Water Association.* Lecture conducted from Barcelona Spain.

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Rosenfeld, P.E. and Grey, M. A. (September 22-24, 2002). Biocycle Composting For Coastal Sage Restoration. *Northwest Biosolids Management Association.* Lecture conducted from Vancouver Washington..

Rosenfeld, P.E. and Grey, M. A. (November 11-14, 2002). Using High-Carbon Wood Ash to Control Odor at a Green Materials Composting Facility. *Soil Science Society Annual Conference.* Lecture conducted from Indianapolis, Maryland.

Rosenfeld. P.E. (September 16, 2000). Two stage biofilter for biosolids composting odor control. *Water Environment Federation.* Lecture conducted from Anaheim California.

Rosenfeld. P.E. (October 16, 2000). Wood ash and biofilter control of compost odor. *Biofest.* Lecture conducted from Ocean Shores, California.

Rosenfeld, P.E. (2000). Bioremediation Using Organic Soil Amendments. *California Resource Recovery Association.* Lecture conducted from Sacramento California.

Rosenfeld, P.E., C.L. Henry, R. Harrison. (1998). Oat and Grass Seed Germination and Nitrogen and Sulfur Emissions Following Biosolids Incorporation With High-Carbon Wood-Ash. *Water Environment Federation 12th Annual Residuals and Biosolids Management Conference Proceedings.* Lecture conducted from Bellevue Washington.

Rosenfeld, P.E., and C.L. Henry. (1999). An evaluation of ash incorporation with biosolids for odor reduction. *Soil Science Society of America.* Lecture conducted from Salt Lake City Utah.

Rosenfeld, P.E., C.L. Henry, R. Harrison. (1998). Comparison of Microbial Activity and Odor Emissions from Three Different Biosolids Applied to Forest Soil. *Brown and Caldwell.* Lecture conducted from Seattle Washington.

Rosenfeld, P.E., C.L. Henry. (1998). Characterization, Quantification, and Control of Odor Emissions from Biosolids Application To Forest Soil. *Biofest.* Lecture conducted from Lake Chelan, Washington.

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Rosenfeld, P.E, C.L. Henry, R. Harrison. (1998). Oat and Grass Seed Germination and Nitrogen and Sulfur Emissions Following Biosolids Incorporation With High-Carbon Wood-Ash. Water Environment Federation 12th Annual Residuals and Biosolids Management Conference Proceedings. Lecture conducted from Bellevue Washington.

Rosenfeld, P.E., C.L. Henry, R. B. Harrison, and R. Dills. (1997). Comparison of Odor Emissions From Three Different Biosolids Applied to Forest Soil. *Soil Science Society of America.* Lecture conducted from Anaheim California.

Teaching Experience:

UCLA Department of Environmental Health (Summer 2003 through 20010) Taught Environmental Health Science 100 to students, including undergrad, medical doctors, public health professionals and nurses. Course focused on the health effects of environmental contaminants.

National Ground Water Association, Successful Remediation Technologies. Custom Course in Sante Fe, New Mexico. May 21, 2002. Focused on fate and transport of fuel contaminants associated with underground storage tanks.

National Ground Water Association; Successful Remediation Technologies Course in Chicago Illinois. April 1, 2002. Focused on fate and transport of contaminants associated with Superfund and RCRA sites.

California Integrated Waste Management Board, April and May, 2001. Alternative Landfill Caps Seminar in San Diego, Ventura, and San Francisco. Focused on both prescriptive and innovative landfill cover design.

UCLA Department of Environmental Engineering, February 5, 2002. Seminar on Successful Remediation Technologies focusing on Groundwater Remediation.

University Of Washington, Soil Science Program, Teaching Assistant for several courses including: Soil Chemistry, Organic Soil Amendments, and Soil Stability.

U.C. Berkeley, Environmental Science Program Teaching Assistant for Environmental Science 10.

Academic Grants Awarded:

California Integrated Waste Management Board. $41,000 grant awarded to UCLA Institute of the Environment. Goal: To investigate effect of high carbon wood ash on volatile organic emissions from compost. 2001.

Synagro Technologies, Corona California: $10,000 grant awarded to San Diego State University.
Goal: investigate effect of biosolids for restoration and remediation of degraded coastal sage soils. 2000.

King County, Department of Research and Technology, Washington State. $100,000 grant awarded to University of Washington: Goal: To investigate odor emissions from biosolids application and the effect of polymers and ash on VOC emissions. 1998.

Northwest Biosolids Management Association, Washington State. $20,000 grant awarded to investigate effect of polymers and ash on VOC emissions from biosolids. 1997.

James River Corporation, Oregon: $10,000 grant was awarded to investigate the success of genetically engineered Poplar trees with resistance to round-up. 1996.

United State Forest Service, Tahoe National Forest: $15,000 grant was awarded to investigating fire ecology of the Tahoe National Forest. 1995.

Kellogg Foundation, Washington D.C. $500 grant was awarded to construct a large anaerobic digester on St. Kitts in West Indies. 1993

8b.5 cont'd

Deposition and/or Trial Testimony:

In the United States District Court For The District of New Jersey
Duarte et al, *Plaintiffs,* vs. United States Metals Refining Company et. al. *Defendant.*
Case No.: 2:17-cv-01624-ES-SCM
Rosenfeld Deposition. 6-7-2019

In the United States District Court of Southern District of Texas Galveston Division
M/T Carla Maersk, *Plaintiffs,* vs. Conti 168., Schiffahrts-GMBH & Co. Bulker KG MS "Conti Perdido" *Defendant.*
Case No.: 3:15-CV-00106 consolidated with 3:15-CV-00237
Rosenfeld Deposition. 5-9-2019

In The Superior Court of the State of California In And For The County Of Los Angeles – Santa Monica
Carole-Taddeo-Bates et al., vs. Ifran Khan et al., Defendants
Case No.: No. BC615636
Rosenfeld Deposition, 1-26-2019

In The Superior Court of the State of California In And For The County Of Los Angeles – Santa Monica
The San Gabriel Valley Council of Governments et al. vs El Adobe Apts. Inc. et al., Defendants
Case No.: No. BC646857
Rosenfeld Deposition, 10-6-2018; Trial 3-7-19

In United States District Court For The District of Colorado
Bells et al. Plaintiff vs. The 3M Company et al., Defendants
Case: No 1:16-cv-02531-RBJ
Rosenfeld Deposition, 3-15-2018 and 4-3-2018

In The District Court Of Regan County, Texas, 112th Judicial District
Phillip Bales et al., Plaintiff vs. Dow Agrosciences, LLC, et al., Defendants
Cause No 1923
Rosenfeld Deposition, 11-17-2017

In The Superior Court of the State of California In And For The County Of Contra Costa
Simons et al., Plaintiffs vs. Chevron Corporation, et al., Defendants
Cause No C12-01481
Rosenfeld Deposition, 11-20-2017

In The Circuit Court Of The Twentieth Judicial Circuit, St Clair County, Illinois
Martha Custer et al., Plaintiff vs. Cerro Flow Products, Inc., Defendants
Case No.: No. 0i9-L-2295
Rosenfeld Deposition, 8-23-2017

In The Superior Court of the State of California, For The County of Los Angeles
Warrn Gilbert and Penny Gilber, Plaintiff vs. BMW of North America LLC
Case No.: LC102019 (c/w BC582154)
Rosenfeld Deposition, 8-16-2017, Trail 8-28-2018

In the Northern District Court of Mississippi, Greenville Division
Brenda J. Cooper, et al., *Plaintiffs,* vs. Meritor Inc., et al., *Defendants*
Case Number: 4:16-cv-52-DMB-JVM
Rosenfeld Deposition: July 2017

8b.5 cont'd

In The Superior Court of the State of Washington, County of Snohomish
Michael Davis and Julie Davis et al., Plaintiff vs. Cedar Grove Composting Inc., Defendants
Case No.: No. 13-2-03987-5
Rosenfeld Deposition, February 2017
Trial, March 2017

In The Superior Court of the State of California, County of Alameda
Charles Spain., Plaintiff vs. Thermo Fisher Scientific, et al., Defendants
Case No.: RG14711115
Rosenfeld Deposition, September 2015

In The Iowa District Court In And For Poweshiek County
Russell D. Winburn, et al., Plaintiffs vs. Doug Hoksbergen, et al., Defendants
Case No.: LALA002187
Rosenfeld Deposition, August 2015

In The Iowa District Court For Wapello County
Jerry Dovico, et al., Plaintiffs vs. Valley View Sine LLC, et al., Defendants
Law No,: LALA105144 - Division A
Rosenfeld Deposition, August 2015

In The Iowa District Court For Wapello County
Doug Pauls, et al.,, et al., Plaintiffs vs. Richard Warren, et al., Defendants
Law No,: LALA105144 - Division A
Rosenfeld Deposition, August 2015

In The Circuit Court of Ohio County, West Virginia
Robert Andrews, et al. v. Antero, et al.
Civil Action N0. 14-C-30000
Rosenfeld Deposition, June 2015

In The Third Judicial District County of Dona Ana, New Mexico
Betty Gonzalez, et al. Plaintiffs vs. Del Oro Dairy, Del Oro Real Estate LLC, Jerry Settles and Deward DeRuyter, Defendants
Rosenfeld Deposition: July 2015

In The Iowa District Court For Muscatine County
Laurie Freeman et. al. Plaintiffs vs. Grain Processing Corporation, Defendant
Case No 4980
Rosenfeld Deposition: May 2015

In the Circuit Court of the 17th Judicial Circuit, in and For Broward County, Florida
Walter Hinton, et. al. Plaintiff, vs. City of Fort Lauderdale, Florida, a Municipality, Defendant.
Case Number CACE07030358 (26)
Rosenfeld Deposition: December 2014

In the United States District Court Western District of Oklahoma
Tommy McCarty, et al., Plaintiffs, v. Oklahoma City Landfill, LLC d/b/a Southeast Oklahoma City Landfill, et al. Defendants.
Case No. 5:12-cv-01152-C
Rosenfeld Deposition: July 2014

8b.5 cont"d

In the County Court of Dallas County Texas
Lisa Parr et al, *Plaintiff*, vs. Aruba et al, *Defendant.*
Case Number cc-11-01650-E
Rosenfeld Deposition: March and September 2013
Rosenfeld Trial: April 2014

In the Court of Common Pleas of Tuscarawas County Ohio
John Michael Abicht, et al., *Plaintiffs,* vs. Republic Services, Inc., et al., *Defendants*
Case Number: 2008 CT 10 0741 (Cons. w/ 2009 CV 10 0987)
Rosenfeld Deposition: October 2012

In the United States District Court of Southern District of Texas Galveston Division
Kyle Cannon, Eugene Donovan, Genaro Ramirez, Carol Sassler, and Harvey Walton, each Individually and on behalf of those similarly situated, *Plaintiffs,* vs. BP Products North America, Inc., *Defendant.*
Case 3:10-cv-00622
Rosenfeld Deposition: February 2012
Rosenfeld Trial: April 2013

In the Circuit Court of Baltimore County Maryland
Philip E. Cvach, II et al., *Plaintiffs* vs. Two Farms, Inc. d/b/a Royal Farms, Defendants
Case Number: 03-C-12-012487 OT
Rosenfeld Deposition: September 2013

EXHIBIT C

SWAPE Technical Consultation, Data Analysis and Litigation Support for the Environment

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Santa Monica, California 90401
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Matthew F. Hagemann, P.G., C.Hg., QSD, QSP

Geologic and Hydrogeologic Characterization
Industrial Stormwater Compliance
Investigation and Remediation Strategies
Litigation Support and Testifying Expert
CEQA Review

Education:

M.S. Degree, Geology, California State University Los Angeles, Los Angeles, CA, 1984.
B.A. Degree, Geology, Humboldt State University, Arcata, CA, 1982.

Professional Certifications:

California Professional Geologist
California Certified Hydrogeologist
Qualified SWPPP Developer and Practitioner

8b.6 **Professional Experience:**

Matt has 25 years of experience in environmental policy, assessment and remediation. He spent nine years with the U.S. EPA in the RCRA and Superfund programs and served as EPA's Senior Science Policy Advisor in the Western Regional Office where he identified emerging threats to groundwater from perchlorate and MTBE. While with EPA, Matt also served as a Senior Hydrogeologist in the oversight of the assessment of seven major military facilities undergoing base closure. He led numerous enforcement actions under provisions of the Resource Conservation and Recovery Act (RCRA) while also working with permit holders to improve hydrogeologic characterization and water quality monitoring.

Matt has worked closely with U.S. EPA legal counsel and the technical staff of several states in the application and enforcement of RCRA, Safe Drinking Water Act and Clean Water Act regulations. Matt has trained the technical staff in the States of California, Hawaii, Nevada, Arizona and the Territory of Guam in the conduct of investigations, groundwater fundamentals, and sampling techniques.

Positions Matt has held include:

- Founding Partner, Soil/Water/Air Protection Enterprise (SWAPE) (2003 – present);
- Geology Instructor, Golden West College, 2010 – 2014;
- Senior Environmental Analyst, Komex H2O Science, Inc. (2000 -- 2003);

- Executive Director, Orange Coast Watch (2001 – 2004);
- Senior Science Policy Advisor and Hydrogeologist, U.S. Environmental Protection Agency (1989–1998);
- Hydrogeologist, National Park Service, Water Resources Division (1998 – 2000);
- Adjunct Faculty Member, San Francisco State University, Department of Geosciences (1993 – 1998);
- Instructor, College of Marin, Department of Science (1990 – 1995);
- Geologist, U.S. Forest Service (1986 – 1998); and
- Geologist, Dames & Moore (1984 – 1986).

Senior Regulatory and Litigation Support Analyst:

With SWAPE, Matt's responsibilities have included:

8b.6 cont'd

- Lead analyst and testifying expert in the review of over 100 environmental impact reports since 2003 under CEQA that identify significant issues with regard to hazardous waste, water resources, water quality, air quality, Valley Fever, greenhouse gas emissions, and geologic hazards. Make recommendations for additional mitigation measures to lead agencies at the local and county level to include additional characterization of health risks and implementation of protective measures to reduce worker exposure to hazards from toxins and Valley Fever.
- Stormwater analysis, sampling and best management practice evaluation at industrial facilities.
- Manager of a project to provide technical assistance to a community adjacent to a former Naval shipyard under a grant from the U.S. EPA.
- Technical assistance and litigation support for vapor intrusion concerns.
- Lead analyst and testifying expert in the review of environmental issues in license applications for large solar power plants before the California Energy Commission.
- Manager of a project to evaluate numerous formerly used military sites in the western U.S.
- Manager of a comprehensive evaluation of potential sources of perchlorate contamination in Southern California drinking water wells.
- Manager and designated expert for litigation support under provisions of Proposition 65 in the review of releases of gasoline to sources drinking water at major refineries and hundreds of gas stations throughout California.
- Expert witness on two cases involving MTBE litigation.
- Expert witness and litigation support on the impact of air toxins and hazards at a school.
- Expert witness in litigation at a former plywood plant.

With Komex H2O Science Inc., Matt's duties included the following:

- Senior author of a report on the extent of perchlorate contamination that was used in testimony by the former U.S. EPA Administrator and General Counsel.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of MTBE use, research, and regulation.
- Senior researcher in the development of a comprehensive, electronically interactive chronology of perchlorate use, research, and regulation.
- Senior researcher in a study that estimates nationwide costs for MTBE remediation and drinking water treatment, results of which were published in newspapers nationwide and in testimony against provisions of an energy bill that would limit liability for oil companies.
- Research to support litigation to restore drinking water supplies that have been contaminated by MTBE in California and New York.

8b.6 cont'd

- Expert witness testimony in a case of oil production-related contamination in Mississippi.
- Lead author for a multi-volume remedial investigation report for an operating school in Los Angeles that met strict regulatory requirements and rigorous deadlines.

- Development of strategic approaches for cleanup of contaminated sites in consultation with clients and regulators.

Executive Director:

As Executive Director with Orange Coast Watch, Matt led efforts to restore water quality at Orange County beaches from multiple sources of contamination including urban runoff and the discharge of wastewater. In reporting to a Board of Directors that included representatives from leading Orange County universities and businesses, Matt prepared issue papers in the areas of treatment and disinfection of wastewater and control of the discharge of grease to sewer systems. Matt actively participated in the development of countywide water quality permits for the control of urban runoff and permits for the discharge of wastewater. Matt worked with other nonprofits to protect and restore water quality, including Surfrider, Natural Resources Defense Council and Orange County CoastKeeper as well as with business institutions including the Orange County Business Council.

Hydrogeology:

As a Senior Hydrogeologist with the U.S. Environmental Protection Agency, Matt led investigations to characterize and cleanup closing military bases, including Mare Island Naval Shipyard, Hunters Point Naval Shipyard, Treasure Island Naval Station, Alameda Naval Station, Moffett Field, Mather Army Airfield, and Sacramento Army Depot. Specific activities were as follows:

8b.6 cont'd

- Led efforts to model groundwater flow and contaminant transport, ensured adequacy of monitoring networks, and assessed cleanup alternatives for contaminated sediment, soil, and groundwater.
- Initiated a regional program for evaluation of groundwater sampling practices and laboratory analysis at military bases.
- Identified emerging issues, wrote technical guidance, and assisted in policy and regulation development through work on four national U.S. EPA workgroups, including the Superfund Groundwater Technical Forum and the Federal Facilities Forum.

At the request of the State of Hawaii, Matt developed a methodology to determine the vulnerability of groundwater to contamination on the islands of Maui and Oahu. He used analytical models and a GIS to show zones of vulnerability, and the results were adopted and published by the State of Hawaii and County of Maui.

As a hydrogeologist with the EPA Groundwater Protection Section, Matt worked with provisions of the Safe Drinking Water Act and NEPA to prevent drinking water contamination. Specific activities included the following:

- Received an EPA Bronze Medal for his contribution to the development of national guidance for the protection of drinking water.
- Managed the Sole Source Aquifer Program and protected the drinking water of two communities through designation under the Safe Drinking Water Act. He prepared geologic reports, conducted public hearings, and responded to public comments from residents who were very concerned about the impact of designation.

8b.6 cont'd

- Reviewed a number of Environmental Impact Statements for planned major developments, including large hazardous and solid waste disposal facilities, mine reclamation, and water transfer.

Matt served as a hydrogeologist with the RCRA Hazardous Waste program. Duties were as follows:

- Supervised the hydrogeologic investigation of hazardous waste sites to determine compliance with Subtitle C requirements.
- Reviewed and wrote "part B" permits for the disposal of hazardous waste.
- Conducted RCRA Corrective Action investigations of waste sites and led inspections that formed the basis for significant enforcement actions that were developed in close coordination with U.S. EPA legal counsel.
- Wrote contract specifications and supervised contractor's investigations of waste sites.

With the National Park Service, Matt directed service-wide investigations of contaminant sources to prevent degradation of water quality, including the following tasks:

- Applied pertinent laws and regulations including CERCLA, RCRA, NEPA, NRDA, and the Clean Water Act to control military, mining, and landfill contaminants.
- Conducted watershed-scale investigations of contaminants at parks, including Yellowstone and Olympic National Park.
- Identified high-levels of perchlorate in soil adjacent to a national park in New Mexico and advised park superintendent on appropriate response actions under CERCLA.
- Served as a Park Service representative on the Interagency Perchlorate Steering Committee, a national workgroup.
- Developed a program to conduct environmental compliance audits of all National Parks while serving on a national workgroup.
- Co-authored two papers on the potential for water contamination from the operation of personal watercraft and snowmobiles, these papers serving as the basis for the development of nation-wide policy on the use of these vehicles in National Parks.
- Contributed to the Federal Multi-Agency Source Water Agreement under the Clean Water Action Plan.

Policy:

Served senior management as the Senior Science Policy Advisor with the U.S. Environmental Protection Agency, Region 9. Activities included the following:

- Advised the Regional Administrator and senior management on emerging issues such as the potential for the gasoline additive MTBE and ammonium perchlorate to contaminate drinking water supplies.
- Shaped EPA's national response to these threats by serving on workgroups and by contributing to guidance, including the Office of Research and Development publication, Oxygenates in Water: Critical Information and Research Needs.
- Improved the technical training of EPA's scientific and engineering staff.
- Earned an EPA Bronze Medal for representing the region's 300 scientists and engineers in negotiations with the Administrator and senior management to better integrate scientific principles into the policy-making process.
- Established national protocol for the peer review of scientific documents.

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8b.6 cont'd

Geology:

With the U.S. Forest Service, Matt led investigations to determine hillslope stability of areas proposed for timber harvest in the central Oregon Coast Range. Specific activities were as follows:

- Mapped geology in the field, and used aerial photographic interpretation and mathematical models to determine slope stability.
- Coordinated his research with community members who were concerned with natural resource protection.
- Characterized the geology of an aquifer that serves as the sole source of drinking water for the city of Medford, Oregon.

As a consultant with Dames and Moore, Matt led geologic investigations of two contaminated sites (later listed on the Superfund NPL) in the Portland, Oregon, area and a large hazardous waste site in eastern Oregon. Duties included the following:

- Supervised year-long effort for soil and groundwater sampling.
- Conducted aquifer tests.
- Investigated active faults beneath sites proposed for hazardous waste disposal.

Teaching:

From 1990 to 1998, Matt taught at least one course per semester at the community college and university levels:

- At San Francisco State University, held an adjunct faculty position and taught courses in environmental geology, oceanography (lab and lecture), hydrogeology, and groundwater contamination.
- Served as a committee member for graduate and undergraduate students.
- Taught courses in environmental geology and oceanography at the College of Marin.

Matt taught physical geology (lecture and lab and introductory geology at Golden West College in Huntington Beach, California from 2010 to 2014.

Invited Testimony, Reports, Papers and Presentations:

Hagemann, M.F., 2008. Disclosure of Hazardous Waste Issues under CEQA. Presentation to the Public Environmental Law Conference, Eugene, Oregon.

Hagemann, M.F., 2008. Disclosure of Hazardous Waste Issues under CEQA. Invited presentation to U.S. EPA Region 9, San Francisco, California.

Hagemann, M.F., 2005. Use of Electronic Databases in Environmental Regulation, Policy Making and Public Participation. Brownfields 2005, Denver, Coloradao.

Hagemann, M.F., 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Nevada and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Las Vegas, NV (served on conference organizing committee).

Hagemann, M.F., 2004. Invited testimony to a California Senate committee hearing on air toxins at schools in Southern California, Los Angeles.

8b.6 cont'd

Brown, A., Farrow, J., Gray, A. and **Hagemann, M.**, 2004. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to the Ground Water and Environmental Law Conference, National Groundwater Association.

Hagemann, M.F., 2004. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in Arizona and the Southwestern U.S. Presentation to a meeting of the American Groundwater Trust, Phoenix, AZ (served on conference organizing committee).

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River and Impacts to Drinking Water in the Southwestern U.S. Invited presentation to a special committee meeting of the National Academy of Sciences, Irvine, CA.

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a tribal EPA meeting, Pechanga, CA.

Hagemann, M.F., 2003. Perchlorate Contamination of the Colorado River. Invited presentation to a meeting of tribal repesentatives, Parker, AZ.

Hagemann, M.F., 2003. Impact of Perchlorate on the Colorado River and Associated Drinking Water Supplies. Invited presentation to the Inter-Tribal Meeting, Torres Martinez Tribe.

Hagemann, M.F., 2003. The Emergence of Perchlorate as a Widespread Drinking Water Contaminant. Invited presentation to the U.S. EPA Region 9.

Hagemann, M.F., 2003. A Deductive Approach to the Assessment of Perchlorate Contamination. Invited presentation to the California Assembly Natural Resources Committee.

Hagemann, M.F., 2003. Perchlorate: A Cold War Legacy in Drinking Water. Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. From Tank to Tap: A Chronology of MTBE in Groundwater. Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. A Chronology of MTBE in Groundwater and an Estimate of Costs to Address Impacts to Groundwater. Presentation to the annual meeting of the Society of Environmental Journalists.

Hagemann, M.F., 2002. An Estimate of the Cost to Address MTBE Contamination in Groundwater (and Who Will Pay). Presentation to a meeting of the National Groundwater Association.

Hagemann, M.F., 2002. An Estimate of Costs to Address MTBE Releases from Underground Storage Tanks and the Resulting Impact to Drinking Water Wells. Presentation to a meeting of the U.S. EPA and State Underground Storage Tank Program managers.

Hagemann, M.F., 2001. From Tank to Tap: A Chronology of MTBE in Groundwater. Unpublished report.

Hagemann, M.F., 2001. Estimated Cleanup Cost for MTBE in Groundwater Used as Drinking Water. Unpublished report.

Hagemann, M.F., 2001. Estimated Costs to Address MTBE Releases from Leaking Underground Storage Tanks. Unpublished report.

Hagemann, M.F., and VanMouwerik, M., 1999. Potential Water Quality Concerns Related to Snowmobile Usage. Water Resources Division, National Park Service, Technical Report.

VanMouwerik, M. and **Hagemann, M.F.** 1999, Water Quality Concerns Related to Personal Watercraft Usage. Water Resources Division, National Park Service, Technical Report.

Hagemann, M.F., 1999, Is Dilution the Solution to Pollution in National Parks? The George Wright Society Biannual Meeting, Asheville, North Carolina.

Hagemann, M.F., 1997, The Potential for MTBE to Contaminate Groundwater. U.S. EPA Superfund Groundwater Technical Forum Annual Meeting, Las Vegas, Nevada.

8b.6 cont'd

Hagemann, M.F., and Gill, M., 1996, Impediments to Intrinsic Remediation, Moffett Field Naval Air Station, Conference on Intrinsic Remediation of Chlorinated Hydrocarbons, Salt Lake City.

Hagemann, M.F., Fukunaga, G.L., 1996, The Vulnerability of Groundwater to Anthropogenic Contaminants on the Island of Maui, Hawaii. Hawaii Water Works Association Annual Meeting, Maui, October 1996.

Hagemann, M. F., Fukunaga, G. L., 1996, Ranking Groundwater Vulnerability in Central Oahu, Hawaii. Proceedings, Geographic Information Systems in Environmental Resources Management, Air and Waste Management Association Publication VIP-61.

Hagemann, M.F., 1994. Groundwater Characterization and Cleanup at Closing Military Bases in California. Proceedings, California Groundwater Resources Association Meeting.

Hagemann, M.F. and Sabol, M.A., 1993. Role of the U.S. EPA in the High Plains States Groundwater Recharge Demonstration Program. Proceedings, Sixth Biennial Symposium on the Artificial Recharge of Groundwater.

Hagemann, M.F., 1993. U.S. EPA Policy on the Technical Impracticability of the Cleanup of DNAPL-contaminated Groundwater. California Groundwater Resources Association Meeting.

8b.6 cont'd

Hagemann, M.F., 1992. Dense Nonaqueous Phase Liquid Contamination of Groundwater: An Ounce of Prevention... Proceedings, Association of Engineering Geologists Annual Meeting, v. 35.

Other Experience:

Selected as subject matter expert for the California Professional Geologist licensing examination, 2009-2011.

Letter 8a – Mitchell M. Tsai

Commenter: Mitchell M. Tsai

Date: May 3, 2021

Response 8a.1:

The commenter provides an introduction to the Southwest Regional Council of Carpenters, represented by the commenter. The comment also states that the commenter reserves the right to supplement comments and requests further notices referring or related to the Project.

The commenter's introductory comments do not specifically contain any issues related to either the Project's DEIR or analysis contained therein. This comment does not relate to the adequacy or content of the DEIR, does not provide new information or evidence related to the analysis in the DEIR, and does not affect the analysis completed or conclusions provided in the DEIR. This comment is noted for the record and revisions to the DEIR are not required.

Response 8a.2:

The commenter states the City should require the Applicant to provide additional community benefits such as requiring local hire and use of a skilled and trained workforce to build the Project which can be helpful to reduce the length of vendor trips and reduce greenhouse gas emissions and associated environmental impacts of the Project.

Employee training and workforce requirements are outside the purview of CEQA; however, this comment will be provided to the City decision makers for their consideration. It should be noted that temporary employment opportunities generated during construction of the Project are expected to come from the existing regional workforce. (p. 6.0-5.) Further, as outlined in the DEIR, Section 5.7 Greenhouse Gas Emissions (p. 5.7-34):

> As shown in Table 5.7-5, the Project will result in approximately 2,706.33 $MTCO_2e$ per year, which would not exceed the SCAQMD/City's screening threshold of 3,000 $MTCO_2e$ per year. Thus, Project-related emissions would have a **less than significant** direct or indirect impact on GHG

As the Project will not result in significant impacts related to greenhouse gas emissions, there is no obligation pursuant to CEQA to further reduce these potential impacts. This comment does not relate to the adequacy or content of the DEIR, does not provide new information or evidence related to the analysis in the DEIR, and does not affect the analysis completed or conclusions provided in the DEIR. This comment is noted for the record and revisions to the DEIR are not required.

Response 8a.3:

The commenter stated the City should also require the Project to be built to standards exceeding the current 2019 California Green Building Code to mitigate the Project's environmental impacts and to advance progress towards the State of California's environmental goals.

According to the 2019 California Green Building Standards Code California Code of Regulations, Title 24, Part 11 under the Preface section on pp iii, "A city, county, or city and county may establish more restrictive building standards reasonably necessary because of local climatic,

geological or topographical conditions." The DEIR building standards are consistent with the 2019 CalGreen building code. The analysis contained in the DEIR concludes the Project will not result in significant and unavoidable impacts. (p. 6.0-3.) As the Project does not result in significant impacts related to air quality, energy, greenhouse gas emissions, there is no obligation pursuant to CEQA, to further reduce the Project's potential impacts and there are no further environmental impacts that need to be mitigated that are not already addressed as part of the DEIR.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR are not required.

Response 8a.4:

The commenter provides a general summary and the commenter's own interpretation of CEQA. However, the commenter makes no specific comment on how these relate to either the Project's DEIR or analysis contained therein. This comment does not relate to the adequacy or content of the DEIR, does not provide new information or evidence related to the analysis in the DEIR, and does not affect the analysis completed or conclusions provided in the DEIR. This comment is noted for the record and revisions to the DEIR are not required.

Response 8a.5:

The commenter provides a general summary and the commenter's own interpretation of CEQA and asserts that for the reasons outlined in the letter (Comments 8.6 through 8.16) the DEIR should be revised and recirculated for additional public comment.

For all the reasons set forth in this Final EIR, including as set forth below in Responses to Comments 8.6 through 8.16, no new information of substantial importance has been added to the EIR, and no new significant environmental impacts or substantial increases in existing significance impacts exist. Accordingly, recirculation of the DEIR is not required. (State CEQA Guidelines 15088.5)

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Response 8a.6:

The commenter stated that due to the COVID-19 crisis, the City must adopt a mandatory finding of significance that the Project may cause a substantial adverse effect on human beings and mitigate COVID-19 impacts. The commenter goes on to explain that CEQA requires that an agency make a finding of significance when a Project may cause a significant adverse effect on human beings, and public health risks related to construction work requires a mandatory finding of significance under CEQA. The commenter recommends that the Lead Agency adopt additional CEQA mitigation measures to mitigate public health risks from the Project's construction activities. The commenter also requests that the Lead Agency require safe on-site construction work practices as well as training and certification for any construction workers on the Project site, and

includes a list of recommended measures. The COVID pandemic is not a CEQA required topic and is not required to be analyzed in the DEIR pursuant to the CEQA Guidelines or CEQA case law. Public Resources Code section 21083(b)(3) and CEQA Guidelines section 15065(a)(4) provide a project may have a significant effect on the environment if the environmental effects of a project will cause substantial adverse effects on human beings, either directly or indirectly. However, COVID-19 is not an environmental effect of the Project – it is already present in the population unrelated to Project development. As a general rule, CEQA does not require an analysis of the impact of the existing environment on a proposed project unless the project will worsen existing environmental hazards or conditions. *California Bldg. Indus. Ass'n v. Bay Area Air Quality Mgmt. Dist.* (2015) 62 Cal.4th 369, 377.

Development of the Project will not worsen COVID-19 conditions. The City is subject to Statewide COVID requirements. The State reopened on June 15, 2021, lifting most restrictions on businesses and the public. As part of the State's reopening, all industries must maintain compliance with California workplace standards, which consist of the COVID-19 Prevention Emergency Temporary Standards for the construction industry.

Specifically, the California Department of Industrial Relations, Division of Occupational Safety and Health (DOSH) protects workers from safety hazards through its Cal/OSHA program and provides consultative assistance to employers. (https://www.dir.ca.gov/occupational_safety.html)

Workplace safety and health regulations in California require employers to take steps to protect workers exposed to infectious diseases like the Novel Coronavirus (COVID-19), which is widespread in the community. Cal/OSHA has posted resources to help employers comply with these requirements and to provide workers information on how to protect themselves and prevent the spread of the disease. (https://www.dir.ca.gov/dosh/coronavirus/) The applicant's contractor is required to comply with all Cal/OSHA requirements in place at the time of construction.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR are not required.

Response 8a.7:

The commenter stated that the DEIR's mitigation measures are impermissibly vague and defer critical details. The commenter claims that the DEIR improperly defers critical details of mitigation measures. The commenter states that here, the DEIR features several mitigation measures which are impermissibly vague and defer critical details, including:

- *MM AES-1*: DEIR states a Photometric Plan will be drafted and reviewed by the City before issuing of building permits to prevent light spillage.

As set forth in Comment 8.9, the commenter concludes that as a result of deficiencies in the DEIR's analysis and mitigation efforts, the DEIR needs to be revised and recirculated.

The commenter begins by providing the commenter's interpretation of CEQA requirements regarding deferral of mitigation measures. The commenter notes impermissible deferral of mitigation occurs when an EIR calls for mitigation measures to be created based on future studies,

but the agency fails to commit itself to specific performance standards. What the commenter failed to note, however, is that a lead agency may rely on future studies to devise the specific design of a mitigation measure when the results of later studies are used to tailor mitigation measures to fit on-the-ground environmental conditions. See *City of Maywood v. Los Angeles Unified Sch. Dist.* (2012) 208 Cal.App.4th 362, 411 (upholding mitigation measure, based on further investigation of contamination at project site, calling for development of hazardous materials remediation plan); *City of Hayward v. Board of Trustees of Cal. State Univ.* (2015) 242 Cal.App.4th 833, 855 (upholding transportation demand management program that identified measures to be evaluated and included monitoring plan, performance goals, and schedule for implementation). Mitigation performance standards are sufficient if they identify the criteria the agency will apply in determining that the impact will be mitigated. *Citizens for a Sustainable Treasure Island v. City & County of San Francisco* (2014) 227 Cal.App.4th 1036, 1059.

The commenter then suggests that MM AES-1 is vague and improperly defers details of mitigation. The details of each environmental impact and corresponding mitigation measures can be found in the DEIR Table ES-1 Summary of Environmental Impacts, Mitigations Measures, and Residual Impacts on pp. 1.0-8 – 1.0-53.

The commenter does not provide the complete citation of **MM AES-1**, and thus it is set forth in full below:

MM AES-1 (DEIR pp. 1.0-8) states that, "Prior to the issuance of building permits, the applicant shall submit a photometric (lighting) plan for approval by the Community & Economic Development Department, Planning Division. The approved light design requirements shall be included on the final building plan sheets. The lighting plan shall incorporate the following requirements:

- The Project shall be designed in such a manner as to prevent light spillage from the project to the adjacent and nearby open space areas.
- Lighting levels shall comply with Chapter 19.556 of the Riverside Municipal Code.
- Shielding shall be employed, where feasible.
- Any night lighting shall be directed away from natural open space areas and directed downward and towards the center of the development.
- No project lights shall blink, flash, oscillate, or be of unusually high intensity or brightness.
- Energy-efficient LPS or HPS lamps shall be used exclusively throughout the project site to dampen glare.
- Exterior lights shall be only "warm" LED lights (<3000K color temperature).

Mitigation measure **MM AES-1** does not indicate "will" as commenter claims, but "shall" as shown above and therefore is a requirement that will be reviewed and approved by the City before building permits are issued and is therefore measurable and enforceable and is not impermissibly vague or defer critical details. Further, **MM AES-1** contains a number of performance standards, including that the Project will be designed to prevent light spillage to the adjacent and nearby open space areas, Project lighting shall comply with Chapter 19.556 of the Riverside Municipal Code, shielding be employed where feasible, night lighting be directed away from natural open

space and will be directed downward towards the center of development, lights shall not blink, flash, oscillate, or be of an unusually high brightness or intensity, energy efficient LPS or HPS lamps shall be used exclusively, and exterior lights shall be only "warm" LED lights. Mitigation Measure **MM AES-1** clearly sets forth the criteria the City will apply in determining that the impact is mitigated, including the type of lamps to be used, their intensity, and the direction lighting will face. Therefore, it contains sufficient performance standards and does not constitute an improper deferral of mitigation.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR are not required.

Response 8a.8:

The commenter claims the DEIR failed to include a Burrowing Owl Protection and Relocation Plan. The commenter also claims under **MM BIO-10** that the DEIR defers drafting and submitting a Stormwater Pollution Prevention Plan.

As detailed on page 5.3-25 in Section 5.3 Biological Resources of the DEIR, "the Project site lacks mammal burrows capable of providing suitable roosting and nesting opportunities. The only burrows observed during the site investigation were too small (less than 4 inches in diameter) to be used by Burrowing Owl (BUOW).). Despite a systematic search of all burrows and open habitat throughout the Project site, no burrowing owl or sign (pellets, feathers, castings, or whitewash) was observed. Additionally, focused surveys for BUOW were conducted in 2006/2007 by Michael Brandman Associates, and the focused survey results were negative. Therefore, BUOW is presumed absent from the Project site and no additional focused surveys are recommended or required. (ELMT(a) pp. 39)." **MM BIO-2** has been implemented as an additional layer of protection **should** burrowing owls be present prior to ground disturbance. As stated in **MM BIO-2**, a 30-day pre-construction survey for burrowing owls is required prior to initial ground-disturbing activities (e.g., vegetation clearing, clearing and grubbing, grading, tree removal, site watering, equipment staging) to ensure that no burrowing owls have colonized the site in the days or weeks preceding the ground-disturbing activities in accordance with the *Burrowing Owl Survey Instructions for the Western Riverside County Multiple Species Habitat Conservation Plan*. As noted in Response 8.7 above, a lead agency may rely on future studies to devise the specific design of a mitigation measure when the results of later studies are used to tailor mitigation measures to fit on-the-ground environmental conditions. No BUOW have been observed on site. A Burrowing Owl Protection and Relocation Plan is only required if on-the-ground conditions change and burrowing owls have colonized the project site prior to the initiation of ground-disturbing activities. For this reason, the DEIR does not include a Burrowing Owl Protection and Relocation Plan and there is no improper deferral of mitigation.

Please refer to Response 5a.29 regarding the Stormwater Pollution Prevention Plan.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does

not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR are not required.

Response 8a.9:

The commenter claims that **MM CUL-2** is vague and improperly defers details of mitigation as it fails to include an Archeological Monitoring Plan. As demonstrated below in the length and detail of **MM CUL-2**, it is not impermissibly vague or defer critical details.

Per **MM CUL-2** (DEIR Table ES-1 pp. 1.0-26 – 1.0-28), "Archaeological and Paleontological Monitoring: At least 30 days prior to application for a grading permit and before any grading, excavation and/or ground disturbing activities take place, the developer/applicant shall retain a Secretary of Interior Standards qualified archaeological monitor to monitor all ground-disturbing activities in an effort to identify any unknown archaeological resources.

1. The project archaeologist, in consultation with consulting tribes (those that requested consultation under AB52 and SB 18), the Developer, and the City, shall develop an Archaeological Monitoring Plan to address, the details, timing, and responsibility of all archaeological and cultural activities that will occur on the project site. Details in the plan shall include:

   a. Project grading and development scheduling;
   b. The development of a rotating or simultaneous schedule in coordination with the developer/applicant and the project archaeologist for designated Native American Tribal Monitors from the consulting tribes during grading, excavation, and ground-disturbing activities on the site, including the scheduling, safety requirements, duties, scope of work, and Native American Tribal Monitors' authority to stop and redirect grading activities in coordination with all Project archaeologists;
   c. The protocols and stipulations that the Applicant, tribes, and Project archaeologist/paleontologist will follow in the event of inadvertent cultural resources discoveries, including any newly discovered cultural resource deposits, or nonrenewable paleontological resources that shall be subject to a cultural resources' evaluation;
   d. Treatment and final disposition of any cultural and paleontological resources, sacred sites, and human remains if discovered on the project site; and
   e. The scheduling and timing of the Cultural Sensitivity Training noted in mitigation measure MM-CUL-4."

MM CUL-2 therefore requires an Archeological Monitoring Plan 30 days prior to grading permits. The details of what the Plan shall include are spelled out within **MM CUL-2**. Further, the City and the consulting tribes agreed that, in the event of the inadvertent discovery of previously unknown cultural resources of tribal or Native American importance during construction activities, appropriate mitigation measures would be implemented and followed. All consulting tribes accepted the City's standard mitigation measures (**MM CUL-1** through **MM CUL-4),** to ensure that potential impacts in the event of an inadvertent discovery of resources remain at less than a

significant level. (p. 5.11-8.) Therefore, **MM CUL-2** is an accepted mitigation measure, contains sufficient performance standards, and does not constitute an improper deferral of mitigation.

The commenter requests that the DEIR be recirculated. As set forth above and throughout these responses, the commenter does not provide credible evidence that the Project would result in new or substantially increased impacts, that there is significant new information, or that any of the other criteria for recirculation under CEQA Guidelines Section 15088.5 has been met. Therefore, recirculation of the DEIR is not required.

Response 8a.10:

The commenter provides a general summary and the commenter's own interpretation of substantial evidence under CEQA. However, the commenter makes no specific comment on how these relate to either the Project's DEIR or analysis contained therein. This comment does not relate to the adequacy or content of the DEIR, does not provide new information or evidence related to the analysis in the DEIR, and does not affect the analysis completed or conclusions provided in the DEIR. This comment is noted for the record and revisions to the DEIR are not required.

Response 8a.11:

The commenter provides its interpretation of the CEQA Guidelines relative to GHG analyses and states that the DEIR fails to support its findings on GHG impacts with substantial evidence. The commenter argues the DEIR used an incorrect and unsubstantiated quantitative analysis and the DEIR failed to identify a potentially significant GHG impact when using a 2.6 MT CO2e/SP/year threshold.

However, both DEIR Section 5.7 and the DEIR's supporting Greenhouse Gas Analysis (DEIR Appendix G) provide the methodologies and quantitative analyses upon which the Project's potential GHG impacts were evaluated. Regarding commenter's arguments regarding the DEIR's analysis and methodology, please refer to Responses 5b.13 through 5b.16.

As outlined in the DEIR Technical Appendix B, Section 3.5.3.1 (pp. 33-34), trip lengths used for calculating mobile source air pollutant emissions are based on the applicable regional travel demand model, the Riverside County Transportation Analysis Model (RivTAM). RivTAM was prepared for the Riverside County Transportation Department as a sub-regional model based on Southern California Association of Governments (SCAG) model, which includes the entire SCAG region. SCAG is the nation's largest metropolitan planning organization, representing six counties (Ventura, Los Angeles, Orange, Riverside, San Bernardino, and Imperial), 191 cities and more than 19 million residents. The goal in developing RivTAM was to provide a greater level of detail for Riverside County. These types of models, including RivTAM, require regular updates to remain relevant and reflect the current state of infrastructure.[6]

The use of a travel demand model like RivTAM is more specific to the region and Project area, as compared to the broader SCAG model, and for the land use type being proposed. The average

[6] Riverside County Traffic Analysis (RIVTAM) Update, SCAG Model Task Force Meeting, March 22, 2017. https://scag.ca.gov/sites/main/files/file-attachments/mtf032217_rivtamreport.pdf?1602995725

trip length for the Project using the RivTAM travel demand model is 11.5 miles. This average trip length for the Project is appropriate and conservative, as in comparison the WRCOG's RivTAM model run for the entire City of Riverside is 10.77 miles for home based average VMT. Therefore, using the VMT calculated for the Project for the GHG analysis, is more conservative than using the City's average VMT, and results are still below the appropriate GHG threshold, and therefore less than significant. And as outlined in Response 5a.10, the proposed Project is residential land use and thus, the Tier 3 screening value of 3,000 MT CO2e per year was appropriately applied, without any requirement to determine if a project qualifies as a "small project."

Furthermore, the use of travel demand models is also a recommended practice that is promoted by the Governor's Office of Planning and Research (OPR) in its updated CEQA guidelines with respect to Senate Bill (SB) 743. Specifically, the latest technical advisory documentation published by OPR (December 2018[7]), on pages 30-31 explicitly states that:

> "…agencies can use travel demand models or survey data to estimate existing trip lengths and input those into sketch models such as CalEEMod to achieve more accurate results. Whenever possible, agencies should input localized trip lengths into a sketch model to tailor the analysis to the project location."

The procedure described by OPR in their SB 743 technical advisory is precisely the method that was used to calculate trip lengths and consequently total VMT for the Project.

Therefore, this comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR are not required.

Response 8a.12:

The commenter incorrectly states the DEIR fails to support its findings on transportation impacts with substantial evidence for VMT. The commenter claims the RivTAM estimates for project trips and lengths for a significance determination underestimates resident and worker trips for the Project site and is unsubstantiated. Commenter also opines the VMT analysis should be based upon the actual conditions at the Project site and not on any City-wide estimates for home-based VMT.

The City recently adopted updated Traffic Impact Analysis Guidelines for VMT and LOS Assessment (City Guidelines). The City Guidelines include VMT thresholds that were recently reviewed and adopted by City Council on June 16, 2020. Based on the adopted VMT thresholds, a significant impact would occur if the following condition is met:

- For new residential Projects, utilizing a threshold consistent with 15 percent below the City's current baseline VMT Per Capita. (DEIR, p. 5.10-19.)

The City Guidelines provide the methodology for non-screened projects, and calls for an analysis using RivTAM, the rationale of which is mirrored in the DEIR's VMT Analysis (see City Guidelines,

[7] https://opr.ca.gov/ceqa/technical-advisories.html

p. 26.) Additionally, the City Guidelines provide for the use of home-based VMT in analyses (see City Guidelines, pp. 40-41.)

The VMT Analysis states on pp. 3-4:

> The Riverside Transportation Analysis Model (RIVTAM) is a useful tool to estimate VMT as it considers interaction between different land uses based on socio-economic data such as population, households and employment. The City Guidelines identifies RIVTAM as the appropriate tool for conducting VMT analysis for land use projects in Riverside County.
>
> Project VMT has been calculated using the most current version of RIVTAM. Adjustments in socioeconomic data (SED) (i.e., population) have been made to the appropriate traffic analysis zone (TAZ) within the RIVTAM model to reflect the Project's proposed land use (i.e., residential use).
>
> Adjustments to SED to represent the Project were made for a separate TAZ in both the base year model and cumulative year model. A separate TAZ was utilized to isolate Project generated VMT. Project generated Home-Based (HB) VMT was then calculated for both the base year (2012) model and cumulative year (2040) model and linear interpolation was used to determine the Project's baseline HB VMT. Project HB VMT is then normalized by dividing the population value. As shown in Table 2, the Project baseline (2019) HB VMT per capita is 9.59 and the Project cumulative (2040) HB VMT per capita is 7.66.

Based on the City's Guidelines, which contain the applicable thresholds for analyzing VMT impacts, the DEIR accurately estimates the Project's VMT.

The commenter then opines that, "even if the DEIR determined that there would be significant impact requiring mitigation – it does not demonstrate that MM-TRANS 1-3 would mitigate the significant effects of VMT without a more accurate analysis of VMT based upon OPR's guidance." OPR's guidance was followed with the Project's VMT analysis and the VMT Analysis states,

> Based on OPR's Technical Advisory, the Western Riverside Council of Governments (WRCOG) prepared a WRCOG SB 743 Implementation Pathway Document Package (March 2019) to assist its member agencies with implementation tools necessary to adopt analysis methodology, impact thresholds and mitigation approaches for VMT. To add to the previous work effort, WRCOG in February 2020 released its Recommended Traffic Impact Analysis Guidelines for Vehicle Miles Traveled and Level of Service Assessment (WRCOG Guidelines), which provides each of its member agencies with specific procedures for complying with the new CEQA requirements for VMT analysis. (VMT Analysis, Appendix I, p. 478.)

Additionally, the DEIR demonstrates that MM TRANS-1 through MM TRANS-3 would mitigate significant effects of current baseline VMT on pp. 5.10-41 where it states,

> The following TDM strategies were identified to reduce project generated VMT:
>
> <u>Provide Pedestrian Network Improvements</u>.

Providing on-site pedestrian access network to link areas of the Project site to the off-site pedestrian network encourages people to walk instead of drive. This mode shift results in people driving less for short/nearby trips (typically less than ¼ mile and no greater than ½ mile) and thus a reduction in VMT. The Project would provide for onsite pedestrian connections linking the site to existing pedestrian network along Central Avenue that would provide pedestrian connectivity to existing and planned commercial and residential uses in the area. In a suburban center context, a maximum 2.0% reduction in Project VMT may be achieved. This TDM strategy is included as MM TRANS-1 in Section 5.10.6 below.

Provide Traffic Calming Measure.

Providing traffic calming measures encourages people to walk or bike instead of using a passenger car. This mode shift would result in a decrease in VMT. Traffic calming features may include: marked crosswalks, count-down signal timers, curb extensions, speed tables, raised crosswalks, raised intersections, median islands, tight corner radii, roundabouts or mini-circles, on-street parking, planter strips with street trees, chicanes/chokers, and others. The Central Avenue corridor provides for sidewalk and bike land enhancements. There is limited opportunity for the Project to implement meaningful enhanced traffic calming measures in the area. A high visibility crosswalk feature with an accessible pedestrian signal is a potential pedestrian enhancement along Central Avenue identified by City staff. This measure on its own would provide a nominal 0.25% reduction in VMT. This TDM strategy is included as MM TRANS-2 in Section 5.10.6 below.

Increase Transit Service Frequency and Speed.

This measure serves to reduce transit-passenger travel time through more reduced headways and increased speed and reliability. This makes transit service more attractive and may result in a mode shift from auto to transit which reduces VMT. The project area is currently served by RTA. RTA Route 16 currently provides service along Central Avenue. Transit service is reviewed and updated by RTA 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. An ADA compliant bus turnout along the Project's frontage was requested by RTA. Providing a bus stop in walking distance (less than ¼ mile) of the Project site would help encourage transit use and reduce VMT. The potential reduction in VMT related to providing enhanced service near the Project site is estimated to be at the low end of the estimated range between 0.1% and 10.5%. Given the suburban center context of the area it is conservatively estimated that a maximum of a 4.0% reduction in Project may be achieved with this measure. This TDM strategy is included as MM TRANS-3 in Section 5.10.6 below.

With implementation of the limited feasible TDM measures above, a potential reduction in Project VMT of 6.25% would achieve the City's target threshold of 15% below current baseline HB VMT per capita that would result in a less than significant VMT impact based on the City's impact thresholds as described in the City Guidelines.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does

not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR are not required.

Response 8a.13:

The commenter provides aa summary and the commenter's interpretation of law regarding general plans and zoning. However, the commenter makes no specific comment on how these relate to either the Project's DEIR or analysis contained therein. This comment contains general information and does not relate to the adequacy or content of the DEIR, does not provide new information or evidence related to the analysis in the DEIR, and does not affect the analysis completed or conclusions provided in the DEIR. This comment is noted for the record and revisions to the DEIR are not required.

Response 8a.14:

The commenter stated that the DEIR is required to review the Project's consistency with regional housing plans, sustainable community strategy, and regional transportation plans. CEQA guidelines section 15125(d) requires that an environmental impact report "discuss any inconsistencies between the proposed Project and applicable general plans, specific plans, and regional plans." The commenter asserts that the Project's environmental documents fail as an informational document since the Project DEIR fails to discuss consistency with the 2020 RTP/SCS - Connect SoCal.

The DEIR references the discussion of regional transportation plans and Connect SoCal in section 5.10 Transportation, subsection 5.10.2.2 Regional Regulations, subsection Regional Transportation Plan/Sustainable Communities Strategy (DEIR pp. 5.10-20 -5.10-21) as well as Section 6.1 Consistency with Regional Plans (DEIR p. 6.0-3). The regional agency monitors inconsistencies in accordance with relevant general plans, specific plans, and regional plans. As stated in Section 6.1, with implementation of the improvements identified in the Traffic Analysis (Appendix I) to address deficiencies to study area intersections Condition of Approval (COA LU-1), and improvements for pedestrians and public transit (MM TRANS-1 through MM TRANS-3), the Project would not conflict with applicable programs, plans, ordinances, or policies addressing the local circulation system, and thus would be consistent with the 2020 RTP/SCS – Connect SoCal. The analysis of the Project's consistency with applicable plans related to the local circulation system is found at DEIR pp. 5.10-25 – 5.10-37. Thus, the project aligns with the overarching goal of the RTP/SCS - Connect SoCal, which is integrating land use and transportation to increase mobility options and achieve a more sustainable growth pattern. Therefore, the DEIR did evaluate consistency with the RTP/SCS - Connect SoCal and found that it would not conflict with this plan.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR are not required.

Response 8a.15:

The commenter states that the DEIR fails to demonstrate consistency with the state's housing law's regional housing needs assessment requirements and the City's obligation to fulfill those requirements in its housing element. The commenter explains that state law requires that jurisdictions provide their fair share of regional housing needs and adopt a general plan for future growth (California Government Code Section 65300). The California Department of Housing and Community Development (HCD) is mandated to determine state-wide housing needs by income category for each Council of Governments (COG) throughout the state.

Within this comment, the commenter claims "CEQA requires the DEIR analyze the Projects consistency with the State's housing goals," however no reference is made to which section of the CEQA guidelines this is required, and there are none. The commenter further states that the CEQA guidelines section 15125(d) requires that an environmental impact report "discuss any inconsistencies between the proposed project and applicable general plans, specific plans, and regional plans" which is correctly indicated in Section 15125(d).

The DEIR indicates the Project would not conflict with or is consistent with CEQA section 15125(d) in Section 6.0 Other CEQA Topics subsection 6.1 Consistency with Regional Plans on page 6.0-1 through 6.0-3. Section 5.8 Land Use and Planning of the DEIR also discuss consistency with applicable general plans, specific plans and regional plans (pp. 5.8-1 – 5.8-27).

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR are not required.

Response 8a.16:

The commenter states that the City fails to conduct any consistency analysis with SCAG's 6th Cycle RHNA Allocation Plan. The DEIR should be revised and recirculated with an analysis of how the Project is consistent with the City of Riverside's 6th Cycle RHNA allocation.

It is the City's responsibility to implement/analyze the SCAG 6th Cycle RHNA Allocation Plan, not individual project developments and associated CEQA documents. The 6th Cycle RHNA Allocation Plan was adopted on March 22, 2021, well after the June 30, 2020 release of the NOP for the Project, which found no significant impacts related to Population and Housing. However, the Project does support the City in meeting the RHNA allocation numbers in accordance with the Project's objectives as identified in the DEIR, Section 3.3.7 Project Objectives (p. 3.0-20) as follows: "Provide housing to increase the type and amount of housing available consistent with the goals of the City's Housing Element and to assist the City in meeting project housing demand as part of the City's growth projections. Per Regional Housing Need Allocation (RHNA), the City will need to make space for a minimum of 18,458 housing units, with an anticipated goal of 24,000 units, by 2029."

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR are not required.

Response 8a.17:

The commenter asserts that for the reasons outlined in the letter (comments 8.6 through 8.16) the DEIR should be revised and recirculated for additional public comment.

For all the reasons set forth above in Responses to Comments 8.6 through 8.16, no new information of substantial importance has been added to the EIR, and no new significant environmental impacts or substantial increases in existing significance impacts exist. Accordingly, recirculation of the DEIR is not required. (State CEQA Guidelines 15088.5)

Therefore, this comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Letter 8b – SWAPE

Commenter: Matt Hagemann and Paul E. Rosenfeld

Date: March 8, 2021

Response 8b.1: The commenter provides a general summary of CalEEMod calculations and equations and states there is a direct relationship between trip length and vehicle miles traveled (VMT) as well as a direct relationship between VMT and vehicle running emissions. The equations cited are from Appendix A Calculation Details for CalEEMod, October 2017, for version CalEEMod2016.3.2. The commenter goes on to state that as trip length is increased, VMT and vehicle running emissions increase as a result. The commenter concludes that vehicle running emissions can be reduced by decreasing the average overall trip length via a local hiring requirement or otherwise.

Please see Response 8a.2, which addresses the similar comment that the length of vendor trips and amount of greenhouse emissions could be reduced by implementing a local hiring requirement.

As stated in Response 8a.2, employee training and workforce requirements are outside the purview of CEQA; however, this comment will be provided to the City decision makers for their consideration. It should be noted that temporary employment opportunities generated during construction of the Project are expected to come from the existing regional workforce. (p. 6.0-5.) Further, as outlined in DEIR Section 5.7 Greenhouse Gas Emissions (p. 5.7-34),

> As shown in Table 5.7-5, the Project will result in approximately 2,706.33 $MTCO_2e$ per year, which would not exceed the SCAQMD/City's screening threshold of 3,000 $MTCO_2e$ per year. Thus, Project-related emissions would have a **less than significant** direct or indirect impact on GHG

As discussed under Response 8a.2, the Project would not result in significant impacts related to greenhouse gas emissions. The greenhouse gas analysis contained in the DEIR, used CalEEMod2016.3.2 (with the equations cited by the commenter), which identified less than significant greenhouse gas impacts. As the Project would not result in significant impacts, there is no obligation under CEQA to further reduce potential impacts via a local hiring requirement or otherwise. This comment does not relate to the adequacy or content of the DEIR, does not provide new information or evidence related to the analysis in the DEIR, and does not affect the analysis completed or conclusions provided in the DEIR. This comment is noted for the record and revisions to the DEIR are not required.

Response 8b.2: The commenter states CalEEMod default worker trip parameters are important to consider in understanding how local hire requirements and associated worker trip length reductions impact greenhouse gas emissions calculations. The commenter goes on to state that the efficacy of a local hire requirement is dependent upon the urbanization of the project site as well as project location.

The commenter makes no specific comment related to either the DEIR or analysis contained therein. The comment does not discuss the Project's location nor level of urbanization, which the commenter specifically states impact the efficacy of a local hire requirement. This comment contains general information and does not relate to the adequacy or content of the DEIR.

Additionally, please see Responses 8a.2, 8a.11, and 8b.1, which address similar comments regarding trip length reductions, reduced greenhouse gas emissions, and local hire requirements. As discussed in Responses 8a.2 and 8b.1, the Project would not result in significant impacts related to greenhouse gas emissions; thus, there is no obligation under CEQA to further reduce potential impacts via local hiring requirement or otherwise. Further, as discussed in Response 8a.11, per DEIR Technical Appendix B, Section 3.5.3.1, Trip Length (pp. 33-34), the trip lengths used for calculating mobile source air pollutant emissions are based on the applicable regional travel demand model: the Riverside County Transportation Analysis Model (RivTAM). As noted in DEIR Technical Appendix B, RivTAM calculates the average trip length to be 11.5 miles for the Project. The use of a travel demand model like RivTAM is supported by substantial evidence since the information contained in the model is specific to the region and for the land use type being proposed.

Furthermore, the use of travel demand models is also a recommended practice that is promoted by the Governor's Office of Planning and Research (OPR) in its updated CEQA guidelines with respect to Senate Bill (SB) 743. Specifically, the latest technical advisory documentation published by OPR (December 2018[8]) see Pages 30-31 explicitly states that:

> "…agencies can use travel demand models or survey data to estimate existing trip lengths and input those into sketch models such as CalEEMod to achieve more accurate results. Whenever possible, agencies should input localized trip lengths into a sketch model to tailor the analysis to the project location."

The procedure described by OPR in their SB 743 technical advisory is precisely the method that was used to calculate trip lengths and consequently total VMT for the Project.

Therefore, this comment does not relate to the adequacy or content of the DEIR, does not provide new information or evidence related to the analysis in the DEIR, and does not affect the analysis completed or conclusions provided in the DEIR. This comment is noted for the record and revisions to the DEIR are not required.

Response 8b.3: The commenter provides an example of the potential impact of a local hire provision on construction-related greenhouse gas emissions. The commenter then states that the example does not indicate that local hire requirements would result in reduced construction-related greenhouse gas emissions for all projects and that the significance of a local hire requirement depends on factors such as trip length.

It should be noted that the commenter makes no specific comment related to the DEIR or the analysis contained therein. The comment does provides an example from a different jurisdiction but does not provide any discussion of how similar requirements would affect this Project. The commenter also expressly qualifies its statements, providing "it does not indicate that local hire requirements would result in reduced construction-related GHG emission for all projects." This comment contains general information and does not relate to the adequacy or content of the DEIR, does not provide new information or evidence related to the analysis in the DEIR, and does not affect the analysis completed or conclusions provided in the DEIR.

[8] https://opr.ca.gov/ceqa/technical-advisories.html

Please see Responses 8a.2, 8a.11, 8b.1, and 8b. 2, which address similar comments regarding reduced trip lengths, reduced greenhouse gas emissions, and local hire requirements. As discussed in these responses, the Project would not result in significant impacts related to greenhouse gas emissions; therefore, there is no obligation under CEQA to further reduce potential impacts via a local hiring requirement or otherwise.

The DEIR already notes that temporary employment opportunities generated during construction of the Project are expected to come from the existing regional workforce. (p. 6.0-5.) Further, it is discussed that the trip lengths used for calculating mobile source air pollutant emissions are based on the applicable regional travel demand model: the RivTAM, which calculates the average trip length to be 11.5 miles for the Project. This average trip length is close to the statewide average and well below the 14.7 miles urban worker trip length in the South Coast Air Basin.

Moreover, as discussed above, the commenter admits that the example provided by the commenter does not indicate that local hire requirements would in fact result in reduced construction-related greenhouse gas emissions for all projects. Therefore, this comment does not relate to the adequacy or content of the DEIR, does not provide new information or evidence related to the analysis in the DEIR, and does not affect the analysis completed or conclusions provided in the DEIR. This comment is noted for the record and revisions to the DEIR are not required.

Response 8b.4: The commenter states that SWAPE retains the right to revise or amend their report when additional information becomes available. This comment does not relate to the adequacy or content of the DEIR, does not provide new information or evidence related to the analysis in the DEIR, and does not affect the analysis completed or conclusions provided in the DEIR. This comment is noted for the record and revisions to the DEIR are not required.

Response 8b.5: Exhibit B is a resume for one of the authors of the comment letter, Paul Rosenfeld. Exhibit B does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Response 8b.6: Exhibit C is a resume for one of the authors of the comment letter, Matthew Hagemann. Exhibit C does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Comment Letter 9 – Leonard Nunney, Friends of Riverside's Hills

Comment letter 9 commences on the next page.

May 2nd, 2021

To: Candice Assadzadeh, Senior Planner, City of Riverside

From: Leonard Nunney for Friends of Riverside's Hills (FRH)

Re: Response to Crestview Apartments Draft EIR (P19-0905).

9.1 The project being considered has a number of potentially significant environmental impacts that are not adequately considered and/or mitigated by the project DEIR. For this (and other reasons documented elsewhere) Friends of Riverside's Hills (FRH) opposes this project in its current form. FRH is a 501(c)(3) non-profit group dedicated to the preservation and enhancement of the quality of life of the residents of Riverside by maintaining the natural beauty of the City, and by promoting the establishment of a network of linked natural open space areas in the City of Riverside and in the surrounding area.

9.2 In presenting the concerns of FRH, I need to point out that I am a professor at the University of California Riverside and one aspect of my research concerns the ability of small populations to avoid extinction. For example, two of my early (1990s) peer-reviewed scientific papers (Assessing minimum viable population size: demography meets population genetics, and Estimating the effective population size of conserved populations) have been cited 403 and 383 times, respectively, according to Google Scholar (as of today). As a result of my expertise, I became a member of the Scientific Advisory Panel that was involved in the establishment of the MSHCP, and that strongly advocated for the critical role of linkages.

9.3 The proposed project site is in a very environmentally sensitive area near to Sycamore Canyon Wilderness Park (SCWP), a park of approximately 1500 acres, and it adjoins Quail Run Park (QRP), another natural open space area of about 30 acres. These two natural open space areas are critical components in the conservation of biodiversity in Western Riverside County and are important to the enjoyment of natural open space by residents of the area and visitors. The concerns documented in this letter focus on these two issues.

9.4 SCWP is core area within the Western Riverside County Multiple Species Habitat Conservation Plan (the MSHCP). When the plan was developed it was recognized that it was critical to link SCWP to the Box Springs Mountain Park, another core area to the east by the establishment of constrained linkage 7.

9.5 **1. Aesthetics (Section 5.1)**

Threshold A: Would the Project have a substantial adverse effect on a scenic vista? The DEIR states there would be a less than significant impact without mitigation. However, the DEIR failed to consider the significant impact on those individuals using the nearby natural space areas, and the impact on those who walk or bike along Central

9.5 Cont'd Avenue. The DEIR analysis assumes only that any effect would be transient of those driving on Central Avenue.

9.6 First, the Riverside Municipal Code Title 17 covering grading is quite clear in its intent to preserve the aesthetic quality of hillside areas through its regulation of grading on properties with an average natural slope of 10% or greater. The subject property has a current average slope of 25.9% (the DEIR incorrectly states this as the average natural slope (ANS); this is incorrect, the ANS was significantly greater than this figure prior to the extensive grading noted in section 4.2 of the DEIR)

9.7 The Grading Title states (section 17.04.010): a "purpose of this title [is] to regulate hillside and arroyo grading in a manner which minimizes the adverse effects of grading on natural landforms,….." and that:

"The required review of hillside/arroyo grading includes regulations to:

A. **Ensure that significant natural characteristics such as land form, vegetation, wildlife communities, scenic qualities, and open space can substantially be maintained**; to preserve unique and significant geologic; biologic and hydrologic features of public value; to encourage alternative approaches to conventional hillside construction practices by achieving land use patterns and intensities that are consistent with the natural characteristics of hill areas such as slope, landform vegetation, and scenic quality.

B. **Maintain the identity, image and environmental quality of the City**; and to achieve land use densities that are in keeping with the General Plan.

C. **Minimize the visual impact of grading**.

D. Minimize grading which relates to the natural contour of the land, and which will round off, in a natural manner, sharp angles at the top and ends of cut and fill slopes, and which does not result in a staircase or padding affect

…….

I. **Preserve major hillsides viewscapes visible from points within the city so that they are not detrimentally altered by the intrusion of highly visible cut and/or fill slopes, building lines** and/or road surfaces."

(Bold emphasis added).

The project totally ignores the hillside/arroyo grading regulations, and instead proposes to change the form of the slopes and create a "staircase" of tall walls and 2:1 slopes that total up to about 30ft (See DEIR Fig 3.0-7). This design is in direct conflict with item I above. These slopes are along Central Ave, used by many people exercising and biking to UCR, and along the south west edge bordering QRP, that is visible not only from this open space areas, but also by the large number of people using a major trail in SCWP (as shown in the next paragraph). The extreme degree to which this "staircasing" has a major

9.7 Cont'd impact on the landform and the scenic vista can be seen in Fig 5.1-5 "Overhead View of Basin & Walls".

9.8 Second, the height (approximately 50ft) of these buildings is entirely inconsistent with the viewscape in the area. In particular, SCWP is a very heavily used park, with the major point of entry on Central Ave, west of the project. From the parking area, a major trail first heads up hill towards the project and then follows the high ground south (see Fig 1 map). This stretch of trail provides dramatic views of the Box Springs Mountains to the east, looking over the project site. The project will severely impact this viewscape. Part of the line of sight does cross a few, largely hidden, single story homes, but the view is otherwise entirely undisturbed by buildings.

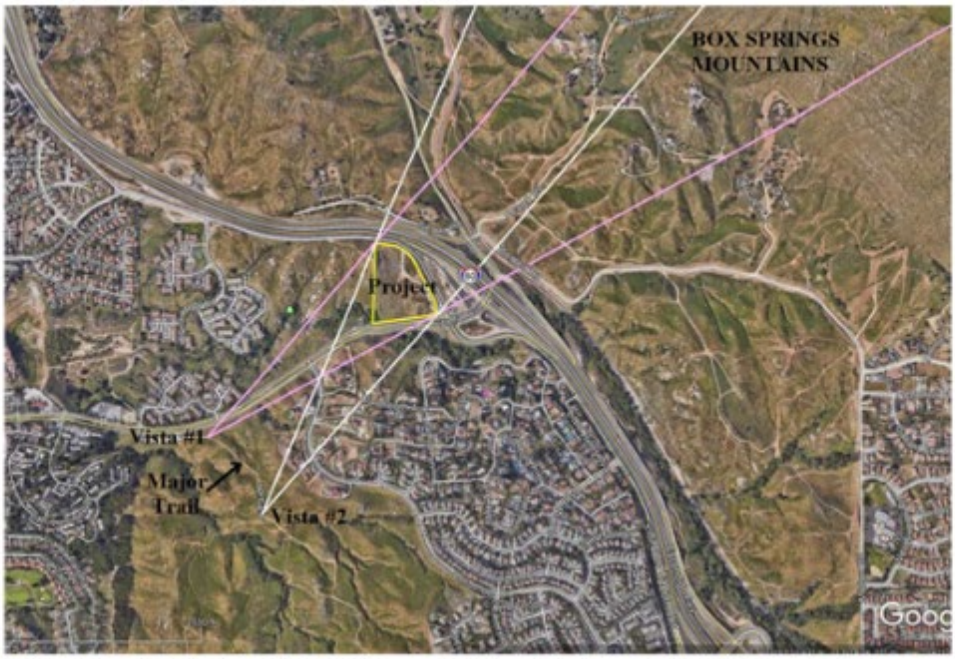


Fig 1: Lines (pink from SCWP vista point #1; white from SCWP vista point #2) show the undisturbed line of sight over the project site to the Box Springs Mountains. The project will create a huge 50ft high complex in this otherwise undisturbed viewscape.

9.9 In conclusion, the proposed project will have a significant impact on the viewscape, both due to its height and due to the very high staircase of slopes along its south and west edges. These issues have not been mitigated or even considered in the DEIR.

9.10 **Threshold D: Would the Project create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?**

It can be seen from Fig 1 that the project will stick up in the evening and nighttime viewscape from SCWP like a sore thumb, with lighted rooms at all levels of the building. This lighting will dramatically degrade the viewscape, with the only apparent mitigation being to significantly lower the height of the buildings to a height more compatible with the single-story homes to the south of the project site.

9.11 **2. Biological Resources (Section 5.3).**

Threshold B: Would the Project have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

The DEIR correctly identifies a blue line stream on the project site, although it incorrectly classifies it as intermittent. I have been observing the stream for many years and it has been flowing year-round. They also incorrectly identified the nature of the culvert that brings the stream under Central Ave to the site as an "84-inch corrugate metal culvert" (DEIR 5.3-10; App. C 5.1.1) when it actually almost immediately narrows to an approximately 65" diameter culvert made of concrete (see Appendix B within Appendix C, Photograph 8).

9.12 The conclusion that there is no wetland outside of the immediate stream bed is not based on appropriate data. It is stated that "Within the project footprint, the substrate within the drainage consisted of rock and loose sandy deposits that would not allow anaerobic conditions within the soil. Therefore, it was determined that no areas met all three wetland parameters and no jurisdictional wetland features exist within the project site." (DEIR 5.; App. C 5.1.2). A minimum requirement would be to determine the depth of the water table and perform other tests according to the guidelines in the Corps Arid West Regional Supplement (cited in the DEIR and defined in Appendix C of Appendix C); however, there is no indication that this was done (i.e. no data are provided). Thus, the wetland delineation is based on inadequate data.

9.13 **Comments relating to both Threshold B and Threshold F (defined below).** A critical feature of protecting the conserved 0.53 acres surrounding the stream and the adjoining QRP is to prevent any light or sound leakage. The MSHCP wildlands/urban interface requires that "Shielding shall be incorporated in project designs to ensure ambient lighting in the MSHCP Conservation Area is not increased". Given that the location currently has zero light, this means that there must be no light leakage whatsoever. While AES-1 states that project lighting must not spill from the project area in to the open space areas, it also states that shielding will be used "where feasible" and it does not address lights installed by residents.

9.14 In addition, there needs to be additional constraints to prevent the degradation of the same area due to invasive species planted in the project. The mitigation in the DEIR

9.14 Cont'd refers to Table 6.2. This is a good start, but it was not recognized in the DEIR analysis that the list of invasive plant species is dynamic, and appropriate mitigation must ensure that the plants have not been r3ecognized as invasive within inland Southern California since Table 6.2 was constructed. This can be done by checking the California Invasive Plant Council website and the Consortium of California Herbaria (CCH) and CalFlora databases to see if non-native plants from horticulture are being recorded as naturalized in local wildlands.

9.15 Fencing: the fencing separating the developed project from the 0.53 acres of open space and QRP must be of a construction that does not allow the passage of domestic cats, since they are a major wildlife predator. There appears to be no analysis of this concern in the DEIR. It is not clear if the tubular steel fence will encompass all of this boundary, but in any event, it needs to be specified how the passage of domestic cats will be prevented.

9.16 **Threshold D: Would the Project 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?**

and

Threshold F: Would the Project conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

Contrary to the conclusions of the DEIR, as proposed and mitigated the project will have a serious environmental impact on wildlife movement between SCWP and the Box Springs Mountains, and as such will conflict with the stated goals of the Western Riverside Multiple Species Habitat Conservation Plan (MSHCP). The result will be a serious environmental impact.

As noted in the DEIR, the project site is located in the area of the proposed constrained linkage 7 between these two locations as part of the MSHCP. Some of the relevant description (bold emphasis added) is (MSHCP vol 1 3:79-80, attached):

> "Proposed Constrained Linkage 7 is comprised of **upland Habitat in the vicinity of Central Avenue**. It is the **only connection from Sycamore Canyon Park to Box Springs Reserve**. This Linkage is important for species dispersal and would reduce the likelihood of species extinction as a result of population isolation…….
>
> Since this Linkage is affected by edge, it is anticipated that treatment and management of edge conditions along this Linkage will be necessary to ensure that it provides Habitat and movement functions for species using the Linkage…… Maintenance of an **adequate wildlife undercrossing at least 10-20 feet wide** with fencing and vegetative cover will be important to accommodate bobcat movement."

Thus, the description defines minimum dimensions of the linkage (10-20 ft wide), that it is upland habitat, and that edge mitigation/management will be important. The edge

9.16 Cont'd

mitigation involves adherence to the wildland/urban interface guidelines (MSHCP vol1 6:42-46).

Fig 2: Western entrance to the (approximately) 450-foot-long 5-foot diameter culvert under I215 freeway that is a non-feasible option for creating Constrained Linkage 7. (photo June 2019 LN)

The precise location of a viable constrained linkage 7 is undefined (see the RCA Joint Project Review of the project at the end of Appendix C). However, if the plan does not place it on the project site, then it appears that the RCA places it coming from the Park, north to Quail Run Park, and then onto the SW corner of the project site before crossing south under Central Avenue to APN 256-050-004. The linkage is then channeled by the high retaining wall created by Sycamore Canyon Boulevard to the culvert passing under the I215 freeway (Fig 2).

The culvert under the I215 is roughly 450ft long and less than 6ft in diameter, ending in APN 256-050-004 at its eastern end. At its western end, the entrance is blocked by a permanent pond (Fig 2). Furthermore, the culvert under Central Ave is also about 250ft long and less than 6ft in diameter. This route does not satisfy the basic necessary conditions for the linkage, which requires upland habitat and a minimum 10-20ft width. It is also extraordinarily unlikely that any of the animals covered under the MSHCP would

9.16 Cont'd travel the length of either of these culverts: the width at the bottom of the culverts that can be used by animals is narrow (perhaps 3ft) and most of that is taken up by running water, plus the entrance to the freeway culvert in APN 256-050-004 is fronted by a deep pool of water (Fig 2), and the entrance to the culvert under Central is habitually partially blocked (Fig 3). Creation of a 10-20 ft wide useable tunnel under the freeway and under Central does not appear feasible at this time.

Fig 3: Southern entrance to the (approximately) 250-foot-long 5-foot diameter culvert under Central Ave that is a non-feasible option for creating Constrained Linkage 7.

9.17 The vastly superior (and much more straightforward) route for the linkage is to stay to the north side of Central Ave, leaving Quail Run Park, and passing across the project site before following Central Ave under the 215 freeway. In the absence of the impacts of this project, this route is likely to be the one naturally followed by the main target species, the bobcat, since this route avoids the very narrow, wet culvert under Central Ave and the extraordinarily long and wet one under the freeway, noting that no route for a functional constrained linkage 7 has yet been defined by the RCA.

9.18 The potential environmental impact of failing to create a functioning constrained linkage 7 is very great. SCWP is a multi-species wildlife preserve that is a core area within the MSHCP as well as being an enormously valuable resource for the City of Riverside and its residents. However, it has one major drawback: it is of moderate size and has become effectively isolated from all other natural areas. This drawback is minimized if a habitat

9.18 Cont'd

connection can be maintained between Sycamore Canyon Wilderness Park and the Box Springs Mountain Park, i.e. by constrained linkage 7.

Despite its size (about 1500 acres), the animal populations of the Park are vulnerable to extinction if the Park becomes completely isolated. Data from studies of habitat islands both natural (islands, mountaintops, etc.) and artificial (national parks) have established that completely isolated populations of moderate size go extinct, even if most of the time they might seem robust and consist of several hundred individuals. Moreover, populations in areas like the SCWP that are subject to environmental fluctuation (e.g. annual rainfall variation associated with climate cycles and climate change) and disturbance (such as fire, and invasion by exotic species) are at increased risk of extinction. This outcome has been established using mathematical and simulation models.

This concern over the potential loss of biodiversity via a local extinction was an important factor influencing the design of the MSHCP, and in the case of SCWP, constrained linkage 7 was proposed to mitigate its isolation, since apart from this proposed linkage SCWP has become completely isolated from all other core areas of the MSHCP.

9.19

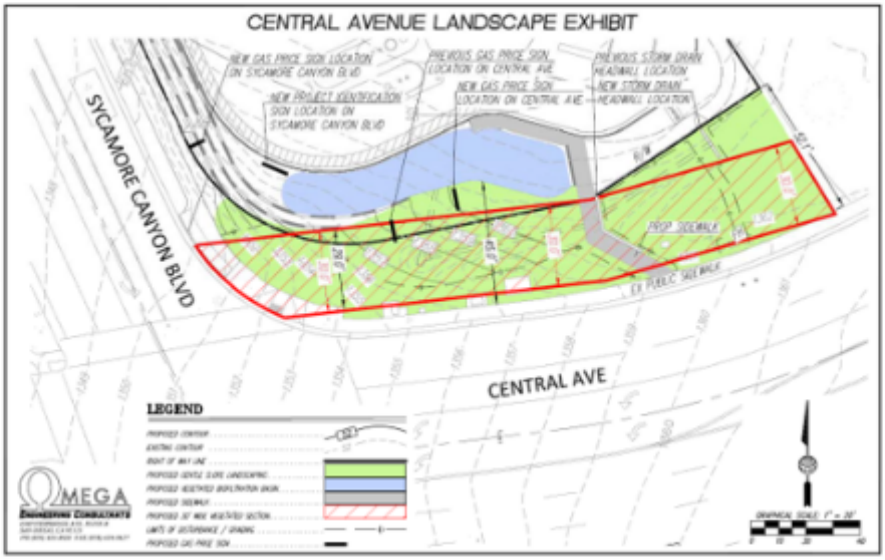


Fig 4: Commercial Project to the immediate east of the project showing the inclusion of a 30ft wide buffer to encourage wildlife movement.

The only viable route for constrained linkage 7 appears to be from QRP along a habitat corridor following the north side of Central Ave to the Freeway underpass. The option for

9.19 Cont'd such a route has already been incorporated into the design of the commercial development to the immediate east of the project. Specifically, the inclusion of a 30ft wide buffer along Central Ave with natural vegetation and minimal to no light intrusion (fig 4). In my expert opinion, it is essential that a similar 30ft (or more) buffer along Central Ave be incorporated into the project, from the western edge of the property as a continuous strip to the eastern edge at Sycamore Canyon Boulevard. This wildlife buffer should be planted with native vegetation and protected to the extent possible according to the MSHCP wildland/urban interface guidelines.

9.20 **Cumulative Environmental Effects**:

The DEIR concluded that there will not be any cumulative effects of the project: "potential cumulative impacts to sensitive biological resources were found to be less than significant with implementation of mitigation measures MM BIO-1 through MM BIO-15 and AES-1" (DEIR 5.3.7). However, there is no consideration of the most serious cumulative effect which has been the progressive isolation of SCWP through development, both commercial (notable warehouses) and suburban. At this point in time the ONLY remaining link between SCWP and any other wildlife area is through constrained linkage 7, which this project, as currently planned, will effectively destroy. The isolation of SCWP will inexorably lead to the progressive loss of its biodiversity over time (as outlined above), a very considerable environmental impact.

9.21 **3. Wildfire (Section 5.13)**

Threshold F: Would the Project expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?

It is important to prevent wildfire mitigation undermining biological mitigation, specifically so that the necessary wildfire mitigation does not degrade any of the open space areas either on or adjacent to the project. For example, MM FIRE-7 "Thinning Zone 2 Required Maintenance" involves the removal and/or thinning of "native vegetation". According to the Fire Zones "Fuel Treatment Site Plan" (DEIR Appendix K), there is no on-site Zone 2 protection along most of the western edge of the project. Why is the project not mitigating for the fire risk by placing the buildings further back from the open space areas (both onsite and QRP) along the projects western edge? Furthermore, a portion of the zone 1 area in the center of this western edge appears to be dangerously truncated. This zone mapping represents a failure to mitigate the wildfire risk, creating a very serious environmental impact.

Thank you for your attention to these concerns.

Regards,
Leonard Nunney (951 313 5386)
For Friends of Riverside's Hills (email watkinshill@juno.com)
4477 Picacho Dr, Riverside, Ca 92507.

Letter 9 – Leonard Nunney, Friends of Riverside's Hills

Commenter: Leonard Nunney

Date: May 3, 2021

Response 9.1:

The commenter states the project has a number of potentially significant environmental impacts that are not adequately considered, without specifying what those are. The commenter then states the Friends of Riverside's Hills (FRH) opposes this project in its current form.

This comment reflects the commenter's opinion and does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR are not required.

Response 9.2:

The commenter states he is a professor at the University of California Riverside and focuses his research concerns on the ability of small populations to avoid extinction. He then states the number of scientific papers he has peer-reviewed. The commenter is also part of the Scientific Advisory Panel that was involved in the establishment of the MSHCP.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR are not required.

Response 9.3:

The commenter states the proposed project site is in a very environmental sensitive area near to Sycamore Canyon Wilderness Park (SCWP) and it adjoin the Quail Run Park (QRP). The commenter then states the importance of these two natural open space areas for the conservation of biodiversity.

This comment provides the commenter's opinion regarding the sensitivity of the site and generally summarizes the uses surrounding the Project site. The comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR are not required.

Response 9.4:

The commenter states the SCWP is core area within the MSHCP. The commenter then states the MSHCP recognized that it was a critical link to SCWP to the Box Spring Mountain Park by the establishment of constrained Linkage 7.

The DEIR does in fact describe Proposed Constrained Linkage 7 as follows (p.5.3-1) as quoted from the MSHCP:

Proposed Constrained Linkage 7

As described in the MSHCP, the Proposed Constrained Linkage 7 is comprised of upland habitat in the vicinity of Central Avenue west of Interstate 215/State Route 60. This constrained linkage is the only connection from Sycamore Canyon Wilderness Park to the south and the Box Spring Reserve to the east (east of Interstate 215/State Route 60). This linkage is important for species dispersal and would reduce the decline of species loss from population isolation. Habitat for MSHCP species such as cactus wren and Bell's sage sparrow occurs within this linkage. This linkage is assumed to provide movement opportunities for common mammals such as bobcat.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR are not required.

Response 9.5:

The commenter states the DEIR failed to consider the significant impact on individuals who use nearby natural space areas and those who walk or bike along Central Avenue in analyzing the proposed Project's potential impacts on a scenic vista. The commenter does not specify what scenic vista they are referring to, so it is assumed the scenic vista in question refers to views of the QROS Park from the Sycamore Canyon Wilderness Park (SCWP) and from Central Avenue as the commenter references the QROS Park and SCWP in subsequent comments.

Please see Response 5a.2 for the response regarding public views of QROS Park from the adjacent Central Avenue sidewalk to the south of the Park and how the proposed Project would not significantly impact these views. The view of a person sitting in a vehicle traveling along Central Avenue would be substantially similar to the view of a person walking along Central Avenue sidewalk or a person riding a bike in the bike lane adjacent to the sidewalk towards the QROS Park as eyelevel for all of these is generally between 4 and 7 feet in height from the road surface or sidewalk. Therefore, the analysis of views and scenic vistas would be the same for car passengers and those walking or biking along Central Avenue next to the QROS Park.

While the commenter states the DEIR does not consider potentially significant impacts to those utilizing nearby natural space areas (i.e., SCW Park), the commenter fails to provide substantial evidence to support the claim the proposed Project would significantly impact views from nearby natural space areas. Though the commenter does provide an aerial view figure in a subsequent related comment (see Comment 9.8 in Letter 9 above) of proposed views from SCWP toward the QROS Park and proposed Project site to the northwest, the figure does not demonstrate what these public views from the SCWP of the QROS Park and beyond actually entail. A reference photo obtained utilizing available Google Maps photo points from the SCWP (see Reference Photo 3 below) refutes the commenter's claim that the proposed Project would significantly impact scenic vista views of the QROS Park and beyond of the Box Springs Mountains when viewed from the nearby natural open space area of SCWP. Reference Photo 3 depicts a viewpoint from SCWP facing northeast toward the QROS Park (denoted by the yellow arrow) and the proposed Project site (denoted by the red arrow), while the photo location provides a Google Map aerial

reference of the location within SCWP and the view direction. As can be seen in photo location, the photo point location is within the vicinity of Vista Point 1 and Vista Point 2 (identified by the commenter in comment 9.8.) As Reference Photo 3 shows, implementation of the proposed Project would not significantly impact scenic vista views of the QROS Park and beyond to the Box Springs Mountains. As depicted, the current residential developments to the west and east of QROS Park, which are situated at topographical elevations higher than the QROS Park, and do not obstruct or significantly impact views of QROS Park or the mountain views beyond when viewed from the SCWP. The proposed Project would be constructed east of the QROS Park at a similar to lower topographic elevation than the current residential developments (as noted on DEIR p. 5.1-24, the proposed Project site is generally close in elevation to the adjacent SR-60/I-215 freeway, for reference). Thus, the proposed Project would not significantly impact public scenic vista views from the nearby SCWP of the QROS Park or the mountain views beyond.

This comment is noted for the record and revisions to the DEIR are not warranted.

Response 9.5 reference photo 3: View from within SCWP northeast towards QROS Park and proposed Project site.

Response 9.5 reference Photo 3: Photo location and direction of view.

Response 9.6:

The commenter essentially states that as the proposed Project site has a current average slope of 25.9%, the site is subject to Riverside Municipal Code (RMC) Title 17 – Grading as it relates to preserving the aesthetic quality of hillside areas through regulating grading on properties with average natural slopes of 10% or greater. The commenter states RMC Title 17 is "quite clear in its intent to preserve the aesthetic quality of hillside areas" and it is implied that the proposed Project site, due to its current slope, qualifies as a hillside of aesthetic quality.

As previously discussed under Response 5a.4, the proposed Project site shows evidence of extensive past grading, with aerial photography indicating the site was utilized for construction staging operations and grading in 2005 to 2006 for the realignment of Sycamore Canyon Boulevard (DEIR p. 5.1-2). This is supported by proposed Project's Geotechnical Evaluation (DEIR Appendix F), which additionally states that review of previous site documentation, including reports from 1997 and 2007, indicate the site has been extensively graded (DEIR Appendix F, p. 6). These accounts of extensive grading occurred prior to the proposed Project site's annexation into the City in 2015.

As previously discussed under Response 5a.4, although the DEIR indicates "per the City records, the Project site has an average natural slope (ANS) of 25.9 percent, this City data is automatically calculated based on topographic contours from 1998, and therefore, represents a prior site condition to what exists today. The commenter argues that the site as a current slope of 25.9 percent, and the average natural slope was much larger due to the extensive grading on site. "Average natural slope" is the slope determined pursuant to the City of Riverside's adopted Average Natural Slope Formula specified in Section 19.100.050 of the RMC. (RMC § 17.08.150.) As stated in both relevant sections, the average natural slope shall be computed from photogrammetric maps, grading permit plans and other data or evidence approved by the Public Works Department. An updated Average Natural Slope (ANS) calculation for the Project parcel was prepared in July 2021 by the Civil Engineer in accordance with the formula in the Riverside Municipal Code (RMC), Title 17 – Grading, Chapter 17.08 Definitions to determine the Project site's current ANS, which is 14.8 percent. This calculation was made using topo of the site flown in October 2018 at 40 scale 1 foot accuracy. The City Public Works Department reviewed and accepted the calculation as it was found consistent with Public Works standards and with common engineering practice. The Project site is not within or is adjacent to the boundaries of the Mockingbird Canyon, Woodcrest, Prenda, Alessandro, Tequesquite, and Springbrook Arroyos. The southwest corner of the site does contain a drainage feature that is mapped as a blue-line drainage/ stream; however, the Project has been designed to avoid this drainage feature.

Due to the average natural slope of the project site and the presence of the blue line stream, the Project is required to comply with the Hillside/Arroyo Grading Ordinance, Section 17.28.020 of the Riverside Municipal Code. The Project is proposing a Grading Exception as allowed under Chapter 17.32 of the RMC in order to construct retaining walls greater than 3 feet in height in an area open to the public view and greater than 6 feet in height in an area not open to the public view. A Grading Exception is also being requested for slopes to exceed 20 feet in height where an existing hill in the northern part of the site will be partially recontoured. (p. 5.6-17.) Thus, while the Project site is not located in the RC Zone, the Project will comply with the City's Hillside

Grading Ordinance, with the approval of a Grading Exception. The DEIR thus fully addresses the grading proposed by the Project and compliance with City regulations put in place to, in part, "preserve prominent landforms within the community" (RMC § 17.04.010.), consistent with the purpose of Measure R to avoid destruction of City hills, ridgelines, arroyos, and watersheds.

Consistent with the City's General Plan Policy LU-4.2 regarding enforcement of the hillside grading provisions in the City's Code (Title 17), the Project would utilize the more flat and disturbed portions of the site created previously by undocumented grading operations. Areas with the greatest extent of topographic relief and lack of disturbance on the site would not be graded or impacted by the proposed development but will be preserved and left in place. (DEIR p. 5.8-16.)

Therefore, this comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and revisions to the DEIR are not warranted.

Response 9.7:

The commenter states the proposed Project does not consider the hillside/arroyo grading regulations cited in comment Letter 9 and instead proposes to create a "staircase" of 2:1 slopes that would be in conflict with the cited grading regulations. The commenter goes on to state this "staircasing" would have a significant impact on the landform and scenic vista from QROS Park and SCWP and cites DEIR Figure 5.1-5 – Overhead View of Basin and Walls.

The commenter cites DEIR Figure 5.1-5 to support the commenter's argument of an "extreme degree of staircasing" that would impact scenic vista views. However, based upon Figure 5.1-5, the commenter's description appears to be exaggerated and out of appropriate visual context. The view of the proposed Project's walls and 2:1 slopes depicted in DEIR Figure 5.1-5 is provided from a relatively close-up overhead view. If Comment 9.7 is to be understood, the commenter's concern stems from proposed Project walls and 2:1 slopes significantly impacting scenic vista views from trails in the SCWP in addition to impacting public views for those traveling/biking/exercising along Central Avenue. However, the commenter fails to provide adequate evidence or an explanation for how these impacts to public views along Central Avenue would occur other than to state the "extreme degree" of "staircasing" would have a "major impact on the landform." As previously discussed in Response 5a.2, the proposed Project would not significantly impact public views of QROS Park from Central Avenue (refer to Response 5a.2 for a more detailed discussion). Moreover, potential impacts to scenic vista views from the SCWP due to the "extreme degree" of "staircasing" stated in reference to DEIR Figure 5.1-5 would not be as significant or "extreme" as the commenter implies. As discussed in Response 9.5, implementation of the proposed Project would not significantly impact views from SCWP of QROS Park or the mountain views beyond. Due to factors such as distance, topography, and existing development, views of the "staircasing" the commenter identifies would be far less "extreme" and exaggerated when viewed from trails within the SCW Park than the commenter alleges based on DEIR Figure 5.1-5.

Additionally, one of the stated objectives of the Project is to "incorporate design and landscaping elements that complement and are responsive to the Canyon Crest community and edge conditions that buffer the project's effect on the nearby natural environments, including the City of Riverside's Quail Run Open Space and the Sycamore Canyon Wilderness Park." (pp. 1.0-3 – 1.0-4.) The Project design and landscaping will comply with City's Design Guidelines and the Zoning Code and would not substantially degrade the existing visual character of the area. (p. 5.1-26.)Further, per Section 17.28.010 – General Requirements, under RMC Title 17 – Grading, "the slope of cut surfaces shall be no steeper than is safe for the intended use and shall be no steeper than two horizontal to one vertical (2:1)" unless a steeper slope has been justified by a soils engineering and/or engineering geology report. Thus, the proposed Project's 2:1 slopes would be consistent with Title 17 General Requirements for slope and is not proposing a slope greater, steeper, or more "extreme" than what is specified in Title 17 for slope.

Therefore, this comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and revisions to the DEIR are not warranted.

Response 9.8:

The commenter states that implementation of the proposed Project would "severely impact" proposed viewscapes of the Box Springs mountains to the east when viewed from trails within SCWP. The commenter provides an aerial map figure of the proposed viewscapes and identifies two vista points facing east from the SCW Park trails, noting that these views provide an "undisturbed line of sight over the project site to the Box Springs Mountains."

The DEIR analyzed the impact of Project development on views of the Box Springs Mountains. Specifically, the DEIR recognizes "the most notable scenic resource near the Project site is Box Springs Mountain, located approximately 2 miles east, refer to Figure 3.0-3C, Photo 4." The DEIR notes that the SR-60 /I-215 freeway is located between the Project site and Box Springs Mountain and that the Project may obstruct partial views of Box Springs Mountain for people traveling east along Central Avenue, while immediately adjacent to the site, but as this would be for a short distance and duration, it would not be considered significant. The DEIR concludes the Project would not significantly impact views of the Box Springs Mountain due to the distance of this scenic resource from the Project site as well as the higher elevations of these mountains compared to the Project site. (p. 5.1-25.)

Refer to Response 9.5 and accompanying Reference Photo 3 for a discussion and visual reference of how the proposed Project would not significantly impact scenic vista views/views from SCWP trails when facing northeast toward QROS Park, the proposed Project site, and the mountain views beyond. As discussed in Response 9.5 and displayed on accompanying Reference Photo 3, implementation of the proposed Project would not significantly impact or obstruct views of mountains to the east of SCWP.

Therefore, this comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the

DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and revisions to the DEIR are not warranted.

Response 9.9:

The commenter provides a concluding statement that the proposed Project would impact the viewscapes identified in Comments 9.5 – 9.8 due to the Project's height and "very high staircase of slopes." The commenter states these issues have not been considered or mitigated in the DEIR.

Please see Responses 9.5 – 9.8 for detailed discussions on and visual reference figures of how the proposed Project would not significantly impact viewscapes identified by the commenter. The aesthetics topics identified by the commenter have been fully discussed in the DEIR as set forth in Responses 9.5 – 9.8, and found not to present actual or significant aesthetics issues or impacts. Accordingly, no mitigation for such issues were required or included in the DEIR.

Therefore, this comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and revisions to the DEIR are not warranted.

Response 9.10:

The commenter states that proposed Project lighting would "dramatically degrade" the evening and nighttime viewscapes from SCWP and implies that significantly lowering the height of the buildings to a height compatible with the single-story buildings to the south of the proposed Project site is the only adequate mitigation.

Please see Response 9.5 and accompanying Reference Photo 3 for a discussion and visual reference of how the proposed Project would not significantly impact or obstruct viewscapes from the SCWP. Both SCWP and QROS Park are undeveloped parks as defined in the RMC Chapter 9, and they are closed from a half hour after sunset to a half hour before sunrise, or when it is dark. Therefore, nighttime viewscapes from SCWP for the public are not applicable/authorized.

As is discussed in Response 9.5 and shown in Reference Photo 3, the proposed Project would not impact or obstruct views to the east from SCWP to the rather extreme or "dramatic" degree the commenter alleges. When considered in the context of the photo reference view provided in Reference Photo 3, there are existing single-story buildings (single family homes) to the south, southwest, and northeast of the Project on hills at higher elevations than the Project. Therefore, there are existing buildings with sources of night lighting on the hillsides surrounding the Project. Night lighting from vehicles on the I-215/SR/60 Freeway adjacent to the Project site also contributes to the existing night light in the Project area. Although the Project will introduce new sources of interior lights inside the buildings, these do not generate substantial light spillage outside of the buildings. As outlined in the DEIR, Section 5.1.5, p. 5.1-27:

> "The proposed Project's exterior lighting from the residential units or from the parking area will meet the City's Zoning Code requirements for support structure height, intensity, flickering/flashing, placement, shielding, orientation and style. The City will require an exterior lighting plan as a condition of project approval (City of Riverside Zoning Code,

> Chapter 19.566) … Overall levels of light generated by the new buildings and passing cars would be comparable to typical light levels in an urban environment and surrounding areas. Additionally, the Project shall be designed to prevent light spillage from the Project to the adjacent open space, to be confirmed with review and approval of a Photometric Plan by the City's Community & Economic Development Department, as outlined in MM AES-1."

The Project was also reviewed by the Riverside County Airport Land Use Commission (ALUC) to ensure that the project is consistent with the compatibility zone as well as in compliance with the land use standards in the Riverside County Airport Land Use Plan (RCALUP), in which the March Air Reserve Base/Inland Port Airport Land Use Compatibility Plan (March ALUCP) is included. On April 30, 2020, ALUC found the Project to be consistent with the 2014 March ALUCP, provided that the City applies recommended conditions including:

1. Any new outdoor lighting that is installed shall be hooded or shielded as to prevent either the spillage of lumens or reflection into the sky. Outdoor lighting shall be downward facing. (p. 7.0-6.)

The proposed Project would be compatible with the existing surrounding residential development and lighting from the proposed Project would not "dramatically degrade the viewscape" or "stick up like a sore thumb" when viewed from SCWP as implied by the commenter. Outdoor lighting would be hooded or shielded to prevent spillage of lumens or reflection into the sky. Additionally, the Project shall be designed to prevent light spillage from the Project to the adjacent open space, to be confirmed with review and approval of a Photometric Plan by the City's Community & Economic Development Department, as outlined in MM AES-1.

Therefore, this comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and revisions to the DEIR are not warranted.

Response 9.11:

The commenter states the blue line stream has been incorrectly classified as he has seen the stream flowing year-round. The commenter also states the DEIR has incorrect measurements for the culvert under Central Ave.

As outlined in the Delineation of State and Federal Jurisdictional Waters Report (contained in Appendix C of the DEIR), page 5:

2.1 U.S. ARMY CORPS OF ENGINEERS

Since 1972, the Corps and U.S. Environmental Protection Agency (EPA) have jointly regulated the discharge of dredged or fill material into waters of the United States, including wetlands, pursuant to Section 404 of the CWA. The Corps and EPA define "fill material" to include any "material placed in waters of the United States where the material has the effect of: (i) replacing any portion of a water of the United States with dry land; or (ii) changing the bottom elevation of any portion of the waters of the United States." Examples include, but are not limited to, sand, rock, clay, construction debris, wood chips, and "materials used to create any structure or infrastructure in the waters of the United States." In April of 2020, the Corps and the EPA provided a new definition for *waters of the United States* [Federal Register, Vol. 85, No. 77 (April 21, 2020)] which encompass: the territorial seas and traditional navigable waters; perennial and intermittent tributaries that contribute surface water flow to such waters; certain lakes, ponds, and impoundments of jurisdictional waters; and wetlands adjacent to other jurisdictional waters. Additionally, the new definition identifies 12 categories of those waters and features that are excluded from the definition of ''waters of the United State, such as features that only contain water in direct response to rainfall (e.g., ephemeral features), groundwater, many ditches, prior converted cropland, and waste treatment systems.

As such, waters of the US include the territorial seas and traditional navigable waters; perennial and intermittent tributaries that contribute surface water flow to such waters (including the mapped drainage course onsite), certain lakes, ponds, and impoundments of jurisdictional waters, and wetlands adjacent to other jurisdictional waters.

As outlined in the Code of Federal Regulations, Title 33: Navigation and Navigable Waters, Part 328 – Definitions of Waters of the United States9, *intermittent* is defined as follows:

> "(5) Intermittent. The term intermittent means surface water flowing continuously during certain time of the year and more than in direct response to precipitation (e.g., seasonally when the groundwater table is elevated or when snowpack melts)."

Therefore, the definition of intermittent stream does include streams with surface water flowing continuously and does not indicated a minimum or maximum amount of time to meet this definition. Also as outlined in the Delineation of State and Federal Jurisdictional Waters Report (contained in Appendix C of the DEIR), page 7: "The analysis presented in this report is supported by field surveys and verification of site conditions conducted on October 17, 2018 and on December 10, 2019." As surface water was observed during both of these field surveys, the stream was correctly classified as "intermittent." The commenter simply states "I have been observing the stream for many years and it has been flowing year-round" without providing any substantial evidence, such as dates and times of observations and photographs of the stream with surface water, whereas the DEIR findings are based on substantial evidence contained in the Delineation of State and Federal Jurisdictional Waters Report (contained in Appendix C of the DEIR), including site visit dates and photographs.

9https://www.ecfr.gov/cgi-bin/text-idx?SID=80abfd5c8eac05a777958a831236dbed&mc=true&node=pt33.3.328&rgn=div5#se33.3.328_13

As stated on page 17 in the Jurisdictional Delineation report (*Delineation of State and Federal Jurisdictional Waters*)(DEIR Appendix C), "Based on the results of this delineation and the proposed project footprint, no impacts to Corps jurisdictional waters will occur from project implementation." The same is stated for the Regional Board and CDFW jurisdictional waters. Additionally, the DEIR Section 5.3 Biological Resources, under the response to Threshold C states:

> "Based on design plans, no temporary or permanent impacts are anticipated to occur to the willow riparian plant community or its associated drainage on the southwest corner of the Project site. Therefore, development of the Project site will not result in impacts to Corps, Regional Board, or CDFW jurisdiction and regulatory approvals will not be required."

As stated on page 14 of the Jurisdictional Delineation report (DEIR Appendix C) "Onsite, the drainage feature begins at an 84-inch corrugate metal culvert extending under Central Avenue." Photograph 8's description indicates "Looking at the 84-inch culvert under Central Ave." The DEIR and delineation report state the measurement of the beginning of the metal culvert. Although the commenter indicates that the culvert narrows to an approximate 65" diameter culvert, this is not supported by substantial evidence, and does not indicate that the description of the culvert as 84-inches (Photograph 8) is incorrect.

These comments do not affect the analysis completed or conclusions provided in the DEIR, do not provide new information or evidence related to the analysis completed in the DEIR, and do not reflect on the adequacy or content of the DEIR. These comments are noted for the record, and revisions to the DEIR are not required.

Response 9.12:

The commenter states the conclusion that there is no wetland outside of the immediate stream bed is not based on appropriate data. The commenter then states that a minimum requirement would be to determine the depth of the water table and perform other tests according to the guidelines in the *Corps Arid West Regional Supplement*. The commenter then states this was not done and therefore the wetland delineation is based on inadequate data.

As stated in the Jurisdictional Delineation report (DEIR Appendix C, page 131 of the Appendix C PDF), "the Corps jurisdictional wetlands are delineated using the methods outlined in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0*. This document is one of a series of Regional Supplements to the Corps Wetland Delineation Manual (Corps 1987). The identification of wetlands is based on a three-parameter approach involving indicators of hydrophytic vegetation, hydric soil, and wetland hydrology. In order to be considered a wetland, an area must exhibit at least minimal characteristics within these three (3) parameters." Per the jurisdictional delineation conducted by ELMT, under section 5.1.2 Wetland Features, "Although evidence of hydrology (i.e., surface water) was present within the onsite drainage feature and the drainage supported a dominance of hydrophytic vegetation, the drainage feature would likely not meet the requirements of hydric soils." Additionally, per the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0,* water-table monitoring data is usually only collected during difficult wetland situations such

as lack of indicators of hydrophytic vegetation (p.95). However, since the proposed Project supported hydrophytic vegetation, determination of the water table is not required. Therefore, the Jurisdictional Delineation report was correctly prepared using the methods outlined in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region, Version 2.0*, a Regional Supplements to the Corps Wetland Delineation Manual (Corps 1987).

Furthermore, as outlined in Response 9.11 above, the DEIR Section 5.3 Biological Resources, under the response to Threshold C states:

> "Based on design plans, no temporary or permanent impacts are anticipated to occur to the willow riparian plant community or its associated drainage on the southwest corner of the Project site. Therefore, development of the Project site will not result in impacts to Corps, Regional Board, or CDFW jurisdiction and regulatory approvals will not be required."

The Project has been designed to avoid and not result in any direct (temporary or permanent) impacts to the drainage feature and associated riparian vegetation.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR are not required.

Response 9.13:

The commenter is expressing concern over Threshold B and Threshold F under Section 5.3 Biological Resources of the DEIR. The commenter states a feature of protecting the conserved 0.53 acres surrounding the stream and the adjoining QROS Park is to prevent any light or sound leakage. The commenter also states that the MSHCP Conservation Area states there should be no increase in lighting and therefore since the given location has zero light, no light leakage should occur.

The MSHCP wildlands/urban interface does require that shielding be incorporated in project designs. As discussed in the DEIR, Section 5.1 Aesthetics, page 5.1-6 under Light and Glare, "There are no existing lights within the Project site. However, there are existing streetlights at the intersection of Sycamore Canyon Boulevard and Central Avenue and along Central Avenue to the southwest of the Project site. Existing night lighting in the Project area also comes from headlights on vehicles traveling along the adjacent roadways and the SR-60/I-215 freeway. Overall, the level of light and glare in the project vicinity is typical of a residential area next to a freeway and nearby commercial and institutional uses." Although the Project site does not have existing lights within the site, light is present from other sources surrounding the Project site.

Mitigation Measure **MM AES-1** requires approval of a photometric (lighting) plan by the City and compliance with the MSHCP. To minimize indirect impacts to species protected under Section 6.1.2 of the MSHCP, Mitigation Measures **MM BIO-4**, **MM BIO-5**, and **MM BIO-6** are required to ensure construction noise and vibration impacts on sensitive biological receivers are reduced to less than significant levels (DEIR, p.5.9-38). Prior to construction, the proposed Project must have an approved photometric plan. A Site Lighting Photometric Plan has been prepared for the

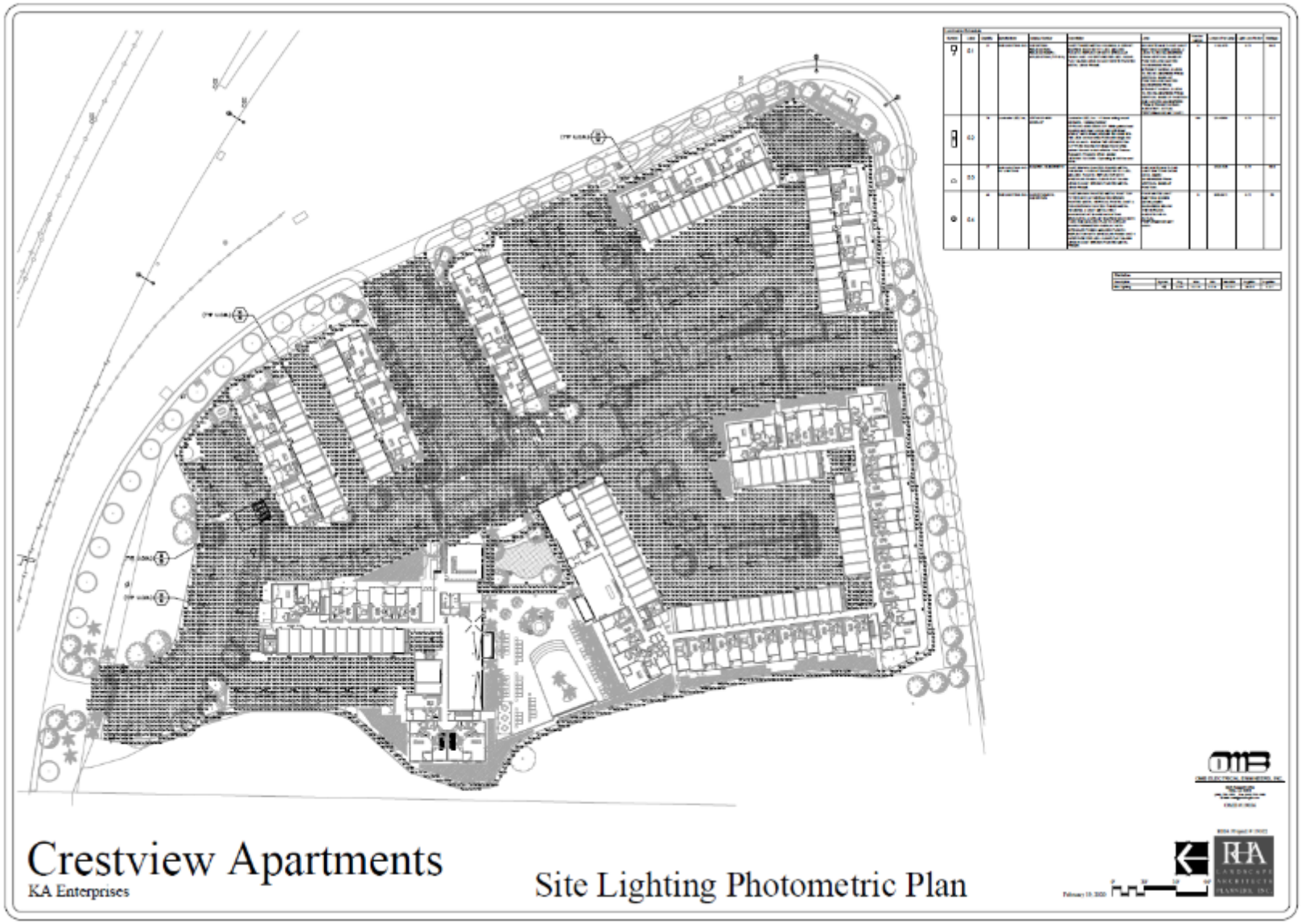
Project, shown in FEIR Figure 2.0-1 below, identifies the exterior light types, locations, quantity, description, lumens per lamp, and that the proposed lighting will not "spill" beyond the development pad/footprint. As stated in the DEIR, Section 5.1.6 (p. 5.1-28), within Mitigation Measure **MM AES-1** outlined below, the Project shall be designed in such a manner as to prevent light spillage from the Project to the adjacent and nearby open space areas and the purpose of the photometric plan is to enable the City to ensure that the approved light design requirements are included in the final building plan sheets, prior to issuance of building permits.

> **MM AES-1:** Prior to the issuance of building permits, the applicant shall submit a photometric (lighting) plan for approval by the Community & Economic Development Department, Planning Division. The approved light design requirements shall be included on the final building plan sheets. The lighting plan shall incorporate the following requirements:
>
> - The project shall be designed in such a manner as to prevent light spillage from the project to the adjacent and nearby open space areas
> - Project lighting shall not exceed an intensity of one foot-candle
> - Shielding shall be employed, where feasible
> - Any night lighting shall be directed away from natural open space areas and directed downward and towards the center of the development
> - No project lights shall blink, flash, oscillate, or be of unusually high intensity or brightness
> - Energy-efficient LPS or HPS lamps shall be used exclusively throughout the project site to dampen glare
> - Exterior lights shall be only "warm" LED lights (<3000K color temperature).

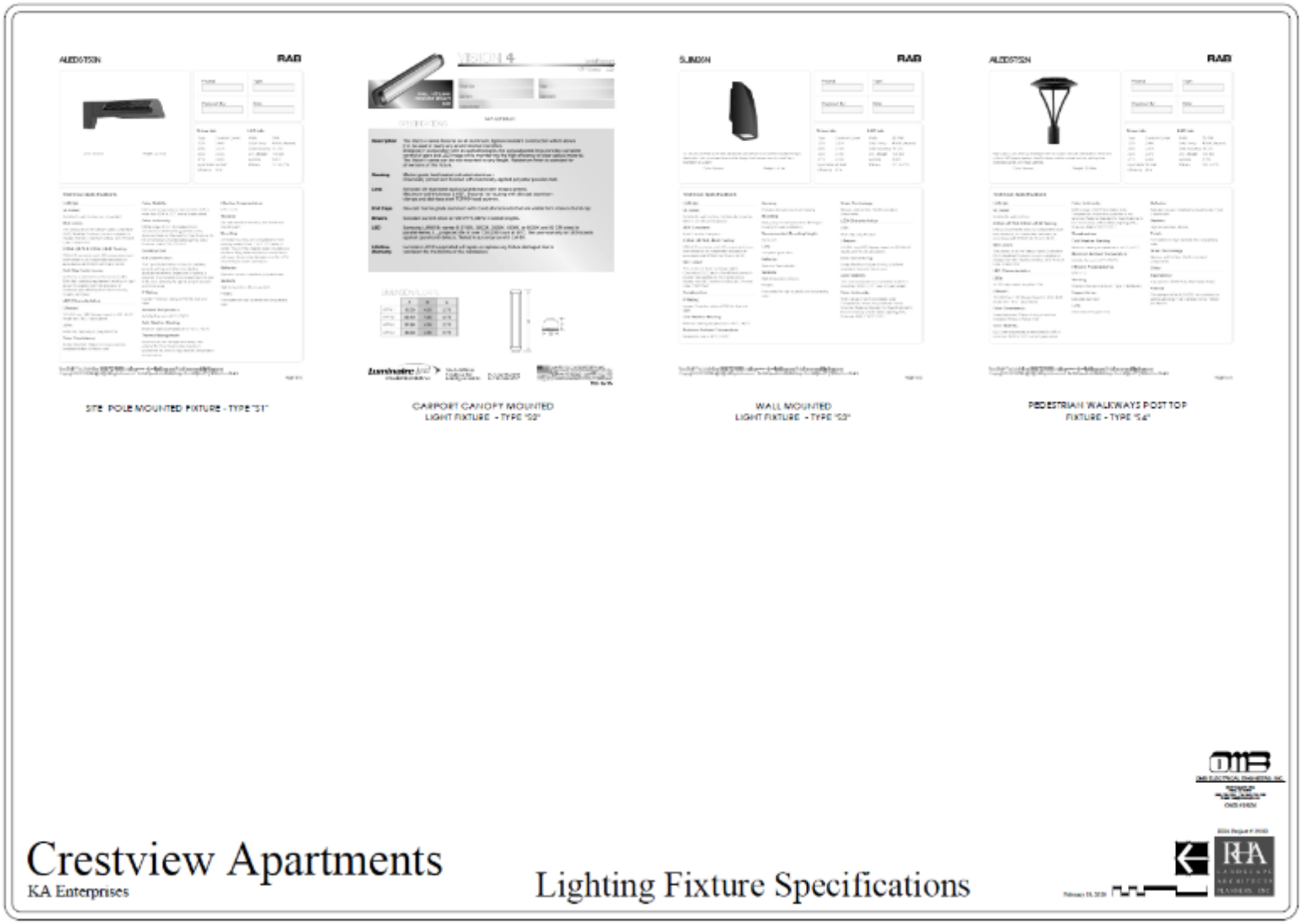
Therefore, mitigation measure **MM AES-1** is fully enforceable and does not improperly defer mitigation. Additionally, as stated in Response 9.10, in order to comply with the March ALUCP, the City shall impose conditions that any new outdoor lighting that is installed shall be hooded or shielded as to prevent either the spillage of lumens or reflection into the sky. Outdoor lighting shall be downward facing. (p. 7.0-6.) Thus, the conserved 0.53 acres surrounding the stream and the adjoining QROS Park are adequately protected and the Project as conditioned and mitigated will prevent any light or sound leakage into these areas.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR are not required.

FEIR Figure 2.0-1. Site Lighting Photometric Plan



FEIR Figure 2.0-2. Lighting Fixture Specifications



Response 9.14:

The commenter states there needs to be additional constraints to prevent the degradation of the same area due to invasive species planted in the project. The commenter states the Table 6.2 [assumed to be of the MSHCP, although the commenter does not specify] is a good start but checking the California Invasive Plant Council website and the Consortium of California Herbaria (CCH) and CalFlora databases would be a good source to ensure that the plants have not been recognized as invasive within inland Southern California since Table 6.2 was constructed.

The City of Riverside is a permittee of the MSHCP and is required to ensure that the Project is in compliance with the Plan. Table 5.3-2 in the DEIR (p. 5.3-29) outlines the Project's compliance with MSHCP Urban/Wildlands Interface Guidelines, including invasives. As outlined in the DEIR in Table 5.3-2:

> "Plant species acceptable for the Project's landscaping must not be considered an invasive species pursuant to Table 6.2 of the MSHCP. To ensure this, the final landscape plans must be reviewed and verified by the RCA and the City for consistency with the plant species list in Table 6.2 of the MSHCP. (ELMT(a) p. 38) Therefore, the Project is consistent with the MSHCP Urban/Wildlands Interface invasive Guidelines."

As part of the Design Review (DR) of the Project by the City, City staff already reviewed the conceptual landscape plans for consistency with MSHCP Table 6.2. In addition, the Western Riverside Regional Conservation Authority (RCA), as part of the Joint Project Review (DEIR Appendix C), reviewed the Project for consistency with the MSHCP, and was also found consistent with Section 6.1.4 of the MSHCP pertaining to Urban/Wildlands Interface Guidelines.

As outlined in the MSHCP, Volume 1, Section 6, page 6-3:

> "Payment of the mitigation fee and compliance with the requirements of Section 6.0 are intended to provide full mitigation under the California Environmental Quality Act (CEQA), National Environmental Policy Act (NEPA), Federal Endangered Species Act, and California Endangered Species Act for impacts to the species and habitats covered by the MSHCP pursuant to agreements with the US Fish and Wildlife Service, the California Department of Fish and Game and/or any other appropriate participating regulatory agencies as set forth in the Implementing Agreement for the MSHCP."

For the following reasons the Project is not required to provide additional constraints on plants used for the Project:

- The Project was determined to be consistent with the MSHCP, including with Section 6.1.4 of the MSHCP pertaining to Urban/Wildlands Interface Guidelines;
- The conceptual landscape plans have been reviewed by the City through the development review process and determined to not include any of the invasive plants identified in Table 6.2 of the MSHCP;
- The MSHCP does not have any provisions for the Project's landscaping to abide with the California Invasive Plant Council, the Consortium of California Herbaria (CCH) and CalFlora databases; and

- Compliance with Section 6.0 of the MSHCP and payment of the mitigation fee provide full mitigation pursuant to CEQA, NEPA and federal and state endangered species acts for species and habitats covered under the Plan.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR are not required.

Response 9.15:

The commenter states the DEIR appears to have no analysis relating to the effectiveness of the tubular steel fence to prevent passage of domestic cats. The commenter also states it is not clear if the tubular steel fence will encompass all of the boundaries.

As stated in the DEIR, Section 5.3.3 Project Design Considerations, page 5.3-21:

> "The Project proposes the construction of a 6-foot high tubular steel fence around the outer edge of the development, which will function as a perimeter barrier and help retain residents **and their pets** [emphasis added] within the developed portion of the site and away from the conservation area in the southwest portion of the site. In addition, in the southwest corner of the site, a series of terraced retaining walls is proposed that will further separate the perimeter walkway and fence and the conservation area. The series of terraced retaining walls includes five retaining walls, up to five feet tall, with a 2:1 slope between the walls. The project will be conditioned by the City to submit the fencing plan to the RCA for review and approval prior to issuance of a building permit."

As stated in the DEIR Project Description, Section 3.3.3 Open Space, Landscaping and Walls/Fencing (page 3.0-16), "A 6-foot-high tubular steel perimeter fence, painted dark metallic grey, is proposed around the perimeter of the property, Figure 3.0-8, Wall and Fence Exhibit." Per Figure 3.0-8 Conceptual Wall and Fence Exhibit of the DEIR shows the proposed fencing and that it will surround the entirety of the apartment buildings, parking areas and common open space areas, located on the outer edge of the walking perimeter loop trail and connecting to the two gate-controlled driveways. Additionally, a series of terraced retaining walls in the southwest corner of the site will serve as an additional barrier between the apartments and the conservation area. As outlined in the Joint Project Review, Section c, vi, page 5 of 5 (contained in Appendix C of DEIR):

> "Proposed land uses adjacent to the MSHCP Conservation Area shall incorporate barriers, where appropriate, in individual project designs to minimize unauthorized public access, domestic animal predation, illegal trespass, or dumping into the MSHCP Conservation Areas. Such barriers may include native landscaping, rocks/boulders, fencing, walls, signage, and/or other appropriate mechanisms. The project proposes the construction of 6-foot-high tubular steel fence around the outer edge of the project site. In addition, in the southwest corner of the site, a series of terraced retaining walls is proposed that will separate the perimeter walkway and fence and the conservation area. The series of terraced retaining walls includes 5 retaining walls, up to 5 feet tall, with a 2:1 slope between

the walls. The project will be conditioned to submit the fencing plan to the RCA for review and approval prior to issuance of the building permit."

The purpose of the condition to submit the fencing plan to the RCA for review and approval prior to issuance of the building permit is to ensure final plans include fencing that will provide an appropriate barrier and minimize domestic animal predation, in accordance with the MSHCP.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR are not required.

Response 9.16:

The commenter discusses concern over Threshold D and Threshold F on Section 5.3 Biological Resources. The commenter states the proposed Project will have a serious environmental impact on wildlife movement between SCWP and the Box Springs Mountains. The commenter then cites the MSHCP and states the importance on the Proposed Constrained Linkage 7 and how it would reduce the likelihood of species extinction as a result of population isolation. Additionally, the commenter discusses how this Linkage is affected by edge and how an adequate wildlife undercrossing at least 10-20 feet wide with fencing and vegetation cover will be important to accommodate bobcat movement and that creation of a 10-20-foot-wide usable tunnel under the freeway and under Central Avenue does not appear feasible at this time.

The MSHCP defines what a constrained linkage is (Volume I, Section 3, pages 3-2479-3-80):

Constrained Linkage	A constricted connection expected to provide for movement of identified Planning Species between Core Areas, where options for assembly of the connection are limited due to existing patterns of use.

Therefore, by definition a constrained linkage has limited options for assembly of the connection due to existing patterns of development.

The commenter states the precise location of a viable constrained Linkage 7 is undefined, which is correct, as that is the intent of the MSHCP, in order to provide flexibility as part of the long-term MSHCP implementation process, as outlined in the MSHCP Volume I, Section 3, page 3-26 below:

The Cores and Linkages depicted in *Figure 3-2* are based on the Conceptual Reserve Design developed for analytical purposes for the MSHCP. Likewise, the quantitative information presented with each Core or Linkage is based on the Conceptual Reserve Design. As described in *Section 3.2.1* of this document, the Conceptual Reserve Design forms the basis for identifying target conservation acreages and generating quantitative data for the MSHCP biological analyses. The Conceptual Reserve Design is intended to describe one way in which the MSHCP Conservation Area could be configured consistent with MSHCP Criteria; it does not represent the only possible reserve that could be assembled consistent with the MSHCP Criteria. Flexibility is intended to be incorporated in the Reserve Assembly process to enable new information and data to be incorporated as part of the long-term MSHCP implementation process.

As outlined in the Habitat Assessment and MSHCP Consistency Analysis report page 35 and MSHCP Volume I, Section 3, pages 3-79 to 3-80, Proposed Constrained Linkage 7 is described as:

Proposed Constrained Linkage 7 is comprised of upland Habitat in the vicinity of Central Avenue. It is the only connection from Sycamore Canyon Park to Box Springs Reserve. This Linkage is important for species dispersal and would reduce the likelihood of species extinction as a result of population isolation. Habitat for Planning Species such as cactus wren and Bell's sage sparrow occurs within this Linkage. This Linkage likely provides for movement of common mammals such as bobcat. Maintenance of contiguous Habitat with appropriate refugia for resting, such as rockpiles, brushpiles, windfalls, hollow snags and hollow trees, is important for dispersal of juveniles.

As outlined in the Habitat Assessment and MSHCP Consistency Analysis report pages 35-36:

Exhibit 7, *MSHCP Criteria Area and Targeted Conservation*, shows the location of the project site within Criteria Cell 721 and the targeted conservation area for cell 721. Conservation within this Cell is planned as needed for the assemblage of Proposed Constrained Linkage 7.

The entire project site is located within Criteria Cell 721, which is an independent Cell that is not affiliated with any Cell Group. Conservation within Criteria Cell 721 will contribute to the assembly of Proposed Constrained Linkage 7, with an emphasis on the conservation of coastal sage scrub habitat and riparian scrub, woodlands and forest. Areas conserved within Criteria Cell 721 will be connected to coastal sage scrub habitat proposed for conservation to the north in Criteria Cell 635 and to the west in Criteria Cell 719. Conservation within Criteria Cell 721 will range from 35 to 45 percent of the Cell, focusing on its northeastern and central portions.

Using the mid-range area described for conservation (40%) within Criteria Cell 721, approximately 64 acres are described for conservation within this approximate 160-acre Criteria Cell. To date, it is assumed that none of these acres have been conserved. There are approximately 96 acres of developable lands within in Criteria Cell 721 located outside of the northeastern and central portions (35%-45%) of this Criteria Cell that are not described for conservation. Based on the graphic depiction shown in Exhibit 7, the proposed project site is not located within the targeted conservation area and would not conflict with the conservation goals for Criteria Cell 721 or the assembly of Proposed Constrained Linkage 7.

The project site is located immediately north of the targeted conservation area for Proposed Constrained Linkage 7 and is separated from the targeted conservation area by Central Avenue. The majority of the other undeveloped areas, outside of the area target conservation area provide minimal habitat for target species. Most of the area outside of the target conservation area are developed or have been subject to existing development and/or anthropogenic disturbances. Further, the willow forest plant community and associated drainage on the southwest corner of the project site will not be impacted, and will continue to provide a wildlife movement corridor under Central Avenue south and west of the project site. It should be noted that Proposed Constrained Linkage 7 has been confined by prior freeway expansion and residential development on Lochmoor Drive, and has been re-routed up and over Central Avenue and across the southwest corner of the site. The proposed project will provide 0.53 acre of conservation in the southwest corner of the site for the re-routed Proposed Constrained Linkage 7, as identified in Exhibit 8, *MSHCP Conservation Area*.

Potential indirect impacts to Proposed Constrained Linkage 7 (i.e., noise, lighting, etc.) will be minimized with implementation of the MSHCP Urbans Wildlands Guidelines described in Section 5.3.4 above and with implementation of the mitigation measures listed in Section 7.4 below.

As stated above, the Proposed Constrained Linkage 7 has been confined by freeway expansion and residential development on Lochmoor Drive and has been re-routed up and over Central Avenue and across the southwest corner of the site.

As outlined in the DEIR page 5.3-27,

> The Project site is located immediately north of the MSHCP Proposed Constrained Linkage 7, which connects Sycamore Canyon Wilderness Park to the south to the Box Springs Reserve to the east (east of Interstate 215/State Route 60) and is generally constrained by urban development. Habitat on the Project site is heavily disturbed and there is little to no incentive for bobcats to occur on the upland portion of the Project site, as it is surrounded on three sides by development (primarily transportation land uses). Box Spring Canyon, located south of the Project site (south of Central Avenue), and the small portion of willow riparian plant community on southwest corner of the Project site, have the potential to be used by migrating or dispersing wildlife, including birds and mammals. (ELMT(a) p. 42)

Per the MSHCP Volume I, Section 3, pages 3-79-3-80:

As shown in the table below, areas not affected by edge within this Linkage total approximately 65 acres of the total 175 acres of the Linkage. Since this Linkage is affected by edge, it is anticipated that treatment and management of edge conditions along this Linkage will be necessary to ensure that it provides Habitat and movement functions for species using the Linkage. Guidelines Pertaining to Urban/Wildlands Interface for the management of edge factors such as lighting, urban runoff, toxics, and domestic predators are presented in *Section 6.1* of this document. The Linkage is constrained by existing urban Development and roadways. Adjacent planned community Development, urbanized areas of the City of Riverside and proposed widening activity of I-215 may affect bobcat movement through this Constrained Linkage. Maintenance of an adequate wildlife undercrossing at least 10-20 feet wide with fencing and vegetative cover will be important to accommodate bobcat movement.

PROPOSED CONSTRAINED LINKAGE 7						
Approximate Dimension Data for Linkage						
Approx. Total (ac.)	Approx. Edge (ac.)	Approx. Interior (ac.)	Approx. Perimeter/ Area Ratio (ft/ac)	Planning Species	Adjacent Proposed General Plan Land Use	Major Covered Activities Potentially Affecting Linkage
175	110	65	118	Bell's sage sparrow, cactus wren, and bobcat	City (Riverside) and Community Development	I-215

As outlined above, the I-215 widening was a major covered activity project (planned project at the time the MSHCP was developed and has since been completed) that was expressly identified as potentially affecting bobcat movement through this Constrained Linkage.

As outlined above, the project site is located immediately north of the targeted conservation area for Proposed Constrained Linkage 7 and is separated from the targeted conservation area by Central Avenue. The riparian plant community and associated drainage on the southwest corner of the project site will not be impacted and will continue to provide a wildlife movement corridor under Central Avenue south and west of the project site. Alternatively, wildlife not utilizing the culvert under Central Avenue could cross over Central Avenue roadway and continue along the drainage and associated vegetation within and beyond the project boundaries. The project will provide 0.53 acre of conservation in the southwest corner of the site for the re-routed Proposed Constrained Linkage 7.

Furthermore, the Regional Conservation Authority (RCA) conducted a consistency conclusion, as identified in the Joint Project Review of the Project (JPR # 08-01-29-01, dated 11/18/2020), contained in Appendix C of the DEIR, and found "*Consistency Conclusion: The project is consistent with both the Criteria and other Plan requirements*." The JPR was submitted to the US Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) as well for their review and also determined the project to be consistent with the requirements of the MSHCP.

Therefore, the Project will not conflict with the stated goals of the MSHCP, including for the Proposed Constrained Linkage 7 and as outlined in the MSHCP, Volume 1, Section 6, page 6-3:

> "Payment of the mitigation fee and compliance with the requirements of Section 6.0 are intended to provide full mitigation under the California Environmental Quality Act (CEQA), National Environmental Policy Act (NEPA), Federal Endangered Species Act, and California Endangered Species Act for impacts to the species and habitats covered by the MSHCP pursuant to agreements with the US Fish and Wildlife Service, the California Department of Fish and Game and/or any other appropriate participating regulatory agencies as set forth in the Implementing Agreement for the MSHCP."

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR are not warranted.

Response 9.17:

The commenter identifies a potential route for Linkage 7 that would be better suited for bobcat: the proposed Linkage 7 starts on the north side of Central Ave, leaving QROS Park, and passing across the Project site before following Central Avenue under the I-215 freeway. The commenter then states that this route is likely to be the one naturally followed by bobcat, since this route avoids the very narrow, wet culvert under Central Ave and the extraordinarily long and wet one under the freeway.

As outlined in Response 9.16 above, the RCA is not required to define the route of Proposed Constrained Linkage 7 and that the Proposed Constrained Linkage 7 has been confined by freeway expansion and residential development on Lochmoor Drive and has been re-routed up and over Central Avenue and across the southwest corner of the site. The RCA conducted a consistency conclusion, as identified in the Joint Project Review of the Project (JPR # 08-01-29-01, dated 11/18/2020), supporting this finding and the Project's consistency with the MSHCP, and further supported by consistency review by the wildlife agencies as well (USFWS & CDFW).

Although the Proposed Constrained Linkage 7 has been re-routed up and over Central Avenue and across the southwest corner of the site through the Joint Project Review process, that does not exclude bobcat from using the alternative route identified by the commenter. As identified in the MSHCP (Volume I, Section 3, pages 3-79-3-80), "maintenance of an adequate wildlife undercrossing at least 10-20 feet wide with fencing and vegetative cover will be important to accommodate bobcat movement." The proposed Project also supports this alternative movement corridor for bobcat from the QROS Park to the west, along the drainage course and associated vegetation (could be outside of and adjacent to in upland areas) in the southwest corner of the site, which is being set aside and preserved (proposed 0.53-acre MSHCP Conservation). The Project includes a landscaped slope on the north side of Central Avenue along the Project's frontage on Central Avenue. Per DEIR Figure 3.0-4: Conceptual Site Plan, of the width of the landscaped slope between the perimeter fence of the apartment buildings and the sidewalk along Central Avenue ranges from generally 20-37 feet wide, with 16 feet wide being the narrowest point behind the bus turnout. This area includes terraced retaining walls ranging from 3-5 feet

high running in an east-west direction, parallel to Central Avenue and would not block or restrict the movement of bobcat along this corridor. Therefore, the Project provides a 10-20-foot-wide area with vegetative cover, consistent with what is identified in the MSHCP and by the commenter, adjacent to Central Avenue, for wildlife movement including bobcats, across the Project site before following Central Avenue under the I-215 freeway.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR are not required.

Response 9.18: The commenter states the importance of creating a functioning constrained Linkage 7 and then discusses the major drawback of SCWP which is its moderate size and the probability of the park becoming isolated from other natural areas. The commenter then states the Park's vulnerability to extinction due to complete isolation and mentions studies have shown completely isolated population of moderate size can go extinct. The commenter also states populations within SCWP are at an increased risk of extinction per outcomes established using mathematical and simulation models (although the commenter does not cite the models used).

The commenter also states, "Data from studies of habitat islands both natural (islands, mountaintops, etc.) and artificial (national parks) have established that completely isolated populations of moderate size go extinct, even if most of the time they might seem robust and consist of several hundred individuals." However, the commenter failed to provide any references to studies (in the form of substantial evidence) related to isolated populations in SCWP to support their claim.

As outlined in Response 9.16 above, the project site is located immediately north of the targeted conservation area for Proposed Constrained Linkage 7 and is separated from the targeted conservation area by Central Avenue. The riparian plant community and associated drainage on the southwest corner of the project site will not be impacted and will continue to provide a wildlife movement corridor under Central Avenue south and west of the project site. Alternatively, wildlife not utilizing the culvert under Central Avenue could cross over Central Avenue roadway and continue along the drainage and associated vegetation within and beyond the project boundaries. The project will provide 0.53 acre of conservation in the southwest corner of the site for the re-routed Proposed Constrained Linkage 7.

Furthermore, the Regional Conservation Authority (RCA) conducted a consistency conclusion, as identified in the Joint Project Review of the Project (JPR # 08-01-29-01, dated 11/18/2020), contained in Appendix C of the DEIR, and found "*Consistency Conclusion: The project is consistent with both the Criteria and other Plan requirements*." The JPR was submitted to the US Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW) as well for their review and also determined the project to be consistent with the requirements of the MSHCP.

Therefore, the Project will not conflict with the stated goals of the MSHCP, including for the Proposed Constrained Linkage 7, and as outlined in the MSHCP, Volume 1, Section 6, page 6-3, "payment of the mitigation fee and compliance with the requirements of Section 6.0 are intended to provide full mitigation under the California Environmental Quality Act (CEQA), National Environmental Policy Act (NEPA), Federal Endangered Species Act, and California Endangered Species Act for impacts to the species and habitats covered by the MSHCP..." The DEIR indicated (p. 5.3-28) "Potential Project impacts to wildlife movement will be less than significant with implementation of mitigation measures **MM BIO-2** through **MM BIO-15** and **MM AES-1**."

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR are not required.

Response 9.19:

The commenter states that since the only viable route for constrained Linkage 7 appears to be from QROS Park along a habitat corridor following the north side of Central Ave to the Freeway underpass the project should include a 30-foot-wide buffer along Central Ave with native vegetation similar to another project east to the proposed Project.

Refer to Response 9.17 above, the proposed Project provides a 16 to 37-foot-wide buffer/slope along the north side of Central Avenue, and thus is consistent with what is identified in the MSHCP adjacent to Central Avenue (10-20-foot-wide area with vegetative cover), for wildlife movement including bobcats, across the Project site before following Central Avenue under the I-215 freeway. The buffer/slope along Central Avenue for the Proposed Project would be in alignment with that of the project across Sycamore Canyon Boulevard.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR are not required.

Response 9.20:

The commenter states the DEIR does not consider the most serious cumulative effect which has been the progressive isolation of SCWP through development, both commercial (notable warehouses) and suburban. The commenter then states the only remaining link between SCWP and any other wildlife area is through constrained Linkage 7 which the project would destroy.

Refer to Response 9.18 above.

Furthermore, as identified in DEIR Section 5.3.7 (pages 5.3-41 to 5.3-42):

The primary effects of the proposed Project, when considered with the buildout of long-range plans in the geographic area covered by the MSHCP, would be the cumulative loss of habitat for sensitive species throughout the MSHCP area. Although the Project site is disturbed it still provides open space for foraging, refuge, and potentially nesting habitat for birds, including raptors and passerines.

The MSHCP addresses 146 Covered Species that depend on a broad range of habitats and geographic areas within Western Riverside County and includes threatened and endangered species and regionally- or locally- sensitive species that have specific habitat requirements and conservation and management needs. The MSHCP addresses biological impacts for take of Covered Species within the MSHCP Area. Impacts to Covered Species and establishment and implementation of a regional conservation strategy and other measures included in the MSHCP address federal, state, and local mitigation requirements for these species and their habitats. Specifically, Section 4.4 of the MSHCP states that:

> *The MSHCP was specifically designed to cover a large geographical area so that it would protect numerous endangered species and habitats throughout the region. It is the projected cumulative effect of future development that has required the preparation and implementation of the MSHCP to protect multiple habitats and multiple endangered species.*

The MSHCP goes on to state that:

> *The LDMF [Local Development Mitigation Fee] is to be charged throughout the Plan Area to all future development within the western part of the County and the Cities in order to provide a coordinated conservation area and implementation program that will facilitate the preservation of biological diversity, as well as maintain the region's quality of life.*

The reason for the imposition of the mitigation fee over the entire region is that the loss of habitat for endangered species is a regional issue resulting from the cumulative effect of continuing development throughout all the jurisdictions in Western Riverside County. Finally, Section 5.1 of the MSHCP states that:

> *It is anticipated that new development in the Plan Area will fund not only the mitigation of the impacts associated with its proportionate share of regional development, but also the impacts associated with the future development of more than 332,000 residential units and commercial and industrial development projected to be built in the Plan Area over the next 25 years.*

Compliance with the MSHCP covers biological impacts to 146 species, and this Project complies with the MSHCP. With implementation of Project design considerations, mitigation measures **MM BIO-1** through **MM BIO-15**, **MM AES-1**, and payment of the MSHCP Local Development Mitigation Fee, the Project is fully consistent with the MSHCP. As the Project complies with the MSHCP, compliance with the MSHCP provide a mechanism of mitigation for both project specific and cumulative development mitigation. All development projects within the City of Riverside as well as the City of Moreno Valley and Riverside County are required to comply with the MSHCP as these agencies are all permittees under the plan. With implementation of mitigation measures MM BIO-1 through MM BIO-12 and payment of the MSHCP Local Development Mitigation Fee, potential cumulative impacts to sensitive biological resources were found to be **less than significant with implementation of mitigation measures MM BIO-1 through MM BIO-15 and AES-1**.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR are not required.

Response 9.21:

The commenter is concerned with the project not mitigating for fire risk by placing the buildings further backfrom the open space areas (both onsite and QROS Park) along the projects western edge. Specifically, the commenter is considered with no on-site Zone 2 protection along most of the western edge of the project.

Response to Threshold C in Section 5.13, Wildlife, in the DEIR, states "The Project site is bordered by Sycamore Canyon Boulevard to the north and east and Central Avenue to the south. The Quail Run Open Space borders the west side of the Project site and sits at a lower elevation at the southwest border and a higher elevation at the northwest border. Generally, though, the Quail Run Open Space follows an overall downslope as it spans further west from the Project site." The following sections address wildfire risks from the proposed Project's development footprint.

Per the DEIR, p. 5.13-21, "Sycamore Canyon Boulevard is to the north and east of the Project site as well as the SR-60 and I-215. A fire starting along the I-215/SR-60 corridor during a strong Santa Ana wind condition would blow embers directly toward the Project site. However, the combination of the boulevard and freeways results in over 200 feet of a near vegetation free landscape. (FPP p., 11) Thus, the risk for the Project site to exacerbate wildfire risks for a wildfire spreading to the Project site from these roadways or vice versa would be lessened as there is generally little wildfire fuel on roadways and with the implementation of the AM&M design considerations described in Section 5.13.3 Project Design Considerations."

Per the DEIR, p. 5.13-21, "the eastern boundary of the Project site abuts Sycamore Canyon Boulevard. The presence of Sycamore Canyon Boulevard along the eastern boundary is highly important as this roadway is approximately 70 feet in width. The presence of this roadway in addition to required irrigated fire resistant landscape planted along the west side of Sycamore Canyon Boulevard; the installation of ignition resistant construction in all the buildings, parking lots, emergency access roadways; and construction requirements provided in the Project's FPP would be sufficient to lessen any threat of wildfire and embers coming from the east of the Project, and thus lessen the risk for the Project to exacerbate wildfire risks from this area of the Project site. (FPP pp., 11-12)"

Per the DEIR, p., 5.13-21 – 5.13-22, "The southern boundary of the Project abuts Central Avenue, which borders approximately 101 acres of undeveloped land on the other side of the road from the Project. Southwest or west winds of up to 30 mph may occur along the southern boundary. These "*rare event*" dry winds pose a threat to the structures near the southern Project boundary, mostly from embers from a wildland fire occurring to the south in the undeveloped land adjacent to Central Avenue. However, the wildland fuels would be removed within the Project due to grading and replaced with structures and Zone 1 landscaping. This removal of wildland fuels, in addition to implementation of required fuel treatments, installation of ignition resistant construction, and construction requirements per the Project's FPP would reduce the risk of the Project exacerbating wildfire risks along the Project's southern boundary. (FPP p., 12-13)"

Per the DEIR, p. 5.13-22, "The western Project boundary is the greatest wildland fire threat to the Project. A wildland fire burning west of the Project during a "*rare event*" west or southwest wind could burn with high intensity towards the Project site. Fuels in the area are light to moderate with slopes in the adjacent open space area ranging from 25-40%. Most of the proposed buildings are located uphill from the expected fire behavior, which is a concern as a fire will generally spread uphill, as described above. However, several parking areas and roadways would separate buildings 1, 2, 3, 4, 5, and portions of buildings 6 and 7 from the wildland fuels, and per the FPP, carports within the defensible space area(s) would be constructed with non-combustible materials (FPP pp., 14, 24). As depicted in Figure 5.13-4 Fuel Treatment Site Plan, the portions of buildings 6 and 7 that are along/within closer proximity to the western Project boundary would be buffered by Irrigated Zone 1 areas as well as portions of Thinning Zone 2 areas. Additionally, as is also depicted and described in Figure 5.13-4, building 7 and the exposed faces of building 6 would be wrapped with 2-hour rated walls, equipped with NFPA 13 sprinkler systems, and would have fire hydrants located within close proximity to each building (see Figure 5.13-4)."

For the reasons stated above, the proposed Project does not have additional Zone 2 protection along the western edge of the Project. (see also FPP pp. 3, 4.) However, as stated on p. 5.13-22 of the DEIR, "The Project specific FPP was reviewed and approved by Riverside Fire Department (RFD) and includes Project construction requirements as described in Section 5.13.3 above, as well as proposed mitigation measures **MM FIRE-1** through **MM FIRE-17**, that would reduce the Project's potential to exacerbate wildfire risks to a less than significant level. The Project will also incorporate RMC standards related to fire suppression at the Project site such as smoke detectors meeting the current CBC and CFCs installed in all units and other enclosed common areas such as hallways, recreation rooms, and utility rooms. Additional fire suppression equipment such as alarm systems, fire extinguishers and sprinklers will also be incorporated as recommended by the RFD. Furthermore, Project structures would be required to comply with the CFC with regard to emergency fire access and use of building materials that would limit the spread of wildfire to the greatest extent possible. This would reduce potential spread of a wildfire from the Project site to areas outside the Project site boundary, reducing the Project's potential to exacerbate wildfire risks."

The wildfire mitigation, including the Thinning Zones, will not encroach into or degrade any of the open space areas on or adjacent to the project. The Project will not encroach with any project related improvements/impacts to the QROS Park or the onsite 0.53 MSHCP conservation area. As outlined in the JPR (Appendix C of DEIR), page 4 of 5, "Manufactured slopes associated with the proposed site development shall not extend into the MSHCP Conservation Area. Fuel management areas shall not extend into the MSHCP Conservation Area."

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR are not required.

2.4 Comment Letters Received After Public Comment Period

The following letters were received after the CEQA public comment period ended on May 3, 2021. As outlined in the CEQA Guidelines Section 15088(a), a lead agency is only required to prepare written responses to comments received during the noticed comment period. Although the City is not required to prepare written responses to comment letters received after close of the noticed comment period of the DEIR, which was from March 19, 2021, until May 3, 2021, the City has prepared written responses, as outlined below.

Comment Letter 10 – Everett DeLano, DeLano & DeLano

Comment letter 10 commences on the next page.

DELANO & DELANO

May 26, 2021

Planning Commission
City of Riverside
3900 Main Street
Riverside, California 92522

Re: May 27, 2021 Meeting, Agenda Item No. 3: Crestview Apartments Project, P19-0775, P19-0776, P19-0777, P20-0307, P20-0308, P20-00309, P20-0310 & P19-0905

Dear Honorable Members of the Planning Commission:

This letter is submitted on behalf of Friends of Riverside's Hills in connection with the proposed Crestview Apartments project ("Project") and related Environmental Impact Report ("EIR").

I. The Project Is Inconsistent with the General Plan and Municipal Code

A. The Project Violates the General Plan

10.1 "The propriety of virtually any local decision affecting land use and development depends upon consistency with the applicable general plan and its elements." *Orange Citizens for Parks and Recreation v. Sup. Ct.* (2016) 2 Cal.5th 141, 153 (citation omitted). If a Project "will frustrate the General Plan's goals and policies, it is inconsistent with the County's General Plan unless it also includes definite affirmative commitments to mitigate the adverse effect or effects." *Napa Citizens for Honest Government v. Napa County Board of Supervisors* (2001) 91 Cal.App.4th 342, 379. "[G]eneral consistencies with plan policies cannot overcome 'specific, mandatory and fundamental inconsistences' with plan policies." *Clover Valley Foundation v. City of Rocklin* (2011) 197 Cal.App.4th 200,239.

The Project violates the General Plan's Land Use Element. The Project as a whole is in violation of Policy LU-4.1, which requires that developments adhere to the protections for hillside development set forth in Proposition R and Measure C. The Staff Report features extensive commentary on the constrained topography of the Project site, as seen in the two proposed variances on page six of the Staff Report and the three proposed grading exceptions on page seven. These proposed exceptions and variances concede that the Project Site is "significantly restricted due to topography and boundary conditions." Staff Report, Exhibit 8 at 1. The exceptions and variances also violate the Land Use Element of the General Plan.

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10.1 Cont'd

The first proposed variance is to allow installation of retaining walls within the front yard setback to exceed three feet in height. This is inconsistent with Objective LU-3 which seeks to preserve prominent ridgelines and hillsides as important community visual, recreational, and biological assets. Retaining walls that exceed three feet in height do not preserve this hillside as an important community visual set.

The second proposed variance is to allow installation of improvements within the 15-foot fully landscaped front yard setback, which include trellises, raised planters, signage, shade structures, retaining walls, perimeter fencing, gates, and parking lot paving. This proposed variance is incompatible with LU-3.1, which calls for pursuing methods to preserve hillside open space and natural habitat.

The first grading exception, to allow up to 11.7-foot-high retaining walls, where the Grading Code allows a maximum height of six feet, is also inconsistent with LU-3. Also inconsistent with LU-3 is the second grading exception, to allow the height of retaining walls visible from the public to be up to 5 feet where the Grading Code allows a maximum height of 3 feet.

The third grading exception, to allow slopes with a ratio of 3.9:1 or steeper to be up to 28 feet in vertical height, is inconsistent with LU-4.2, which enforces the hillside grading provisions of the City's Grading Code to minimize ground disturbance associated with hillside development.

The variance justifications provided by the developer claim that the granting of the variances are consistent with the goals set forth by the Riverside General Plan Open Space and Conservation Element of protecting scenic views, prominent landforms and natural open spaces. General Plan at OS-5. A six-foot wall does little to protect scenic views. Changing the form of the slopes and creating a "staircase" of tall walls and slopes that total up to 30 feet as proposed in the Project does little to complement prominent landforms or natural open spaces. Each proposed variance or exception violates the General Plan.

B. The Project Violates the Municipal Code

10.2

To uphold a variance, the approving agency must provide an "affirmative showing that the subject property differs substantially and in relevant aspects from other parcels in the zone." *Topanga Assn. for a Scenic Community v. County of Los Angeles* (1974) 11 Cal.3d 506, 522. "[D]ata focusing on the qualities of the property and Project for which the variance is sought, the desirability of the proposed development, the attractiveness of its design, the benefits to the community, or the economic difficulties of developing the property in conformance with the zoning regulations, lack legal significance and are simply irrelevant to the controlling issue of whether strict application of zoning rules would prevent the would-be developer from utilizing his or her property to the same extent as other property owners in the same zoning district." *Orinda Assn. v. Board of Supervisors* (1986) 182 Cal.App.3d 1145, 1166 (emphasis added).

10.2 Cont'd

California Government Code Section 65906 establishes the authority of the City to grant variances in cases where the strict application of the Zoning Code deprives such property of privileges enjoyed by other property in the vicinity and under identical land use zones. Riverside Code § 19.720.010. Variances may not be approved for uses or activities not otherwise expressly authorized by the Zoning Code. Riverside Code § 19.720.020(B). In this case, the activities of the Project are not expressly authorized by the Zoning Code, which, if applied properly, zones the Project site in the Residential Conservation Zone. Therefore, the proposed variances related to the Project cannot be approved.

The Residential Conservation Zone ("RC Zone") was codified via the adoption by the people of Riverside in 1979 of Measure R. Measure R provides that the RC Zone as described in the Riverside Municipal Code is applied to all property with an average slope of fifteen percent or more. Municipal Code§ 19.10.050(A)(3). The establishment of the RC Zone is consistent with the Riverside General Plan objectives and voter- approved initiatives to protect prominent ridges, hilltops and hillsides, slopes, arroyos, ravines and canyons, and other areas with high visibility or topographic conditions that warrant sensitive development. *Id.* § 19.100. The RC Zone preserves and enhances the beauty of the city's landscape, maximizes the retention of the City's natural topographic features, assures unobtrusive residential use of said topographic features, reduces the scarring effects of excessive grading, prevents the construction of slopes inadequately protected from erosion, and conserves the city's natural topographic features. *Id.* A lot area for RC Zone land is based on the average natural slope and the date the property waszoned to be in the RC.

All lots having an average natural slope of fifteen to thirty percent shall be limited to one single-family dwelling unit per two acres. Municipal Code §19.100. Further, the only permitted use of an RC Zone for any residential dwellings are "one-family dwellings of a permanent character placed in a permanent location and of not less than 750 square feet ground floor area, exclusive of open porches and garage." *Id.* § 19.100.030(B). The Project Site has an average natural slope of 25.9 percent. Because the Site has an average natural slope of 25.9 percent, the Municipal Code limits development to one single-family dwelling unit per two acres.

The Project's proposed grading also violates the Municipal Code. Where grading is proposed on any parcel having a natural slope of ten percent or greater, the grading must be confined to the minimum grading necessary. The ungraded terrain must be left in its natural form for the remainder of the site. Riverside Municipal Code § 17.28.020. The proposed grading exceptions, in proposing slopes with a ratio of 3.9:1 or steeper be up to 28 feet in vertical height, does not confine the grading on the site to the minimum grading necessary for the Project. Therefore, the Project's proposed grading exceptions violate the Municipal Code.

II. Failure to Make Adequate Findings

The proposed findings to approve the variances and exceptions are inadequate. The Municipal Code requires that a variance must satisfy the following findings, or it will be denied:

> (1) The strict application of the provisions of the Zoning Code would result in practical difficulties or unnecessary hardships inconsistent with the general purpose and intent of the Zoning Code;
> (2) There are special circumstances or conditions applicable to the property involved or to the intended use or development of the property that do not apply generally to other property in the vicinity and under the identical zoning classification;
> (3) The granting of such variance will not be materially detrimental to the public welfare or injurious to the property or improvements in the zone or neighborhood in which the property is located; and
> (4) The granting of the variance will not be contrary to the objectives of any part of the General Plan.

10.3 Municipal Code §19.720.040. The Project does not face any practical difficulties or unnecessary hardships preventing the applicant from developing the Project site consistent with the surrounding residential areas, and the Municipal Code. In addition, as noted above, the Project is inconsistent with several objectives of the General Plan.

The Municipal Code requires that an exception must satisfy the following findings, or it will be denied:

> (1) The strict application of the provisions of this title would result in practical difficulties or unnecessary hardships inconsistent with the general purpose and intent of this title;
> (2) There are exceptional circumstances or conditions applicable to the property involved or to the intended use or development of the property that do not apply generally to other property in the same zone or neighborhood; and
> (3) The granting of a waiver will not be materially detrimental to the public welfare or injurious to the property or improvements in the zone or neighborhood in which the property is located.

Municipal Code §17.32.020. As noted above, the Project is inconsistent with several objectives of the General Plan and the Municipal Code.

III. The Project Violates Measure R and Proposition C

10.4 In 1979, the residents of Riverside passed the voter initiative Measure R. The California Supreme Court has explained: "The initiative and referendum are not rights 'granted the people, but... power[s] reserved by them... If doubts can reasonably resolved

10.4 Cont'd

in favor of the use of this reserve power, courts will preserve it.'" *Rossi v. Brown* (1999) 9 Cal. 4th 688, 695. Measure R was passed to protect and enhance the City's natural landscape and topographic features. The Project disregards the protection of natural landscape and topographic features that the City and its people desired when adopting Measure R in 1979 and later affirmed in passing Proposition C. Thus, any path in which the Project could use this incorrect zoning assignment to its advantage would be invalid in that it does not comply with the requirements of Measure R and Proposition C.

10.5

IV. Failure to Comply with CEQA's Procedural Mandates

The California Environmental Quality Act ("CEQA") is premised in part on "a belief that citizens can make important contributions to environmental protection and ... notions of democratic decision-making ... " *Concerned Citizens of Costa Mesa, Inc. v. 32nd Agricultural Assoc.* (1986) 42 Cal.3d 929, 936. "Environmental review derives its vitality from public participation." *Ocean View Estates Homeowners Assn. v. Montecito Water Dist.* (2004) 116 Cal.App.4th 396,400. There were extensive comments submitted on the Draft EIR. A final EIR has not been prepared, and responses to the many comments have yet to be provided. It is therefore premature for the Planning Commission to consider the EIR and make recommendations.

10.6

V. Conclusion

For the foregoing reasons, Friends of Riverside's Hills requests you deny the Project and EIR. Thank you for your consideration of these concerns.

Sincerely,

Everett DeLano

cc: Candice Assadzadeh, Senior Planner

Letter 10 – DeLano & DeLano

Commenter: Everett DeLano

Date: May 26, 2021

Response 10.1:

The commenter provides a collection of various references to and abbreviated excerpts from the California Public Resources Code and CEQA case law. However, the commenter makes no specific comment on how these relate to either the Project's DEIR or analysis contained therein.

The commenter alleges the Project violates the City's General Plan Land Use Element, specifically Policy LU-4.1. The Project site is not, and has never been, located within the RC zone as discussed in Response 5a.4, and thus the protections for hillside development set forth in Proposition R and Measure C do not apply to the development of the Project site. However, the Project is consistent with the intent of Proposition R and Measure C in that it is designed to avoid destruction of City hills, arroyos, watersheds, and ridgelines. The areas with the greatest extent of topographic relief and lack of disturbance on the site would not be graded or impacted by the proposed development but will be preserved and left in place.

The Project also would not impact adjacent RC-zoned areas (the Quail Run Open Space to the west of the Project, the residential area south of Central Avenue, off of Lochmoor Drive), as well as property to the north of the Project (across the SR-60/I-215 freeway) in accordance with Proposition R and Measure C. One of the Project objectives is to incorporate design and landscaping elements that complement and are responsive to the Canyon Crest community and edge conditions that buffer the Project's effect on nearby natural environments, including the City of Riverside's Quail Run Open Space (QROS) Park and the Sycamore Canyon Wilderness Park. In terms of complementing and responding to the visual character of the site adjacent to the QROS Park, the Project will not disturb natural features of the Project site that complement the QROS Park. Specifically, there is a rock outcropping located along the western edge of the property, which is partially located within the Project property line and largely located in the adjacent property, the City's QROS Park. (DEIR, p. 5.1-26.) Within the Project property line this area will not be graded or disturbed but left in place and preserved. (*See* DEIR pp. 5.8-13, 5.8-15.)

The commenter then states that the Project's proposed variances and grading exceptions violate the City's General Plan Land Use Element. Please see Responses 5a.4, 9.6, and 9.7 for discussions of how the Project would not be in violation of Proposition R and Measure C (as cited by the commenter), nor would the Project conflict with the Grading Code or with guidelines regulating hillside/arroyo grading. As is discussed in Responses 5a.4, 9.6, and 9.7, the Project would not result in the substantial impacts cited by the commenter to natural landforms or natural open spaces, nor would the Project result in a significant "staircasing" effect as described by the commenter and previous commenters. As outlined in the DEIR, Section 5.8 Land Use and Planning, the GP 2025 Land Use and Urban Design Element and Open Space and Conservation

Element includes the following Objectives and Policies, referenced by the commenter (DEIR, pp. 5.8-6 and 5.3-21):

> **Objective LU-3:** Preserve prominent ridgelines and hillsides as important community visual, recreational and biological assets.
>
> > **Policy LU-3.1:** Pursue methods to preserve hillside open space and natural habitat.
> >
> > **Policy LU-4.2:** Enforce the hillside grading provisions of the City's Grading Code (Title 17) to minimize ground disturbance associated with hillside development; respect existing land contours to maximum feasible extent.
>
> **Objective OS-5:** Protect biotic communities and critical habitats for endangered species throughout the General Plan Area.

Refer to Responses 5a.2 and 5a.3 related visual impacts, to Response 5a.4 related to Proposition R, Measure C, and the Grading Code, and Response to 5a.5 related to the preservation of on-site biological habitats/resources/assets. As outlined in the DEIR p. 5.3-9, the Project site is not located within designated critical habitat.

Therefore, this comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR are not required.

Response 10.2:

The commenter provides a collection of various references to and abbreviated excerpts from the California Public Resources Code and CEQA case law. However, the commenter makes no specific comment on how these relate to either the Project's DEIR or analysis contained therein.

The commenter states the Project's average natural slope and proposed grading exceptions violate the RMC and cites RMC guidelines regarding Residential Conservation (RC) Zones to support the comment's claim. Please see Responses 5a.4, 5a.5, 9.6, and 9.7 for discussions of how the Project would not conflict with or violate applicable zoning or grading requirements for the Project site.

As outlined in the Staff Report May 27, 2021, Exhibit 1 – Findings (pp. 15-16),

> "Granting of the variance requests will not be contrary to the objectives of the General Plan.
>
> Variance A and B: The proposed project complies with this finding. The project is consistent with the following General Plan 2025 Policies, which seeks to:
>
> Policy H-2.2: "*Encourage the production and concentration of quality mixed-use and high-density housing along major corridors and infill sites throughout the City in accordance with smart growth principles articulated in the General Plan*."
>
> The project proposes to construct a high-density housing project at the intersection of Sycamore Canyon Boulevard and Central Avenue, and near the SR-60/I-215 corridor. The

project will comply with the following smart growth principles provided in the General Plan 2025:

a. Foster distinctive, attractive communities with a strong sense of place;
b. Preserve open space, farmland, natural beauty, and critical environmental areas; and
c. Strengthen and direct development toward existing communities.

Policy LU-3: "*Preserve prominent ridgelines and hillsides as important community visual, recreational, and biological assets*."

The project proposes to leave the westerly portion of the project site undisturbed, preserving the prominent ridgelines and hillsides and the biological assets within the jurisdictional feature located at the southwest corner of the project site, which consists of a willow riparian plant community, riparian/riverine habitat, and associated drainage.

LU-7.2: "*Design new development adjacent and in close proximity to native wildlife in a manner which protects and preserves habitat*."

The project is located Criteria Cell 721 of the Riverside County Multiple Species Habitat Conservation Plan (MSHCP). The southwest corner of the project site contains a jurisdictional feature consisting of a willow riparian plant community, riparian/riverine habitat, and associated drainage. The project will be conditioned to convey a 0.53-acre area, including the riparian/riverine area, to the Regional Conservation Authority (RCA), to ensure long-term conservation. Therefore, the site was designed to be proximate to native wildlife, in a manner which protects and preserves habitat.

Based on the above findings, staff finds that granting the Variance will not be contrary to the objectives of the General Plan.

As the commenter correctly notes, in 1979, Riverside voters approved Measure R (or Proposition R): "Taxpayer's Initiative to Reduce Costly Urban Sprawl by Preserving Riverside's Citrus and Agricultural lands, Its Unique Hills, Arroyos and Victoria Avenue." The two main features of Measure R relate to: 1) preservation of agriculture through application of the RA-5 - Residential Agricultural Zone to specific areas of the City; and 2) protection of hillside areas through application of the RC - Residential Conservation Zone to areas of the City based on slopes over 15 percent. The two areas of the City which were zoned RA-5 are: 1) the Arlington Heights Greenbelt, in the south and central portion of the City; and 2) an area commonly known as Rancho La Sierra lying on a bluff above the Santa Ana River and bordered by Tyler Street on the east and Arlington Avenue on the west. (Riverside General Plan, OS-13.) The Project site is not located within either of the two specified areas and thus the first feature of Measure R does not apply.

In 1987, Riverside voters passed Measure C, a bolstering amendment to Proposition R, entitled "Citizens' Rights Initiative to Reduce Costly Urban Sprawl, to Reduce Traffic Congestion, to Minimize Utility Rate Increases and to Facilitate Preservation of Riverside's Citrus and Agricultural Lands, its Scenic Hills, Ridgelines, Arroyos and Wildlife Areas". (Riverside General Plan, OS-14.) Measure C had a variety of functions, among them: (a) Amending Measure R so as to delete the authority of the City's council to amend or repeal Measure R; (b) amending Measure R so as to further promote and encourage agriculture by protecting agricultural lands from premature

development; and (c) requiring the City to develop a general plan for those areas within the City's sphere of influence that had not already been encompassed by the City's extant general plan.

Measure C required the City to initiate a planning process leading to the development and adoption of a plan for the ultimate development of the City's Sphere of Influence (Measure C, Section 7.) The plan was to expand the provisions of Measure R to the Sphere of Influence Area, including Measure R's application of the RC Zone to all property having an average natural slope of 15 percent or more, and limiting development to one single family dwelling per two acres for lots having an average natural slope of 15 to 30 percent. (Measure R, Section 4; Riverside Municipal Code § 19.100.050(A)(3).)

The Project site was formerly located within the City's Northern Sphere of Influence (Riverside General Plan, Figure LU-1). Pursuant to the City's General Plan, the Project site was not identified as within an area noted as major hills and canyons or an arroyo. (Riverside General Plan, Figure LU-3.) The zoning for the site, at the time it was annexed into the City, was not challenged and the statute of limitations for a challenge has since expired. Please refer to FEIR Appendix L which includes Planning Commission Memorandum for Case Numbers P14-0246 (ANX), P14-1059 (GPA), and P14-0901 (Pre-Zoning), dated May 21, 2015, and City of Riverside City Council Memorandum for Annexation 118. As stated in both documents, at the time of its annexation from Riverside County to the City, the proposed Project site held a County General Plan land use designation of CR – Commercial Retail, and subsequently a City land use designation of C – Commercial. Further, the County zoning at the time of the site's annexation was C-P-S – Scenic Highway Commercial and the subsequent City zoning was CG – Commercial General. Thus, even though the City's General Plan designated much of the *surrounding* property as HR - Hillside Residential land use designation with a RC - Residential Conservation Zoning designation, *the proposed Project site* was not designated by the County or City of Riverside as residential, and the parcel was not included in the City's Residential Conservation (RC) Zone as part of the annexation into the City. The zoning for the site, at the time it was annexed into the City, was not challenged and the statute of limitations for a challenge has since expired. As the Project site is not, and has never been zoned RC, there is no conflict between the site's proposed zoning and Measure R/ the RC Zone.

Further, although the DEIR indicates "per the City records, the Project site has an average natural slope (ANS) of 25.9 percent," that information was from City data that is automatically calculated based on topographic contours from 1998, and therefore, represents a prior site condition to what exists today. Also, the Project site conditions existing today would be what existed at the time of the annexation in 2015, as the disturbance to the site for the realignment of Sycamore Canyon Boulevard occurred in 2005-2006, prior to the annexation. An updated Average Natural Slope (ANS) calculation for the Project parcel was prepared in July 2021 by the Civil Engineer in accordance with the formula in the Riverside Municipal Code (RMC), Title 17 – Grading, Chapter 17.08 Definitions, to determine the Project site's current ANS, which is 14.8 percent. This calculation was made using topo of the site flown in October 2018 at 40 scale 1 foot accuracy. The City Public Works Department reviewed and accepted the calculation as it was found consistent with Public Works standards and with common engineering practice. Therefore, as the

Project site does not have an ANS over 15 percent, the RC - Residential Conservation Zone would not be applicable.

The DEIR is revised to reflect the most accurate ANS calculation of 14.8 percent for the Project site, as follows on pages 3.0-4, 4.0-1, 5.1-23, 5.1-24 of the DEIR:

~~Per City records, the~~The Project site has an average natural slope (ANS) of 14.8 ~~25.9~~ percent.

As outlined in the Staff Report May 27, 2021, Exhibit 1 – Findings (pp. 18-19),

> "Granting of the Grading Exception [Grading Exception B to allow slopes with ratio of 3.9:1 or steeper to be up to 28 feet in vertical height where the Grading Code limits these to a maximum of 20 feet] will allow typical development of the property in accordance with the Objectives and Policies of the General Plan 2025 and the Grading Code. The conceptual grading design balances the significant and varied constraints and conditions described in the findings above. The existing knoll has a vertical slope height of 28 feet. The condition of the know is unstable and could potentially become public safety hazard. The knoll as existing, in its natural form, does not comply with the provisions of the Grading Code. The applicant proposes to stabilize and recontour the existing know, with proposed vertical slope height of 28 feet.
>
> Granting the Grading Exception will allow the knoll to be stabilized and recontoured without increasing the overall height or altering the crown. Since the overall vertical height of the slope will not increase, granting the Grading Exception will not be materially detrimental to the public welfare or injurious to the property or improvements in the zone or neighborhood in which the property is located."

Therefore, this comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR are not required.

Response 10.3:

The commenter states that the findings to approve the variances and exceptions are inadequate. The commenter simply lists the requirements for the findings without making any specific comment on how or why they are inadequate. Staff Recommended Findings for the Variances and Grading Exceptions are contained in the May 27, 2021 Planning Commission Staff Report, pages 12-19 (Exhibit 1 of the Staff Report). Therefore, adequate Findings of fact are contained in the May 27, 2021 Planning Commission Staff Report. As the Planning Commission is an advisory body, staff provided recommended findings and detailed findings of fact will be made by the City Council, as the decision-making body. And as outlined in Response 10.2 above, the Project is not inconsistent with the objectives and policies in the GP 2025 referenced in the previous comment.

Therefore, this comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR are not required.

Response 10.4:

First the commenter erroneously refers to the City's Proposition R and Measure C as "Measure R and Proposition C." The commenter then erroneously states that the Project does not comply with them. Please see 5a.4 above for a discussion of Project compatibility with Proposition R, Measure C and the RMC Title 17 Grading Code.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Response 10.5:

The commenter provides a collection of various references to and abbreviated excerpts from the California Public Resources Code and CEQA case law. However, the commenter makes no specific comment on how these relate to either the Project's DEIR or analysis contained therein.

The commenter indicates that a final EIR has not been prepared and thus it is premature for the Planning Commission to consider the EIR and make recommendations.

As outlined in the CEQA Guidelines §15089 Preparation of Final EIR,

> "(a) The Lead Agency shall prepare a final EIR before approving the project."

The Planning Commission on May 27, 2021 considered the project but did not approve the project. In many instances, proposed projects are considered by an advisory body before they are considered by the decision-making body. For example, many land use approvals must be recommended to the City Council by a Planning Commission acting as an advisory body. (*See* Govt Code § 65354, 65356.) That is exactly what is required here, as the Project is requesting legislative actions, such as a General Plan Amendment and Rezone. (Riverside Municipal Code, § 19.800.040.) In cases such as this, the advisory body is required to review the EIR, but CEQA expressly permits that the EIR can be reviewed in either <u>draft</u> or final form. (State CEQA Guidelines, § 15025(c).) The Planning Commission's review of the EIR and recommendation of approval is thus proper under CEQA.

As required by CEQA, written detailed responses to each comment letter received during the noticed comment period, are contained herein, in Section 2 Responses to Comments of this Final EIR, which will be considered by City Council prior to any certification of the EIR. Therefore, as the Planning Commission did not certify the EIR or approve the Project, no failures to comply with CEQA's procedural requirements has occurred.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Response 10.6:

The commenter provides an opinion and urges the Project and DEIR as proposed to be rejected. This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Comment Letter 11 – Kevin Akin

Comment letter 11 commences on the next page.

Andrade, Frances

From: Kevin Akin <kevinakin1950@hotmail.com>
Sent: Wednesday, May 26, 2021 11:37 PM
To: Andrade, Frances
Subject: [External] Comments to Planning Commission re: Crestview Apartments Project, meeting of 27 May 2021

To the members of the Riverside City Planning Commission

In regards to 27 May 2021 Meeting of the Commission, Agenda Item No. 3: Crestview Apartments Project, P19-0775, P19-0776, P19-0777, P20-0307, P20-0308, P20-0309, P20-0310 & P19-1905.

My name is Kevin Akin. I live, and have lived for more than 45 years, at 20212 Harvard Way, Riverside CA 92507. There are no structures between my house and the proposed apartment complex, the site of which is clearly visible across the Box Spring Creek and its arroyo from my yard. If it is built, it will be clearly visible from the north-facing windows of my house and will be much the closest set of structures in that direction.

I have followed the process of this project with some interest. I have noted, too, the eagerness with which the developers have poured money into the campaign coffers of certain city officials. As should be expected from this developer, a group with a very bad reputation for honesty, much of the material submitted by them and their allies to city bodies has been largely composed of falsehoods. If this project is approved, I look forward to the proof of this assertion in court by those who oppose this ghastly, ugly, fantastically offensive project, which is not merely likely but certain to disrupt the lives and habitat of important wildlife that we in my
11.1 neighborhood enjoy. One of the principles of the development company has, in the past, declared at a public meeting that the wildlife does not belong where it now lives, and we might as well get used to it. I believe that the developer does not belong in my home town of Riverside, where I was born in 1950, and I hope that city officials pay sufficient attention to send them packing.

The lot from which they intent to eradicate wildlife is, as they know from previous discussions, home to a great many species that travel between the Box Spring Mountains area and the Sycamore Canyon Park area, as well as inhabiting the wildlife reserve immediately adjoining the site. I myself have repeatedly observed mountain lions (several times), bobcats (frequently), and many smaller species on the site and the adjoining land. The developer is well aware, but chooses to make false statements denying, that the wildlife corridor (mostly used at night) actually goes under the 60/215 Freeway along Central Avenue. (The nominal path along the creek in the tunnel under the freeway is blocked by deep pools of water, is quite constricted, and is in fact not used at all by the big cats, or by much of anything but bats and frogs.) Coyotes, rabbits and jackrabbits, snakes, and many other wildlife species can be seen year-round crossing under the freeway along Central, and in the roadway.

11.2 This enormous apartment block simply does not belong on this plot of land. The slopes are wrong under the laws in Riverside, the damage to the local environment would be too great, and there is simply no public benefit to putting this apartment complex here instead of somewhere closer in to the center of the city, or at least away from this vital wildlife corridor.

1

11.3 My entire neighborhood is outraged by this proposal. I wish circumstances were such that we could fill the chamber with protesting neighbors, but under current conditions this cannot be done. Please listen to us anyway, and reject this proposal. -Kevin Akin 26 May 2021

Kevin Akin
20212 Harvard Way
Riverside, California 92507
(951) 787-0318

2

Letter 11 – Kevin Akin

Commenter: Kevin Akin

Date: May 26, 2021

Response 11.1:

In regard to the aesthetics of the Project, the commenter states the Project "will be clearly visible from the north-facing windows of my home." CEQA distinguishes between public and private views by focusing on whether a project will affect the environment of persons in general, not whether a project will affect particular persons. Private views, such as from individual homes, generally are not analyzed under CEQA and potential impacts on such views would not be considered to be environmentally significant. Please see Responses 5a.2, 5a.3, 9.5, 9.6, and 9.8 above for discussion of impacts to scenic vistas. Furthermore, the Project's aesthetics and potential impacts to scenic vistas are analyzed in the DEIR (Section 5.1). Specifically, impacts on public views from Harvard Way, the street cited by the commenter, were included in the DEIR (*see* Figures 5.1-1a and 5.1-1b.) As stated in the DEIR, "There are public views of the Project site from the residential neighborhood to the south and southeast of the Project site along public streets including Harvard Way and Westpoint Drive. However, these views are partially blocked and limited due to the existing topography and vegetation (including trees) as well as residential development and associated landscaping and other improvements. This is demonstrated in two views of the Project site from Harvard Way and Westpoint Drive, as show in Figure 5.1-1A and 5.1-1B. Although the views from the residential neighborhoods to the south and southeast of the Project site include the Project site, the proposed Project would not block or substantially obstruct the scenic vista of the Downtown Riverside area viewed from the residential neighborhood to the south and southeast, as it will be set in amongst other hills surrounding the Project site." (DEIR, p. 5.1-24.)

The commenter goes on to provide an opinion regarding the Project developer, but does not provide any information or evidence related to the analysis completed in the DEIR. In regard to the commenter's statements about impacts to local wildlife, the commenter does not specify any impacts on endangered or threatened species. Additionally, please refer to Responses 5a.7, 5a.30, 5a.32, 9.11, 9.13, 9.16, 9.17, 9.18, and 9.19 above regarding wildlife movement.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and revisions to the DEIR are not warranted.

Response 11.2:

The commenter states the Project's "slopes are wrong under the laws in Riverside." Please see Responses 5a.4, 9.6, and 9.7 for discussions of how the Project would not conflict with or violate applicable zoning or grading requirements for the Project site.

As explained in Responses 5a.4 and 9.6 above, and as stated on DEIR p. 5.1-2, the proposed Project site shows evidence of extensive past grading, with aerial photography indicating the site was utilized for construction staging operations and grading in 2005 to 2006 for the realignment

of Sycamore Canyon Boulevard. This is supported by proposed Project's Geotechnical Evaluation (DEIR Appendix F), which additionally states that review of previous site documentation, including reports from 1997 and 2007, indicate the site has been extensively graded (DEIR Appendix F, p. 6).

Due to the average natural slope of the project site and the presence of the blue line stream, the Project is required to comply with the Hillside/Arroyo Grading Ordinance, Section 17.28.020 of the Riverside Municipal Code. The Project is proposing a Grading Exception as allowed under Chapter 17.32 of the RMC in order to construct retaining walls greater than 3 feet in height in an area open to the public view and greater than 6 feet in height in an area not open to the public view. A Grading Exception is also being requested for slopes to exceed 20 feet in height where an existing hill in the northern part of the site will be partially recontoured. (DEIR p. 5.6-17) Thus, the Project will comply with the City's Hillside Grading Ordinance, with the approval of a Grading Exception. The EIR thus fully addresses the grading proposed by the Project and compliance with City regulations put in place to, in part, "preserve prominent landforms within the community" (RMC § 17.04.010.), consistent with the purpose of Measure R to avoid destruction of City hills, ridgelines, arroyos, and watersheds.

Additionally, as stated in Response 9.7 above, per Section 17.28.010 – General Requirements, under RMC Title 17 – Grading Code, "the slope of cut surfaces shall be no steeper than is safe for the intended use and shall be no steeper than two horizontal to one vertical (2:1)" unless a steeper slope has been justified by a soils engineering and/or engineering geology report. Thus, the proposed Project's 2:1 slopes would be consistent with Title 17 General Requirements for slope and is not proposing a slope greater, steeper, or more "extreme" than what is specified in Title 17 for slope.

The commenter goes on to state that the damage to the local environment would be too great and there is no public benefit to the Project's location. The EIR includes extensive analysis and concludes that the Project would not result in any significant environmental impacts that could not be mitigated to a less than significant level. (DEIR, p. 6.0-3). Thus, the Project would not cause any significant or "great" damage to the environment. Development of the Project at this location serves a number of public benefits. Notably, the Project will comply with smart growth principles by providing high-density housing near the SR-60/I-215 freeway, a major regional transportation corridor. The Project site is approximately 4 miles drive on surface streets from the Hunter Park/UCR Metrolink station and about 4 ½ miles from the Riverside Metrolink station. Metrolink is a commuter rail system that provides service to Los Angeles, Orange County, and San Diego County. (DEIR, p. 6.0-1.)

The Project site is located immediately north of the MSHCP Proposed Constrained Linkage 7, which connects Sycamore Canyon Wilderness Park to the south to the Box Springs Reserve to the east (east of Interstate 215/State Route 60) and is generally constrained by urban development. Habitat on the Project site is heavily disturbed and there is little to no incentive for bobcats to occur on the upland portion of the Project site, as it is surrounded on three sides by development (primarily transportation land uses). Box Spring Canyon, located south of the Project site (south of Central Avenue), and the small portion of willow riparian plant community on southwest corner of the Project site, have the potential to be used by migrating or dispersing

wildlife, including birds and mammals. The Project will not directly impact, prevent or restrict the use of Box Spring Canyon or the willow riparian plant community as a corridor by wildlife. Development of the Project also provides 0.53 acre of conservation in the southwest corner of the site for the re-routed Proposed Constrained Linkage 7, maintaining existing wildlife corridors. (DEIR, p. 5.3-27.)_Please also refer to Responses 5a.7,and 9.16 through 9.20 regarding the Project's location in relation to wildlife corridors.

Therefore, this comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and revisions to the DEIR are not warranted.

Response 11.3:

This comment provides the commenter's opinion regarding the Project, but does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR are not required.

Comment Letter 12 – Mitchell M. Tsai

Comment letter 12 commences on the next page.

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E: info@mitchtsailaw.com

Mitchell M. Tsai
Attorney At Law

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Pasadena, California 91101

VIA U.S. MAIL & E-MAIL

May 27, 2021

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Frances Andrade
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RE: Crestview Apartments Project

Dear Ms. Assadzadeh and Mr. Andrade,

12.1 On behalf of the Southwest Regional Council of Carpenters ("**Commenter**" or "**Carpenter**"), my Office is submitting these comments on the City of Riverside's ("**City**" or "**Lead Agency**") Draft Environmental Impact Report ("**DEIR**") (SCH No. 2020069047) for the Crestview Apartments Project, a new residential development proposed for 237 residential units and supporting uses ("**Project**").

The Southwest Carpenters is a labor union representing 50,000 union carpenters in six states and has a strong interest in well ordered land use planning and addressing the environmental impacts of development projects.

Individual members of the Southwest Carpenters live, work and recreate in the City and surrounding communities and would be directly affected by the Project's environmental impacts.

Commenters expressly reserves the right to supplement these comments at or prior to hearings on the Project, and at any later hearings and proceedings related to this Project. Cal. Gov. Code § 65009(b); Cal. Pub. Res. Code § 21177(a); *Bakersfield Citizens*

for Local Control v. Bakersfield (2004) 124 Cal. App. 4th 1184, 1199-1203; see *Galante Vineyards v. Monterey Water Dist.* (1997) 60 Cal. App. 4th 1109, 1121.

Commenters expressly reserves the right to supplement these comments at or prior to hearings on the Project, and at any later hearings and proceedings related to this Project. Cal. Gov. Code § 65009(b); Cal. Pub. Res. Code § 21177(a); *Bakersfield Citizens for Local Control v. Bakersfield* (2004) 124 Cal. App. 4th 1184, 1199-1203; see *Galante Vineyards v. Monterey Water Dist.* (1997) 60 Cal. App. 4th 1109, 1121.

12.1 Cont'd

submitted prior to certification of the EIR for the Project. *Citizens for Clean Energy v City of Woodland* (2014) 225 Cal. App. 4th 173, 191 (finding that any party who has objected to the Project's environmental documentation may assert any issue timely raised by other parties).

Moreover, Commenter requests that the Lead Agency provide notice for any and all notices referring or related to the Project issued under the California Environmental Quality Act ("**CEQA**"), Cal Public Resources Code ("**PRC**") § 21000 *et seq*, and the California Planning and Zoning Law ("**Planning and Zoning Law**"), Cal. Gov't Code §§ 65000–65010. California Public Resources Code Sections 21092.2, and 21167(f) and Government Code Section 65092 require agencies to mail such notices to any person who has filed a written request for them with the clerk of the agency's governing body.

12.2

The City should require the Applicant provide additional community benefits such as requiring local hire and use of a skilled and trained workforce to build the Project. The City should require the use of workers who have graduated from a Joint Labor Management apprenticeship training program approved by the State of California, or have at least as many hours of on-the-job experience in the applicable craft which would be required to graduate from such a state approved apprenticeship training program or who are registered apprentices in an apprenticeship training program approved by the State of California.

Community benefits such as local hire and skilled and trained workforce requirements can also be helpful to reduce environmental impacts and improve the positive economic impact of the Project. Local hire provisions requiring that a certain percentage of workers reside within 10 miles or less of the Project Site can reduce the length of vendor trips, reduce greenhouse gas emissions and providing localized

12.2 Cont'd

economic benefits. Local hire provisions requiring that a certain percentage of workers reside within 10 miles or less of the Project Site can reduce the length of vendor trips, reduce greenhouse gas emissions and providing localized economic benefits. As environmental consultants Matt Hagemann and Paul E. Rosenfeld note:

> [A]ny local hire requirement that results in a decreased worker trip length from the default value has the potential to result in a reduction of construction-related GHG emissions, though the significance of the reduction would vary based on the location and urbanization level of the project site.

March 8, 2021 SWAPE Letter to Mitchell M. Tsai re Local Hire Requirements and Considerations for Greenhouse Gas Modeling.

Skilled and trained workforce requirements promote the development of skilled trades that yield sustainable economic development. As the California Workforce Development Board and the UC Berkeley Center for Labor Research and Education concluded:

> . . . labor should be considered an investment rather than a cost – and investments in growing, diversifying, and upskilling California's workforce can positively affect returns on climate mitigation efforts. In other words, well trained workers are key to delivering emissions reductions and moving California closer to its climate targets.[1]

12.3

The City should also require the Project to be built to standards exceeding the current 2019 California Green Building Code to mitigate the Project's environmental impacts and to advance progress towards the State of California's environmental goals.

This letter is intended to supplement Commenter's May 3, 2021 comment letter concerning the Project.

[1] California Workforce Development Board (2020) Putting California on the High Road: A Jobs and Climate Action Plan for 2030 at p. ii, *available at https://laborcenter.berkeley.edu/wp-content/uploads/2020/09/Putting-California-on-the-High-Road.pdf*

I. **THE PLANNING COMMISSION SHOULD CONTINUE THIS ITEM TO CONSIDER THE FINAL ENVIRONMENTAL IMPACT REPORT**

The City is currently recommending that the Planning Commission recommend approval of this Project and certification of the environmental impact report without even considering or reviewing the Final Environmental Impact Report for the Project.

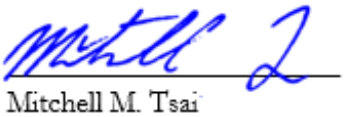
12.4 The City's approach violates the California Environmental Quality Act, Cal. Pub. Res. Code § 21100 *et seq* ("**CEQA**") and the City's municipal code. CEQA requires that a lead agency certify a Final Environmental Impact Report ("**Final EIR**") that includes responses to any comments submitted to the Draft Environmental Impact Report ("**Draft EIR**") as well as changes, in any, made to the Final EIR from the previous draft. CEQA Guidelines § 15090.

The Municipal Code requires that the Planning Commission "[r]eview and approve environmental documents prepared pursuant to [CEQA]....." Riverside Municipal Code § 19.050.030(B)(9). Since the City must ultimately certify a Final Environmental Impact Report, and since the Project's Environmental Impact Report is currently in mere draft form, the Planning Commission would be abandoning its duties to review and approve the Project's Environmental Impact Report if it were to pass this Project on to the City Council having only reviewed the a mere draft of the Project's EIR.

III. CONCLUSION

12.5 Commenters request that the City revise and recirculate the Project's environmental impact report to address the aforementioned concerns. If the City has any questions or concerns, feel free to contact my Office.

Sincerely,



Mitchell M. Tsai
Attorneys for Southwest Regional
Council of Carpenters

Letter 12 – Mitchell M. Tsai

Commenter: Mitchell M. Tsai

Date: May 27, 2021

Response 12.1:

The commenter provides a collection of various references to and abbreviated excerpts from the California Public Resources Code and CEQA case law. However, the commenter makes no specific comment on how these relate to either the Project's DEIR or analysis contained therein. The commenter requests the lead agency provide notice for any and all notices related to the Project. The City has added the commenter to its CEQA notice transmittal list. This comment does not relate to the adequacy or content of the DEIR, does not provide new information or evidence related to the analysis in the DEIR, and does not affect the analysis completed or conclusions provided in the DEIR. This comment is noted for the record and revisions to the Draft EIR are not required.

Response 12.2:

The commenter states the City should require the Applicant to provide additional community benefits such as requiring local hire and use of a skilled and trained workforce to build the Project which can be helpful to reduce the length of vendor trips and reduce greenhouse gas emissions and associated environmental impacts of the Project.

As outlined in the DEIR, Section 5.7 Greenhouse Gas Emissions (p. 5.7-34):

> As shown in Table 5.7-5, the Project will result in approximately 2,706.33 $MTCO_2e$ per year, which would not exceed the SCAQMD/City's screening threshold of 3,000 $MTCO_2e$ per year. Thus, Project-related emissions would have a **less than significant** direct or indirect impact on GHG

Please also see Responses 5b.4 through 5b.17 for the discussions that address SWAPE's claims that the DEIR has not adequately evaluated impacts or adequately mitigated for impacts. As the outlined in Responses 5b.4 through 5b.17, the DEIR has fully evaluated potential air quality, GHG emissions, and health risk impacts based upon appropriately applied methodologies and screening thresholds. Further, it is shown that all potential impacts as they relate to air quality, GHG emissions, and health risk impacts were correctly found to be less than significant; thus, no mitigation is required.

As the Project will not result in significant impacts related to greenhouse gas emissions, there is no obligation pursuant to CEQA to further reduce these potential impacts. This comment does not relate to the adequacy or content of the DEIR, does not provide new information or evidence related to the analysis in the DEIR, and does not affect the analysis completed or conclusions provided in the DEIR. This comment is noted for the record and revisions to the DEIR are not required.

Response 12.3:

The commenter stated the City should also require the Project to be built to standards exceeding the current 2019 California Green Building Code to mitigate the Project's environmental impacts and to advance progress towards the State of California's environmental goals.

According to the 2019 California Green Building Standards Code California Code of Regulations, Title 24, Part 11 under the Preface section on pp iii, "A city, county, or city and county may establish more restrictive building standards reasonably necessary because of local climatic, geological or topographical conditions." The DEIR building standards are consistent with the 2019 CalGreen building code. The analysis contained in the DEIR conclude the Project will not result in significant and unavoidable impacts. (p. 6.0-3.) As the Project does not result in significant impacts related to air quality, energy, greenhouse gas emissions, there is no obligation pursuant to CEQA, to further reduce the Project's potential impacts and there are no further environmental impacts that need to be mitigated that are not already addressed as part of the DEIR.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record, and revisions to the DEIR are not required.

Response 12.4:

The commenter asserts that the City's approach of Planning Commission considering the Project and the EIR prepared for the Project to be in violation of CEQA.

As outlined in Response 10.5 above, per the CEQA Guidelines §15089 Preparation of Final EIR,

> "(a) The Lead Agency shall prepare a final EIR before approving the project."

The Planning Commission on May 27, 2021 considered the project but did not approve the project. In many instances, proposed projects are considered by an advisory body before they are considered by the decision-making body. For example, many land use approvals must be recommended to the City Council by a Planning Commission acting as an advisory body. (*See* Govt Code § 65354, 65356.) That is exactly what is required here, as the Project is requesting legislative actions such as a General Plan Amendment and Rezone. (Riverside Municipal Code, § 19.800.040.) In cases such as this, the advisory body is required to review the EIR, but CEQA expressly permits that the EIR can be reviewed in either <u>draft</u> or final form. (State CEQA Guidelines, § 15025(c).) The Planning Commission's review of the EIR and recommendation of approval is thus proper under CEQA.

As required by CEQA, written detailed responses to each comment letter received during the noticed comment period, are contained herein, in Section 2 Responses to Comments of this Final EIR, which will be considered by City Council prior to any certification of the EIR. Therefore, as the Planning Commission did not certify the EIR or approve the Project, no failures to comply with CEQA's procedural requirements has occurred.

This comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

Response 12.5:

The commenter asserts that for the reasons outlined in the letter (comments 12.1 through 12.4) the DEIR should be revised and recirculated for additional public comment.

The Final EIR will be publicly available prior to consideration by the City Council. For all the reasons set forth above in Responses to Comments 12.1 through 12.4, no new information of substantial importance has been added to the EIR, and no new significant environmental impacts or substantial increases in existing significance impacts exist. Accordingly, recirculation of the DEIR is not required. (State CEQA Guidelines 15088.5)

Therefore, this comment does not affect the analysis completed or conclusions provided in the DEIR, does not provide new information or evidence related to the analysis completed in the DEIR, and does not reflect on the adequacy or content of the DEIR. This comment is noted for the record and no changes to the DEIR are required.

2.5 References

The following references were used in the preparation of this section of the FEIR:

Cal/OSHA	Cal/OSHA website https://www.dir.ca.gov/dosh/coronavirus/
Water Boards	California State Water Resources Control Board (Water Boards), 2009-0009-DWQ Construction General Permit, July 2010. https://www.waterboards.ca.gov/water_issues/programs/stormwater/constpermits.html
CBIA vs. BAAQMD California Supreme Court case	California Building Industry Association v. Bay Area Air Quality Management District. December 2015. Available at: https://caselaw.findlaw.com/ca-supreme-court/1721100.html
DOSH	California Department of Industrial Relations, Division of Occupational Safety and Health (DOSH) website https://www.dir.ca.gov/occupational_safety.html
MSHCP	Dudek & Associates, Inc., *Western Riverside County Multiple Species Habitat Conservation Plan*, June 2003. https://www.wrc-rca.org/document-library/
OPR Technical Advisory	California Office of Planning and Research, Technical Advisory on Evaluating Transportation Impacts in CEQA, December 2018. https://opr.ca.gov/ceqa/technical-advisories.html
SCAG RTP 2016	Southern California Association of Governments (SCAG), 2016-2040 RTP SCS, Demographics & Growth Forecast Appendix, Table 11 Jurisdictional Forecast 2040. April 2016. Appendix N.

SCAG Connect SoCal 2020	Southern California Association of Governments (SCAG), 2020 RTP, Demographics & Growth Forecast Technical Report, Table 11 Jurisdictional Forecast 2040. September 2020. Appendix N.
Urban Crossroads 2021	Urban Crossroads. Construction Health Risk Assessment (HRA) and Output Files. June 2021. Appendix M.
WLC TIA	City of Moreno Valley, World Logistics Center Traffic Impact Assessment (WLC TIA), available at http://www.moval.org/cdd/documents/about-projects.html

3.0 Revisions to the Draft EIR

This section presents other specific changes to the text of the Draft EIR that have been made to clarify information presented in the Draft EIR or to update information presented in the Draft EIR based on new regulatory or policy guidance since preparation of the Draft EIR. The changes in this section are in addition to the changes and revisions to the Draft EIR that have been made in response to the comments received on the Draft EIR, as presented in Section 2.0, Response to Comments. However, the revisions presented above in Section 2.0 are also shown below. These revisions are not considered significant new information that would trigger Draft EIR recirculation pursuant to State CEQA Guidelines Section 15088.5. For example, they do not disclose a new or substantially worsened significant environmental impact, or a new feasible mitigation measure or alternative not proposed for adoption. Rather, the revisions correct or clarify information presented.

Where revisions to the main text are called for, the section and page are set forth, followed by the appropriate revision. Added text is indicated with underlined text. Text deleted from the Draft EIR is shown in ~~strikethrough~~. Page numbers correspond to the page numbers of the Draft EIR. Furthermore, any and all revisions related to mitigation measures have been incorporated into the Mitigation Monitoring and Reporting Program (MMRP).

3.1 Text Revisions to the Draft EIR

Section 1.0, Executive Summary, pp. 1.0-8 – 1.0-39 changes as follows:

MM AES-1: (2nd bullet)

- ~~Project lighting shall not exceed an intensity of one foot-candle~~ Lighting levels shall comply with Chapter 19.556 of the Riverside Municipal Code.

MM BIO-1: Pursuant to the MBTA and Fish and Game Code, removal of any trees, shrubs, or any other potential nesting habitat should be conducted outside the avian nesting season. The nesting season generally extends from February 1 through August 31, beginning as early as January 1 for raptor species, but can vary slightly from year to year based upon seasonal weather conditions. If ground disturbance and vegetation removal cannot occur outside of the nesting season (September 1 through ~~February~~January 31, a pre-construction clearance survey for nesting birds shall be conducted within three (3) days of the start of any ground disturbing activities to ensure that no nesting birds will be disturbed during construction.

If the biologist finds an active nest on the Project site and determines that the nest may be impacted, the biologist shall delineate an appropriate buffer zone around the nest. The size of the buffer shall be determined by the biologist and shall be based on the nesting species, its sensitivity to disturbance, expected types of disturbance, and location in relation to the construction activities. These buffers are typically 300 feet from the nests of non-listed species and 500 feet from the nests of raptors and listed species. Any active nests observed during the survey shall be mapped on an aerial photograph. Only construction activities (if any) that have been approved by a Biological Monitor shall take place within the buffer zone until the nest is vacated. The biologist

shall serve as a Construction Monitor when construction activities take place near active nest areas to ensure that no inadvertent impacts on these nests occur. Results of the pre-construction survey and any subsequent monitoring shall be provided to the Property Owner/Developer and the City. The monitoring report shall summarize the results of the nest monitoring, describe construction restrictions currently in place, and confirm that construction activities can proceed within the buffer area without jeopardizing the survival of the young birds.

MM BIO-8: (2nd and 5th bullet)

- Pave, periodically water, or apply acceptable non-toxic chemical stabilizer as identified in the SWPPP to construction access/egress points.
- Cover all stockpiles that would not be utilized within three days with plastic or equivalent material, to be determined by the on-site construction superintendent, or spray them with an acceptable non-toxic chemical stabilizer as identified in the SWPPP.

MM BIO-10: (2nd bullet)

- All fiber rolls ~~roles~~[1], straw wattles ~~waddles~~, and/or hay bales utilized within and adjacent to the Project site shall be free of non-native plant materials.

Land Use and Planning			
Threshold B: Would the Project 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?	~~Significant without mitigation~~ Less than significant	~~**MM LAND USE-1**: In order to alleviate an LOS deficiency and associated conflict with GP policies, the Sycamore Canyon Boulevard and Central Avenue intersection traffic signal shall be modified to implement overlap phasing on the northbound (NB) right turn lane. The Project will not be conditioned to pay fair share for these improvements as the adjacent Sycamore Commercial Development will construct them.~~ ~~**MM LAND USE-2**: In order to alleviate an LOS deficiency and associated conflict with GP policies, the~~	Less than significant

		~~Sycamore Canyon Boulevard and Central Avenue intersection traffic signal shall be modified to add a 2nd NB right turn lane and to implement overlap phasing on the eastbound (EB) right turn lane. The Project shall contribute its fair share of 8.6% of the cost to the County of Riverside.~~ ~~**MM LAND USE-3**: In order to alleviate an LOS deficiency and associated conflict with GP policies, Watkins Drive & SR-60/I-215 Westbound (WB) on-ramp shall be improved with installation of a traffic signal, addition of a 2nd NB left turn lane, and addition of a 2nd Southbound (SB) through lane. The Project shall contribute its fair share of 4.2% of the cost to the County of Riverside and Caltrans.~~	

MM FIRE-2: Fuel treatment in the Project shall require meeting the minimum City fuel treatments of 50-feet of Irrigated Zone 1 (described in Section 5.13.3 Project Design Considerations), which includes all manufactured slopes located within the Project. Irrigated Zone 1 additionally includes 30 feet of fuel treatment on either side of each roadway. Thinning Zone 2 fuel treatment (described in Section 5.13.3 Project Design Considerations) shall be required between 50 and 100 feet of any structure. The establishment of the Project fuel treatment Zones 1 and 2 shall be ~~inspected~~ reviewed and must be approved by the Riverside Fire Department prior to the issuance of building permits.

Section 3.2.1 Project Description, p. 3.0-4 changes as follows:

~~Per City records, the~~The Project site has an average natural slope (ANS) of 14.8 ~~25.9~~ percent.

Section 4.2 Project Site Setting, p. 4.0-1 changes as follows:

~~Per City records, the~~The Project site has an average natural slope (ANS) of 14.8 ~~25.9~~ percent.

Section 5.1 Aesthetics, pp. 5.1-23 and 5.1-24 changes as follows:

~~Per City records, the~~The Project site has an average natural slope (ANS) of 14.8 ~~25.9~~ percent.

Section 5.1 Aesthetics, p. 5.1-28 changes as follows:

MM AES-1: (2nd bullet)

- ~~Project lighting shall not exceed an intensity of one foot-candle~~ Lighting levels shall comply with Chapter 19.556 of the Riverside Municipal Code.

Section 5.3 Biological Resources, pp. 5.3-37 – 5.3-39 changes as follows:

MM BIO-8: (2nd and 5th bullet)

- Pave, periodically water, or apply acceptable non-toxic chemical stabilizer as identified in the SWPPP to construction access/egress points.
- Cover all stockpiles that would not be utilized within three days with plastic or equivalent material, to be determined by the on-site construction superintendent, or spray them with an acceptable non-toxic chemical stabilizer as identified in the SWPPP.

MM BIO-10: (2nd bullet)

- All fiber rolls ~~roles~~[1], straw wattles ~~waddles~~, and/or hay bales utilized within and adjacent to the Project site shall be free of non-native plant materials.

Section 5.6 Geology and Soils, p. 5.16-17 is changes as follows:

The project is proposing a Grading Exception as allowed under Chapter 17.32 of the RMC in order to construct retaining walls greater than 3 feet in height in an area open to the public view and greater than 6 feet in an area not open to the public view.

Section 5.8 Land Use, p. 5.8-14 is changed as follows:

As outlined in the Transportation section, Section 5.10.5, based on the City's deficiency criteria, the following intersection was found to be deficient:

- Sycamore Canyon Boulevard & Central Avenue (#3) – The addition of Project traffic increases the pre-project delay by more than 2.0 seconds during the AM peak hour resulting in a cumulative deficiency.

Intersection improvements are required to alleviate this Project-related deficiency at the intersection of Sycamore Canyon Boulevard & Central Avenue (#3) in order to achieve consistency with GP 2025 goals and policies for transportation within the Circulation and Community Mobility Element. Where the Project will result in LOS deficiencies at intersections or roadway segments, below the standards set forth in the General Plan Circulation Element, the Project would conflict with General Plan policies addressing the circulation system ~~and would be considered significant~~. Implementation of ~~mitigation measure~~ ~~**MM**~~ **Condition of Approval (COA) LAND USE-1** through ~~**MM**~~ **COA LAND USE-3** is required to ensure the Project is consistent with GP 2025 Circulation and Community Mobility Element goals and policies. ~~Mitigation measure~~ ~~**MM**~~ **COA LAND USE-1** through ~~**MM**~~ **COA LAND USE-3** are detailed in Section 5.8.5 below. Potential impacts from conflict with GP 2025 Circulation and Community Mobility Element policies is

~~reduced to~~ **less than significant with implementation of ~~mitigation measure MM~~ COA LAND USE-1 through ~~MM~~ COA LAND USE-3.**

Section 5.8 Land Use, p. 5.8-26 is changed as follows:

With implementation of ~~mitigation measure~~ **~~MM~~ COA LAND USE-1** through **~~MM~~ COA LAND USE-3,** the Project will not conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect and potential impacts are **less than significant**.

5.8.6 Proposed Mitigation Measures

An EIR is required to describe feasible mitigation measures which could minimize significant adverse impacts (State CEQA Guidelines, Section 15126.4). The following conditions of approval ~~mitigation measures~~ are based on the improvements needed under Opening Year Cumulative (2022) and Horizon Year (2040) traffic conditions, ~~mitigation measures~~ **~~MM~~ COA LAND USE-1** through **~~MM~~ COA LAND USE-3,** to meet LOS standards set forth in the General Plan Circulation Element and not conflict with the General Plan. While the Traffic Analysis examined LOS within the Project vicinity, a deficiency in LOS is no longer considered a significant traffic related impact pursuant to updated CEQA guidelines. Instead, the assessment of LOS is intended to identify key access, circulation and operational issues within the Project area, and to confirm consistency with, and reduce potential impacts associated with conflict with, the City's land use/General Plan consistency analysis. Horizon Year (2040(traffic conditions are analyzed in Section 5.10.7. The improvements needed to address Opening Year Cumulative deficiencies are typically a sub-set of those improvements recommended under Horizon Year (2040) traffic conditions.

~~MM~~ COA LAND USE-1: In order to alleviate an LOS deficiency and associated conflict with GP policies, the Sycamore Canyon Boulevard and Central Avenue intersection traffic signal shall be modified to implement overlap phasing on the northbound (NB) right turn lane. The Project will not be conditioned to pay fair share for these improvements as the adjacent Sycamore Commercial Development will construct them.

~~MM~~ COA LAND USE-2: In order to alleviate an LOS deficiency and associated conflict with GP policies, the Sycamore Canyon Boulevard and Central Avenue intersection traffic signal shall be modified to add a 2nd NB right turn lane and to implement overlap phasing on the eastbound (EB) right turn lane. The Project shall contribute its fair share of 8.6% of the cost to the County of Riverside.

~~MM~~ COA LAND USE-3: In order to alleviate an LOS deficiency and associated conflict with GP policies, Watkins Drive & SR-60/I-215 Westbound (WB) on-ramp shall be improved with installation of a traffic signal, addition of a 2nd NB left turn lane, and addition of a 2nd Southbound (SB) through lane. The Project shall contribute its fair share of 4.2% of the cost to the County of Riverside and Caltrans.

Section 5.8 Land Use p. 5.10-27 is changed as follows:

While the Traffic Analysis examined LOS within the Project vicinity, a deficiency in LOS is no longer considered a significant traffic related impact pursuant to updated CEQA guidelines. Instead, the assessment of LOS is intended to identify key access, circulation and operational issues within the Project area, and to confirm consistency with, and reduce potential impacts associated with conflict with, the City's land use/General Plan consistency analysis. The Project will contribute to the following intersection that is anticipated to operate at a deficient LOS during peak hours for Opening Year Cumulative (2022) without the Project:

- Sycamore Canyon Boulevard & Central Avenue (#3) – LOS E AM peak hour only

With implementation of ~~mitigation measure~~ **~~MM~~ COA LAND USE-1**, the intersection would operate at acceptable LOS standard as set forth in the General Plan Circulation Element. The effectiveness of the proposed recommended intersection improvements from **~~MM~~ COA LAND USE-1 to meet LOS** standards is presented in Table 5.10-15 below for Opening Year Cumulative (2022) traffic conditions.

With the implementation of the intersection recommendations in **~~MM~~ COA LAND USE-1**, there are no Project-related deficiencies anticipated to the study area intersections. **~~MM~~ COA LAND USE-1** is required to ensure the Project is consistent with GP 2025 Circulation and Community Mobility Element goals and policies. The Project would not conflict with General Plan policies addressing the circulation system and potential impacts would be **less than significant without mitigation**. **Section 5.11 Tribal Cultural Resources, p. 5.11-2 is changed as follows:**

Senate Bill 18 Consultation Process

Pursuant to SB 18 consultation, the City sent letters to the nineteen (19) tribes identified by the NAHC whose ancestral territory includes the area of project site. The Soboba Band of Mission Indians and the Morongo Band of Mission Indians responded to the City's SB 18 letter. Of the two tribes, ~~O~~only the Soboba Band of Mission Indians requested government-to-government consultation under SB 18. See Table 5.11-1 – SB 18 Response Log, below.

Section 5.11 Tribal Cultural Resources, p. 5.11-3 is changed as follows:

Table 5.11-1 – SB 18 Response Log

Native American Tribe (Individual Responding)	Comment
Morongo Band of Mission Indians	• In a letter dated January 30, 2020, the Tribe indicated the proposed Project area is located within the Tribe's aboriginal territory. • The Tribe did not request further consultation pursuant to SB 18.
Soboba Band of Mission Indians	• In a letter dated April 8, 2020, the Tribe indicated its office would like to initiate government-to-government consultation. • The City consulted with the Tribe on April 20, 2020 • The Tribe requested a Tribal Cultural Landscape study (TCL) be completed for the Project. However, the City determined that it would not require a TCL study because of the currently disturbed nature of the site, the history of disturbances to the site from prior construction activities and grading, and the lack of tribal cultural resources on site. • Consultation with the Tribe concluded July 30, 2020.

Section 5.13 Wildfire, p. 5.13-25 is changed as follows:

MM FIRE-2: Fuel treatment in the Project shall require meeting the minimum City fuel treatments of 50-feet of Irrigated Zone 1 (described in Section 5.13.3 Project Design Considerations), which includes all manufactured slopes located within the Project. Irrigated Zone 1 additionally includes 30 feet of fuel treatment on either side of each roadway. Thinning Zone 2 fuel treatment (described in Section 5.13.3 Project Design Considerations) shall be required between 50 and 100 feet of any structure. The establishment of the Project fuel treatment Zones 1 and 2 shall be ~~inspected~~

reviewed and must be approved by the Riverside Fire Department prior to the issuance of building permits.

Section 6.1 Consistency with Regional Plans, p. 6.0-3 is changed as follows:

Section 5.10 Transportation includes a discussion of whether the Project would conflict with an applicable program, plan, ordinance or policy addressing the circulation system. With implementation of improvements identified in the Traffic Analysis (Appendix I) to address deficiencies to study area intersections (~~MM~~COA LU-1), and improvements for pedestrians and public transit (MM TRANS-1 through MM TRANS-3), the Project would not conflict with applicable programs, plans, ordinances, or policies addressing the local circulation system. Therefore, the Project will not conflict with the Connect SoCal – 2020-2045 RTP/SCS.

Section 6.4 Growth-Inducing Impacts, p. 6.0-6 is changed as follows:

Economic Growth: The proposed Project would generate temporary employment opportunities during construction. Because workers would be expected to come from the existing regional work force, construction of the proposed Project would not be growth-inducing from a temporary employment standpoint. The operations (on-site leasing office) and maintenance of the development (cleaning and landscape maintenance of the on-site amenities) would generate new employment opportunities. However, the proposed Project would not provide a substantial number of long-term jobs and workers would be expected to come from the existing regional work force. The proposed Project would not be expected to induce substantial economic expansion in the proposed Project vicinity to the extent that direct physical environmental effects would result. ~~Moreover, the environmental effects associated with any future development in or around Riverside would be addressed as part of the CEQA environmental review for each of these development projects.~~

Section 8.0 Alternatives, pp. 8.0-18 to 8.0-21 is changed as follows:

Table 8.0-1 – Comparison of Alternatives Matrix, indicates whether each alternative's environmental impact is reduced, increased, or similar compared to that of the proposed Project for each of the issue areas studied. Based on the alternative's analysis provided above, Alternative 1: No Project/Development Alternative, would be the environmentally superior alternative. The No Project/Development Alternative would either avoid or lessen the severity of all ~~significant~~ impacts of the proposed project, as nothing would be constructed. However, the No Project/Development Alternative would not fulfill the objectives of the proposed Project.

When the "No Project/Development" alternative is determined to be environmentally superior, State CEQA Guidelines also requires identification of the environmentally superior alternative among the development options. Of the other alternatives evaluated in this EIR, Alternative 2: Commercial Development, is determined to not be the environmentally superior alternative, as this Alternative would result in an increase in impacts for more environmental issues (aesthetics, air quality, energy, greenhouse gas emissions, operational noise, traffic, utilities, wildfire) than it would reduce impacts (land use/planning, VMT), compared to the proposed Project. ~~however, i~~It is also not consistent with the proposed Project's Objectives and Goals. As outlined above in 8.1.2 the Project applicant previously considered development of the site as commercial and had a conceptual site plan prepared, refer to Figure 8.0-1 - Alternative 2 Commercial Development Conceptual Site Plan. The applicant tried to solicit tenants for the commercial development and

were not able to do so. As there was no demand identified for commercial development at this site, that type of development was determined to be not economically viable. Therefore, a commercial development was eliminated as a feasible alternative.

8.4 Comparison of Alternatives

Table 8.0-1 – Comparison of Alternatives Matrix, below, compares the potential environmental impacts of each alternative to the proposed Project.

Table 8.0-1 – Comparison of Alternatives Matrix

Environmental Issue	Proposed Project	Alternative 1 No Project/No Development	Alternative 2 Commercial Development	Alternative 3 Mixed Use Development
Aesthetics	**LTSM**	**Reduced**	**Increased**	**Increased**
Air Quality	**LTS**	**Reduced**	**Increased**	**Increased**
Biological Resources	**LTSM**	**Reduced**	**Similar**	**Similar**
Cultural Resources	**LTSM**	**Reduced**	**Similar**	**Similar**
Energy	**LTS**	**Reduced**	**Increased**	**Increased**
Geology and Soils	**LTSM**	**Reduced**	**Similar**	**Similar**
Greenhouse Gas Emissions (GHG)	**LTS**	**Reduced**	**Increased**	**Similar**
Land Use and Planning	**LTS~~M~~**	**Reduced**	**Reduced**	**Increased**
Noise	**LTSM**	**Reduced**	**Similar/ Increased**	**Similar/ Increased**
Transportation	**LTSM**	**Reduced**	**Increased/ Reduced**	**Increased /Reduced**
Tribal Cultural Resources	**LTSM**	**Reduced**	**Similar**	**Similar**
Utilities	**LTS**	**Reduced**	**Increased**	**Increased**
Wildfire	**LTSM**	**Similar**	**~~Reduced~~ Increased**	**Similar**

Environmental Issue	Proposed Project	Alternative 1 No Project/No Development	Alternative 2 Commercial Development	Alternative 3 Mixed Use Development
Meets Project Objectives?		Alternative does not meet **any** of the Project objectives	Alternative 2 does not meet **all** of the Project objectives	Alternative 2 does not meet **all** of the Project objectives
LTS = Less than Significant Impact LTSM = Less than Significant Impact with Mitigation SU = Significant and Unavoidable				

Project Objectives	Alternative 1 No Project/ No Development	Alternative 2 Commercial Development	Alternative 3 Mixed Use Development
	Achieve the Project Objectives?		
Provide a high-quality residential development in close proximity to the University of California, Riverside, Downtown Riverside and high-quality transit corridors.	No	No	Yes - Partially
Increase the type and amount of housing available consistent with the goals of the City's Housing Element.	No	No	Yes - Partially
Provide new residential development to assist the City of Riverside in meeting its Regional Housing Needs Assessment (RHNA) allocation of 18,419 new housing units for the 2021-2029 Housing Element Cycle and the State's current housing crisis	No	No	Yes - Partially
Use land resources more efficiently by providing a well-planned, infill development on a currently vacant and largely disturbed site.	No	Yes	Yes
Implement green building practices and other sustainable development methods throughout the project, consistent with the City's Climate Action Plan.	No	Yes	Yes
Preserve the existing natural bed and bank of the drainage course and associated sensitive	Yes	Yes	Yes

Project Objectives	Alternative 1 No Project/ No Development	Alternative 2 Commercial Development	Alternative 3 Mixed Use Development
	Achieve the Project Objectives?		
vegetation outside of the development footprint to maintain its hydrologic and biological function for water flow conveyance and wildlife movement.			
Incorporate design and landscaping elements that complement and are responsive to the Canyon Crest community and edge conditions that buffer the project's effect on the nearby natural environments, including the City of Riverside's Quail Run Open Space Park and the Sycamore Canyon Wilderness Park.	No	Yes	Yes

3.2 Appendix Revisions to the Draft EIR

Appendix L – Planning Commission Memo & City Council Memo Annexation 118

Appendix M – Construction Health Risk Assessment (HRA) Output Files

Appendix N – SCAG RTP 2016 & 2020 Connect SoCal Data