SMP 39/SMP 40 Project

SCH# 2023010091

Final Environmental Impact Report

Prepared for the
City of Livermore

LIVERMORE
CALIFORNIA

January 2024

Prepared by
RANEY PLANNING & MANAGEMENT, INC.
25 years
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TABLE OF CONTENTS

TABLE OF CONTENTS

1. Introduction and List of Commenters

1. INTRODUCTION AND LIST OF COMMENTERS

1.1 INTRODUCTION

This Final Environmental Impact Report (EIR) contains comments received during the Draft EIR public review period for the SMP 38/SMP 39/SMP 40 Project. As discussed further below, subsequent to the Draft EIR public review period, all components of the project related to SMP 38 were removed from the proposed project. All other components of the proposed project remain the same. This Final EIR incorporates the various revisions to the Draft EIR accordingly, as presented in Chapter 3, Revisions to the Draft EIR Text.

This document has been prepared by the City of Livermore, as Lead Agency, in accordance with the California Environmental Quality Act (CEQA) and the CEQA Guidelines, Section 15132. The Introduction and List of Commenters chapter of the Final EIR discusses the background of the Draft EIR and purpose of the Final EIR, identifies the comment letters received on the Draft EIR, and provides an overview of the organization of the Final EIR.

1.2 BACKGROUND

The Draft EIR identifies the proposed project's potential environmental impacts and the mitigation measures that would be required to be implemented. The Draft EIR includes the following environmental analysis chapters:

- Agricultural Resources;
- Air Quality, Greenhouse Gas Emissions, and Energy;
- Biological Resources;
- Cultural and Tribal Cultural Resources;
- Hydrology and Water Quality;
- Noise;
- Public Services and Utilities; and
- Transportation.

The remaining environmental issue areas identified by Appendix G of the CEQA Guidelines are addressed in the Initial Study prepared for the proposed project, which was circulated for review with the Notice of Preparation (NOP) and included as Appendix A of the Draft EIR.

In accordance with CEQA, the City of Livermore used the following methods to solicit public input on the Draft EIR:

- An NOP for the Draft EIR was released for a 30-day public review period from January 6, 2023 to February 6, 2023. The NOP comment letters are included as Appendix B to the Draft EIR.
- A public scoping meeting was held before the Planning Commission on January 17, 2023 to solicit comments regarding the scope of the Draft EIR.

- On August 30, 2023, the Draft EIR was submitted to the State Clearinghouse for distribution to State agencies for a 45-day public review period from August 30, 2023 to October 13, 2023.
- On August 30, 2023, a Notice of Availability (NOA) of the Draft EIR was posted to the City's website (https://www.livermoreca.gov/departments/community-development/planning/environmental-documents), and the Alameda County Clerk's Office (1106 Madison Street. Oakland CA 94607), and mailed to local agencies and interested members of the public.
- A public meeting was held before the Planning Commission on October 3, 2023 to solicit comments regarding the Draft EIR.

All public comments received on the Draft EIR are listed in this chapter, and written responses to comments are included in Chapter 2, Response to Comments, as discussed in more detail in Section 1.6 of this chapter.

As noted above, subsequent to the Draft EIR public review period, the City has chosen to remove all components of the project related SMP 38 from the proposed project. As discussed on page 3-7 of the Draft EIR, the project included an SOI Amendment to modify the City of Livermore's SOI to include SMP 38. Approval of the SOI Amendment would not have altered the existing land use or zoning designation of SMP 38. The City of Livermore General Plan land use designation for SMP 38 would have remained Limited Agriculture and Open Space/Sand and Gravel, the Alameda County land use designation would have remained Industrial and Water Management, and the Alameda County zoning designation would have remained Agriculture. Annexation of SMP 38 into the City of Livermore was not proposed as part of the project, nor was development of the parcels that consist of SMP 38. Because specific development proposals for SMP 38 are not available at this time, the City of Livermore decided to remove SMP 38 from the proposed project. The City of Pleasanton has agreed to participate in a discussion of the Sphere of Influence (SOI) amendment when a development proposal is brought forth for SMP 38.

Pursuant to CEQA Guidelines Section 15088.5(a), a lead agency is required to recirculate a Draft EIR if "significant new information" is added after the Draft EIR is circulated but before certification. Significant new information is defined as information that changes the Draft EIR "…in a way that deprives the public of a meaningful opportunity to comment on…" a significant impact, a feasible way to mitigate an impact, or a feasible way to avoid an impact. The following identifies circumstances that would be considered "significant new information" that would trigger recirculation:

- Information that shows a new significant impact;
- Information that shows an increase in the severity of an impact (unless mitigation measures are identified to reduce it to acceptable levels);
- Information that identifies a feasible new alternative or mitigation measure considerably different from other analyzed alternatives or mitigation measures that would clearly lessen project impacts and the applicant declines to implement the measure; and/or
- Information that demonstrates that the Draft EIR was fundamentally flawed, basically inadequate, and conclusory in nature, thus, precluding meaningful public review and comment.

Because the components of the project related to SMP 38, as discussed throughout the Draft EIR, would not result in any physical changes to the environment, given that development of SMP 38 was not proposed, the analysis throughout the Draft EIR focused on the potential

environmental impacts associated with the development of SMP 39 and SMP 40, as well as the off-site trail connection options. Therefore, removal of the components of the project associated with SMP 38 would not result in any changes to the Draft EIR analysis, nor significant new information pursuant to CEQA Guidelines Section 15088.5(b), and the revisions reflected in this Final EIR clarify, amplify, and are consistent with the analyses and conclusions of the Draft EIR. Accordingly, the changes presented within this Final EIR would not trigger the need for recirculation of the Draft EIR.

1.3 PURPOSE OF THE FINAL EIR

Pursuant to CEQA Guidelines Section 15132, this Final EIR consists of the following:

1. A list of persons, organizations, and public agencies commenting on the Draft EIR (included as Section 1.4 of this chapter);
2. Comments received on the Draft EIR (Chapter 2 of this Final EIR);
3. Responses to the comments received on the Draft EIR (Chapter 2 of this Final EIR);
4. Revisions to the Draft EIR (Chapter 3 of this Final EIR); and
5. Any other information added by the Lead Agency.

1.4 LIST OF COMMENTERS

The City of Livermore received six comment letters during the public comment period on the Draft EIR for the proposed project. The comment letters were authored by the following agencies and groups.

Agencies

Letter 1 ..... Alameda County Transportation Commission
Letter 2 ..... California Department of Transportation, Aeronautics Program
Letter 3 ..... San Francisco Bay Regional Water Quality Control Board
Letter 4 ..... Zone 7 Water Agency

Groups

Letter 5 ..... Carpenters Union Local 713
Letter 6 ..... Golden State Environmental Justice Alliance

In addition, comments were received from three commenters during the public hearing held on October 3, 2023 to solicit public comments regarding the Draft EIR. A summary of the comments from the Draft EIR comment hearing are included as Letter 7.

Letter 7 ..... Summary of Verbal Comments: Draft EIR Public Hearing (October 2023)

1.5 CERTIFICATION OF THE FINAL EIR

State law requires that the City make several types of CEQA "findings" at the time of final action on the project. Findings describe the conclusions reached regarding particular issues, including specific evidence in support of those conclusions. The Final EIR typically provides much of the substantial evidence to support these findings. The required findings for the project are as follows:

- Certification of the Final EIR (CEQA Guidelines Section 15090) – These findings support the adequacy of the Final EIR for decision-making purposes. The Lead Agency must make the following three determinations in certifying a Final EIR:

1. The Final EIR has been completed in compliance with CEQA.
2. The Final EIR was presented to the decision-making body of the Lead Agency, and the decision-making body reviewed and considered the information in the Final EIR prior to approving the project.
3. The Final EIR reflects the Lead Agency's independent judgment and analysis.

- Findings Regarding Significant Impacts and Project Alternatives (CEQA Guidelines Section 15091) – These findings explain how the City chose to address each identified significant impact, including the mitigation measures adopted or an explanation of why such measures are infeasible. A discussion of the feasibility of project alternatives is also required by this section (see also CEQA Guidelines Section 15126.6[f]).

Pursuant to CEQA Guidelines, Section 15093(b), when a Lead Agency approves a project that would result in significant unavoidable impacts, the agency must state in writing the reasons supporting the action (Statement of Overriding Considerations). The Statement of Overriding Considerations shall be supported by substantial evidence. The SMP 39/SMP 40 Project would result in significant and unavoidable impacts related to agricultural resources; thus, a Statement of Overriding Considerations must be adopted if the project is approved. The required Findings of Fact and Statement of Overriding Considerations will be included as part of the resolution considered by the City of Livermore.

1.6 ORGANIZATION OF THE FINAL EIR

The Final EIR is organized into the following four chapters.

1. Introduction and List of Commenters

Chapter 1 provides an introduction and overview of the document, describes the background of the Draft EIR and the purposes of the Final EIR, provides a list of commenters, and describes the organization of the Final EIR.

2. Responses to Comments

Chapter 2 presents the comment letters received and responses to each comment within the letters. Each comment letter received has been numbered at the top of the page and bracketed to indicate how the letter has been divided into individual comments. Each comment is given a number with the letter number appearing first, followed by the comment number. For example, the first comment in Letter 1 would have the following format: 1-1. The response to each comment references the comment number.

3. Revisions to the Draft EIR Text

Chapter 3 summarizes minor changes made to the Draft EIR text since its release, including clarifications, modifications, and amplifications of the analysis. Section 15088.5 of the State CEQA Guidelines states that a Lead Agency is required to recirculate a Draft EIR when "significant new information" is added to the document after public notice is given of the availability of the Draft EIR for public review under Section 15087 but before certification. Pursuant to this section, the term "information" can include changes in the project or environmental setting, as well as additional data or other information. New information added to an EIR is not considered "significant" unless the EIR is changed in a way 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) that the City has decided not to implement.

"Significant new information" requiring recirculation includes any of the following:

1. A new significant environmental impact would result from the project or from a new mitigation measure proposed to be implemented.
2. A substantial increase in the severity of an environmental impact would result unless mitigation measures are adopted that reduce the impact to a level of insignificance.
3. A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the environmental impacts of the project, but the project's proponents decline to adopt it.
4. The Draft EIR was so fundamentally and basically inadequate and conclusory in nature that meaningful public review and comment were precluded.

Recirculation is not required where the new information added to the EIR merely clarifies or amplifies or makes insignificant modifications in an adequate EIR. The modifications to the Draft EIR identified in Chapter 3 have been examined with these requirements and obligations in mind. The City has determined that the provisions of Section 15088.5 of the CEQA Guidelines are not triggered and recirculation of the EIR is not required. A more detailed description of this determination will be included in the CEQA Findings of Fact described above.

4. Mitigation Monitoring and Reporting Program

CEQA Guidelines, Section 15097, requires lead agencies to adopt a program for monitoring the mitigation measures required to avoid the significant environmental impacts of a project. The intent of the Mitigation Monitoring and Reporting Program (MMRP) is to ensure implementation of the mitigation measures identified within the EIR for the SMP 39/SMP 40 Project.

2. Responses to Comments

2. RESPONSES TO COMMENTS

2.1 INTRODUCTION

The Responses to Comments chapter contains responses to each of the comment letters submitted regarding the SMP 38/SMP 39/SMP 40 Project (proposed project) Draft EIR during the public review period. As discussed in the Introduction and List of Commenters chapter of this Final EIR, SMP 38 was removed from the proposed project. Accordingly, among other changes, the proposed project's title has been revised to be the SMP 39/SMP 40 Project. This change has been reflected in the response to comments below. Please see Chapter 3, Revisions to the Draft EIR Text, of this Final EIR for all changes made to the Draft EIR text, including those related to removal of the SMP 38 components from the project.

2.2 RESPONSES TO COMMENTS

Each bracketed comment letter is followed by numbered responses to each bracketed comment. The responses amplify or clarify information provided in the Draft EIR and/or refer the reader to the appropriate place in the document where the requested information can be found. Comments that are not directly related to environmental issues (e.g., opinions on the merits of the project that are unrelated to its environmental impacts) are either discussed or noted for the record. Where revisions to the Draft EIR text are required in response to the comments, such revisions are noted in the response to the comment, and are also listed in Chapter 3 of this Final EIR. All new text is shown as <u>double underlined</u> and deleted text is shown as ~~struck through~~.

Letter 1

ALAMEDA County Transportation Commission
1111 Broadway, Suite 800, Oakland, CA 94607 • 510.208.7400 • www.AlamedaCTC.org

October 13, 2023

Ashley Vera,
Senior Planner
City of Livermore
1052 S. Livermore Avenue
Livermore, California 94550

SUBJECT: Draft Environmental Impact Report for the SMP 38/SMP39/SMP40 Project

Dear Ms. Vera,

Thank you for the opportunity to comment on the Draft Environmental Impact Report (DEIR) for the SMP 38/SMP39/SMP40 Project.

The project site is located in unincorporated Alameda County and includes nine separate parcels totaling approximately 217 acres. The project site is adjacent to Oaks Business Park, a complex of eight light industrial warehouse buildings located in the northwestern corner of the city of Livermore. The project site is located west of Isabel Avenue/State Route (SR) 84, north of Stanley Boulevard, south of West Jack London Boulevard, and east of El Charro Road. The project parcels are currently undeveloped but have several structures related to a former horse ranch in the northwest corner of SMP38 and other structures located on the Additional Annexation-Only Parcels.

The project consists of a Sphere of Influence Amendment (SOI) to include SMP 38 within the city of Livermore SOI and remove it from the city of Pleasanton's SOI. The land use designation for this parcel will remain Limited Agriculture and Open Space/Sand and Gravel and the Alameda County zoning designation would remain Agriculture. SMP 38 will not be developed.

1-1

For SMP 39, the project includes development of a total of up to six light industrial buildings consisting of approximately 755,000 square feet (sf) of new building space with associated internal roadways and other improvements. For SMP 40, the project will develop two industrial buildings up to 759,275 sf of new building space with internal roadways and other improvements. The project includes a paved at-grade trail on-site that is consistent with the City of Livermore Active Transportation Plan. Moreover, the project includes development of an off-site trail connection to the existing Arroyo Mocho Trail located on the east side of the Isabel Avenue/SR 84. The DEIR considered and evaluated three alternatives for the proposed off-site Isabel Avenue/SR 84 crossing:

- Option 1: At-Grade Crossing at Discovery Drive
- Option 2: Undercrossing at Isabel Bridge
- Option 3: Overcrossing of Isabel Avenue/SR 84

Since the proposed project would appear to generate over 100 pm-peak trips and is therefore subject to review under the Land Use Analysis Program (LUAP) of the Congestion Management Program (CMP), the Alameda County Transportation Commission (Alameda CTC) respectfully submits the following comments:

Congestion Management Program (CMP) Review

- Senate Bill (SB) 743 requires the use of VMT analyses rather than Level of Service (LOS) analyses to determine projects' transportation impacts under CEQA. However, Government Code Section 65089(b) and the Congestion Management Program (CMP) Land Use Analysis Program continue to require jurisdictions to analyze each project's potential impacts on the CMP roadway network. Alameda CTC would like to request that the project sponsor conduct a project impact analysis on the CMP roadway facilities that may be affected by the project. The required Level of Service analysis may be included in an appendix to the project EIR or as a separate document.
    - CMP roadway facilities in the project area include:
        - SR 84
        - I-580
        - North Canyons Parkway
    - For the purposes of CMP Land Use Analysis, the Highway Capacity Manual freeway and urban streets methodologies are the preferred methodologies to study vehicle delay impacts.
    - The Alameda CTC has *not* adopted any policy for determining a threshold of significance for Level of Service for the Land Use Analysis Program of the CMP. Professional judgment should be applied to determine the significance of project impacts.

1-2

Use of Countywide Travel Demand Model

- Alameda CTC appreciates the use of Alameda CTC Travel Demand Model for the detailed evaluation of project impacts on the forecasted multimodal regional travel and for the estimates of average VMT per employee as stated on page 4.8-18.

1-3

VMT Analysis

Alameda CTC has developed a VMT Reduction Calculation Tool to help member agencies and project sponsors comply with the requirements of SB 743. Alameda CTC appreciates that the project applicant has used this tool to estimate VMT reduced by the application of Mitigation Measure 4.8-3 that includes an Employer Carpool Program and encourages project applicant to implement any other combination of TDMs included in the tool.

1-4

Impacts

- *Impacts to VMT*
  As stated above, SB 743 changed the metric to determine impacts of land use projects on the transportation network from a delay-based metric, such as LOS, to a metric that is more aligned with existing state goals for the reduction of greenhouse gas emissions (GHG), such as VMT.

  Alameda CTC understands that based on the nature of industrial projects that tend to generate higher VMT than typical office projects, the City of Livermore recommended using the city average VMT of 16.20 VMT/employee without the 15% reduction as recommended by the Office of Planning and Research (OPR). With the added flexibility afforded to the project, it still results in significant VMT impacts. Alameda CTC appreciates the recommendation to include a Transportation Demand Management (TDM) Program that includes an Employer Carpool Program for SMP 39 and SMP 40 that will be monitored by the project applicant on an annual

1-5

1-5 cont.

basis for three years to see if program has reached target VMT as stated on page 4.8-20 of the DEIR. Please refer to the section below on Mitigation Measures for more detail on what Alameda CTC considers adequate mitigation for a project.

1-6

- *Impacts on Transit*
  The DEIR addresses potential impacts of the project on the Metropolitan Transportation System (MTS) transit operators, which in Livermore is the Livermore Amador Valley Transit Authority (WHEELS), and found that project would not have significant impacts on transit systems. Given the proximity of bus stops to the two locations that would be developed, SMP 39 and SMP 40, the project applicant should consider potential partnerships with WHEELS to provide transit benefits to future employees as part of the TDM program to help mitigate the project's anticipated VMT impact.

1-7

- *Impacts on Bicyclists and Pedestrians*
  The DEIR addresses potential impacts of the project to people biking and walking in and near the Project area, especially nearby roads included in the Countywide High-Injury Network and major barriers identified in the Countywide Active Transportation Plan. Alameda CTC appreciates that the project will build a paved bike and pedestrian trail within the project limits that will connect to existing trails. In addition, the project will build an off-site connection to the Arroyo Mocho Trail as stated in the project description and in the Transportation Impacts Section on page 4.8-18 of the DEIR.

1-8

- For additional detail on other considerations about the effects of vehicle traffic on cyclist safety and performance, site development and roadway improvements, and consistency with adopted plans, see Appendix J of the 2019 CMP.

Cumulative Impacts

1-9

Alameda CTC understands the DEIR analysis showed that increased traffic volumes on local roadway facilities under cumulative conditions would not substantially alter performance related to bicycle facilities, pedestrian facilities, transit facilities and services, and emergency vehicle access. Rather, impacts to such facilities under cumulative plus project conditions would be similar to the impacts under current conditions.

The DEIR states on page 4.8-22 that the VMT impact analysis presented under Impact 4.8-3 would also apply to cumulative plus project conditions because the OPR Technical Advisory indicates that VMT efficiency metrics, such as VMT per unit of development or per service population may not be appropriate for CEQA cumulative analysis. The reason for this is that these measures employ a denominator and the Technical Advisory recommends the use of an efficiency-based, project-specific VMT analysis. Therefore, if a project falls below an efficiency-based threshold that is aligned with long-term environmental goals and relevant plans, it would not have cumulative impacts distinct from those of the existing conditions scenario. Since the conclusion of the cumulative VMT analysis would remain identical to that presented under Impact 4.8-3, no VMT analysis was presented under the cumulative discussion of the DEIR.

Mitigation Measures

1-10

Alameda CTC would like to share some of its policy considerations for mitigation measures.

- Alameda CTC's policy regarding mitigation measures is that to be considered adequate they must be:
  - Adequate to sustain CMP transit service standards, and/or reduce VMT below the applicable level of significance;
  - Fully funded; and
  - Consistent with project funding priorities established in the Capital Improvement Program of the CMP, the Countywide Transportation Plan (CTP), and the Regional Transportation Plan (RTP) or the Federal Transportation Improvement Program, if the agency relies on state or federal funds programmed by Alameda CTC.

1-10 cont.

- The EIR should discuss the adequacy of proposed mitigation measures according to the criteria above. In particular, the EIR should detail when proposed roadway or transit route improvements are expected to be completed, how they will be funded, and the effect on service standards if only the funded portions of these mitigation measures are built prior to Project completion. The EIR should also address the issue of transit funding as a mitigation measure in the context of the Alameda CTC mitigation measure criteria discussed above.

- Jurisdictions are encouraged to discuss multimodal tradeoffs associated with mitigation measures or project elements that involve changes in roadway geometry, intersection control, or other changes to the transportation network. This analysis should identify impacts to automobiles, transit, bicyclists, and pedestrians. The HCM 2010 MMLOS methodology is encouraged as a tool to evaluate these tradeoffs, but project sponsors may use other methodologies as appropriate for particular contexts or types of mitigations.

1-11

- The EIR should consider the use of TDM measures, in conjunction with roadway and transit improvements, as a means of attaining acceptable levels of service. Whenever possible, mechanisms that encourage ridesharing, flextime, transit, bicycling, telecommuting and other means of reducing peak hour traffic trips should be considered.

1-12

Thank you for the opportunity to comment on this DEIR. Please contact me at (510) 208-7474, or Aleida Andrino-Chavez, Associate Transportation Planner, at (510) 208-7480, if you have any questions.

Sincerely,

Colin Dentel-Post
Principal Transportation Planner

cc: Aleida Andrino-Chavez, Associate Transportation Planner

LETTER 1: ALAMEDA COUNTY TRANSPORTATION COMMISSION

Response to Comment 1-1
The comment is an introductory statement and does not address the adequacy of the Draft EIR.

Response to Comment 1-2
The comment does not address the adequacy of the Draft EIR. As noted by the commenter, traditionally, lead agencies used level of service (LOS) to assess the significance of such impacts, with greater levels of congestion considered to be more significant than lesser levels. However, as discussed on page 4.8-7 of the Draft EIR, as a result of Senate Bill (SB) 743, passed in 2013, local jurisdictions may not rely on vehicle LOS and similar measures related to delay as the basis for determining the significance of transportation impacts under CEQA. Consistent with the CEQA Guidelines Section 15064.3(b), vehicle miles traveled (VMT) is the primary metric used to identify transportation impacts to roadway systems in the Draft EIR. Potential impacts related to VMT are evaluated under Impact 4.8-3 of the Draft EIR, which starts on page 4.8-19. As discussed on page 4.8-20 of the Draft EIR, the proposed project would result in a less-than-significant impact related to VMT with incorporation of Mitigation Measure 4.8-3, which requires preparation of a Transportation Demand Management (TDM) Program.

The Traffic Impact Analysis (TIA) prepared for the proposed project (see Appendix N of the Draft EIR) includes LOS analyses at 16 key intersections along the road network. The intersections include four intersections along Isabel Avenue (State Route [SR] 84) and the Interstate 580 (I-580) ramps at El Charro Road/Fallon Road. All intersections were scoped, coordinated, and vetted with City of Livermore staff. The North Canyon Parkway corridor was not analyzed due to the recommended trip distribution that was identified (i.e., zero project trips were assigned to North Canyon Parkway).

Response to Comment 1-3
The comment does not address the adequacy of the Draft EIR.

Response to Comment 1-4
The comment does not address the adequacy of the Draft EIR.

Response to Comment 1-5
The comment does not address the adequacy of the Draft EIR.

Response to Comment 1-6
The comment does not address the adequacy of the Draft EIR. Nonetheless, the project applicant is amenable to exploring a partnership with the Livermore-Amador Valley Transit Authority (WHEELS). It should be noted that a possible partnership is not required to reduce potential impacts related to transit services, as the Draft EIR concludes that the proposed project would not conflict with a program, plan, ordinance, or policy addressing the circulation system, including transit facilities. The comment will be forwarded to the decision-makers for their consideration.

Response to Comment 1-7
The comment does not address the adequacy of the Draft EIR.

Response to Comment 1-8
The comment does not address the adequacy of the Draft EIR.

Response to Comment 1-9
The comment does not address the adequacy of the Draft EIR.

Response to Comment 1-10
With respect to the first bullet point provided in the comment, the Draft EIR concludes that a potentially significant impact could occur related to VMT under Impact 4.8-3, which starts on page 4.8-19. To address the potential impact, the Draft EIR requires implementation of Mitigation Measure 4.8-3 on page 4.8-20, which mandates that the project applicant develop a TDM Program for both SMP 39 and SMP 40. The TDM Program must be developed prior to the issuance of the first building permit associated with the proposed project. The TDM Program would include an Employer Carpool Program and must be monitored by the project applicant/operator on an annual basis to determine the efficacy of the selected TDM strategies in achieving the reduction below the average VMT per employee of three percent (i.e., the performance target). If the performance target is not initially met, Mitigation Measure 4.8-3 includes clear performance standards to ensure that additional TDM strategies are incorporated to reduce the average VMT per employee, such that the potential impact is reduced to a less-than-significant level.

With respect to the second and third bullet points provided in the comment, the TDM Program would be funded by the project applicant. Finally, with respect to the adequacy of Mitigation Measure 4.8-3, case law demonstrates the components that a mitigation measure must include in order to meet CEQA's requirements (*Sacramento Old City Assoc. v. City Council of Sacramento* [1991] 229 Cal. App. 3d 1011). A lead agency must commit itself to the mitigation by identifying and adopting one or more mitigation measures for the identified significant effect. In addition, performance standards must be included in the mitigation measure, as specific performance standards are needed in order to show that the final mitigation measure will be effective. Furthermore, the lead agency must ensure that the future mitigation will be implemented, which is oftentimes done through a condition of approval for obtaining a development permit. Inherent in the commitment to mitigation and adoption of performance standards is a responsibility to ensure that the final mitigation is effective and is actually implemented. Mitigation Measure 4.8-3 meets the requirements for contents that must be included in the mitigation measure to address the potentially significant impact, as necessitated by CEQA. Thus, Mitigation Measure 4.8-3 is adequate. The comment will be forwarded to the decision-makers as part of their consideration of the proposed project.

Response to Comment 1-11
Mitigation Measures 4.8-1 and 4.8-3 of the Draft EIR do not include changes in roadway geometry, intersection control, or other changes to the transportation network. Mitigation Measure 4.8-1 on page 4.8-17 of the Draft EIR necessitates preparation of a Construction Traffic Management Plan prior to grading permit issuance for the SMP 39 and SMP 40 sites to ensure that potentially significant disruptions to the transportation network near the project site, such as along West Jack London Boulevard or Isabel Avenue/SR 84, do not occur during project construction. Mitigation Measure 4.8-3 on page 4.8-20 mandates that the project applicant develop a TDM Program for both SMP 39 and SMP 40. The Transportation chapter of the Draft EIR does not include any other mitigation measures. The comment is noted for the record.

Response to Comment 1-12

Mitigation Measure 4.8-3 does not include requirements for roadway or transit improvements. However, consistent with the recommendations contained in the comment, the TDM Program would include an Employer Carpool Program that implements a ridesharing program and establishes a permanent transportation management association, with funding requirements for employers. As such, the Draft EIR considers the use of TDM measures that could reduce peak hour traffic trips.

CALIFORNIA STATE TRANSPORTATION AGENCY GAVIN NEWSOM, GOVERNOR

California Department of Transportation

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Letter 2

October 12th, 2023

Ashley Vera
Associate Planner
City of Livermore
1052 S. Livermore Avenue
Livermore, CA 94550

Electronically Sent <asvera@livermoreca.gov>

Re: 2023010091, SMP 38/SMP 39/SMP 40 Project

Dear Ms. Vera:

2-1 The California Department of Transportation, Aeronautics Program has reviewed the Draft Environmental Review for the project titled SMP 38/SMP 39/SMP 40. One of the goals of the California Department of Transportation (Caltrans), Aeronautics Program, is to assist cities, counties, and Airport Land Use Commissions or their equivalent (ALUC), to understand and comply with the State Aeronautics Act pursuant to the California Public Utilities Code (PUC), Section 21001 et seq. Caltrans encourages collaboration with our partners in the planning process and thanks you for including the Aeronautics Program in the review of the Draft EIR.

2-2 All three sites, SMP 38, SMP 29, and SMP 40, are located within the Airport Protection Area Boundary and Airport Influence Area defined by the airport land use compatibility plan (ALUCP) of Livermore Municipal Airport. SMP 38 sits largely within Safety Zone 6, and partially in Safety Zones 2 and 3. A majority of SMP 39 is in Safety Zone 6 with a small portion in Safety Zone 3. SMP 40 sits within Safety Zone 6. Per the ALUCP, industrial land uses (warehouses, manufacturing, research, and development) are permitted within Zone 6. However, land use compatibility is more restricted for Safety Zones 2 and 3, with conditional or non-permitted industrial uses in these areas. Future and proposed development should adhere to the compatibility standards set forth in the ALUCP. Moreover, SMP 38 and SMP 39 are in the 60 CNEL noise contour, with a portion of SMP 38 in the 65 CNEL noise contour. SMP 40 is outside of the CNEL noise contours for Livermore Municipal Airport. Noise compatibility should also be considered per the ALUCP noise compatibility criteria standards.

Per the California Public Utilities Code Section 21001 et seq. relating to the State Aeronautics Act, Section 21676(b) prior to the amendment of a general plan…within

2-2

the planning boundary established by the airport land use commission pursuant to Section 21675, the local agency shall first refer the proposed action to the commission. If the commission determines that the proposed action is inconsistent with the commission's plan, the referring agency shall be notified. Any proposed development in the defined safety zones, therefore, must adhere to the safety criteria and restrictions defined in the Airport Land Use Compatibility Plan(s) formed by the ALUC pursuant to the PUC, Section 21674.

An ALUCP is crucial in minimizing noise nuisance and safety hazards around airports while promoting the orderly development of airports, as declared by the California Legislature. A responsibility of the ALUC is to assess potential risk to aircraft and persons in airspace and people occupying areas within the vicinity of the airport.

If you have any questions or need additional information, please contact me at my email address: tiffany.martinez@dot.ca.gov.

Sincerely,

Tiffany Martinez

Tiffany Martinez
Transportation Planner, Aeronautics Program

Cc: State Clearinghouse

LETTER 2: CALIFORNIA DEPARTMENT OF TRANSPORTATION, AERONAUTICS PROGRAM

Response to Comment 2-1

The comment is an introductory statement and does not address the adequacy of the Draft EIR.

Response to Comment 2-2

Potential hazards and noise impacts related to the project site's proximity to Livermore Municipal Airport are evaluated in Section IX, Hazards and Hazardous Materials, of the Initial Study prepared for the proposed project (see Appendix A of the Draft EIR) and Chapter 4.6, Noise, of the Draft EIR. In addition, page 4.0-4 of the Draft EIR includes the following:

> In addition, it should be further noted that, while the proposed project was determined not to result in a safety hazard for people working in the project area related to the Livermore Municipal Airport, the proposed project would still be required to comply with all policies of the ALUCP, including policies related to safety and Airspace Protection. ALUCP policies that may be applicable to the proposed project include the following: Policy 3.3.2.5 related to airport safety zones; Policy 3.3.2.6 related to airport protection areas; Policy 3.3.2.8 related to non-residential development criteria; Policy 3.3.2.9 related to land uses of particular concern; Policy 3.3.3.5 related to Federal Aviation Administration (FAA) notification; Policy 3.3.3.7 related to flight hazards due to building design or project operations; Policy 3.3.3.8 related to avigation easement dedication; and Policy 3.3.4.6 related to buyer awareness measures such as the requirement for sellers or leasers of property within an airport influence area (AIA) to provide a notice as part of all real estate transactions within the AIA disclosing such information. The proposed project would be subject to review and any conditions set forth by the ALUCP.

Furthermore, the Alameda County Airport Land Use Commission (ALUC) considered the compatibility of the proposed project with the Livermore Municipal Airport Airport Land Use Compatibility Plan (ALUCP) on October 9, 2023. The Alameda County ALUC adopted Resolution 2023-02 confirming that the proposed project would be compatible with the ALUCP, specifically concluding that the proposed uses are compatible with Safety Zone 6 and would be capable of attenuating exterior aircraft-related to 50 dB CNEL through standard building practices. Thus, the proposed project is consistent with the ALUCP, and the analyses and conclusions in the Draft EIR are adequate.

California Water Boards

Gavin Newsom
Governor

Yana Garcia
Secretary for Environmental Protection

San Francisco Bay Regional Water Quality Control Board

Date **Letter 3**

October 8, 2023

Sent via electronic mail: No hardcopy to follow

City of Livermore
ATTN: Ashley Vera, Associate Planner (asvera@livermoreca.gov)
1052 S. Livermore Avenue
Livermore, CA 94550

Subject: San Francisco Bay Regional Water Quality Control Board Comments on the Draft Environmental Impact Report for the SMP 38/SMP 39/SMP 40 Project, City of Livermore, Alameda County, California
SCH No. 2023010091

Dear Ms. Vera:

San Francisco Bay Regional Water Quality Control Board (Water Board) staff appreciates the opportunity to review the *Draft Environmental Impact Report for the* SMP 38/SMP 39/SMP 40 *Project* (DEIR). The DEIR evaluates the potential environmental impacts associated with implementing the SMP 38/SMP 39/SMP 40 Project (Project).

3-1 The Project site consists of nine parcels identified by Assessor's Parcel Numbers (APNs) 904-1-7-21; 904-1-2-12; 904-1-7-32; 904-3-1-4; 904-10-2-2, -3, -5, -7, and -8, totaling 217.04 acres in unincorporated Alameda County. The Project site is generally located west of Isabel Avenue/State Route (SR) 84, north of Stanley Boulevard, south of West Jack London Boulevard, and east of El Charro Road. On SMP 38, the proposed Project includes a Sphere of Influence (SOI) Amendment. On SMP 39 the proposed Project includes development of six industrial buildings consisting of 755,500 sf of new building space, and associated improvements. On SMP 40, the Project includes development of two industrial buildings consisting of up to 759,275 sf of new building space and associated improvements. A number of approvals would be required for development of SMP 39 and SMP 40, including a SOI Amendment for SMP 39, General Plan Amendment, Pre-zoning and Annexation, Zoning Map Amendment/Planned Development, Vesting Tentative Subdivision Maps, a Pre-Annexation Agreement, and Development Agreement. In addition, the Project would include annexation of four

additional parcels (APNs 904-10-2-3, -5, -7, and -8) located east of SMP 40. Development of SMP 38 and additional annexation parcels is not proposed at this time.

Summary 3-1 cont.

As is discussed below, the discussion in the DEIR of stormwater management from the developed Project site indicates that the currently proposed treatment measures for stormwater runoff water quality treatment are not consistent with the Water Board's current permit for stormwater runoff. In addition, the discussion of mitigation measures for post-construction hydrograph modification (hydromodification) does not address the requirements to prevent the generation of erosive flows in post-construction stormwater runoff. Discussions of stormwater management in the DEIR must be completely revised prior to the adoption of the Final EIR for the Project.

Comment 1. The text of the DEIR suggests that current post-construction stormwater treatment proposals are not MRP-compliant.

Text on page 3-14 of Section 3.5, Project Components, describes the stormwater treatment that is proposed for SMP 39:

> Stormwater from the new impervious areas within SMP 39 would be collected and treated pursuant to the requirements listed in the City of Livermore's Municipal Separate Storm Sewer System (MS4) Permit. The eastern half of the site would be discharged directly to the existing storm drain system with Jack London Boulevard through new service laterals connected to each lot. The remaining western portion would be routed through a three-acre-foot detention pond before discharging to a new 18- to 24-inch public storm drain line that runs approximately 600 feet north along the western property line of City of Livermore parcel APN-904-3-1-1 and connect to the existing storm drain system of West Jack London Boulevard. 3-2

The MS4 Permit that is referred to in the quoted text is the Water Board's National Pollutant Discharge Elimination System (NPDES) Municipal Regional Permit (MRP) for the management of stormwater runoff (Order R2-2022-0013; NPDES Permit No. CAS612008). The MRP requires that projects provide adequate water quality treatment for post-construction stormwater runoff and hydromodification mitigation for stormwater flows that flow over new and recreated impervious surfaces.

Water quality treatment for stormwater runoff must be provided using Low Impact Development (LID) principles. For most new development projects, LID-compliant water quality is provided through the construction, operation, and maintenance of bioretention areas, which use filtration, adsorption, chemical process, and biological processes to remove suspended and dissolved contaminants from stormwater runoff. However, the discussion of stormwater treatment for SMP 39 does not discuss the provision of LID treatment measures for runoff from the Projects new impervious surfaces. A reference is made to discharging runoff from the western portion of SMP 39 to a three-acre-foot detention pond. However, detention ponds, which only provide water quality treatment through the settlement of suspended contaminants, do not provide LID-compliant water

3-2 cont. quality treatment, since they have much lower removal rates for suspended contaminants than the removal rates provided by bioretention areas. In addition, detention ponds do not treat dissolved contaminants. No treatment is mentioned for runoff from the eastern portion of SMP 39.

Text on page 3-17 of Section 3.5, Project Components, describes the stormwater treatment that is proposed SMP 40:

> According to the Stormwater Quality Control Plan that has been prepared for the SMP 40 site, stormwater from impervious areas within SMP 40 would flow to a number of catch basin filtration inserts located throughout the SMP 40 site. The catch basins would connect a new network of stormwater lines to three 96-inch underground storage vaults located west of Building 1, within the internal drive aisle, between the dock doors and trailer parking. The storage vaults would be placed five feet underground and surrounded by rock. Stormwater from the storage vaults would be routed north and west to the existing detention basin located northwest of Building 1, within the Oaks Business Park, before being ultimately directed into a portion of the Arroyo Mocho Bypass Channel.

3-3 The stormwater quality treatment proposed for SMP 40 is not MRP-compliant LID treatment. LID treatment should mimic the treatment of runoff provided by undeveloped lands, with highly permeable treatment soil matrices used to minimize the amount of surface area necessary to treat stormwater runoff. To the maximum extent feasible, LID treatment should operate via gravity flow so that it continues to function without intense human maintenance. Reliance on pumping collected water from vaults into treatment areas is not consistent with LID treatment principles. In some cases of small, infill developments that are heavily constrained by existing development, it may be necessary to pump some runoff into treatment devices. However, since SMP 40 is currently undeveloped it is possible to design a MRP-compliant treatment system that avoids the need to pump collected runoff into bioretention areas. Also, catch basin filtration inserts and detention basins are not MRP-compliant The stormwater treatment system for SMP 40 must be completely redesigned to be MRP-compliant. The redesigned stormwater system must rely on gravity flow to discharge runoff to properly-sized bioretention areas.

3-4 The discussion of LID techniques on pages 4.5-10 and 4.5-11 of the DEIR is good, but the discussion of actual proposed treatment measures in Section 3.5 of the DEIR is not consistent with LID techniques.

3-5 cont. **Comment 2. The DEIR does not propose an actual mitigation project for impacts to Arroyo Mocho resulting from Trail Connection Option 2 in SMP 40.**
Text on page 4.3-32 in Section 4.3-3, Have a substantial adverse effect on any riparian habitat or other sensitive natural community, of Section 4.3, Biological Resources, discusses mitigation for the Project's impacts to riparian habitat along Arroyo Mocho that would result from implementation of Trail Connection Option 2. However, Section

4.3-3 does not actually describe mitigation measures, but only proposes to develop mitigation measures when a permit is requested from the California Department of Fish and Wildlife.

In a CEQA document, a project's potential impacts and proposed mitigation measures should be presented in sufficient detail for readers of the CEQA document to evaluate the likelihood that the proposed remedy will actually reduce impacts to a less than significant level. CEQA requires that mitigation measures for each significant environmental effect be adequate, timely, and resolved by the lead agency. In an adequate CEQA document, mitigation measures must be feasible and fully enforceable through permit conditions, agreements, or other legally binding instruments (CEQA Guidelines Section 15126.4). Mitigation measures to be identified at some future time are not acceptable. It has been determined by court ruling that such mitigation measures would be improperly exempted from the process of public and governmental scrutiny which is required under the California Environmental Quality Act. Therefore, the DEIR lacks an adequate discussion of proposed mitigation measures for the Project's impacts to Arroyo Mocho and its associated riparian habitat.

3-5 cont.

In addition, the discussion of impacts and mitigation in this section refers to the Water Board's authority under Section 401 of the Clean Water Act. Since the proposed impacts in Arroyo Mocho will be above the ordinary high water mark, there is no nexus to federal authority at the trail crossing of Arroyo Mocho. The Water Board will regulate impacts to Arroyo Mocho above the ordinary high water mark under its Porter-Cologne Act authority.

Please note that the required amount of mitigation will depend on the similarity of the impacted water of the state to the provided mitigation water of the State, the uncertainty associated with successful implementation of the mitigation project, and the distance between the site of the impact and the site of the mitigation water. In-kind mitigation for the fill of open waters consists of the creation of new open waters. If the mitigation consists of restoration or enhancement of open waters, the amount of mitigation will be greater than if the mitigation consists of the creation of open waters. If there are uncertainties with respect to the availability of sufficient water to support a mitigation water or sufficiently impermeable soils to sustain ponding, then the amount of mitigation would also have to be greater. Finally, the amount of required mitigation increases as the distance between the impact site and the mitigation site increases.

Without a description of a viable mitigation project, the DEIR does not demonstrate that the Project's impacts to waters of the State can be mitigated to a less than significant level.

Comment 3. The discussion of stormwater treatment in Section 4.5-2 of the DEIR does not appear to propose MRP-compliant stormwater quality treatment for SMP 39 or SMP 40.

3-6

As was noted above in Comment 1, the descriptions of proposed stormwater quality treatment measures for SMP 39 and SMP 40 do not appear to be MRP-compliant. Text

3-6 cont.

on page 4.5-24 refers to a three-acre-foot detention pond, which would be required to incorporate LID treatment features. But the text of the DEIR does not describe the proposed LID treatment features for the detention pond. In addition, this detention pond would only treat the western half of SMP 39. The DEIR does not describe any LID techniques for stormwater quality treatment for runoff from the eastern half of SMP 39.

The discussion of stormwater runoff treatment for SMP 40 relies on collecting runoff from SMP 40 in an underground storage basin and pumping the collected stormwater into treatment features. This proposal is not consistent with the description of LID techniques on pages 4.5-10 and 4.5-11 of the DEIR. SMP 40 is currently undeveloped, so there are no barriers to providing treatment for all runoff from new impervious surfaces in SMP 40 in bioretention areas. The proposed stormwater treatment system for SMP 40 must be revised to eliminate the underground storage basin and incorporate bioretention areas throughout SMP 40.

Comment 4. The discussion of stormwater runoff from impervious surfaces associated with the off-site trail connection in Section 4.5-2 shows an incomplete understanding of the sources of pollution in stormwater runoff.
The discussion of runoff from the off-site trail includes the following text:

3-7

> It should also be noted that given the nature of the off-site trail connection options, pollutants such as oil and grease from vehicle leaks, traffic, and maintenance activities are not anticipated to be carried into storm drainage systems, as the trail would be used for bicycle and pedestrian activities.

The author of this sentence appears to be unaware of the significant role of the deposition of airborne contaminants on the contamination of stormwater runoff from impervious surfaces. Between storm events, airborne contaminants are continuously being deposited on impervious surfaces. In Mediterranean climates, such as the Bay Area, there are often intervals of many days or weeks between storm events. When a storm does occur, all of the airborne contaminants that have deposited on impervious surfaces since the prior storm are entrained and/or dissolved in runoff from the new storm. This results in high levels of contaminants in runoff from surfaces that are not used by motor vehicles.

Comment 5. The discussion of post-construction hydromodification focusses on flooding and does not address the hydromodification mitigation measures that are required by the MRP.
The discussion of hydromodification in Section 4.5-4 only addresses changes in post-construction runoff volumes associated with the 10-year and 100-year storm events.

3-8

This discussion of hydromodification is not MRP-compliant. Hydromodification associated with increases in impervious surface areas results in flashier, higher-energy runoff from developed surfaces. These flashy, high-energy flows trigger channel incision, followed by bank failure. Much of the damage to creeks is associated with channel forming flows, which are on the order of the 2-year storm event. Therefore, the MRP requires mitigation for hydromodification of channel forming flows.

3-8 cont.

The MRP requires mitigation measures for hydromodification to control flows from 10 percent of the 2-year flow up to the 10-year flow event. Post-project runoff flows must be no greater than pre-project flows for all flows from 10 percent of the 2-year event to the 10-year event. The discussion of stormwater treatment in Section 4.5 of the DEIR does not address this requirement of the MRP.

Conclusion

3-9

Based on the information provided in the DEIR, the Project's proposed treatment for stormwater runoff water quality and mitigation for hydromodification impacts are not compliant with the requirements of the MRP. The discussion of stormwater quality and mitigation for hydromodification must be completely revised before the Final EIR is adopted. This revision must be based on a complete redesign of the proposed stormwater treatment infrastructure.

If you have any questions, please contact me at (510) 622-5680, or via e-mail at brian.wines@waterboards.ca.gov.

Sincerely,

Brian K. Wines

Brian Wines
Water Resources Control Engineer
South and East Bay Watershed Section

cc: State Clearinghouse (state.clearinghouse@opr.ca.gov)

LETTER 3: SAN FRANCISCO BAY REGIONAL WATER QUALITY CONROL BOARD

Response to Comment 3-1

The comment is an introductory statement, including a summary of the specific comments and recommendations included in the remainder of the letter. Detailed responses to the subsequent comments of the letter are provided below.

Response to Comment 3-2

Potential impacts related to water quality, which includes evaluation of the proposed project's consistency with the provisions of the National Pollutant Discharge Elimination System (NPDES) Municipal Regional Permit (MRP) and low-impact development (LID) features, are assessed under Impact 4.5-2, which begins on page 4.5-23 of the Draft EIR. As discussed on page 4.5-24 of the Draft EIR, the proposed project would be required to incorporate LID features into the on-site stormwater drainage facilities. All on-site LID features would be required to comply with the provisions included in the Alameda County C.3 Stormwater Technical Guidance, and, as part of required C.3 compliance, the project applicant would be required to prepare a Stormwater Control Plan and Maintenance Plan for submittal to the Regional Water Quality Control Board (RWQCB) to ensure that final C.3 stormwater requirements have been integrated into the project design.

To ensure the proposed project complies with applicable water quality requirements as part of each project component, Mitigation Measure 4.5-2(a) on page 4.5-27 of the Draft EIR requires that a final Stormwater Control Plan and Maintenance Plan be submitted to the City Director of Public Works and the City Engineer for review and approval prior to the approval of final project improvement plans for SMP 39, SMP 40, and the selected off-site trail connection option. Additionally, Mitigation Measure 4.5-2(a) requires that the final Stormwater Control Plan and Maintenance Plan comply with all applicable provisions of the Alameda Countywide Clean Water Program C.3 Stormwater Technical Guidance publication and meet the standards of the California Stormwater Quality Association (CASQA) Stormwater Best Management Practices (BMP) Handbook for New Development and Redevelopment. Site design measures, source control measures, hydromodification management, and LID standards, as necessary, must be incorporated into the design and shown on the improvement plans. Finally, the final plans must include calculations demonstrating that the water quality BMPs are appropriately sized, using methodology in the CASQA Stormwater BMP Handbook for New Development and Redevelopment. With implementation of Mitigation Measure 4.5-2(a), as well as Mitigation Measures 4.3-3(b) through 4.3-3(e) of the Biological Resources chapter (which are related to applicable requirements to protect water resources), the Draft EIR concludes a less-than-significant impact would occur. Thus, the analyses and conclusions presented in the Draft EIR are adequate.

Nonetheless, in response to the comment and for clarification purposes, page 3-14 of the Draft EIR is hereby revised as follows:

> Stormwater from the new impervious areas within SMP 39 would be collected and treated pursuant to the requirements listed the City of Livermore's Municipal Separate Storm Sewer System (MS4) Permit. Stormwater quality and hydromodification controls would be provided by a proposed bioretention planter in the expanded right-of-way of West Jack London Boulevard. ~~The~~ Stormwater flows from the eastern half of the site would be discharged ~~directly~~ to the existing storm drain system within West Jack London Boulevard.

following treatment for water quality and hydromodification by the bioretention planter ~~through new service laterals connected to each lot~~. ~~The~~ Following treatment and hydromodification by the bioretention planter, stormwater flows from the remaining western portion would be routed through a three-acre-foot detention pond before discharging to a new 18- to 24-inch public storm drain line that runs approximately 600 feet north along the western property line of City of Livermore parcel APN 904-3-1-1 and connects to the existing storm drain system of West Jack London Boulevard. Additionally, it should be noted that the western detention pond is intended for detaining high-flow runoff and would not provide stormwater quality or hydromodification controls.

Similarly, in response to the comment and for clarification purposes, page 4.5-24 of the Draft EIR is hereby revised as follows:

SMP 39

Stormwater on the SMP 39 site would be collected through an on-site storm drainage system, which would be required to incorporate LID treatment features, before being routed to the existing drainage system located within West Jack London Boulevard. The drainage system for the eastern half of the site would convey flows to the new stormwater quality and hydromodification controls that would be provided by a proposed bioretention planter in the expanded right-of-way of West Jack London Boulevard. Following treatment and hydromodification by the bioretention planter, stormwater flows would be conveyed ~~connect~~ to multiple existing storm drains within West Jack London Boulevard, which would discharge north into the existing modified channels at the Livermore Municipal Airport, before ultimately discharging at the existing large drop structure under West Jack London Boulevard, west of the Livermore Municipal Airport.

~~The drainage system for~~ Following treatment and hydromodification by the bioretention planter, stormwater flows from the remaining the western half of the site would be routed through a three-acre-foot detention pond, which would ~~be required to incorporate LID treatment features~~ serve to detain high-flow runoff. The outflow from the detention pond would flow north through an 18-inch storm drain and 24-inch storm drain within West Jack London Boulevard, before flowing into an existing modified channel located immediately north, along the northern edge of the roadway, before ultimately discharging at the existing large drop structure under West Jack London Boulevard, west of the Livermore Municipal Airport.

The above revisions are for clarification purposes only and do not change the conclusions of the Draft EIR.

Response to Comment 3-3

The proposed project does not include the use of pumps for stormwater treatment associated with SMP 40. The intent of the SMP 40 stormwater treatment design is to utilize a treatment train design, as described in Section 7.4 of the Alameda Countywide Clean Water Program C.3 Stormwater Technical Guidance publication. Pursuant to Section 7.4, non-LID measures may be used in the treatment train, so long as the last measure is a LID treatment measure. For SMP 40, the last treatment measure would be the buried 96-inch perforated gravel encased storage vaults, which would provide 100 percent volume capture and infiltration of runoff. Infiltration is listed as a LID treatment measure. Section 7.4 specifically describes the treatment train system proposed for SMP 40 with the following sentence: “Another example is when a hydrodynamic separator is

used to remove trash and coarse sediment upstream of a media filter or subsurface infiltration system."[1]

It should be noted that subsequent to preparation of the Draft EIR, the project applicant determined that at least two Contech Engineered Solutions Vortech Systems Hydrodynamic Separators would be installed on-site within SMP 40 to provide pretreatment and trash capture. The project applicant decided upon the Vortech Systems Hydrodynamic Separators, as the devices meet emerging stormwater treatment technologies (TAPE) certification standards.[2] The Vortech Systems Hydrodynamic Separators would be installed in areas proposed for disturbance as part of development of SMP 40, which were evaluated in the Draft EIR. Thus, the installation of Contech Engineered Solutions Vortech Systems Hydrodynamic Separators within SMP 40 does not affect the adequacy of the environmental analyses contained in the Draft EIR.

In response to the comment and for clarification purposes, page 4.5-25 of the Draft EIR is hereby revised as follows:

> ### *SMP 40*
> As shown on the Preliminary Stormwater Quality Control Plan prepared for SMP 40 (see Figure 4.5-5), stormwater on the SMP 40 site would be collected through an on-site storm drainage system, which would include an underground detention storage system comprised of three parallel 96-inch-wide, 1,000-foot-long corrugated metal pipes. The underground detention storage system would connect to the existing Oak Detention Basin, located to the north of the site, where water would be treated in accordance with the regional C.3 standards.
>
> In addition, the SMP 40 storm drainage system would include installation of at least two Contech Engineered Solutions Vortech Systems Hydrodynamic Separators to provide pretreatment and trash capture, prior to conveyance of flows to the corrugated metal pipes. The Vortech Systems Hydrodynamic Separators meet emerging stormwater treatment technologies (TAPE) certification standards and would be installed in areas proposed for disturbance as part of development of SMP 40.
>
> Outflow from the Oak Detention Basin would flow north through an existing 24-inch storm drain line to West Jack London Boulevard, where runoff would be conveyed north into the existing modified channels at the Livermore Municipal Airport, before ultimately discharging at the existing large drop structure under West Jack London Boulevard, west of the Livermore Municipal Airport.
>
> The proposed detention system would include an overflow connection to Arroyo Mocho to the south. A flap gate would be installed on the outlet to prevent water from Arroyo Mocho to backflow into the underground storage system.

Similarly, in response to the comment and for clarification purposes, page 3-17 of the Draft EIR is hereby revised as follows:

> According to the Stormwater Quality Control Plan that has been prepared for the SMP 40 site, stormwater from impervious areas within SMP 40 would flow to a number of catch basin filtration inserts located throughout the SMP 40 site. The catch basins would connect

[1] Alameda Countywide Clean Water Program. *C.3 Stormwater Technical Guidance Version 8*. March 22, 2023.
[2] Washington Department of Ecology. *Emerging Stormwater Treatment Technologies (TAPE)*. Available at: https://ecology.wa.gov/regulations-permits/guidance-technical-assistance/stormwater-permittee-guidance-resources/emerging-stormwater-treatment-technologies#tape. Accessed October 2023.

> a new network of stormwater lines to three 96-inch underground storage vaults located west of Building 1, within the internal drive aisle, between the dock doors and trailer parking. The storage vaults would be placed five feet underground and surrounded by rock. Stormwater from the storage vaults would be routed north and west to the existing detention basin located northwest of Building 1, within the Oaks Business Park, before being ultimately directed into a portion of the Arroyo Mocho Bypass Channel.
>
> In addition, the SMP 40 storm drainage system would include installation of at least two Contech Engineered Solutions Vortech Systems Hydrodynamic Separators to provide pretreatment and trash capture, prior to conveyance of flows to the corrugated metal pipes. The Vortech Systems Hydrodynamic Separators meet emerging stormwater treatment technologies (TAPE) certification standards and would be installed in areas proposed for disturbance as part of development of SMP 40.
>
> A portion of SMP 40 and the annexation only parcel, owned by the Zone 7 Water Agency and identified by APN 904-10-2-5, are within an area identified by FEMA as Zone AE, which is considered a SFHA within the 100-year floodplain. The proposed project would involve importing soils to bring the proposed building area above the 100-year floodplain, subject to approval of a Letter of Map Revision (LOMR) from FEMA.

The above revisions amplify the analyses contained in the Draft EIR and do not change the conclusions of the Draft EIR.

In addition to stormwater treatment, the proposed infiltration system is designed to provide hydromodification controls. It should be noted that as part of the project application process, Bay Area Hydrology Model (BAHM) calculations showing the proposed infiltration system's compliance with applicable hydromodification requirements were provided to the City of Livermore Engineering Division. Based on the above, the design of the SMP 40 stormwater system would be MRP-compliant. Furthermore, Mitigation Measure 4.5-2(a) requires that the final Stormwater Control Plan and Maintenance Plan prepared for the project comply with all applicable provisions of the Alameda Countywide Clean Water Program C.3 Stormwater Technical Guidance publication and meet the standards of the CASQA Stormwater BMP Handbook for New Development and Redevelopment. Please see Response to Comment 3-2 above. In addition, the City would require pretreatment measures with TAPE certification as a condition of approval for the project in response to the comment.

Response to Comment 3-4

Please see Responses to Comments 3-2 and 3-3 above.

Response to Comment 3-5

With respect to the contents that must be included in a mitigation measure, CEQA Guidelines Section 15126.4(a)(1) provides that mitigation measures must be feasible. In addition, CEQA Guidelines Section 15126.4(a)(2) requires that mitigation measures must be fully enforceable through permit conditions, agreements, or other legally binding instruments. Mitigation Measures 4.3-3(a) through 4.3-3(e), which begin on page 4.3-32 of the Draft EIR, address potentially significant impacts that could occur to wetland and riparian areas from development of Trail Connection Option 2 and/or SMP 40, in accordance with applicable federal and State regulations. Altogether, the mitigation measures require that the project applicant complies with the applicable provisions of the Clean Water Act (CWA), NPDES Permitting Program, and California Fish and Game Code (CFGC) to prevent significant impacts to protected wetland and riparian habitats.

To ensure compliance with federal and State regulations, each of the aforementioned mitigation measures includes timing requirements that specifically address when each mitigation measure must be implemented (i.e., prior to ground-disturbing activities or prior to the issuance of grading permits). The mitigation measures establish from which regulatory authority the project applicant must obtain approval (i.e., the U.S. Army Corps of Engineers [USACE], RWQCB, and/or the California Department of Fish and Wildlife [CDFW]). The mitigation measures also set forth clear performance standards with which the project applicant must comply in order for the mitigation to be deemed successfully implemented, including, but not limited to, completion and submittal of a formal wetland delineation to USCAE for verification to determine the extent of all hydrological features, their jurisdictional status, and the extent of any potential impacts associated with the project; preparation of a Storm Water Pollution Prevention Plan (SWPPP) and final Stormwater Control Plan; notification of CDFW, pursuant to California Fish and Game Code (CFGC) Section 1600; obtaining of Clean Water Act (CWA) Section 401 from the RWQCB; and obtaining a CWA Section 404 permit from USACE. In accordance with CEQA Guidelines Section 15126.4(a)(1)(B), mitigation measures that include sufficient performance standards, such as those established by Mitigation Measures 4.3-3(a) through 4.3-3(e), are deemed adequate. The proposed project would be subject to the mitigation measures set forth in the Draft EIR as a required condition of approval by the City. Thus, the mitigation measures established by the Draft EIR, including Mitigation Measures 4.3-3(a) through 4.3-3(e), are feasible and contain permit conditions, agreements, or other legally binding instruments that ensure their completion and efficacy. Thus, Mitigation Measures 4.3-3(a) through 4.3-3(e) comply with the applicable provisions of CEQA Guidelines Section 15126.4, and the analyses and conclusions in the Draft EIR are adequate.

Response to Comment 3-6

Please see Responses to Comments 3-1 through 3-3.

Response to Comment 3-7

In response to the comment and for clarification purposes, page 4.5-27 of the Draft EIR is hereby revised as follows:

> It should also be noted that given the nature of the off-site trail connection options, pollutants such as oil and grease from vehicle leaks, traffic, and maintenance activities are not anticipated to be carried into storm drainage systems, as the trail would be used for bicycle and pedestrian activities only. Although airborne contaminants have the potential to settle on impervious surfaces between storm events, which can eventually result in high levels of contaminants in runoff even from surfaces not used by motorized vehicles, as demonstrated throughout this chapter, the proposed project would be subject to applicable regulations and standards, as well as the mitigation measures set forth herein. Compliance with the aforementioned requirements would ensure runoff from the off-site trail connection options is directed to stormwater treatment features prior to entering the City's storm drainage system.

The above revisions are for clarification purposes only and do not change the conclusions of the Draft EIR.

Response to Comment 3-8

Please see Responses to Comments 3-1 through 3-3. The proposed underground storage/infiltration system is designed to meet the hydromodification requirements mentioned by the commenter. Specifically, the proposed system is sized to provide hydromodification controls through storage vaults that include two orifices and a high-flow weir to provide the flow control.

The BAHM calculations for the project demonstrate compliance with the MRP by showing that the post-project discharge rates and durations for the selected hydromodification control structure does not exceed the pre-project discharge rates and durations from 10 percent of the pre-project two-year peak flow up to the pre-project 10-year peak flow.

Response to Comment 3-9

The comment is a conclusory statement, summarizing the comments contained in the letter. Please see Responses to Comments 3-2 through 3-8.

ZONE 7 WATER AGENCY
Delivering Quality, Reliability and Safety

100 North Canyons Parkway
Livermore, CA 94551
(925) 454-5000

Letter 4

October 13, 2023

Ashley Vera
Associate Planner
City of Livermore
1052 S. Livermore Avenue
Livermore, California 94550

Sent via E-mail

Re: Notice of Availability of a Draft Environmental Impact Report – SMP 38/SMP 39/ SMP 40 Project

Zone 7 Water Agency (Zone 7, or Zone 7 of the Alameda County Flood Control and Water Conservation District) has reviewed the referenced document in the context of Zone 7's mission to "Deliver safe, reliable, efficient, and sustainable water and flood protection services" within the Livermore-Amador Valley. Below are our comments for your consideration.

4-1

We understand that this EIR includes (1) a program-level analysis of the environmental impacts associated with the proposed Sphere of Influence Amendment for SMP 38 and annexation of the Additional Annexation Only Parcels; and (2) a more detailed analysis for SMP 39 and SMP 40 because the project applicant has submitted project-specific information for those areas.

Hydrology / Flood Protection –

4-2

1. On page 4.5.16, under paragraph Alameda County Flood Control and Water Conservation District (the District). For completeness, please explain that the District is divided into ten active flood control zones based on discrete drainage boundaries, and that Zone 7 Water Agency (governed by a locally elected board of directors) is responsible for one of the ten zones with a service area that comprises of the City of Dublin, Livermore, Pleasanton, and unincorporated areas of Alameda County (project site). Alameda County Public Works Agency serves as the agent for the District and is responsible for land use activity within the unincorporated area, and is the present Floodplain Manager. Zone 7 owns and manages over 37 miles of engineered and natural channels throughout its service area, including a portion of Arroyo Mocho adjacent to the SMP 40 and a channel bypass section to the east of SMP 39.

ZONE 7 WATER AGENCY
Delivering Quality, Reliability and Safety

2. On page 4.5.17, under Zone 7 Stream Maintenance Master Plan

   Typo: Change "Maintenance" to "Management" (Stream Management Master Plan is the correct title).

4-3

   For completeness, add a short description about Zone 7's overall role in the Livermore-Amador Valley; for example, Zone 7 Water Agency is committed to deliver safe, reliable, efficient and sustainable water and flood protection services.

   Also add a short description about the SMMP; for example, 2006 SMMP identified 45 conceptual projects across twelve distinct reaches, delineated by the geography of the Alameda Creek watershed and its subbasins within Zone 7's Service Area. Zone 7 established a specific emphasis for each reach depending on that reach's role in providing flood protection to the Valley and its relation to other resource areas such as water supply, habitat, and recreation.

   Also on page 4.5.17, please add to last sentence of what paragraph?: "Zone 7 has informed the City that they are unsure whether the bypass will proceed and will be conducting further analysis through a system-wide evaluation as part of Phase 2a of the Flood Management Plan, the update to the 2006 SMMP."

3. On page 4.5.20, second paragraph, it mentions that the modeling by Schaaf & Wheeler assumed that SMP 40 would be elevated out of the floodplain. The DEIR should analyze the impacts from constructing, since the function of floodplain would be compromised due to the raised pad elevations.

4-4

4. On page 4.5.33, the second paragraph mentions that an analysis of the post-project hydraulic grade line (HGL) of the existing storm drain system increases, but there is no mention of the increase of the floodplain level within SMP 39 or 40, due to displacement from the proposed pad elevation increases. The DEIR should analyze impacts of increased HGL to effectiveness of the drainage system and also identify the proposed mitigation for displacement of the floodplain to areas not captured by the proposed storm drain system. Please note that obtaining a LOMR is not a mitigation measure that addresses any adverse impacts caused by floodplain displacement. Also, stormwater from Arroyo Mocho spills out onto Stanley Blvd; the DEIR should analyze if displacement of the floodplain impacts Stanley Blvd.

4-5

4-6

4-7

5. Appendix I discusses the drainage analysis connecting SMP 39 and 40 into the City's existing storm drain system. It, however, does not analyze impacts to the FEMA floodplain due to the construction of building pad elevations, which will displace

4-8

4-8 cont.

floodplain waters elsewhere. The DEIR should include analysis of the displacement and identify how the displacement of floodplain waters will be mitigated.

4-9

6. Setback. The DEIR project description does not address constructing along a natural channel or a mining pit. It is not clear, what sort of analysis has been performed to ensure that the channel embankment does not fail along the southern border of SMP 39 and 40. Zone 7 recommends that the Developer applies a setback of 20' from the top of bank, which should be determined from a 2.5:1 slope projection from the toe of channel/mining pit to the top, to ensure that the embankment will be stable.

Groundwater –

4-10

7. Wells. Our records indicate that there are 11 wells in or immediately adjacent to the project area (Figure 1, Figure 2 and Figure 3) including three Zone 7 program wells (3S1E10A002, 3S1E11G001 and 3S2E07N002), three supply wells (3S1E10A001, 3S1E10A003, and 3S1E12M002), two monitoring wells (3S1E11D013 and 3S1E12Q004), two cathodic protection wells (3S1E10B007 and 3S1E13A001), and one inclinometer (3S1E13B001). All of these wells must be protected during construction. Additionally, one destroyed well (3S1E12M001) exists at the site.

   Please be advised that Zone 7 program wells must remain operational during and following construction as they are essential to Zone 7's regional groundwater monitoring program. Contact Zone 7 to coordinate any necessary upgrades or adjustments in the well and/or well box elevation to match the final grade.

   Please immediately notify Zone 7 if any other wells exist in the project area. All well locations should be field verified and noted on the plans. A Zone 7 drilling permit is needed for any well or soil boring work that may be planned for this project. The drilling permit application and permit fee schedule can be downloaded from our website: https://www.zone7water.com/post/well-drilling-and-soil-boring-permits. For additional information please email wellpermits@zone7water.com.

4-11

8. Groundwater Management Plan. It should be noted that the subject property (or project) is located within the basin area under sustainable groundwater management by Zone 7 as per the Alternative Groundwater Sustainability Plan for the Livermore Valley Groundwater Basin (https://www.zone7water.com/sites/main/files/file-attachments/alt_gw_sustainability_plan-4.pdf?1656015908) and is subject to all relevant sustainable groundwater management actions.

ZONE 7 WATER AGENCY
Delivering Quality, Reliability and Safety

4-12 9. Groundwater Quality. Elevated nitrate (as Nitrogen) and Perfluorooctane Sulfonic Acid (PFOS) concentrations have been detected in some local wells in this area (see Figures 1 to Figure 8). Consequently, we advise wells on this site be tested regularly for potability if groundwater is to be used.

4-13 10. Onsite Wastewater Treatment Systems (OWTS, e.g., septic systems). Zone 7's understanding is that the proposed commercial infrastructure for SMP 39 and 40 will be connected to municipal sewer line and the proposed use for SMP 38 will remain residential and unchanged. Please provide Zone 7 with details if any other type of wastewater management is planned for this project. On-site disposal of wastewater from new non-residential facilities are prohibited unless an approval from Zone 7 Water Agency is obtained. For any questions, please email septics@zone7water.com.

Water Supply / Water Conservation

4-14 11. Water Supply Assessment, page 4.7-29 and Appendix L. It is not clear from the evaluation in the DEIR if the project's water demands are accounted for in the City's existing demand projections; the DEIR seems to suggest they are, but the assessment in Appendix L seems to conclude otherwise. The DEIR should more clearly explain the water supply assessment (WSA) and ensure consistency between the DEIR and WSA in Appendix L.

4-15 12. Water-wise Landscaping. Zone 7 encourages the use of sustainable, climate-appropriate, and drought-tolerant plants, trees and grasses that thrive in the Tri-Valley area. Find more information at: http://www.trivalleywaterwise.com.

We appreciate the opportunity to comment on this project. If you have any questions on this letter, please feel free to contact me at (925) 454-5005 or via email at erank@zone7water.com.

Sincerely,

Elke Rank

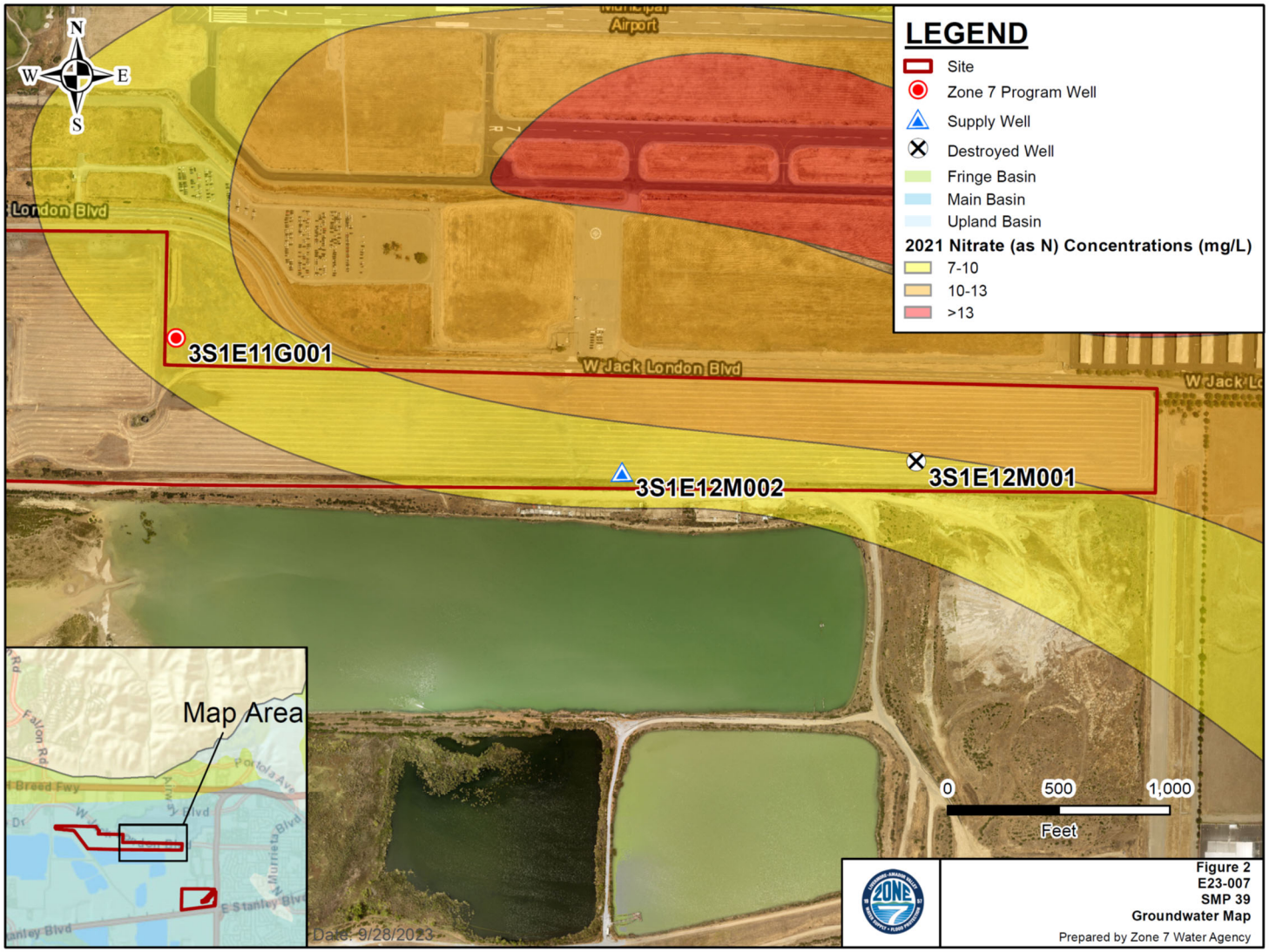
Elke Rank
Acting Senior Water Resources Planner

cc: Ken Minn, file

4-16


LEGEND
Site
Zone 7 Program Well
Supply Well
Monitor Well
Other Well
Fringe Basin
Main Basin
Upland Basin
2021 Nitrate (as N) Concentrations (mg/L)
7-10
3S1E10B007
3S1E10A003
3S1E10A001
3S1E10A002
3S1E11D013
El Charro Rd
Jack London Blvd
Map Area
Arthur H Breed Fwy
Stanley Blvd
0
500
1,000
Feet
Figure 1
E23-007
SMP 38
Groundwater Map
Prepared by Zone 7 Water Agency

4-16 cont.


N
W
E
S
Airport
London Blvd
W Jack London Blvd
3S1E11G001
3S1E12M002
3S1E12M001
LEGEND
Site
Zone 7 Program Well
Supply Well
Destroyed Well
Fringe Basin
Main Basin
Upland Basin
2021 Nitrate (as N) Concentrations (mg/L)
7-10
10-13
>13
Map Area
0
500
1,000
Feet
Date: 9/28/2023
Figure 2
E23-007
SMP 39
Groundwater Map
Prepared by Zone 7 Water Agency

4-16 cont.


N
W
E
S
LEGEND
Site
Zone 7 Program Well
Monitor Well
Other Well
Fringe Basin
Main Basin
Upland Basin
3S1E12Q004
3S2E07N002
3S1E13A001
3S1E13B001
Map Area
Discovery Dr
Atlantis St
Voyager St
Isabel Ave
Rodrose St
Stanley Blvd
E Stanley
0
500
1,000
Feet
Date: 9/28/2023
Figure 3
E23-007
SMP 40
Groundwater Map
Prepared by Zone 7 Water Agency

LETTER 4: ZONE 7 WATER AGENCY

Response to Comment 4-1

The comment is an introductory statement and does not address the adequacy of the Draft EIR.

Response to Comment 4-2

Based on the comment and for clarification purposes, page 4.5-16 of the Draft EIR is hereby revised as follows:

> **Alameda County Flood Control and Water Conservation District**
> ACFCWCD was created in 1949, and plans, designs, constructs, and maintains Western Alameda County's flood control systems such as natural creeks, channels, levees, pump stations, dams, and reservoirs. The ACFCWCD also cares for the natural environment through public outreach and enforcement of pollution control regulations governing County waterways. The ACFCWCD's updated Hydrology and Hydraulics Manual defines current practices in the hydrologic and hydraulic design of all flood control facilities in Alameda County that are subject to district approval. The ACFCWCD is divided into 10 active flood control zones based on discrete drainage boundaries, one for which Zone 7 is responsible that includes the cities of Dublin, Livermore, and Pleasanton and unincorporated areas of Alameda County. Zone 7 owns and manages more than 37 miles of engineered and natural channels throughout its service area, including a portion of Arroyo Mocho adjacent to SMP 40 and a channel bypass section to the east of SMP 39. Zone 7 is committed to deliver safe, reliable, efficient, and sustainable water and flood protection services.

The above revisions are for clarification purposes only and do not change the conclusions of the Draft EIR.

Response to Comment 4-3

Based on the comment and for clarification purposes, pages 4.5-17 and 4.5-18 of the Draft EIR are hereby revised as follows:

> **Zone 7 Stream ~~Maintenance~~ Management Master Plan**
> The 2006 Zone 7 Stream ~~Maintenance~~ Management Master Plan (SMMP), which updates the Zone 7's 1966 Flood Control Master Plan, identifies 45 conceptual projects across 12 distinct reaches, which are delineated by the geography of the Alameda Creek watershed and its subbasins within Zone 7's service area. Zone 7 established a specific emphasis for each reach depending on that reach's role in providing flood protection to the valley and its relation to other resource areas such as water supply, habitat, and recreation. The 2006 SMMP includes a recommended project to divert stormwater in a major storm event within the Arroyo Mocho channel, referred to in the SMMP as the Arroyo Mocho Bypass and Regional Storage at Chain of Lakes (Project Number R.6-2). Because widening of the existing Arroyo Mocho in this area is likely to be infeasible, the bypass and regional storage at Chain of Lakes are considered a viable alternative to provide the 100-year flood protection. A major component of the approach to regional flood protection includes detention of flood water in the Chain of Lakes, which requires diversion of flood waters from the Arroyo Mocho during high flow events. The project involves routing peak flows into a bypass channel running within the western boundary of the SMP 40 property, located east of Lake E, ultimately traveling within the southern boundaries of the SMP 38 and 39 properties, located north of Lakes F and G, and eventually connecting to the Chain of Lakes for regional storage as shown on Figure 4.5-4. Zone 7 has informed the City that they are unsure whether the bypass will proceed and will be conducting further analysis through a

system-wide evaluation as part of Phase 2a of the Flood Management Plan, the update to the 2006 SMMP.

The above revisions are for clarification purposes only and do not change the conclusions of the Draft EIR.

Response to Comment 4-4

The proposed fill for the building pads would be located outside the regulatory floodway and would not be subject to the No-Rise Certification for Floodways established by the Federal Emergency Management Agency (FEMA). In other words, the proposed fill would not block the active channel flow. Furthermore, the displacement of floodplain storage would not impact downstream flows nor floodplain limits, based on the Zone 7 and FEMA HEC-RAS models, which were used to form this conclusion.

Response to Comment 4-5

Please see Response to Comment 4-4 above. Additionally, the displacement of the floodplain for the proposed buildings would not significantly impact the floodplain boundaries. The Arroyo Mocho hydraulics control the spill into the north overbank, and fill in this area does not appear to significantly impact channel water levels. The Zone 7 HEC-RAS models do not show an increase in floodplain area due to the proposed fill for the building pads. The stage and flow hydrograph extracted from model results also does not show water level increases adjacent to the project site, nor downstream near the confluence with the Arroyo Las Positas. The model results support the conclusion that the existing floodplain storage at SMP 40 is not effective in attenuating downstream flows, nor reducing flooding.

Response to Comment 4-6

The City of Livermore's storm drain ICM hydraulic modeling does not show a significant impact on the 10-year or 100-year system. The additional flows from the proposed development site would be mitigated through detention storage. The displaced floodplain storage by the proposed buildings would not impact channel, or storm system capacities. The City of Livermore's drainage system, like all other municipalities in the region, is not intended to capture 100-year channel spills. Drainage networks are designed to convey 10-year runoff to flood control channels.

Response to Comment 4-7

Based on the Zone 7 HEC-RAS modeling, the proposed project would not impact potential spills onto Stanley Boulevard.

Response to Comment 4-8

The SMP 40 Flood Study Memorandum and SMP 39/SMP 40 Drainage Analysis Memorandum prepared for the Draft EIR (see Appendices H and I of the Draft EIR) focused on the City of Livermore's storm drainage network and are not intended to analyze the large flood control channels. The potential impacts related to flooding from the proposed project are modeled using the Zone 7 and FEMA HEC-RAS floodplain and floodway models (see Appendices H and I of the Draft EIR for the full modeling results). Those analyses show the removal of the floodplain associated with the proposed buildings would not significantly impact neighboring parcels, nor downstream water levels or flow rates. The volume of floodplain storage at the proposed building sites would be negligible compared to the overall watershed runoff.

The current Letter of Map Revision (LOMR) for Arroyo Las Positas and Arroyo Mocho would remove the proposed building locations from the regulatory floodway. In addition, as discussed on page 4.5-33 of the Draft EIR, Livermore Municipal Code Section 16.12.120 requires that the building pads of all site development within a FEMA-designated Special Flood Hazard Area (SFHA) be elevated above the 100-year base flood elevation (BFE). In compliance with Livermore Municipal Code Section 16.12.120, Mitigation Measure 4.5-5 on page 4.5-34 of the Draft EIR requires that if buildings within SMP 39 are determined to be within a SFHA, the City or project applicant must obtain a LOMR from FEMA. In addition, prior to building permit issuance for SMP 40, the mitigation measure requires that the City or project applicant obtain a LOMR.

Response to Comment 4-9

According to Figure 3-9 in the Project Description chapter of the Draft EIR (see Draft EIR page 3-18), the proposed buildings for SMP 39 would be located a minimum of 135 feet from the southern property boundary. Thus, buildings would not be constructed immediately adjacent to the mining pits that occur to the south of SMP 39. In addition, within the southernmost portion of SMP 39, the proposed project would include only surface-level improvements. Thus, the proposed project would meet the commenter's recommended setback of 20 feet from the top of the nearest mining pit.

With respect to SMP 40, as shown in Figure 3-11 of the Draft EIR on page 3-21, the proposed project does not include construction in areas within SMP 40 immediately adjacent to the mining pits. The siting of buildings within SMP 40 would be well outside of the 20-foot setback distance recommended by the commenter. Additionally, as discussed on page 4.3-31 of the Draft EIR, the proposed development of SMP 40 would avoid all impacts to potential waters of the U.S. and State, and all grading and building development would be setback a minimum of 25 feet from the top of the Arroyo Mocho's bank and outside of the riparian tree canopy, consistent with CDFW requirements.

Response to Comment 4-10

As discussed on page 4.0-3 of the Draft EIR, the Initial Study prepared as part of the Draft EIR (see Appendix A of the Draft EIR) evaluated the potential for ground-disturbing activities associated with the proposed project to encounter the existing groundwater well located along the western boundary of SMP 39. In addition, as further noted on page 4.0-4 of the Draft EIR, since the Initial Study was prepared for the proposed project, a Zone 7 supply well was identified in the south-central portion of the SMP 39 site. As a result, the project applicant would be required to contact Zone 7 regarding the supply well and either obtain an abandonment permit to properly abandon the well, or, if required by Zone 7, implement other measures identified by Zone 7, such as providing any necessary upgrades or adjustments to the well and/or well box elevation to match the final grade. Mitigation Measure IX-1 included in Table 2-1 of the Draft EIR was revised to reflect these changes.

Response to Comment 4-11

The proposed project would be required to comply with applicable policies, regulations, and/or standards, including those established by the Alternative Groundwater Sustainability Plan. From a CEQA standpoint, as discussed on page 4.5-12 of the Draft EIR, the Livermore Valley Groundwater Basin has been designated a "Medium" priority basin, which is the threshold for Sustainable Groundwater Management Act (SGMA) compliance. In addition, potential impacts related to conflicts with a water quality control plan or sustainable groundwater management plan are evaluated under Impact 4.5-3 of the Draft EIR, starting on page 4.5-28, and concluded to be

less than significant. The comment is noted for the record and will be forwarded to the decision-makers for their consideration.

Response to Comment 4-12

As discussed on page 4.5-28 of the Draft EIR, water service for the proposed project would be provided by the City of Livermore, which is supplied water through a wholesale agreement with Zone 7. The City does not currently pump groundwater (nor plans to in the future); however, a portion of the water supply that the City receives from Zone 7 is obtained through groundwater from the Livermore Valley Groundwater Basin. The comment is noted for the record and will be forwarded to the decision-makers as part of their consideration of the proposed project.

Response to Comment 4-13

As discussed on pages 3-14 and 3-17 of the Draft EIR, sanitary sewer service for the proposed project would be provided by the City of Livermore. The proposed project does not include on-site disposal of wastewater from the proposed non-residential facilities.

Response to Comment 4-14

The projected water demand in the City's 2020 Urban Water Management Plan (UWMP) did not include the project water demands associated with the proposed project. Based on the comment and for clarification purposes, the discussion under Impact 4.7-4 on pages 4.7-29 and 4.7-30 of the Draft EIR is hereby revised as follows:

> Based on the WSA, the total projected water supplies determined to be available for the proposed project and other development served by ~~Zone 7 Water Agency~~ LMW, as well as the anticipated demand, during normal, single dry, and multiple dry years during a 20-year projection is summarized in Table 4.7-8. The WSA determined anticipated demand within the LMW service area through incorporation of projections from the City's 2020 UWMP, which included the expected buildout of the Livermore General Plan planning area, as well as Isabel Neighborhood Specific Plan. As detailed in the City's 2020 UWMP, projections are developed based on expected retailer demands on Zone 7 Water Agency from an analysis conducted by Zone 7 Water Agency. Projected retailer demands were based on 2020 deliveries, retailer delivery requests for 2022 to 2025, and projected buildout demands. According to the WSA, in 2020, the City's potable and raw water demand was approximately 2,134 million gallons per year (mgy), or 6,549 AFY. The City is anticipated to be built out by 2040, when potable and raw water demands are projected to reach 2,263 mgy (6,945 AFY). The growth in potable and raw water demands equates to six percent, which reflects the City's status as being mostly built out already. The projected water demands in the City's 2020 UWMP did not include the projected water demands for the proposed project. As shown in Table 4.7-4, the additional potable water demand for the proposed project is projected to be 88 AFY. The additional demand represents an approximately 1.3 percent increase in the City's projected potable water demands, which is considered to be well within the margin of error for water supply planning purposes. Furthermore, Zone 7's 2020 UWMP indicates that Zone 7 would have a supply surplus greater than the 88 AFY generated by the proposed project in all hydrologic conditions through 2045. Therefore, as shown in Table 4.7-8, water demand within the LMW's service area (including the proposed project) is not expected to exceed supplies in any year or hydrologic condition.

Table 4.7-8
Potable and Raw Water Supply and Demand During Normal, Single Dry, and Multiple Dry Years (AFY) in the LMW Service Area

Hydrologic Condition	2025	2030	2035	2040	2045
Normal Year					
Potable and Raw Water Supply[1]	6,533	6,702	6,868	7,033	7,033
Total Water Demand[2]	6,533	6,702	6,868	7,033	7,033
Shortfall?	**NO**	**NO**	**NO**	**NO**	**NO**
Single Dry Year					
Potable and Raw Water Supply[1]	6,533	6,702	6,868	7,033	7,033
Total Water Demand[2]	6,533	6,702	6,868	7,033	7,033
Shortfall?	**NO**	**NO**	**NO**	**NO**	**NO**
Multiple Dry Year 1					
Potable and Raw Water Supply[1]	6,533	6,702	6,868	7,033	7,033
Total Water Demand[2]	6,533	6,702	6,868	7,033	7,033
Shortfall?	**NO**	**NO**	**NO**	**NO**	**NO**
Multiple Dry Year 2					
Potable and Raw Water Supply[1]	6,567	6,735	6,901	7,033	7,033
Total Water Demand[2]	6,567	6,735	6,901	7,033	7,033
Shortfall?	**NO**	**NO**	**NO**	**NO**	**NO**
Multiple Dry Year 3					
Potable and Raw Water Supply[1]	6,601	6,768	6,934	7,033	7,033
Total Water Demand[2]	6,601	6,768	6,934	7,033	7,033
Shortfall?	**NO**	**NO**	**NO**	**NO**	**NO**
Multiple Dry Year 4					
Potable and Raw Water Supply[1]	6,634	6,801	6,967	7,033	7,033
Total Water Demand[2]	6,634	6,801	6,967	7,033	7,033
Shortfall?	**NO**	**NO**	**NO**	**NO**	**NO**
Multiple Dry Year 5					
Potable and Raw Water Supply[1]	6,668	6,834	7,000	7,033	7,033
Total Water Demand[2]	6,668	6,834	7,000	7,033	7,033
Shortfall?	**NO**	**NO**	**NO**	**NO**	**NO**

[1] ~~Based on excess supplies presented in Zone 7 Water Agency's 2020 UWMP and the relatively small demand from the proposed project,~~ Because the potable water demand associated with the proposed project represents less than a 1.3 percent increase from the demands evaluated in the City's 2020 UWMP, and because the Zone 7 2020 UWMP shows a supply surplus in all hydrologic conditions through 2045, the City's ~~Zone 7 Water Agency's~~ supplies are assumed to equal the LMW service area projected demands, including the proposed project.

[2] Equals the City's total projected potable and raw water demand (as shown in Table 4.7-3) with the additional potable water demand for the proposed project (as shown in Table 4.7-4) (see also Tables 4-2 and 4-4 of the WSA).

Source: West Yost Associates, 2023.

~~As shown in Table 4.7-8, water demand within the LMW's service area is not expected to exceed supplies in any year or hydrologic condition.~~ In addition, the WSA determined that the recycled water demand associated with the proposed project would be approximately 21 AFY, or about one percent of the City's annual projected recycled water demand through 2045, which would, similarly, not exceed anticipated recycled water supplies (see Table 4.7-4). Given the high reliability of the City's recycled water supply and the relatively small recycled water demand associated with the proposed project, the WSA concluded the City would be capable of meeting the recycled water demand associated with the project under all hydrologic conditions.

The above revisions are for clarification purposes only and do not change the conclusions of the Draft EIR.

Response to Comment 4-15

As discussed on page 3-19 of the Draft EIR, all landscaping improvements would be consistent with the City's Design Standards and Guidelines and the City's Water Efficient Landscape Ordinance. The comment is noted for the record and will be forwarded to the decision-makers for their consideration.

Response to Comment 4-16

The comment includes three attached figures and does not address the adequacy of the Draft EIR.

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Mitchell M. Tsai
Law Firm

139 South Hudson Avenue
Suite 200
Pasadena, California 91101

VIA E-MAIL

October 13, 2023

Letter 5

Ashley Vera, Associate Planner
City of Livermore
1052 S. Livermore Avenue
Livermore, CA 94550
Em: Asvera@livermoreca.gov

RE: City of Livermore's SMP 38, 39, and 40 Project

Dear Ashley Vera,

On behalf of the Carpenters Union Local 713 ("**Local 713**"), my Office is submitting these comments for the City of Livermore's ("**City**") Draft Environmental Impact Report ("**Draft EIR**" or "**DEIR**") for the SMP 38, 39, and 40 Project ("**Project**").

According to the Project's Notice of Availability ("**NOA**") of a Draft EIR Project Description:

> "On **SMP 38**, the proposed project includes a Sphere of Influence (SOI) Amendment to **include** SMP 38 within the **City of Livermore** SOI and **remove** it from the **City of Pleasanton's** SOI. The City of Livermore General Plan land use designation for SMP 38 would remain Limited Agriculture and Open Space/Sand and Gravel and the Alameda County zoning designation would remain Agriculture. **Development of SMP 38** is **not proposed**.
>
> For **SMP 39**, the proposed project would include development of a total of **up to six light industrial buildings**, consisting of **up to approximately 755,500 square feet** (sf) of new building space, and associated **internal roadways** and **other** improvements. **For SMP 40**, the proposed project would include development of **two industrial buildings** containing up to **759,275 sf of new building space** with related **internal roadways** and **other** improvements. A number of approvals would be required for development of SMP 39 and SMP 40,

5-1

5-1 cont.

including a **SOI Amendment for SMP 39**, **General Plan Amendment**, **Pre-zoning** and **Annexation**, **Zoning Map Amendment**/Planned Development, Vesting Tentative Subdivision **Maps**, a **Pre-Annexation Agreement**, and **Development Agreement**. A **Site Plan Design Review** entitlement is required for SMP 39 and SMP 40, which would include a review of the site plan, building, and landscape design; however, the entitlement is **only proposed for SMP 40 at this time**. A Site Plan Design Review entitlement will be required **at a later date** for the future development of **SMP 39**. In addition, the proposed project would include **annexation of four additional parcels** (APNs 904-10-2-3, -5, -7, and -8) located **east of SMP 40**. Development is **not proposed** on the additional parcels **as part** of the proposed project.

The project would include a **paved at-grade, on-site trail along the boundaries** of the SMP 40 site, consistent with the City's Active Transportation Plan. Specifically, the on-site trail would extend from the northeastern corner of the site, along the project site's eastern, southern, and western boundaries, before connecting to an existing off-site paved shared-use path at the northwestern corner of site, which extends along the west side of the Oaks Business Park to the north and connects to West Jack London Boulevard.

In addition, the project would include a **new off-site connection to the existing Arroyo Mocho Trail**, located on the east side of Isabel Avenue/SR 84. For the purposes of the Draft EIR analysis, three alternatives for the proposed off-site Isabel Avenue/SR 84 crossing to the existing Arroyo Mocho Trail are considered and evaluated in the Draft EIR, including the following, and described in more detail in the Draft EIR:

- Trail Connection Option 1 – **At-Grade** Crossing at **Discovery Drive**;
- Trail Connection Option 2 – **Undercrossing** at **Isabel** Bridge; and
- Trail Connection Option 3 – **Overcrossing** of **Isabel** Avenue/SR 84."

NOA of Draft EIR, pp. 1-2, emph. added.

5-1 cont.

The concurrently circulated Draft EIR contains the same project description. DEIR, pp. 1-2—1-4.

The Carpenters Local 713 represents thousands of union carpenters in Alameda County, and has a strong interest in well-ordered land use planning and in addressing the environmental impacts of development projects.

Individual members of Local 713 live, work, and recreate in the City and surrounding communities and would be directly affected by the Project's environmental impacts.

The Carpenters Local 713 expressly reserves the right to supplement these comments at or prior to hearings on the Project, and at any later hearing and proceeding related to this Project. Gov. Code, § 65009, subd. (b); Pub. Res. Code, § 21177, subd. (a); see

5-2

Bakersfield Citizens for Local Control v. Bakersfield (2004) 124 Cal.App.4th 1184, 1199-1203; see also *Galante Vineyards v. Monterey Water Dist.* (1997) 60 Cal.App.4th 1109, 1121.

The Carpenters Local 713 incorporates by reference all comments related to the Project or its CEQA review, including the Environmental Impact Report. See *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, the Carpenters Local 713 requests that the City provide notice for any and all notices referring or related to the Project issued under the California Environmental Quality Act (**CEQA**) (Pub. Res. Code, § 21000 *et seq.*), and the California Planning and Zoning Law ("**Planning and Zoning Law**") (Gov. Code, §§ 65000–65010). California Public Resources Code Sections 21092.2, and 21167(f) and California 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.

I. THE CITY SHOULD REQUIRE THE USE OF A LOCAL WORKFORCE TO BENEFIT THE COMMUNITY'S ECONOMIC DEVELOPMENT AND ENVIRONMENT

5-3

The City should require the Project to be built by contractors who participate in a Joint Labor-Management Apprenticeship Program approved by the State of California and make a commitment to hiring a local workforce.

Community benefits such as local hire 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 provide 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.

5-3 cont.

March 8, 2021 SWAPE Letter to Mitchell M. Tsai re Local Hire Requirements and Considerations for Greenhouse Gas Modeling.

Workforce requirements promote the development of skilled trades that yield sustainable economic development. As the California Workforce Development Board and the University of California, Berkeley Center for Labor Research and Education concluded:

> [L]abor 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]

Furthermore, workforce policies have significant environmental benefits given that they improve an area's jobs-housing balance, decreasing the amount and length of job commutes and the associated greenhouse gas (GHG) emissions. In fact, on May 7,

[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.

2021, the South Coast Air Quality Management District found that that the "[u]se of a local state-certified apprenticeship program" can result in air pollutant reductions.[2]

Locating jobs closer to residential areas can have significant environmental benefits. As the California Planning Roundtable noted in 2008:

> People who live and work in the same jurisdiction would be more likely to take transit, walk, or bicycle to work than residents of less balanced communities and their vehicle trips would be shorter. Benefits would include potential reductions in both vehicle miles traveled and vehicle hours traveled.[3]

5-3 cont.

Moreover, local hire mandates and skill-training are critical facets of a strategy to reduce vehicle miles traveled (VMT). As planning experts Robert Cervero and Michael Duncan have noted, simply placing jobs near housing stock is insufficient to achieve VMT reductions given that the skill requirements of available local jobs must match those held by local residents.[4] Some municipalities have even tied local hire and other workforce policies to local development permits to address transportation issues. Cervero and Duncan note that:

> In nearly built-out Berkeley, CA, the approach to balancing jobs and housing is to create local jobs rather than to develop new housing. The city's First Source program encourages businesses to hire local residents, especially for entry- and intermediate-level jobs, and sponsors vocational training to ensure residents are employment-ready. While the program is voluntary, some 300 businesses have used it to date, placing more than 3,000 city residents in local jobs since it was launched in 1986. When

[2] South Coast Air Quality Management District (May 7, 2021) Certify Final Environmental Assessment and Adopt Proposed Rule 2305 – Warehouse Indirect Source Rule – Warehouse Actions and Investments to Reduce Emissions Program, and Proposed Rule 316 – Fees for Rule 2305, Submit Rule 2305 for Inclusion Into the SIP, and Approve Supporting Budget Actions, *available at* http://www.aqmd.gov/docs/default-source/Agendas/Governing-Board/2021/2021-May7-027.pdf?sfvrsn=10.

[3] California Planning Roundtable (2008) Deconstructing Jobs-Housing Balance at p. 6, *available at* https://cproundtable.org/static/media/uploads/publications/cpr-jobs-housing.pdf

[4] Cervero, Robert and Duncan, Michael (2006) Which Reduces Vehicle Travel More: Jobs-Housing Balance or Retail-Housing Mixing? Journal of the American Planning Association 72 (4), 475-490, 482, *available at* http://reconnectingamerica.org/assets/Uploads/UTCT-825.pdf.

needed, these carrots are matched by sticks, since the city is not shy about negotiating corporate participation in First Source as a condition of approval for development permits.

5-3 cont.

Recently, the State of California verified its commitment towards workforce development through the Affordable Housing and High Road Jobs Act of 2022, otherwise known as Assembly Bill No. 2011 ("**AB2011**"). AB2011 amended the Planning and Zoning Law to allow ministerial, by-right approval for projects being built alongside commercial corridors that meet affordability and labor requirements.

The City should consider utilizing local workforce policies and requirements to benefit the local area economically and to mitigate greenhouse gas, improve air quality, and reduce transportation impacts.

II. THE CITY SHOULD IMPOSE TRAINING REQUIREMENTS FOR THE PROJECT'S CONSTRUCTION ACTIVITIES TO PREVENT COMMUNITY SPREAD OF COVID-19 AND OTHER INFECTIOUS DISEASES

5-4

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.[5]

Carpenters Local 713 recommend that the Lead Agency adopt additional requirements to mitigate public health risks from the Project's construction activities. Local 713 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.

In particular, based upon Carpenters Local 713's experience with safe construction site work practices, Local 713 recommends that the Lead Agency require that while construction activities are being conducted at the Project Site:

Construction Site Design:

[5] 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.

5-4 cont.

- 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.
- 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]

5-4 cont.

- 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.[6]

5-5

III. THE PROJECT WOULD BE APPROVED IN VIOLATION OF THE CALIFORNIA ENVIRONMENTAL QUALITY ACT

A. Background Concerning the California Environmental Quality Act

[6] *See also* The Center for Construction Research and Training, North America's Building Trades Unions (April 27 2020) NABTU and CPWR COVID-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.

5-5 cont.

The California Environmental Quality Act is a California statute designed to inform decision-makers and the public about the potential significant environmental effects of a project. 14 California Code of Regulations ("**CEQA Guidelines**"), § 15002, subd. (a)(1).[7] At its core, its purpose is to "inform the public and its responsible officials of the environmental consequences of their decisions *before* they are made." *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553, 564.

1. Background Concerning Environmental Impact Reports

CEQA directs public agencies to avoid or reduce environmental damage, when possible, by requiring alternatives or mitigation measures. CEQA Guidelines, § 15002, subds. (a)(2)-(3); see also *Berkeley Keep Jets Over the Bay Committee v. Board of Port Comes* (2001) 91 Cal.App.4th 1344, 1354; *Citizens of Goleta Valley v. Board of Supervisors* (1990) 52 Cal.3d 553; *Laurel Heights Improvement Assn.*, 47 Cal.3d at p. 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, subd. (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 Public Resources Code section 21081. See CEQA Guidelines, § 15092, subds. (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. *Berkeley Jets*, 91 Cal.App.4th at p. 1355 (quoting *Laurel Heights Improvement Assn.*, 47 Cal.3d at pp. 391, 409 fn. 12) (internal quotations omitted). A clearly inadequate or unsupported study is entitled to no judicial deference. *Id.* 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. County of Fresno* (2018) 6 Cal.5th 502,

[7] 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. Dept. of Fish & Wildlife* (2015) 62 Cal.4th 204, 217.

5-5 cont.

515; *Madera Oversight Coalition, Inc. v. County of Madera* (2011) 199 Cal.App.4th 48, 102, 131. As the court stated in *Berkeley Jets*, 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. 91 Cal.App.4th at p. 1355 (internal quotations omitted).

The preparation and circulation of an EIR is more than a set of technical hurdles for agencies and developers to overcome. *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). 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. *Id.* 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. *Id.*

A strong presumption in favor of requiring preparation of an EIR is built into CEQA. This presumption is reflected in what is known as the "fair argument" standard under which an EIR must be prepared whenever substantial evidence in the record supports a fair argument that a project may have a significant effect on the environment. *Quail Botanical Gardens Found., Inc. v. City of Encinitas* (1994) 29 Cal.App.4th 1597, 1602; *Friends of "B" St.* v. *City of Hayward* (1980) 106 Cal.3d 988, 1002.

The fair argument test stems from the statutory mandate that an EIR be prepared for any project that "may have a significant effect on the environment." PRC, § 21151; see *No Oil, Inc. v. City of Los Angeles* (1974) 13 Cal.App.3d 68, 75; accord *Jensen v. City of Santa Rosa* (2018) 23 Cal.App.5th 877, 884. Under this test, if a proposed project is not exempt and may cause a significant effect on the environment, the lead agency must prepare an EIR. PRC, §§ 21100 (a), 21151; CEQA Guidelines, § 15064 (a)(1), (f)(1). An EIR may be dispensed with only if the lead agency finds no substantial evidence in the initial study or elsewhere in the record that the project may have a significant effect on the environment. *Parker Shattuck Neighbors v. Berkeley City Council* (2013) 222 Cal.App.4th 768, 785. In such a situation, the agency must adopt a negative declaration. PRC, § 21080, subd. (c)(1); CEQA Guidelines, §§ 15063 (b)(2), 15064(f)(3).

5-5 cont.

"Significant effect upon the environment" is defined as "a substantial or potentially substantial adverse change in the environment." PRC, § 21068; CEQA Guidelines, § 15382. A project may have a significant effect on the environment if there is a reasonable probability that it will result in a significant impact. *No Oil, Inc.*, 13 Cal.3d at p. 83 fn. 16; see *Sundstrom v. County of Mendocino* (1988) 202 Cal.App.3d 296, 309. If any aspect of the project may result in a significant impact on the environment, an EIR must be prepared even if the overall effect of the project is beneficial. CEQA Guidelines, § 15063(b)(1); see *County Sanitation Dist. No. 2 v. County of Kern* (2005) 127 Cal.App.4th 1544, 1580.

This standard sets a "low threshold" for preparation of an EIR. *Consolidated Irrigation Dist. v. City of Selma* (2012) 204 Cal.App.4th 187, 207; *Nelson v. County of Kern* (2010) 190 Cal.App.4th 252; *Pocket Protectors v. City of Sacramento* (2004) 124 Cal.App.4th 903, 928; *Bowman v. City of Berkeley* (2004) 122 Cal.App.4th 572, 580; *Citizen Action to Serve All Students v. Thornley* (1990) 222 Cal.App.3d 748, 754; *Sundstrom*, 202 Cal.App.3d at p. 310. If substantial evidence in the record supports a fair argument that the project may have a significant environmental effect, the lead agency must prepare an EIR even if other substantial evidence before it indicates the project will have no significant effect. See *Jensen,* 23 Cal.App.5th at p. 886; *Clews Land & Livestock v. City of San Diego* (2017) 19 Cal.App.5th 161, 183; *Stanislaus Audubon Society, Inc. v. County of Stanislaus* (1995) 33 Cal.App.4th 144, 150; *Brentwood Assn. for No Drilling, Inc. v. City of Los Angeles* (1982) 134 Cal.App.3d 491; *Friends of "B" St.*, 106 Cal.App.3d 988; CEQA Guidelines, § 15064(f)(1).

B. <u>The DEIR's Project Description Is Fatally Flawed and in Violation of CEQA's Piecemealing Prohibition, Which, In Turn, Tainted the DEIR's Remaining Analysis; as Related, the DEIR's Alternatives Are Also Narrowly Drawn and Legally Inadequate.</u>

5-6

First, CEQA Guidelines § 15124 specifically requires that an EIR include a project description. Further, subdivision (d) of CEQA Guidelines § 15124, in pertinent parts, mandates to include in the EIR a statement of all possible approvals needed for the Project:

"(d) A statement briefly describing the intended uses of the EIR.

(1) This statement shall include, **to** the **extent** that the **information** is **known** to the Lead Agency,

5-6 cont.

> (A) A list of the agencies that are expected to use the EIR in their decision making, and
>
> (B) A list of permits and other approvals required to implement the project.
>
> (C) A **list** of **related environmental review** and **consultation** requirements required by federal, state, or local laws, regulations, or policies. To the **fullest extent possible**, the lead agency **should integrate CEQA** review with **these related** environmental review and consultation requirements.
>
> (2) **If** a public agency must make **more** than **one decision** on a **project**, **all its decisions** subject to CEQA should be **listed**, **preferably** in the order in which they will occur. On request, the Office of Planning and Research will provide assistance in identifying state permits for a project." (Emph. added.)

In turn, it is axiomatic that such project description in the EIR must be accurate, stable, and finite. As stated in *Burbank-Glendale-Pasadena Airport Authority v. Hensler* (1991) 233 Cal.App.3d 577, 592:

> " 'An accurate project description is necessary for an intelligent evaluation of the potential environmental effects of a proposed activity.' (Cit. omit.) A narrow view of a project could result in the fallacy of division, that is, overlooking its cumulative impact by separately focusing on isolated parts of the whole. (Id., at p. 1144, 249 Cal.Rptr. 439.) An accurate, stable and finite project description is the *sine qua non* of an informative and legally sufficient EIR; the defined project and not some different project must be the EIR's bona fide subject. (Cit. omit.) 'CEQA compels an interactive process of assessment of environmental impacts and responsive project modification which must be genuine. It must be open to the public, premised upon a full and meaningful disclosure of the scope, purposes, and effect of a consistently described project, with flexibility to respond to unforeseen insights that emerge from the process.' (Cit. omit.)"

Similarly, "the selection of a narrow project as the launching pad for a vastly wider proposal frustrate[s] CEQA's public information aims . . . . calculated selection of its

5-6 cont.

truncated project concept [is] not an abstract violation of CEQA." *County of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185, 199–200; Pub. Res. Code § 21168.5.

Adoption of project limits as part of the certification of the EIR is "too little too late to adequately apprise all interested parties of the true scope of the project for intelligent weighing of the environmental consequences". *City of Santee v. County of San Diego* (1989) 214 Cal.App.3d 1438, 1454–1455.

Where the agency provides an inconsistent description portraying the Project as having "no increase" while at the same time allowing for substantial changes in the existing conditions fails to adequately apprise all interested parties of the true scope and magnitude of the Project, amounting to prejudicial abuse of discretion for failure to provide a stable and consistent project description." *San Joaquin Raptor Rescue Center v. County of Merced* (2007) 149 Cal.App.4th 645, 657. "By giving such conflicting signals to decisionmakers and the public about the nature and scope of the activity being proposed, the Project description [is] fundamentally inadequate and misleading." *Id.* at 655-657. A conflicting project description results in understated impact analysis. *Id.* at 672.

As stated in *County of Inyo v. City of Los Angeles* (1977) 71 Cal.App.3d 185, 192–193:

> "A curtailed or distorted project description may stultify the objectives of the reporting process. Only through an accurate view of the project may affected outsiders and public decision-makers balance the proposal's benefit against its environmental cost, consider mitigation measures, assess the advantage of terminating the proposal (i.e., the "no project" alternative) and weigh other alternatives in the balance. An accurate, stable and finite project description is the sine qua non of an informative and legally sufficient EIR."

Lastly, "[w]here the agency uses an erroneous or entirely speculative project description as justification for its approval of the Project, but never intended to actually proceed with that project, "such a situation would constitute much more insidious conduct than a failure to comply with CEQA. 'CEQA contemplates serious and not superficial or pro forma consideration of the potential environmental consequences of a project.' (Cit. omit.)" *Burbank-Glendale-Pasadena Airport Authority v. Hensler* (1991) 233 Cal.App.3d 577, 593.

Second, CEQA mandates that "the lead agency must consider the whole of an action, not simply its constituent parts, when determining whether it will have a significant environmental effect." Guidelines § 15003(h). As a corollary, CEQA forbids "piecemealing." *Lighthouse Field Beach Rescue v. City of Santa Cruz* (2005) 131 Cal.App.4th 1170, 1208. ("The prohibition against piecemeal review is the flip side of the requirement that the whole of a project be reviewed under CEQA. (See Guidelines, § 15378, subd. (a).)") Piecemealing is reviewed *de novo*. (*Paulek v. Department of Water Resources* (2014) 231 Cal.App.4th 35, 46.)

CEQA's piecemealing prohibition stems from two sources—a public agency's duty to define the "project" being evaluated by "the whole of an action" (CEQA Guidelines § 15378(a)&(c)), and its duty to "consider[ ] the effects, both individual and collective, of all activities involved in [the] project" (PRC § 21002.1(d)).

5-6 cont.

Moreover, CEQA's piecemealing prohibition stems from its requirement to consider the cumulative impacts of all phased or multiple projects which are part of the same general undertaking. CEQA Guidelines § 15165. For purposes of cumulative impacts analysis, CEQA mandates to consider the impacts of the past, present, and reasonably foreseeable future projects. CEQA Guidelines §§ 15063(b)(1) (prepare an EIR "if the agency determines that there is substantial evidence that *any* aspect of the project, either *individually* or *cumulatively, may* cause a significant effect on the environment, *regardless* of whether the overall effect of the project is adverse or beneficial"); 15064(h) (need to consider cumulative impacts of past, other current and "probable future" projects). Even if the Project's impacts may not be significant, its incremental effects, when added to other past, present, and probable future projects, can be cumulatively significant. (CEQA Guidelines §§15065(a)(3), 15130(b)(1)(A), 15355(b).)

Our Supreme Court has defined piecemealing as "chopping a large project into many little ones – each with a minimal potential impact on the environment – which cumulatively may have disastrous consequences." (*Bozung v. Local Agency Formation Com.* (1975) 13 Cal.3d 263, 283-284.) Thus, identifying and studying the "whole of the project" is crucial to attainment of CEQA's goals of properly disclosing and mitigating environmental impacts. "'Project' is given a broad interpretation in order to maximize protection of the environment." (*San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal.App.4th 713, 730.)

5-6 cont.

Even when a developer obtains a right to construct or has completed one or more pieces of a larger project that has so far evaded full environmental review, the City and this Court have the right, indeed the duty, to remedy the wrong. This includes stopping the challenged incomplete parts and ordering a comprehensive environmental review of the entire project using a corrected project description and baseline. (*Arviv Enterprises, Inc. v. South Valley Area Planning Com.* (2002) 101 Cal.App.4th 1333 ("*Arviv*") is on point. In *Arviv*, a Los Angeles developer had an overall plan to build 21 homes in the Mulholland community along Woodstock Road. (*Id.* at 1336.) Rather than present the "whole" of its action as part of an EIR or other comprehensive review, the developer chopped the larger project into pieces, one of 5 homes, another of 2 homes, and another of 14 homes. (*Id.* at 1338 & 1343.) It then processed separately each via CEQA exemptions or MND. (*Id.)*

Eventually the City figured out the developer's attempted circumvention of CEQA and required it "to obtain an EIR for a 21-house development," rather than proceed in a piecemeal manner. The developer sued the City, arguing it should not have to prepare an EIR. (*Id.* at 1343.) The trial court rejected the developer's position, and our Court of Appeal affirmed, holding: "The significance of an accurate project description is manifest, where, as here, cumulative **environmental impacts may be disguised or minimized by filing numerous, serial applications**." (*Id.* at 1346 (emph. added)).

"One way to evaluate which acts are part of a project is to examine how closely related the acts are to the overall objective of the project." *(Tuolumne County Citizens for Responsible Growth, Inc. v. City of Sonora* (2007) 155 Cal.App.4th 1214, 1226.) "Another way to phrase the question of whether a particular act is a step taken towards the achievement of the proponent's objective is to ask 'whether the act is part of a coordinated endeavor.' [Citation.]" (*POET, LLC v. State Air Resources Bd.* (2017) 12 Cal.App.5th 52, 75, fn. 15.)

The failure to analyze the whole of the project, and thereby allow the true impacts, including cumulative impacts of the various parts added together, to escape review, is potentially "disastrous," and should not be allowed. (*Bozung*, *supra*, 13 Cal.3d at 283-284.) Consistent with *Arviv*, an EIR is also required on piecemealing grounds to properly analyze regulatory threshold exceedances caused by the Project Applicant's "coordinated endeavor." For example, under Guidelines § 15206(b)(2)(D), a proposed hotel with more than 500 rooms shall be deemed regionally/area wide

5-6 cont.

significant. This determination may not be possible where a project is piecemealed. Similarly, under PRC § 21155.1, there are numerous limitations and requirements the Project must meet, including a cap of maximum 200 units, which cannot be properly assessed where a project is piecemealed.

CEQA's piecemealing prohibition – especially for later phases or last act project components – is also critical as it results in an improperly inflated and inaccurate baseline and/or fundamentally inaccurate "no project" alternatives, which, in turn, taints the entire CEQA review. (*POET, LLC v. State Air Resources Bd* (2017) 12 Cal.App.5th 52, 83 [use of an inflated baseline had the effect of understating the increase of impacts, requiring reversal]; see also, CEQA Guidelines §§ 15126.6(e)(2) & 15125(a)(1) [both the "no project" alternative and the baseline consider the existing environmental conditions]). It is settled that, without an adequate baseline, the "analysis of impacts, mitigation measures and project alternatives becomes impossible." (*County of Amador v. El Dorado County Water Agency* (1999) 76 Cal.App.4th 931, 953.)

Alternatively, even if various parts of the project are sufficiently separate and do not constitute a whole of an action, CEQA requires that the environmental review of the project include impacts of the past, present, and reasonably foreseeable future projects. See, CEQA Guidelines §§15065(a)(3), 15130(b)(1)(A), 15355(b).) In fact, courts treat piecemealing and failure to study cumulative impacts of related approvals as alternative theories. (*San Joaquin Raptor/Wildlife Rescue Center v. County of Stanislaus* (1994) 27 Cal.App.4th 713, 733 ("*San Joaquin*") ["even assuming the sewer expansion was severable from the development project, the FEIR still did not comply with CEQA" for failure to consider their cumulative impacts.]) Thus, in analyzing a Project's cumulative impacts, it's important to analyze not just the impacts of the Project itself but also consider impacts from all other related projects as well.

CEQA's prohibition against piecemealing was recently reaffirmed by the Court in the CEQA exemption context as resulting in two violations – improperly focusing on only part of the project instead of the *whole of an action* and also providing an unduly narrow project description to qualify for an exemption:

> "In the unpublished portions of this opinion, we conclude County committed two other CEQA violations. First, it improperly described the project as constituting only the proposed condemnation proceedings and a mere change in ownership of the landfill sites. Second, the unduly narrow

project description caused County to erroneously conclude the commonsense exemption applied. The CEQA violations justified the trial court's issuance of a writ of mandate vacating County's approval of condemnation proceedings for each of the three landfills." *Los Angeles Dept. of Water & Power v. County of Inyo* (2021) 67 Cal.App.5th 1018, 1025 ("*LADWP*").

In the *LADWP* case, *supra*, the project involved condemnation of land for purposes of continued and increased land use of operation of landfill, where the County invoked two exemptions: Class 1 (existing facilities and minor changes) and common sense exemption. *LADWP,* 67 Cal.App.5th 1030-31. The Court used *independent review* to interpret the scope of the exemptions, including the words "facility" and "minor." The Court reasoned:

5-6 cont.

"In accordance with *Hillside*, we independently review whether County proceeded in the manner required by law in making its exemption determination and apply the substantial evidence test to the County's findings of fact. Stated from another perspective, an appellate court "must first determine as a matter of law the scope of the exemption and then determine if substantial evidence supports the agency's factual finding that the project fell within the exemption." (*California Farm Bureau Federation v. California Wildlife Conservation Bd.* (2006) 143 Cal.App.4th 173, 185 [49 Cal. Rptr. 3d 169].) This appeal raises a legal question about the scope of the existing facilities exemption, which requires us to interpret the words used in Guidelines section 15301." (*LADWP,* at 1036.)

In light of the above-noted legal authority, the DEIR's project description here is not accurate, stable and finite. It further engages in improper piecemealing in violation of CEQA. First, as emphasized in the quoted project description in the NOA (in the introductory section of this comment letter) and as also provided by the Draft EIR's project description, the Project seeks removal of SMP 38 from one City's SOI and inclusion into another City's SOI; yet the DEIR provides that no development is proposed on SMP 38:

5-7

"SMP 38, SMP 39, SMP 40, and the Additional Annexation Only Parcels are within the City of Livermore South Livermore Urban Growth Boundary (UGB); however, SMP 38 and SMP 39 are also within the City of Pleasanton's SOI. Accordingly, an **SOI Amendment** for **SMP 38 and** SMP

5-7 cont.

> 39 is proposed **in order** to **modify City of Pleasanton SOI**, **align** the **SOI** and South Livermore UGB boundaries to be **consistent with one another**, and provide a **contiguous division** of **land** between the cities of Livermore and Pleasanton. **Annexation of SMP 38** into the City of Livermore is **not proposed as part** of the project, **nor** is **development** of the **three parcels** representing **SMP 38**. It should be noted that the **likelihood** for any **future development** on the Additional Annexation Only Parcels is low due to physical constraints to development present on the parcels and their small size. Thus, the **analysis** of this **EIR assumes** that **any development** on the Additional Annexation Only Parcels would be **limited** to **cooperating** with the project **applicant** regarding **development** of the proposed **trail** and **trail connection**." (DEIR, p. 1-4, emph. added; see also DEIR, pp. 3-7—3-9.)

The quoted description from the EIR is vague and ambiguous. On the one hand, it provides that annexation of SMP 38 or development of 3 parcels thereon is not "part" of the project. It is only fair to ask: if SMP 38 is not to be developed or if its development is unlikely as suggested by the EIR, then why is SMP 38 even included in the Project? It is obvious that, as in *Bozung, supra,* the changes to SMP 38 – i.e., removal of it from one City and including it in the other City – makes the annexation and future development of SMP 38 more than likely and reasonably foreseeable. That such annexation or development is not part of *this* project and is not studied in *this* Draft EIR is not a valid excuse to study the potential impacts of such reasonably foreseeable development and annexation.

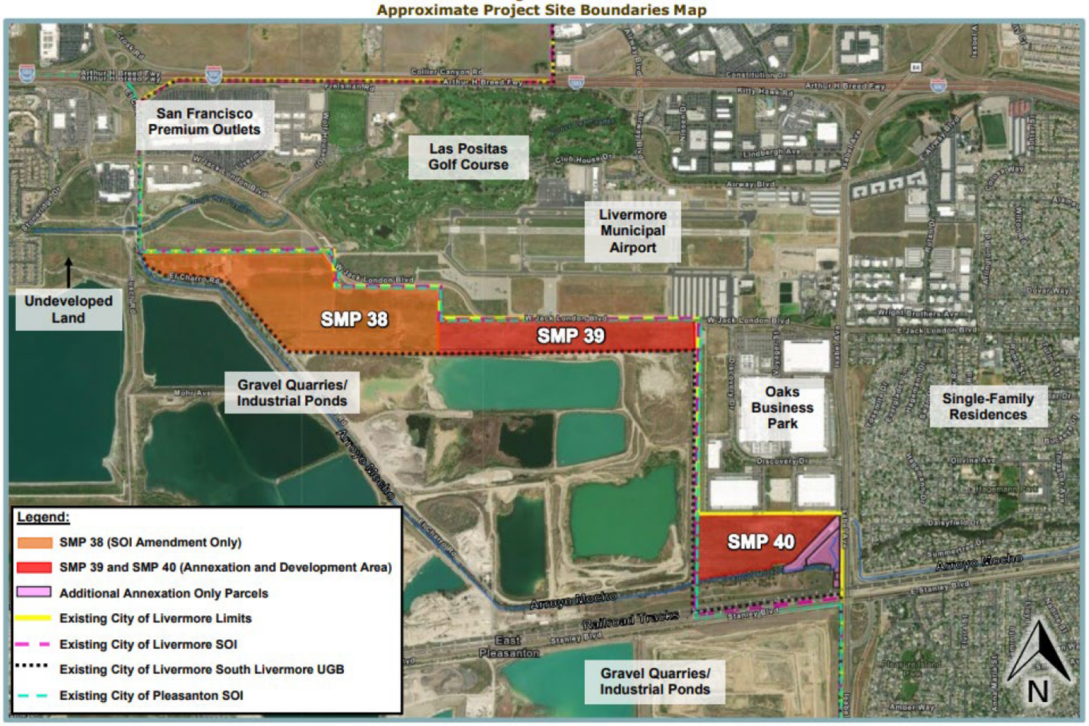
In addition, that the foregoing description in the Draft EIR violates CEQA and the mandate in CEQA Guidelines 15124(d)(2) is also confirmed by the fact that the statement of resolutions and entitlements required for the Project omit any action as to SMP 38, except for "Resolution authorizing submittal of a SOI Amendment application to the Alameda County LAFCo." (DEIR, p. 1-4.) As explained above, it is reasonably foreseeable that the SMP 38 is proposed to be removed from the City of Pleasanton into the City of Livermore in order to subsequently develop the 4 parcels on SMP 38.

That SMP 38 is to be developed as an industrial site – and not to remain in its existing agricultural use – is also confirmed by the SMP 38's adjacency and proximity to the

5-7 cont.

other SMP 39, 40, and other parcels that *are* included in the Project and proposed for industrial development, as shown in the screenshot below from DEIR, p. 3-3:

Figure 3-2
Approximate Project Site Boundaries Map



As such, the EIR's project description about SMP 38 and analysis of the reasonably foreseeable impacts of the changes to SMP 38 – even if those changes are now presented as merely administrative and paper changes – is legally flawed, rendering the EIR inadequate as a matter of law.

5-8

Second, the DEIR's description of changes on SMP 39 is also too narrow, vague, and open-ended, i.e., not finite. The DEIR's NOA (quoted above in the introductory part) provides more details than the very document of accountability, the EIR. Based on the Project description in the *summary* of the DEIR: "On the SMP 39 site, the proposed project would include development of a total of up to six light industrial buildings, consisting of up to approximately **755,500 square feet** (sf) total of new building space, and associated internal roadways, parking, landscaping, utilities, and other improvements." (DEIR, p. 2-1.) The EIR's very "Project Description" Chapter 3 provides no such details, whatsoever. (DEIR, p. 3-5.)

5-8 cont.

Similarly, on the SMP 40, the DEIR's NOA provides far more details. The DEIR's *summary* provides some details, stating:

> "On the SMP 40 site, the proposed project would include development of **two industrial buildings** containing up to **approximately 759,275 sf** of new building space with related internal roadways, parking, landscaping, utilities, and other improvements. The proposed project would include frontage improvements along SMP 39 and right-of-way dedication for the ultimate buildout of West Jack London Boulevard, which would include an at-grade, paved shared-use path along the project frontage, consistent with the City's Active Transportation Plan (ATP). Similarly, a paved at-grade, on-site trail would be provided along the boundaries of the SMP 40 site, consistent with the City's ATP. The proposed on-site trails would provide connection between SMP 39 to the existing path along the western boundary of the Oaks Business Park, SMP 40, and eventually to the Arroyo Mocho Trail, as the proposed project would include a new off-site trail connection to the existing Arroyo Mocho Trail, located on the east side of Isabel Avenue/SR 84. **Three alternatives** for the proposed off-site trail crossing to the existing Arroyo Mocho Trail are being considered and evaluated in this EIR, including an at-grade crossing at Discovery Drive, an undercrossing at the existing Isabel Bridge, and an overcrossing of Isabel Avenue/SR 84 just north of the existing railroad tracks and associated crossing (north of Stanley Boulevard)." (DEIR, p. 2-2.)

Yet, as with SMP 38 and 39, the DEIR's project description Chapter 3 provides far less details on what is proposed at SMP 40 and merely provides legal arguments and conclusions. (DEIR, p. 3-5—3-6.)

Critically, for both SMP 39 and 40, the DEIR's project description notes that they will require "other improvements," without much specifying those:

> "**For SMP 39**, the proposed project would include development of a total of up to six light industrial buildings, consisting of up to approximately 755,500 square feet (sf) of new building space, and associated internal roadways and **other improvements**; **for SMP 40**, the proposed project would include development of two industrial buildings consisting of up to 759,275 sf of new building space with related internal roadways and **other improvements**. A number of approvals would be required for

5-8 cont.

development of SMP 39 and SMP 40, including a SOI Amendment for SMP 39, General Plan Amendment, Pre-zoning and Annexation, Zoning Map Amendment/Planned Development, Vesting Tentative Subdivision Maps, a Pre-Annexation Agreement, and Development Agreement. A Site Plan Design Review entitlement is required for SMP 39 and SMP 40, which would include a review of the site plan, building, and landscape design; **however**, the **Site Plan Design Review** entitlement is **only** proposed for **SMP 40 at this time**. A **Site Plan Design Review** entitlement **will be** required **at a later date** for the **future development** of **SMP 39**. Development of SMP 38 is not proposed. The proposed project includes an SOI Amendment to include SMP 38 within the City of Livermore SOI. The City of Livermore General Plan land use designation for SMP 38 would remain Limited Agriculture and Open Space/Sand and Gravel and the Alameda County zoning would remain Agriculture. A detailed description of the proposed project, including the necessary approvals, is provided below." (DEIR, p. 3-7, emph. added.)

The EIR's reference of "other improvements" without specifying those, renders the EIR fatally lacking, since it leaves the public and decisionmakers in the dark about what other improvements are needed for the Project and what impacts they may have.

5-9

Similarly, the above-quoted and emphasized statements about the site plan design review entitlement only proposed at SMP 40 "at this time" and similarly that a site plan design review will be required "at a later time" for the development of SMP 39 make the DEIR's project description legally lacking, in light of CEQA's requirement, including under CEQA Guidelines §§ 15387(a) & (c) [whole of an action] and 15124, esp. (d)(2), which require to include the full list of approvals that are needed for the Project and to study the impacts of all changes and their impacts in one document regardless of how many discretionary actions are required.

5-10

On a separate note but also related to the legally inadequate project description in the EIR is the fact that the statement of "project objectives" in the Project Description is very narrowly-drawn (DEIR, pp. 3-6—3-7), which led to a legally inadequate range of alternatives in the EIR, whereby only large industrial development is proposed on SMP 39 and 40 and was studied in all EIR alternatives. An EIR must discuss a reasonable range of alternatives to the project, which "shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or

5-10 cont.

substantially lessen one or more of the significant effects." CEQA Guidelines § 15126.6(a)&(c). "[T]he discussion of alternatives shall focus on alternatives…. which are capable of avoiding or substantially lessening any significant effects of the project…." (Guidelines § 15126.6(b).) Further, an EIR is legally inadequate if it contains an overly narrow range of alternatives. (*Watsonville Pilots Ass'n v. City of Watsonville* (2010) 183 Cal.App.4th 1059, 1087, 20190 ("*Watsonville*") [not considering a reduced development alternative was error].) One reason for legally inadequate narrow range of EIR alternatives is where the EIR's project descriptions are very narrowly drawn. *We Advocate Through Environmental Review v. County of Siskiyou* (2022) 78 Cal.App.5th 683, 692-694, esp. 694 ("*WATER*" [the "no project" alternative's infeasibility was not established because of the "unreasonably narrow project objectives"].) As in *WATER, supra,* here, the DEIR's project objectives closely mirror the very project description and alternatives leaving no flexibility or room to draft a reduced project alternative or an alternative that may have less impacts:

> "3. Develop **industrial facilities** with **high-quality architectural design**, landscaping, and signage that are consistent with the City's design standards and guidelines;
>
> 4. Create **logical** and **future city boundaries** in cooperation with the City of Pleasanton and Alameda County that **align** with the City of **Livermore's** General Plan and Urban Growth Boundary, including **ensuring compatible development** with existing and planned land uses and adequate infrastructure capacity;
>
> 5. Implement the **City's goal** of **revitalizing underutilized** lands that are appropriate for infill development;
>
> 6. **Dedicate**, **widen**, and **improve** West Jack **London Boulevard**, as envisioned in the City's General Plan and Capital Improvement Program;
>
> 7. **Development** of the **property** should generate **long term sustainable property tax** and **sales tax** revenue for the City of Livermore **via annexation** of **SMP-39** and **SMP-40**; and
>
> 8. Construct **on-site** and **off-site trail improvements** and connections to existing trail network, as identified in the Active Transportation Plan." (DEIR, p. 3-7, emph. added.)

5-10 cont.

As a result of the legally inadequate and lacking project description, piecemealing of future actions and failure to study the "whole of an action" or Project's reasonably foreseeable expansion, or alternatively the EIR's failure to review the cumulative impacts of the project's related parts or components, the EIR is legally flawed and must be recirculated to include the full scope and impacts of the Project and, as related, to propose all the potential alternatives and mitigation measures to reduce such impacts to the level of insignificance. The EIR's noted flaws result in informational deficiency and overall impossibility to meaningfully assess the Project's impacts and mitigation thereof.

C. The Project May Have a Significant Impact on Biological Resources

The Project may have a significant impact on biological resources. As noted in the Section B, *supra*, that the biological impact analysis of the EIR is legally flawed is, first of all, due to the fact that the EIR's project description is legally inadequate and narrow. And even on the provided disclosures in the EIR, the DEIR's impact analysis is flawed for the following reasons.

First, the DEIR's biological resources impact analysis relies on multiple inadequate biological field surveys outlined in Appendices D and E of the DEIR prepared by Monk & Associates that are described in insufficient detail.

5-11

For example, with regards to the field surveys, the DEIR states that:

> "SMP 39 and SMP 40 were both first surveyed in 2000, with follow-up surveys over the years, including in November 2013, for various development proposals. In addition, a **project-specific field survey** was conducted on SMP 39 on **October 14, 2021**, and on SMP 40 on **June 10, 2019** to record biological resources within the sites, and to assess the likelihood of resource agency regulated areas to be located within the sites. An **additional survey** was conducted for SMP 40 on **June 21, 2019** to flag the Arroyo Mocho's riparian drip line to allow for the project engineers to survey the limits of the riparian vegetation and overlay the area on the project site plan, and **another general survey** of SMP 40 was conducted on **September 10, 2021.**"

DEIR, p. 4.3-24. [Emphasis added.']

However, the DEIR's reliance on these biological resources field surveys is improper for several reasons. First, although the DEIR outlines the various dates that these

field surveys took place, the most recent field survey for biological resources was conducted in October of 2021, which is now two (2) years ago. Accordingly, it is possible that the biological landscape of the Project Site has changed since then.

Furthermore, even assuming that the date of the project-specific September and October 2021 field surveys were conducted recently enough, the DEIR and its accompanying Appendices D and E leave out crucial information about the site surveys.

5-11 cont.

In summarizing the various site surveys that occurred in 2013, 2019, and 2021, DEIR Appendix D's Biological Resources Analysis ("**SMP-39 BRA**") states that "[e]ach site survey involved searching all habitats on the site and recording all plant and wildlife species observed. . . ." and that the "evaluation included an examination of the site to determine if there could be potential areas within the project site that would be regulated as waters of the United States and/or State . . ." DEIR Appendix D, p. 2. Thus, the SMP-39 BRA field surveys seem to indicate that visual inspections were done during these site visits. However, SMP-39 BRA is insufficient for numerous reasons as it leaves out crucial information about the site surveys while relying on the surveys to form conclusions about the Project's potential biological resources impacts.

5-12

As a preliminary matter, *one* (1) single field survey alone for just the SMP-39 Project Site is insufficient to adequately identify all of the potential habitats and plant and wildlife species occurring within the Project Site, as the site surveys purport to have looked for.

5-13

Even further, the SMP-39 BRA fails to specify the site surveyor's qualifications, or the amount of effort such as man-hours spent on the plant and animal identification for any of these site surveys (DEIR Appendix D, p. 2) and therefore leaves open the possibility that certain species would not be observed on the single occasion that the surveys were conducted at this particular Site, but nevertheless could be present at the Site.

5-14

Moreover, the SMP-39 BRA does not specify what time of the day the surveys were conducted during, (DEIR Appendix D, p. 2) which, again, leaves open the possibility that certain species, for example, nocturnal species, could present themselves at different times of the day. Even further, in one (1) single survey, the surveyor may fail to identify species that would only present themselves during certain times of the *year*. According to the SMP-39 BRA in Appendix D, for example, the most recent surveys

5-14 cont.

were conducted in June 2019 (a summer month) and October 2021 (a fall month), while failing to account for the spring and winter months. DEIR Appendix D, p. 2. However, there may be certain plant or animal species that would not be identifiable to an observer during the summer or fall months but that could nevertheless be present at the Project Site and be identifiable during other seasons of the year.

For the reasons outlined above with regards to the SMP-39 BRA in Appendix D, the same reasoning applies to the field surveys discussed in Biological Resources Analysis for the Oaks Business Park ("**OBP BRA**") which was prepared on February 15, 2023 by Monk & Associates, Inc. The OBP BRA pertained to the proposed Oaks Business Park project site which is in the City of Livermore and was intended to "provide a description of existing biological resources on the project site and to identify potentially significant impacts that could occur to sensitive biological resources from the construction of a proposed industrial development." DEIR Appendix E, p. 1.

5-15

Specifically, the OBP BRA states that a general project site survey was conducted on June 10, 2019 "to record biological resources and assess the likelihood of resource agency regulated areas occurring on the project site" and again on June 21, 2019 "to flag the Arroyo Mocho's riparian drip line so that the engineers could survey the limits of the riparian vegetation and overlay it on the project site plan." DEIR Appendix E, p. 3. The DEIR further states that "a **wetland delineation** was conducted along the Arroyo Mocho located to the south of SMP 40 on **June 15, 2022** as part of the proposed SMP 40 on-site trail plan." DEIR, p. 4.3-24. [Emphasis added.] However, although this wetland delineation was more recent, this does not appear to have included a site survey for identifying plant or animal species.

For the same reasons as set forth above for the SMP-39 BRA site surveys (i.e. failure to state the time of day, duration of the site visit, or man hours spent, the qualifications of the surveyor, and the failure to conduct the surveys multiple times a year to account for species that may present themselves at different times of the year), OBP BRA suffers from the same deficiencies and therefore cannot be relied upon to accurately conclude that the Project will have a less than significant impact on biological resources and therefore that no mitigation measures are required.

5-15 cont.

Therefore, the DEIR's reliance on surveys not in compliance with California Department of Fish and Wildlife's ("**CDFW**") survey guidelines[8] and its misuse of the California Natural Diversity Database ("**CNDD**") resulted in potentially inaccurate determinations. For example, with regards to botanical field surveys, the CDFW's survey guidelines state that such field surveys should be conducted in a way that will maximize the likelihood of identifying special status plants and sensitive natural communities that may be present at a site.[9] Specifically, the guidelines state that "[m]ore than one field visit is usually necessary to adequately capture the floristic diversity of a project area."[10]

For each of the foregoing reasons, the Project may have a significant impact on biological resources. Accordingly, the DEIR's findings as to the Project's biological impacts are not supported with substantial evidence that is of verifiable or credible value and the DEIR must be revised and recirculated to reassess those impacts, including on the wildlife species with potential to occur on the Project Site using protocol-level detection surveys and describing those surveys with sufficient detail.

D. The Project May Have Significant Noise Impacts.

5-16

As noted in Section B, *supra*, the DEIR's noise impact analysis is legally lacking and flawed as a result of a legally inadequate project description and unlawful piecemealing.

In addition, the very nature of the Project indicates that it may have a significant impact on noise. The Project proposes to develop up to six (6) light industrial buildings of approximately 755,500 square feet, along with associated internal roadways, parking, landscaping, utilities, and other improvements for SMP 39, as well as to develop two (2) industrial buildings of approximately 759,275 square feet of new building space that will include internal roadways, parking, landscaping, utilities, and

[8] *See*, California Natural Resources Agency, *Department of Fish and Wildlife Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities, available at* https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18959&inline, pp. 4, 5-6, accessed on Oct. 9, 2023), updated on Feb. 3, 2023; *see generally* California Department of Fish and Wildlife California Natural Diversity Database, *available at* https://wildlife.ca.gov/Data/CNDDB/Plants-and-Animals (last visited on Oct. 9, 2023.)

[9] California Natural Resources Agency, *supra*, at p. 4.

[10] *Id.*

5-16 cont.

other improvements, among other things. DEIR, p. 1-3. The Project further proposes a trail connection. DEIR, p. 1-3.

Despite finding that the Project would have a significant noise impact with regards to, for example, the "generation of a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies . . .", the DEIR relies upon deficient mitigation measures to conclude that these significant impacts would be mitigated to a less-than-significant level. DEIR, p. 4.6-21. However, the mitigation measure relied upon in noise impact analysis 4.6-1 is flawed for several reasons, which are discussed below.

Mitigation Measure 4.6-1 states that:

> "**Prior to issuance of a grading permit** for the chosen off-site trail connection option, the project applicant **shall prepare** a construction noise management plan that identifies measures to be taken to minimize construction noise on surrounding sensitive land uses and include specific noise management measures to be included within the plans and specifications for the trail connection option, **subject to review and approval by the City of Livermore Community Development Department**. The project applicant shall demonstrate, **to the satisfaction of the City** that the project complies with the following:
>
> - All heavy construction equipment used on the proposed project shall be maintained in good operating condition, with all internal combustion, engine-driven equipment fitted with intake and exhaust mufflers that are in good condition.
> - All mobile or fixed noise producing equipment used on the proposed project that is regulated for noise output by a local, state, or federal agency shall comply with such regulations while in the source of project activity.
> - Where feasible, electrically-powered equipment shall be used instead of pneumatic or internal combustion powered equipment.
> - All stationary noise-generating equipment shall be located as far away as possible from the nearest residential uses.

- Signs prohibiting unnecessary idling of internal combustion engines shall be posted.
- The use of noise-producing signals, including horns, whistles, alarms and bells shall be for safety warning purposes only.
- The use of temporary sound barriers shall be incorporated along the outer work area of the construction site, east of Isabel Avenue/SR 84. Barrier height and location(s) shall be determined by a qualified acoustical engineer to ensure that the resultant construction noise levels at the nearest residence would meet the applicable standard. The sound barrier fencing shall consist of 0.5-inch plywood or minimum STC 27 sound curtains placed to shield nearby sensitive receptors. The plywood barrier shall be free from gaps, openings, or penetrations to ensure maximum performance."

5-16 cont.

DEIR, pp. 4.6-23 – 4.6-24. [Emphasis added.]

The proposed mitigation measure suffers from numerous flaws.

First, Mitigation Measure 4.6-1 improperly defers mitigation, as can be evidenced from the above-quoted and emphasized DEIR statement where it states that the measure will take place "prior to issuance of a grading permit." Deferring mitigation to some undefined time *after* the Project's approval is improper and cannot be used as a mitigation measure.

CEQA forbids deferred mitigation. Guidelines § 15126.4(a)(1)(B). CEQA allows deferral of details of MMs only "when it is impractical or infeasible to include those details during the project's environmental review." (*Id.*) CEQA further requires: "that the agency (1) commits itself to the mitigation, (2) adopts specific performance standards the mitigation will achieve, and (3) identifies the type(s) of potential action(s) that can feasibly achieve that performance standard…" Guidelines § 15126.4(a)(1)(B). The City failed all of these preconditions and requirements, as its DEIR failed to show why the development of the construction noise management plan cannot be developed before the certification of the DEIR, what impacts they will have individually or cumulatively, if those would indeed be feasible, and the specific performance criteria the Applicant will have to meet. Moreover, the City clearly did not commit to mitigation, since all it would do, per the mitigation measure, is review and approve the proposed plans of the Applicant. Accordingly, the proposed mitigation measure is

5-17

5-17 cont.

improperly deferred and vague as it defers the formulation of mitigation measures or the construction noise management plan to a later time, shifts the burden to the Applicant, and further does not explain how the proposed plan will clearly reduce the noise impact to a level of insignificance.

Second, the proposed mitigation measure is illusory, since it requires the Project Applicant to prepare a construction noise management plan and requires the City to review the plan.

5-18

Third, the proposed mitigation measure is also illusory because of its timing: prior to the issuance of a grading permit and does not provide for any *discretionary approval or hearing*. It merely states that the plan shall be subject to the City's "review and approval" and that the Project Applicant must show, "to the satisfaction of the City", that the project is compliant with various measures.

Accordingly, the Project may have a significant noise impact and as such, the City should require that the EIR be revised and recirculated to properly analyze and mitigate the Project's potential noise impacts.

E. The Project May Have a Significant Impact on Traffic and Transportation

5-19

The DEIR's traffic impacts are also inadequately disclosed and mitigated in light of the legally inadequate project description and piecemealing, detailed in Section B, *supra*. Given that the Project proposes the development of up to six (6) light industrial buildings that will include a total of 1,543 vehicle parking spaces for SMP 39, as well as the development of two (2) light industrial buildings that will include a total of 633 vehicle parking spaces for SMP 40 (DEIR, pp. 1-3, 4.2-65), this indicates that the Project may have a significant traffic and transportation impact.

This is further supported by the fact that the DEIR directly states that the Project will generate an estimated **3,596 daily trips** for the SMP 39 development, and an estimated **1,062 daily trips** for the SMP 40 development, totaling approximately **4,658 net trips** for the Project as a whole. DEIR, p. 4.8-15, Table 4.8-2.

Furthermore, there are numerous deficiencies with the DEIR and its traffic and transportation analysis.

5-20

First, with regards to the DEIR's Project-specific impacts and mitigation measures analysis 4.8-1, the DEIR concludes that for the "conflict with a program, plan, ordinance, or policy addressing the circulation system during construction activities"

standard of significance, the Project would have a less than significant impact with the implementation of mitigation. DEIR, p. 4.8-16. However, the proposed mitigation measure is flawed and cannot be relied upon to conclude that the Project will have a less than significant impact.

Mitigation Measure 4.8-1 states that:

> "**Prior to grading permit issuance** for the SMP 39 and SMP 40 sites, as well as the chosen off-site trail connection option, the **project applicant shall prepare a Construction Traffic Management Plan for review and approval by the City Engineer**. The plan shall include the following:
>
> - A project staging plan to maximize on-site storage of materials and equipment;
> - A set of comprehensive traffic control measures, including scheduling of major truck trips and deliveries to avoid peak hours; lane closure proceedings; signs, cones and other warning devices for drivers; and designation of construction access routes;
> - Provisions for maintaining adequate emergency access to the project site;
> - Permitted construction hours, per City of Livermore standards;
> - Designated locations for construction staging areas;
> - Identification of parking areas for construction employees, site visitors, and inspectors, including on-site locations;
> - Signs posted at the entrances to the construction sites noting who to contact if there are questions or concerns, along with a contact phone number; and
> - Provisions for street sweeping to remove construction-related debris on public streets."

DEIR, p. 4.8-17. [Emphasis added.]

5-20 cont.

However, for the same reasons asserted above with regards to the noise mitigation measure proposed, the above mitigation measure suffers from the same flaws.

5-21

First, Mitigation Measure 4.8-1 improperly defers mitigation, as can be evidenced from the above-quoted and emphasized DEIR statement where it states that this mitigation

5-21 cont.

measure would take place "prior to grading permit issuance." Again, this suggests that the mitigation is being deferred to some unspecified time *after* the Project has already been approved. As discussed above, CEQA forbids deferred mitigation. Guidelines § 15126.4(a)(1)(B). CEQA allows deferral of details of MMs only "when it is impractical or infeasible to include those details during the project's environmental review." (*Id.*) CEQA further requires: "that the agency (1) commits itself to the mitigation, (2) adopts specific performance standards the mitigation will achieve, and (3) identifies the type(s) of potential action(s) that can feasibly achieve that performance standard…" Guidelines § 15126.4(a)(1)(B). The City failed all of these preconditions and requirements, as its DEIR failed to show why the development of the Construction Traffic Management Plan cannot be developed before the certification of the DEIR, what impacts they will have individually or cumulatively, if those would indeed be feasible, and the specific performance criteria the Applicant will have to meet. Moreover, the City clearly did not commit to mitigation, since all it would do, per the mitigation measure, is review and approve the proposed plans of the Applicant. Accordingly, the proposed mitigation measure is improperly deferred and vague as it defers the formulation of mitigation measure or the Construction Traffic Management Plan to a later time, shifts the burden to the Applicant, and further does not explain how the proposed plan will clearly reduce the noise impact to a level of insignificance.

Second, this proposed mitigation measure is illusory, as it requires the Applicant to prepare a Construction Traffic Management Plan and requires the City Engineer's review and approval, but does not indicate whether any public hearing will be involved.

5-22

For similar reasons as those stated above, the same applies to standard of significance 4.8-3, "conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)", and the conclusion that the Project will have a less than significant impact with the implementation of a mitigation measure.

Similarly, Mitigation Measure 4.8-3 has language stating that:

> "**[p]rior to the issuance of the first building permit,** the project **applicant shall** be required to **develop a Transportation Demand Management (TDM) Program** for SMP 39 and SMP 40. The **TDM Program shall be monitored by the applicant/operator** on an annual basis **to determine the efficacy of the selected TDM strategies in achieving the reduction below the average VMT per employee of three percent (i.e., the performance target).** An **Annual Status**

5-22 cont.

> **Report** on the TDM Program **shall be submitted to the City of Livermore Engineering Division** beginning a year after the issuance of any certificate of occupancy and shall include details on the TDM strategies, including an Employer Carpool Program which has a goal to reduce VMT per employee by approximately four percent and, thus, would meet and exceed the performance target. The Employer Carpool Program shall implement a ridesharing program and establish a permanent transportation management association with funding requirements for employers. Data shall be collected in October of each year and the Annual Status Report shall be submitted by December 31st of each year. **The report shall be prepared in the form and format designated by the City.** The data shall include project-generated VMT estimates compatible with the methodology used to estimate the benchmark VMT so that performance comparisons can be made. **If the Annual Status Report demonstrates that the project is not in compliance with the performance target set forth in this mitigation measure, the project must incorporate additional TDM strategies to meet the performance target in coordination with City staff**. The project **applicant/operator may propose new TDM strategies** that develop over time to further reduce project-generated VMT if substantial evidence is provided to support the efficacy of the strategy. If the Annual Status Reports demonstrate that the performance target has been achieved for three consecutive years once SMP 39 and SMP 40 are both fully occupied and operational, the project shall no longer need to provide annual reporting."

DEIR, p. 4.8-20. [Emphasis added.]

Similarly to the issues identified with Mitigation Measure 4.8-1, many of the same issues pertain to Mitigation Measure 4.8-3 and are thus incorporated herein.

Accordingly, first, the language that "[p]rior to issuance of the first building permit" and that the Applicant must develop a Transportation Demand Management ("**TDM**") Program improperly defers mitigation of the Project's traffic impacts to some later unspecified date that will occur *after* the Project has already been approved. See, Guidelines § 15126.4(a)(1)(B), *supra.*

Second, that the TDM program is to be monitored by the applicant and operator "to determine the efficacy of the selected TDM strategies in achieving the reduction below the average VMT per employee of three percent" improperly shifts the burden of enforcing this mitigation measure on the Applicant. Furthermore, the obligation of the Applicant and operator to "determine the efficacy" of the Program is illusory, as it relies upon the applicant/operator's subjective determination of the TDM's efficacy.

5-22 cont.

Third, the language stating that if the Annual Status Report shows the Project to be non-compliant with the established performance target of the mitigation measure, "the project must incorporate additional TDM strategies to meet the performance target in coordination with City staff." Again, this improperly defers mitigation of the Project's traffic impact to some later date if the Project is found, *some time after the Project's approval*, to not have met its performance target of the mitigation measure.

In sum, the proposed mitigation measure fails to show *how* the Project's significant traffic impacts will be mitigated to a level of insignificance and improperly defers mitigation to some later unspecified date. For the reasons set forth above, the DEIR's reliance upon the proposed mitigation measures is improper and the DEIR must be revised and recirculated to include more stringent measures that will actually reduce the traffic impact to a level of insignificance and that do not defer mitigation of the Project's traffic impacts.

F. <u>The Project May Have a Significant Impact Air Quality, Greenhouse Gas, Water, Noise, Hazards, Human Health, Wildlife/Biological Impacts, and Cumulative Impacts, Requiring Mandatory Findings of Significance and a Revision and Recirculation of the EIR.</u>

5-23

Since the project description in the DEIR is legally inadequate and piecemealed and since the Project may have significant traffic impacts that are not accurately disclosed in the DEIR, then the Project's traffic-related impacts are also derivatively understated and may be significant, requiring a revision and recirculation of the EIR.

There is an acknowledged direct correlation between the increase in traffic impacts and an increase in their associated air quality, greenhouse gas emission ("**GHG**"), and noise impacts. See e.g., *City of Redlands v. County of San Bernardino* (2002) 96 Cal.App.4th 398, 413, "it is reasonable to assume" that a project enabling physical residential development would have reasonably foreseeable indirect air and other impacts.

As stated in the Office of Planning Research's ("OPR") technical advisory in 2018:

> "VMT and Greenhouse Gas Emissions Reduction. Senate Bill 32 (Pavley, 2016) requires California to reduce greenhouse gas (GHG) emissions 40 percent below 1990 levels by 2030, and Executive Order B-16-12 provides a target of 80 percent below 1990 emissions levels for the transportation sector by 2050. The transportation sector has three major means of reducing GHG emissions: increasing vehicle efficiency, reducing fuel carbon content, and reducing the amount of vehicle travel."

Similarly, there is an acknowledged nexus between the increase of traffic and an increase in related air quality, GHG impacts, noise, water/flooding impacts and impacts on human health and natural environment, including wildlife and waterways. As described in the 2018 OPR Technical advisory:

5-23 cont.

> "VMT and Other Impacts to Health and Environment. VMT mitigation also creates substantial benefits (sometimes characterized as "co-benefits" to GHG reduction) in both in the near-term and the long-term. Beyond **GHG emissions**, **increases** in **VMT** also impact **human health** and the **natural environment**. Human health is impacted as increases in **vehicle travel** lead to **more vehicle crashes**, **poorer air quality**, increases in chronic diseases associated with reduced physical activity, and worse mental health. Increases in vehicle travel also negatively affect other road users, including pedestrians, cyclists, other motorists, and many transit users. The **natural environment** is **impacted** as **higher VMT** leads to more collisions with wildlife and fragments habitat. Additionally, development that leads to more vehicle travel also tends to consume **more energy**, **water**, and **open space** (including farmland and sensitive habitat). This increase in impermeable surfaces **raises** the **flood risk** and **pollutant transport** into **waterways**."

As such, the Project here may have significant traffic, air, GHG, energy, water, noise and other impacts, including impacts on human beings and the natural environment.

IV. CONCLUSION

5-24

Based on the foregoing, the City should deny the Project's proposed entitlements and require that the Environmental Impact Report be revised and recirculated pursuant to CEQA, consistent with the comments and issues identified in this comment letter.

Sincerely,

5-24 cont.

Stephanie Papayanis

Stephanie Papayanis
Attorneys for Carpenters Local 713

Attached:

5-25

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).

LETTER 5: CARPENTERS UNION LOCAL 713

Response to Comment 5-1
The comment is an introductory statement and does not address the adequacy of the Draft EIR.

Response to Comment 5-2
The comment does not address the adequacy of the Draft EIR. The comment is noted for the record and the commenter will be notified of future notices referring or related to the proposed project.

Response to Comment 5-3
The comment does not directly address the adequacy of the Draft EIR, but rather, recommends the hiring of a local workforce in order to reduce environmental impacts related to VMT and greenhouse gas (GHG) emissions. The Draft EIR determined on page 4.8-20 that with implementation of Mitigation Measure 4.8-3, potential impacts related to VMT would be reduced to a less-than-significant level. In addition, as discussed starting on page 4.2-69 under Impact 4.2-7, the Draft EIR concludes that potential impacts related to GHG emissions would be less than cumulatively considerable. Thus, as concluded by the Draft EIR, development of the proposed project, with incorporation of the mitigation measures set forth in the Draft EIR, would result in a less-than-significant impact related to VMT and GHG emissions. Nevertheless, the comment is noted for the record and will be forwarded to the decision-makers for their consideration.

Response to Comment 5-4
The prevention of COVID-19 spread is not a physical environmental issue area required for analysis under CEQA. Thus, the comment does not address the adequacy of the Draft EIR and is noted for the record. The comment will be forwarded to the decision-makers for their consideration.

Response to Comment 5-5
The comment does not address the adequacy of the Draft EIR.

Response to Comment 5-6
The comment does not address the adequacy of the Draft EIR and is noted for the record. Please see Response to Comment 5-7.

Response to Comment 5-7
As previously discussed, subsequent to the Draft EIR public review period, SMP 38 was removed from the proposed project. Thus, the currently proposed project includes only the project components discussed and evaluated in the Draft EIR associated with SMP 39 and SMP 40 and off-site trail connection options.

Nevertheless, as discussed on page 3-7 of the Project Description chapter of the Draft EIR, the proposed project, as previously proposed, included a Sphere of Influence (SOI) Amendment to include SMP 38 and SMP 39 within the City of Livermore SOI to align the City's SOI and South Livermore Urban Growth Boundary (UGB) to be consistent with each other. However, as clearly explained in the Draft EIR, development of SMP 38 was not proposed as part of the project. SMP 38 would have remained outside of the City limits and within the unincorporated portion of

Alameda County. The site would have continued to be designated by the County as Industrial and Water Management and zoned Agriculture. SMP 38 would have also continued to be designated by the City of Livermore as Limited Agriculture and Open Space/Sand and Gravel. Changes to the land use and zoning designations of SMP 38 were not proposed in the Draft EIR.

Thus, the comment's suggestion that an SOI Amendment to include SMP 38 within the Livermore SOI would make future annexation and development of SMP 38 "more than likely and reasonably foreseeable" constitutes speculation, and CEQA does not require an EIR to evaluate speculation. Therefore, the description and analyses of SMP 38 in the Draft EIR are adequate, pursuant to CEQA.

Response to Comment 5-8

The comment claims that the Project Description chapter of the Draft EIR is too "narrow, vague, and open-ended," arguing that the Notice of Availability (NOA) prepared for the proposed project includes more details of the proposed project that the actual Project Description chapter.

The comment is incorrect.

For example, the Project Description chapter of the Draft EIR includes the following description of SMP 39 on page 3-17:

> ### Site Plan for SMP 39
> SMP 39 would be developed with up to six light industrial buildings totaling approximately 755,500 sf of new building space (see Figure 3-9). Each building would have a maximum height of 50 feet or 55 feet with a Conditional Use Permit. The buildings are conceptually proposed at this time. They would range in size from 89,400 sf to 183,600 sf and would each include between eight to 34 dock doors for a total of 104 dock doors. A total of 1,647 parking stalls would be provided at the SMP 39 site. This includes 104 truck/trailer stalls.

The Project Description chapter includes similar levels of detail in the discussions on the proposed utility, circulation, and parking improvements that would be constructed as part of development of SMP 39, as well as new landscaping (see Draft EIR pages 3-13 to 3-14 and 3-17 to 3-19). Additionally, the Project Description chapter includes discussions on the proposed utility, circulation, and parking improvements that would be constructed as part of development of SMP 40, as well as new landscaping and three off-site trail connection options (see Draft EIR pages 3-14 to 3-17 and 3-19 to 3-24). Nonetheless, in response to the comment and for clarification purposes, page 3-7 of the Draft EIR is hereby revised as follows:

> For SMP 39, the proposed project would include development of a total of up to six light industrial buildings, consisting of up to approximately 755,500 square feet (sf) of new building space, and associated internal roadways and other improvements (which would include associated utility, and parking improvements, as well as new landscaping, all of which are discussed in further detail below); for SMP 40, the proposed project would include development of two industrial buildings consisting of up to 759,275 sf of new building space with related internal roadways and other improvements (which would include associated utility, and parking improvements, as well as new landscaping, all of which are discussed in further detail below). A number of approvals would be required for development of SMP 39 and SMP 40, including a SOI Amendment for SMP 39, General Plan Amendment, Pre-zoning and Annexation, Zoning Map Amendment/Planned Development, Vesting Tentative Subdivision Maps, a Pre-Annexation Agreement, and Development Agreement. A Site Plan Design Review entitlement is required for SMP 39

> and SMP 40, which would include a review of the site plan, building, and landscape design; however, the Site Plan Design Review entitlement is only proposed for SMP 40 at this time. A Site Plan Design Review entitlement will be required at a later date for the future development of SMP 39. Development of SMP 38 is not proposed. The proposed project includes an SOI Amendment to include SMP 38 within the City of Livermore SOI. The City of Livermore General Plan land use designation for SMP 38 would remain Limited Agriculture and Open Space/Sand and Gravel and the Alameda County zoning would remain Agriculture. A detailed description of the proposed project, including the necessary approvals, is provided below.

The above revisions are for clarification purposes only, as the "other improvements" referenced by the commenter are already described in detail on pages 3-13 to 3-24 of the Draft EIR. Given the level of detail provided therein, the Project Description chapter of the Draft EIR provides a comprehensive description of the proposed project to allow readers to understand the potential significant effects of the project and its alternatives, in accordance with the CEQA Guideline Section 15125. Thus, the Project Description chapter of the Draft EIR is adequate.

Response to Comment 5-9

The Draft EIR clearly discusses the entitlements requested as part of the proposed project, which are listed on pages 3-26 and 3-27 of the Draft EIR and discussed in further detail throughout the Project Description chapter. With respect to the Site Plan and Design Review that will be required of SMP 39 at a later date, although such an entitlement is not currently proposed for SMP 39, the Draft EIR, nonetheless, includes the Preliminary Site Plan for SMP 39 (see Figure 3-9 on page 3-18 of the Draft EIR), identifies the maximum footprint and building square footage shown on the Preliminary Site Plan that could result from buildout of SMP 39, and evaluates potential environmental impacts that could occur through such development. As such, the Draft EIR properly evaluates the whole of the action and is adequate.

Response to Comment 5-10

The Draft EIR does not include project objectives that are narrowly drawn and lead to an inadequate range of alternatives. The project objectives included in the Project Description chapter of the Draft EIR (see pages 3-6 and 3-7) are drawn such that reasonable alternatives to the proposed project are properly evaluated and allow for meaningful evaluation, analysis, and comparison with the proposed project. Such is evident based on the fact that the project objectives are not so narrow that only the project, as proposed, could attain most of the basic objectives. For example, while Objective 3 establishes a goal of developing industrial facilities, none of the project objectives establish a specific amount of square feet that would need to be developed to meet the goal, nor a specific number of buildings. As such, alternative industrial developments at a reduced intensity could be developed within SMP 39 and SMP 40 that could meet most of the project objectives, while also resulting in less severe environmental impacts.

Such a result is key in determining the adequacy of the project objectives. For example, the court determined the following in *We Advocate Through Environmental Review v. County of Siskiyou* (2022) 78 Cal.App.5th 683:

> In taking this artificially narrow approach for describing the project objectives, the County ensured that the results of its alternatives analysis would be a foregone conclusion. It also, as a result, transformed the EIR's alternatives section—often described as part of the "core of the EIR" (*In re Bay-Delta, supra*, 43 Cal.4th at p. 1162)—into an empty formality. No alternative apart from the rehabilitation of the existing plant, after all, could "site the proposed facility at the Plant," involve the use of "the full production capacity of the existing

> Plant," allow the "operation of the Plant as soon as possible," or involve the "modification [of] the existing facilities at the Plant." We find that the County produced a flawed EIR as a result.

Based on the court's ruling, an EIR cannot include project objectives that lead to a foregone conclusion of only a project, as proposed, meeting the majority of the project objectives. As demonstrated in Chapter 6, Alternatives Analysis, of the Draft EIR, the project objectives do not transform the Draft EIR's analysis of project alternatives such that only the proposed project could meet most of the objectives. Such is made clear on page 6-21 of the Draft EIR, which finds that the Reduced Intensity Alternative would generally meet all of the objectives of the proposed project, while also resulting in fewer impacts to all seven environmental issue areas, relative to the proposed project.

Additionally, given that the existing land use designations of SMP 39 and SMP 40 allow for industrial development, Objective 3's goal of developing industrial facilities is consistent with the existing allowable uses of the sites. Thus, for the reasons discussed above, the project objectives included in the Draft EIR are adequate.

Response to Comment 5-11

The commenter's statement that "it is possible that the biological landscape" of the project site has changed since October 2021 constitutes speculation. The commenter does not provide evidence that such changes have occurred. The project site is farmed and has been for decades. At the time of the site visits completed by Monk & Associates' qualified biologists, which occurred in different months over several years, the site was always in a disced, mowed, hayed, or otherwise farmed/disturbed state and supported only ruderal (weedy) herbaceous vegetation and common wildlife species. The landscape remained essentially unchanged over the years and Monk & Associates' qualified biologists never noted any significant changes in flora or fauna or reason to believe that special-status plants or animals resided on-site. Thus, the field surveys conducted by Monk & Associates are adequate.

Response to Comment 5-12

One single field survey is sufficient to get a baseline description of a project site's plant communities and wildlife habitats and to determine if additional surveys for special-status species are necessary. For most biological resource assessments conducted for the purposes of CEQA, one baseline site survey is typical. Because the SMP 39 and SMP 40 sites are farmed and have been for decades, one site survey for each was sufficient to establish a baseline vegetation and wildlife condition, determine project-related impacts, and prescribe appropriate mitigation measures.

Response to Comment 5-13

As detailed in the Biological Resources Analysis for SMP 39 (SMP 39 BRA) prepared for the proposed project (see Appendix D of the Draft EIR), the SMP 39 BRA employed industry standard practices, which are discussed in further detail on pages 1 to 2 of the SMP 39 BRA. Additionally, Monk & Associates is an established biological consulting firm with a number of qualified biologists on staff with particular knowledge of the project site and vicinity, as documented in the SMP 39 BRA. Furthermore, the comment is speculative, and the commenter does not provide evidence that Monk & Associates failed to adequately survey the SMP 39 site for the purposes of CEQA.

Response to Comment 5-14

Please see Response to Comment 5-12.

Response to Comment 5-15

Please see Responses to Comments 5-11 through 5-13. In addition, one cannot complete a wetland delineation without noting the plant species present, because hydrophytic vegetation (i.e., wetland plants) is one of the three indicators necessary for an area to be classified as a USACE jurisdictional wetland. Thus, all plants observed were recorded during the June 2022 wetland delineation. Additionally, Sarah Lynch, Monk & Associates Principal Biologist, keeps a "wildlife observed" list each time she is in the field, and all wildlife observed in June 2022, as with all other survey dates, were noted and included in the Biological Resource Analysis for the Oaks Business Park (SMP 40 BRA) (see Appendix E of the Draft EIR).

In addition, the CDFW's survey guidelines that the commenter cites are the guidelines for conducting floristic surveys for rare and endangered or other special-status plant species. Focused floristic surveys require multiple site visits during the growing season, when the target plants are in flower or are otherwise identifiable, so that they can be identified to the taxa level necessary to determine if the plant is a special-status species. However, Monk & Associates' qualified biologists made a determination based on the site's farmed conditions and Monk & Associates' past survey experience of the properties (dating back to 2000) that such focused surveys for special-status plants would not be necessary, given that discing, mowing, planting, and haying are all incompatible land uses with special-status plants known within the project area. Furthermore, Monk & Associates' review of the CNDDB prior to conducting site surveys and preparing the SMP 39 BRA and SMP 40 BRA is the correct use of the CNDDB. To allege any misuse occurred would be speculative and without evidence.

Finally, case law demonstrates that biological reports need to provide "adequate information to ensure that 'decisions be informed, and therefore balanced'" (*Association of Irritated Residents v. County of Madera* [2003] 107 Cal.App.4th 1383, 1404). The BRAs supporting the Draft EIR more than meet the aforementioned standard and provide substantial evidence supporting the conclusions in the Draft EIR, based on multiple years of site visits that found stable conditions.

Response to Comment 5-16

The comment summarizes portions of the Noise chapter of the Draft EIR and expresses a general opinion that the impact analysis in the Noise chapter is "legally lacking and flawed," but does not provide specific examples that would allow for a detailed response.

Please see Responses to Comments 5-17 and 5-18.

Response to Comment 5-17

Pursuant to CEQA Guidelines Section 15126.4(a)(1)(B), the deferred formulation of a mitigation measure to the future is ordinarily inappropriate; however, the rule is not absolute, with the courts having recognized exceptions in a number of situations (see *POET, LLC v. State Air Resources Bd.* (2013) 218 Cal. App. 4th 681, 735). CEQA Guidelines Section 15126.4(a)(1)(B) acknowledges such exceptions, explaining that mitigation measures may set forth performance standards for mitigating a significant impact when the specification of specific details of mitigation during the EIR review process is impractical or infeasible, provided that the lead agency commits to implement the mitigation, adopts the specified performance standard, and identifies the types of actions that may achieve compliance with the performance standard. The exception to the general

rule against deferred mitigation was first described in the leading case of *Sacramento Old City Assoc. v. City Council of Sacramento* (1991) 229 Cal. App. 3d 1011, 1022, in which the court held that an agency may defer selection of specific mitigation measures when the agency approves a project, if the measures that will be considered subsequently are described, performance criteria are identified, and the agency commits to devising measures that will satisfy those criteria. Furthermore, a mitigation performance standard is sufficient if the standard identifies the specific criteria the agency will apply in determining that the impact will be mitigated (see *Sierra Club v. County of Fresno* [2018] 6 Cal. 5th 52, 525). Performance standards based on specific objectives that inform the agency "what it is to do and what it must accomplish" are sufficient (see *Center for Biological Diversity v. Department of Fish & Wildlife* [2015] 234 Cal. App. 4th 214, 245).

The Draft EIR concludes under Impact 4.6-1, which starts on page 4.6-21, that the proposed construction activities could result in a potentially significant impact only during construction of the selected off-site trail connection option. As such, Mitigation Measure 4.6-1 includes a very concrete requirement to address noise generated during such activities. In particular, the last bullet point of the mitigation measure requires the use of temporary sound barriers along the outer work area of the construction site, east of Isabel Avenue/SR 84, with specific requirements further included related to the barrier height, location, and fencing to ensure the resultant construction noise levels at the nearest residence would meet the applicable noise level standard. Thus, while Mitigation Measure 4.6-1 starts by requiring a Construction Noise Management Plan, the mitigation measure follows with a very specific performance standard containing detailed criteria to address the sole issue that the City of Livermore is capable of ensuring is accomplished. As such, Mitigation Measure 4.6-1 does not improperly defer mitigation, and the analyses and conclusions in the Draft EIR are adequate.

Response to Comment 5-18

Please see Response to Comment 5-17 above.

Response to Comment 5-19

The comment summarizes portions of the Transportation chapter of the Draft EIR and expresses a general opinion that potential transportation impacts are "inadequately disclosed and mitigated" in the Draft EIR, but does not provide specific examples that would allow for a detailed response.

Response to Comment 5-20

Mitigation Measure 4.8-1 on page 4.8-17 of the Draft EIR contains the components that a mitigation measure must include in order to meet CEQA's requirements. For example, Mitigation Measure 4.8-1 includes clear language on the timing of when the mitigation must be implemented (i.e., prior to grading permit issuance for the SMP 39 and SMP 40 sites, as well as the chosen off-site trail connection option). The mitigation measure also includes clear performance standards that the required Construction Traffic Management Plan must meet to be determined satisfactory. Finally, the City of Livermore's adoption of the MMRP would ensure the mitigation measures set forth in the Draft EIR, including, but not limited to, Mitigation Measure 4.8-1, are implemented. Therefore, the Draft EIR does not defer mitigation, and the analyses and conclusions in the Draft EIR are adequate.

Please see Response to Comment 5-17 above.

Response to Comment 5-21

Please see Response to Comment 5-17 above.

Response to Comment 5-22

The Draft EIR's incorporation of a TDM Program to reduce VMT and GHG emissions is appropriate. In *City of Hayward v. Board of Trustees of California State University* (2015), the court found the TDM mitigation measure adequate, even though the project's traffic impact was ultimately determined to be significant and unavoidable.

CEQA requires that 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. Mitigation Measure 4.8-3 of the Draft EIR requires the project applicant to develop and implement a TDM Program and annual reporting program to reduce potential impacts associated with the proposed project. Mitigation Measure 4.8-3 outlines the targets, timing requirements, and potential TDM strategies that would be included in the TDM program, including an Employer Carpool Program. Mitigation Measure 4.8-3 additionally describes requirements for annual TDM performance monitoring, evaluation, and reporting if targets are not met. The TDM mitigation measure is anticipated to reduce VMT per employee and associated GHG emissions by four percent, which would be below the applicable threshold. In addition, the implementation of a TDM Program is feasible, and the City and applicant are committed to such implementation, as required by Mitigation Measure 4.8-3 of the Draft EIR. Moreover, sufficient evidence exists that TDM strategies can effectively reduce vehicle travel demand. The City of Livermore's adoption of the MMRP would ensure the mitigation measures set forth in the Draft EIR, including, but not limited to, Mitigation Measure 4.8-3, are implemented.

Additionally, in the decision cited above, the court noted:

> While the Trustees have not committed to implementation of any particular measure that is specified in the TDM Implementation Plan, the TDM is not illusory. The plan enumerates specific measures to be evaluated, it incorporates quantitative criteria and it sets specific deadlines for completion of the parking and traffic study and timelines for reporting to the city on the implementation and effectiveness of the measures that will be studied. The monitoring program which is an integral part of the plan ensures that the public will have access to the information necessary to evaluate compliance with the Trustees' obligations.
>
> The approach taken by the Trustees is consistent with the approach taken in numerous cases with judicial approval. (E.g., *Sacramento Old City Assn. v. City Council* (1991) 229 Cal.App.3d 1011, 1028–1029 [280 Cal. Rptr. 478] (*Sacramento*) [city "has set forth a list of alternatives to be considered in the formulation of a transportation management plan … where practical considerations prohibit devising such measures early in the planning process (e.g., at the general plan amendment or rezone stage), the agency can commit itself to eventually devising measures that will satisfy specific performance criteria articulated at the time of project approval"]; *California Native Plant Society v. City of Rancho Cordova* (2009) 172 Cal.App.4th 603, 621 [91 Cal. Rptr. 3d 571] [*Sacramento* "stands for the proposition that when a public agency has evaluated the potentially significant impacts of a project and has identified measures that will mitigate those impacts, the agency does not have to commit to any particular mitigation measure in the EIR, so long as it commits to mitigating the significant impacts of the project."]; *Defend the Bay v. City of Irvine, supra*, 119 Cal.App.4th at p. 1275 ["Deferral of the specifics of mitigation is permissible where the local entity commits itself to mitigation and lists the alternatives to be considered, analyzed and possibly incorporated in the mitigation plan"].) Accordingly, we conclude that the EIR does not improperly defer mitigation of the traffic impacts.

Mitigation Measure 4.8-3 includes the following key elements cited by the court:

- Specific performance measures to be evaluated, including VMT per employee based on the VMT significance thresholds established in the Draft EIR;
- Quantitative performance measure targets that must be met based on the Draft EIR significance thresholds (for VMT per employee); and
- Specific timing for TDM Program monitoring, evaluation, reporting, and additional actions that must be taken if performance measure targets are not met.

Importantly, the court also noted:

> The Master Plan goal to reduce drive alone vehicle trips is the performance standard that the TDM plan will strive to meet. The EIR … provides details about the types of programs that the University will evaluate and adopt to achieve this goal. Because the Master Plan covers a long range development program and is based on projections of growth that may or may not occur, it is necessary that the University retain the flexibility to select those programs that best work at a given point in time.

Similar to the Master Plan referenced by the court, operation of the proposed project would occur over an extended period of time. A key reason that the development and implementation of a TDM Program is identified to address project impacts is to fully evaluate and then implement an appropriate variety of TDM strategies, including an Employer Carpool Program. Understanding which strategies would be most effective requires comprehensive and continuous analysis and monitoring of project employee travel patterns, much of which is uncertain at this time and will evolve over the development of the project.

Response to Comment 5-23

For reasons addressed in previous comment responses, the Project Description chapter of the Draft EIR is adequate and the Draft EIR evaluates the whole of the action. The commenter suggests that the proposed project may result in potentially significant impacts related to air quality, greenhouse gas (GHG) emissions, hydrology and water quality, noise, hazards and hazardous materials, biological resources, and cumulative impacts; however, specific examples are not provided by the commenter. The Draft EIR analyzes all environmental issue areas required for analysis under CEQA, either in the various technical chapters of the Draft EIR or in the Initial Study prepared for the proposed project (see Appendix A of the Draft EIR). Of the aforementioned issue areas cited by the commenter, the Draft EIR identifies potentially significant impacts related to air quality (Impacts 4.2-1 and 4.2-2), hydrology and water quality (Impacts 4.5-1, 4.5-2, 4.5-4, and 4.5-5), noise (Impact 4.6-1), and biological resources (Impacts 4.3-2 and 4.3-3). However, all of the aforementioned potentially significant impacts would be reduced to a less-than-significant level with implementation of the mitigation measures set forth by the Draft EIR. With respect to potential cumulative impacts, the Draft EIR identifies a cumulative significant impact related to agricultural resources (Impact 4.1-3) and utilities service systems (Impact 4.7-8). With implementation of mitigation, the Draft EIR concludes under Impact 4.7-8 that the potential impact would be less than cumulatively considerable; however, the Draft EIR determines under Impact 4.1-3 that feasible mitigation is not available to reduce the project's contribution to the significant impact to a less than cumulatively considerable level. Thus, the Draft EIR finds under Impact 4.1-3 that the project's contribution to the cumulative significant impact would be cumulatively considerable and significant and unavoidable. With respect to potential impacts related to hazards and hazardous materials, the Initial Study prepared for the proposed project

identifies mitigation measures that would reduce all potential impacts related to hazards to a less-than-significant level.

Based on the above, the analyses and conclusions in the Draft EIR are adequate. The comment is noted for the record and will be forwarded to the decision-makers for their consideration.

Response to Comment 5-24

The comment is a conclusion and does not address the adequacy of the Draft EIR.

Response to Comment 5-25

The comment references attached material to the comment letter and does not address the adequacy of the Draft EIR. The attached information (see Appendix A of this Final EIR) does not address the adequacy of the Draft EIR.

Letter 6

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October 13, 2023

Ashley Vera, Associate Planner
City of Livermore
1052 S. Livermore Ave.
Livermore, CA 94550

VIA EMAIL TO:
asvera@livermoreca.gov

SUBJECT: COMMENTS ON SMP 38/SMP 39/SMP 40 EIR (SCH NO. 2023010091)

Dear Ms. Vera,

Thank you for the opportunity to comment on the Environmental Impact Report (EIR) for the proposed SMP 38/SMP 39/SMP 40 Project. Please accept and consider these comments on behalf of Golden State Environmental Justice Alliance. Also, Golden State Environmental Justice Alliance formally requests to be added to the public interest list regarding any subsequent environmental documents, public notices, public hearings, and notices of determination for this project. Send all communications to Golden State Environmental Justice Alliance P.O. Box 79222 Corona, CA 92877.

1.0 Summary

6-1

The approximately 217.04-acre project site consists of nine separate parcels located in unincorporated Alameda County. The project is proposed via three identifying areas - SMP 38, SMP 39, and SMP 40. The aforementioned SMP numbers are due to the Surface Mining Permit (SMP) numbers applicable to each site. The Surface Mining Permits for each of the sites were approved by Alameda County in 2004 to allow for the extraction of sand and gravel within the sites; however, aggregate mining has not occurred within any of the sites. Four additional parcels located east of SMP 40 are included in the overall project area.

SMP 38, SMP 39, SMP 40, and the Additional Annexation Only Parcels are within the City of Livermore South Livermore Urban Growth Boundary (UGB); however, SMP 38 and SMP 39 are also within the City of Pleasanton's Sphere of Influence (SOI). Accordingly, an SOI Amendment for SMP 38 and SMP 39 is proposed in order to modify City of Pleasanton SOI, align the SOI and South Livermore UGB boundaries to be consistent with one another, and provide a contiguous division of land between the cities of Livermore and Pleasanton. Annexation of SMP 38 into the

City of Livermore is not proposed as part of the project, nor is development of the three parcels representing SMP 38.

On the SMP 38 site, the proposed project includes a Sphere of Influence (SOI) Amendment to include SMP 38 within the City of Livermore SOI and remove it from City of Pleasanton's SOI. The City of Livermore General Plan land use designation for SMP 38 would remain Limited Agriculture and Open Space/Sand and Gravel and the Alameda County zoning designation would remain Agriculture. Development of SMP 38 is not proposed.

6-1 cont.

On the SMP 39 site, the proposed project would include development of a total of up to six light industrial buildings, consisting of up to approximately 755,500 square feet (sf) of new building space, and associated internal roadways and other improvements. On the SMP 40 site, the proposed project would include development of two industrial buildings containing up to 759,275 sf of new building space with related internal roadways and other improvements. Discretionary approvals are required for development of SMP 39 and SMP 40, including a SOI Amendment for SMP 39, General Plan Amendment, Pre-zoning and Annexation, Zoning Map Amendment/Planned Development, Vesting Tentative Subdivision Maps, a Pre-Annexation Agreement, and Development Agreement. A Site Plan Design Review entitlement is required for SMP 39 and SMP 40, which would include a review of the site plan, building, and landscape design; however, the entitlement is only proposed for SMP 40 at this time.

4.0.3 Environmental Issues Dismissed in the Initial Study: Hazards and Hazardous Materials

General Plan Figure 3-5: Airport Protection Area and Safety Compatibility Zones depicts the project site within Zone 2: Inner Approach/Departure Zone, Zone 3: Inner Turning Zone, and Zone 4: Outer Approach/Departure Zone. The EIR does not provide any information regarding ALUC review of the project. The City's General Plan requires ALUC review prior to making any land use decisions:

6-2

1. Land Use Policy P3. The following actions shall be reviewed by the ALUC for determination of consistency with the ALUCP prior to their approval by the City of Livermore.
    - *A)* Adoption of any amendment to the General Plan or a specific plan that proposes new land uses, or increased intensity or density of Existing Land Uses in the Airport Influence Area, as such terms are defined in section 2.4 of the ALUCP. (Reso. 2013-113)
    - *B)* The adoption or approval of a zoning ordinance which (1) introduces a new land use within the Airport Influence Area not contemplated by an Existing Land Use or increases the intensity or density of, or permitted by, an Existing Land Use, and (2)

involves any of the airport-related concerns listed in Section 1.4 of the ALUCP. (Reso. 2013-113)

C) Proposed redevelopment of a property within the Airport Influence Area that increases the intensity or density of an Existing Use that is inconsistent with the compatibility criteria set forth in the ALUCP (see Section 2.7.5.7 (a) of the ALUCP for exceptions to this policy). (Reso. 2013-113)

D) Per ALUCP section 2.6.2, the City has the discretion to refer development proposals to the ALUC for advisory review if deemed appropriate to ensure land use compatibility with the Airport. (Reso. 2013-113)

6-2 cont.

The EIR is misleading to the public and decision makers by excluding the required airport compatibility review beyond that of the City. Delaying ALUC review until after the CEQA process is implementation of the project prior to CEQA review and deferred mitigation in violation of CEQA. A revised EIR must be prepared which includes a review and comment letter regarding the proposed development plans from the ALUC.

4.0.3 Environmental Issues Dismissed in the Initial Study: Land Use and Planning

The EIR provides discussion and information regarding Land Use and Planning Checklist Question A. The EIR does not provide any information or analysis regarding Land Use and Planning Checklist Question 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?" Appendix A: NOP & IS states that, "Based on the above, the potential for the proposed project to 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 *will be evaluated in the technical chapters of the SMP 38/SMP39/SMP 40 Project EIR*. Pending further analysis, a potentially significant impact could occur." However, the EIR does not provide any Land Use and Planning Analysis in respect to Checklist Question B. The EIR does not provide a consistency analysis with all land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect. For example, the EIR has not evaluated the conversion of the project site from the General Plan land use designation of Open Space to Low Intensity Industrial.

6-3

The project has significant potential to conflict with many of these items, including but not limited to the following from the General Plan:

1. Goal LU-1 Protect the unique qualities of Livermore, which include a historic Downtown, a variety of residential neighborhoods, vineyards, ranches, natural habitats and open space.

2. Objective LU-4.2 Ensure that new development complements its local context and minimizes impacts on the environment.
3. Land Use Policy P1. New development shall be designed to respect and enhance Livermore's existing development and natural environment.
4. Land Use Policy P2. The use of "green construction" and land development techniques shall be encouraged as a means to reduce the environmental impacts of construction activity.
5. Land Use Policy P3. Encourage all additions and new development to follow green building practices for design, construction, and operation and to incorporate as many LEED prerequisites and credits as feasible.
6. Objective LU-4.3 Designate appropriate areas for industrial uses in order to prevent negative impacts on the health, safety, and welfare of residents.
7. Land Use Policy P1. Industrial development shall be subject to design principles and performance standards consistent with General Plan policies.
8. Objective LU-4.4 Protect the Municipal Airport from encroachment by incompatible uses.
9. Land Use Policy P1. The City shall encourage development of property within the immediate vicinity of the Airport for light industrial and transportation uses to the extent that noise standards and flight clearance requirements are maintained, and environmental impacts are adequately mitigated.

6-3

10. Land Use Policy P2. Development in the Airport Influence Area, depicted in Figure 3-5.1, shall be in conformance with the Livermore Airport Land Use Compatibility Plan ("ALUCP"), dated August 2012. Land uses shall be consistent with this General Plan, the Livermore Development Code, and the Land and Use and Safety Compatibility Criteria contained in Table 2-3 and Table 3-2 of the ALUCP. Existing Land Uses, as defined in Section 2.4 of the ALUCP, are not subject to the policies of the ALUC. ALUCP Section 2.7.5.7 lists other special conditions where ALUC authority may be limited. (Reso. 2013-113)
11. Land Use Policy P3. The following actions shall be reviewed by the ALUC for determination of consistency with the ALUCP prior to their approval by the City of Livermore.
    - *E)* Adoption of any amendment to the General Plan or a specific plan that proposes new land uses, or increased intensity or density of Existing Land Uses in the Airport Influence Area, as such terms are defined in section 2.4 of the ALUCP. (Reso. 2013-113)
    - *F)* The adoption or approval of a zoning ordinance which (1) introduces a new land use within the Airport Influence Area not contemplated by an Existing Land Use or increases the intensity or density of, or permitted by, an Existing Land Use, and (2) involves any of the airport-related concerns listed in Section 1.4 of the ALUCP. (Reso. 2013-113)
    - *G)* Proposed redevelopment of a property within the Airport Influence Area that increases the intensity or density of an Existing Use that is inconsistent with the compatibility

criteria set forth in the ALUCP (see Section 2.7.5.7 (a) of the ALUCP for exceptions to this policy). (Reso. 2013-113)

H) Per ALUCP section 2.6.2, the City has the discretion to refer development proposals to the ALUC for advisory review if deemed appropriate to ensure land use compatibility with the Airport. (Reso. 2013-113)

12. Goal OSC-3 Protect agricultural open space in the Planning Area and the City. Objective OSC-3.1 Preserve agricultural land, a vital part of Livermore's open space network and an irreplaceable natural resource.
13. OSC Policy P1. Undeveloped lands that are State-designated as Prime Farmland, Farmland of Statewide Importance, and Unique Farmland shall be preserved, to the greatest extent feasible, for open space or agricultural use.
14. OSC Policy P2. The City shall encourage the County to preserve agricultural activities outside the Urban Growth Boundary.
15. OSC Policy P5. The City shall attempt to increase the employment to population ratio to reduce commuting rates and associated vehicle-related pollution emissions. The City shall approve only those development proposals, which are designed and located to minimize energy consumption and adverse impacts on air, land and water resources. High-density, transit oriented developments shall be strongly encouraged and promoted through the use of specific planning, density transfer, the planned development concept, and zoning designations.
16. Goal CIR-5 Maintain relatively free-flowing traffic, except where the City has identified intersections or areas of the City that are exempt from the Citywide standard.
17. Objective CIR-5.1 Maintain adequate levels of service for all areas of the City.
18. Policy P1. For the purposes of development associated traffic studies, road improvement design, and capital improvement priorities, the upper limit of acceptable service at signalized intersections shall be mid-level D, except in the Downtown Area and near freeway interchanges.

6-3 cont.

Providing this analysis is vital as the EIR does not present any meaningful discussion or analysis regarding the project's location near the Airport or that the ALUC has completed its required review. This is especially vital given the General Plan Figure 3-5: Airport Protection Area and Safety Compatibility Zones depicts the project site within Zone 2: Inner Approach/Departure Zone, Zone 3: Inner Turning Zone, and Zone 4: Outer Approach/Departure Zone. A revised EIR must be prepared that includes a review and comment letter regarding the proposed development plans from the ALUC.

6-4

Further, the LOS analysis within Appendix N: Traffic Impact Analysis concludes that implementation of the project will result in deficient LOS for the following intersections:

6-5

1. Isabel Ave/Stanley Blvd
2. El Charro Rd/I-580 WB Ramps

Appendix N provides Table M: Recommended Improvement Measures with improvements that will allegedly mitigate these significant impacts to less than significant levels. It must be noted that the impacts to the I-580 are under jurisdiction of Caltrans and a portion of the Isabel Ave/Stanley Blvd intersection is under County of Alameda jurisdiction. Any improvements constructed in these areas or in-lieu fees paid are beyond the control/scope of the lead agency. None of the improvements listed are identified within the City or County DIF, indicating that these improvements are not planned or funded to occur. An assessment of fees is appropriate when linked to a specific mitigation program. (*Anderson First Coalition v. City of Anderson* (2005) 130 Cal.App.4th 1173, *Save our Peninsula Comm. v. Monterey County Bd. Of Supers.* (2001) 87 Cal.App.4th 99, 141.) Payment of fees is not sufficient where there is no evidence mitigation will actually result. (*Gray v. County of Madera* (2008) 167 Cal.App.4th 1099,1122.) The assessment of fees here is not adequate as there is no evidence mitigation will actually result. The improvements required are not listed as part of an existing DIF/TUMF program and therefore are not planned to occur at all or by any certain date. Any improvements recommended or fees paid to mitigate impacts for impacts to Caltrans or County of Alameda facilities are beyond the control of the lead agency and evidence that these improvements will be completed or approved by the other lead agency has not been provided. A revised EIR must be prepared and recirculated to include the LOS analysis as a cumulatively considerable significant impact as the project is not consistent with the City's General Plan.

6-5 cont.

4.0.3 Environmental Issues Dismissed in the Initial Study: Population and Housing

The EIR concludes that impacts to Population and Housing will be less than significant because "Although the project could indirectly attract residents to the area for employment opportunities, new employees would *likely* be drawn from current residents in the project *area*. In addition, the increase in jobs would be *relatively* small compared to the City's existing population. The geographic area of "project area" of the project site is undefined and relying on the entire labor force within an undefined distance, notably the greater Bay Area region, to fill the project's construction and operational jobs will increase project VMT and emissions during all phases of construction and operations. A revised EIR must be prepared to account for longer worker trip distances. Additionally, the revised EIR must also provide demographic and geographic information on the location of qualified workers to fill these positions in order to provide an accurate environmental analysis.

6-6

6-6 cont.

The EIR does not meaningfully discuss the project's compliance with the Association of Bay Area Governments (ABAG) RTP/SCS (Plan Bay Area 2050). Plan Bay Area 2050's Growth Pattern[1] notes that the East Alameda County area (Dublin, Livermore, and Pleasanton) will add 18,000 jobs between 2015 - 2050. Utilizing the EIR's calculation of 1,478 employees, the project represents 8.2% of the East Alameda County area employment growth from 2015 - 2050. A single project accounting for this amount of the projected employment and/or population over 35 years represents a significant amount of growth. A revised EIR must be prepared to include this analysis, and also provide a cumulative analysis discussion of projects approved since 2015 and projects "in the pipeline" in Dublin, Livermore, and Pleasanton to determine if the project will exceed Plan Bay Area 2050's employment and/or population growth forecast for East Alameda County. The amount of growth accounted for by cumulative projects multiplies exponentially when other commercial and industrial development activity approved since 2015 are added to the calculation. A revised EIR must be prepared to include this information for analysis and also include a cumulative development analysis of projects approved since 2015 and projects "in the pipeline" to determine if the proposed project exceeds ABAG's and/or the City's growth forecasts.

6-7

4.2 Air Quality, Greenhouse Gas Emissions, and Energy

Please refer to attachments from SWAPE for a complete technical commentary and analysis.

6-8

The EIR does not include meaningful analysis of relevant environmental justice issues in reviewing potential impacts, including cumulative impacts from the proposed project. This is especially significant as the surrounding community is highly burdened by pollution. According to CalEnviroScreen 4.0[2], CalEPA's screening tool that ranks each census tract in the state for pollution and socioeconomic vulnerability, the proposed project's census tract (6001451300) is highly burdened by pollution. The surrounding community bears the impact of multiple sources of pollution and is more polluted than average compared to the rest of the State in many pollution indicators measured by CalEnviroScreen. For example, the project census tract ranks in the 74th percentile for diesel particulate matter (PM) burden and 82nd percentile for traffic burdens. These environmental factors are attributed to heavy truck activity in the area. Exhaust fumes contain toxic chemicals that can damage DNA, cause cancer, make breathing difficult, and cause low weight and premature births[3]. The very small particles of diesel PM can reach deep into the lung,

[1] Plan Bay Area 2050 Growth Pattern
https://www.planbayarea.org/sites/default/files/FinalBlueprintRelease_December2020_GrowthPattern_Jan2021Update.pdf
[2] CalEnviroScreen 4.0 https://oehha.ca.gov/calenviroscreen/report/calenviroscreen-40
[3] OEHHA Traffic https://oehha.ca.gov/calenviroscreen/indicator/traffic-density

6-8 cont. where they can contribute to a range of health problems. These include irritation to the eyes, throat and nose, heart and lung disease, and lung cancer[4].

6-9 The census tract also ranks in the 76th percentile for hazardous waste facility impacts. Hazardous waste generators and facilities contribute to the contamination of air, water and soil near waste generators and facilities can harm the environment as well as people[5].

6-10 The census tract ranks in the 74th percentile for groundwater threats and 56th percentile for contaminated drinking water. Poor communities and people in rural areas are exposed to contaminants in their drinking water more often than people in other parts of the state[6]. People who live near contaminated groundwater may be exposed to chemicals moving from the soil into the air inside their homes[7].

6-11 Further, the census tract is a diverse community including 19% Hispanic, 1% African-American, and 9% Asian-American residents, whom are especially vulnerable to the impacts of pollution. The community has a high rate of low educational attainment, meaning 28% of the census tract over age 25 has not attained a high school diploma, which is an indication that they may lack health insurance or access to medical care. Medical care is vital for this census tract as it ranks in the 35th percentile for incidence of cardiovascular disease and 24th percentile for incidence of asthma.

6-12 California's Building Energy Code Compliance Software (CBECC) is the State's only approved energy compliance modeling software for non-residential buildings in compliance with Title 24[8]. CalEEMod is not listed as an approved software. The CalEEMod modeling does not comply with the 2022 Building Energy Efficiency Standards and under-reports the project's significant Energy impacts and fuel consumption to the public and decision makers. Since the EIR did not accurately or adequately model the energy impacts in compliance with Title 24, a finding of significance must be made. A revised EIR with modeling using the approved software (CBECC) must be circulated for public review in order to adequately analyze the project's significant environmental

[4] OEHHA Diesel Particulate Matter https://oehha.ca.gov/calenviroscreen/indicator/diesel-particulate-matter
[5] OEHHA Hazardous Waste Generators and Facilities https://oehha.ca.gov/calenviroscreen/indicator/hazardous-waste-generators-and-facilities
[6] OEHHA Contaminated Drinking Water https://oehha.ca.gov/calenviroscreen/drinking-water
[7] OEHHA Groundwater Threats https://oehha.ca.gov/calenviroscreen/indicator/groundwater-threats
[8] California Energy Commission 2022 Energy Code Compliance Software https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency-1

6-12 cont.

impacts. This is vital as the EIR utilizes CalEEMod as a source in its methodology and analysis, which is clearly not the approved software.

4.8 Transportation

Appendix N: Traffic Impact Analysis concludes that implementation of the project will result in deficient LOS for the following intersections:

3. Isabel Ave/Stanley Blvd
4. El Charro Rd/I-580 WB Ramps

6-13

Appendix N provides Table M: Recommended Improvement Measures with improvements that will allegedly mitigate these significant impacts to less than significant levels. It must be noted that the impacts to the I-580 are under jurisdiction of Caltrans and a portion of the Isabel Ave/Stanley Blvd intersection is under County of Alameda jurisdiction. Any improvements constructed in these areas or in-lieu fees paid are beyond the control/scope of the lead agency. None of the improvements listed are identified within the City or County DIF, indicating that these improvements are not planned or funded to occur. An assessment of fees is appropriate when linked to a specific mitigation program. (*Anderson First Coalition v. City of Anderson* (2005) 130 Cal.App.4th 1173, *Save our Peninsula Comm. v. Monterey County Bd. Of Supers.* (2001) 87 Cal.App.4th 99, 141.) Payment of fees is not sufficient where there is no evidence mitigation will actually result. (*Gray v. County of Madera* (2008) 167 Cal.App.4th 1099,1122.) The assessment of fees here is not adequate as there is no evidence mitigation will actually result. The improvements required are not listed as part of an existing DIF/TUMF program and therefore are not planned to occur at all or by any certain date. Any improvements recommended or fees paid to mitigate impacts for impacts to Caltrans or County of Alameda facilities are beyond the control of the lead agency and evidence that these improvements will be completed or approved by the other lead agency has not been provided. The EIR must be revised and recirculated to include the LOS analysis as cumulatively considerable significant impact as the project conflicts with Transportation Impact Threshold A and Land Use and Planning Impact Threshold B because it is not consistent with the following General Plan policies:

1. Goal CIR-5 Maintain relatively free-flowing traffic, except where the City has identified intersections or areas of the City that are exempt from the Citywide standard.
2. Objective CIR-5.1 Maintain adequate levels of service for all areas of the City.
3. Policy P1. For the purposes of development associated traffic studies, road improvement design, and capital improvement priorities, the upper limit of acceptable

6-13 cont.

service at signalized intersections shall be mid-level D, except in the Downtown Area and near freeway interchanges.

6-14

The EIR has underreported the quantity VMT generated by the proposed project operations. The operational nature of industrial/warehouse uses involves high rates of truck/trailer/delivery van VMT due to traveling from large import hubs to regional distribution centers to smaller industrial parks and then to their final delivery destinations. Once employees arrive at work at the proposed project, they will conduct their jobs by driving delivery vans across the region as part of the daily operations as a warehouse facility, which will drastically increase project-generated VMT. The project's truck/trailer and delivery van activity is unable to utilize public transit or active transportation and it is misleading to the public and decision makers to exclude this activity from VMT analysis. The project's actual VMT generated is not consistent with the significance threshold and legislative intent of SB 743 to reduce greenhouse gas emissions by reducing VMT. A revised EIR must be prepared to reflect a quantified VMT analysis that includes all truck/trailer and delivery van activity.

6-15

The EIR has not adequately analyzed the project's potential to substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses; or the project's potential to result in inadequate emergency access. There are no exhibits adequately depicting the onsite turning radius available for trucks maneuvering throughout the site. Notably, the truck/trailer parking stalls are adjacent to the the truck/trailer loading docks for each building, as shown on the project site plans within Appendix N. These parking stalls that may be in use at any time and further restrict truck/trailer movement on the site. Deferring this environmental analysis required by CEQA to the construction permitting phase is improper mitigation, deferred mitigation, and does not comply with CEQA's requirement for meaningful disclosure and adequate informational documents. A revised EIR must be prepared to include a finding of significance due to these significant and unavoidable impacts.

5.2 Growth Inducing Impacts, 5.3 Cumulative Impacts, and 5.4 Significant Irreversible Environmental Changes

6-16

The EIR relies upon erroneous Energy modeling to determine that the project will meet sustainability requirements. As noted above, the EIR did not model the project's energy consumption in compliance with Title 24 modeling software. Further, the EIR states here that "the Project is required by law to comply with the California Building Standards Code which would minimize the Project's demand for nonrenewable resources," which is not relevant to the proposed project and its own contribution to significant irreversible environmental changes. The EIR must

6-16 cont.

be revised to include a finding of significance due to the an inaccurate and erroneous analysis regarding the project's Air Quality, Greenhouse Gas, and Energy impacts.

6-17

The EIR does not adequately discuss or and analyze the commitment of resources is not consistent with regional and local growth forecasts. As noted below, the project represents a significant amount of growth in the City and accounts for a significant amount of the East Alameda County employment growth through 2050. The revised EIR must also include a cumulative analysis discussion here to demonstrate the impact of the proposed project in a cumulative setting.

6-18

The EIR has not provided an adequate or accurate cumulative analysis discussion here to demonstrate the impact of the proposed project in a cumulative setting. Plan Bay Area 2050's Growth Pattern[9] notes that the East Alameda County area (Dublin, Livermore, and Pleasanton) will add 18,000 jobs between 2015 - 2050. Utilizing the EIR's calculation of 1,478 employees, the project represents 8.2% of the East Alameda County area employment growth from 2015 - 2050. A single project accounting for this amount of the projected employment and/or population over 35 years represents a significant amount of growth. A revised EIR must be prepared to include this analysis, and also provide a cumulative analysis discussion of projects approved since 2015 and projects "in the pipeline" in Dublin, Livermore, and Pleasanton to determine if the project will exceed Plan Bay Area 2050's employment and/or population growth forecast for East Alameda County. The amount of growth accounted for by cumulative projects multiplies exponentially when other commercial and industrial development activity approved since 2015 are added to the calculation. A revised EIR must be prepared to include this information for analysis and also include a cumulative development analysis of projects approved since 2015 and projects "in the pipeline" to determine if the proposed project exceeds ABAG's and/or the City's growth forecasts.

6-19

The EIR also does not discuss that the Sphere of Influence (SOI) Amendment to include SMP 38 within the City of Livermore SOI and remove it from City of Pleasanton's SOI eliminates obstacles to population growth. The EIR does not discuss or analyze that the SOI Amendment for SMP 39, General Plan Amendment, Pre-zoning and Annexation, Zoning Map Amendment/Planned Development encourage or facilitate other activities that could significantly affect the environment by setting precedence for future growth activities. The EIR must be revised to include an adequate and accurate environmental analysis by discussing the precedent setting actions of approving these discretionary applications.

[9] Plan Bay Area 2050 Growth Pattern
https://www.planbayarea.org/sites/default/files/FinalBlueprintRelease_December2020_GrowthPattern_Jan2021Update.pdf

6.0 Alternatives

6-20 The EIR is required to evaluate a reasonable range of alternatives to the proposed project which will avoid or substantially lessen any of the significant effects of the project (CEQA § 15126.6.) The alternatives chosen for analysis include the CEQA required "No Project" alternative and only two others - No Project (Maximum Allowable Operations) Alternative and Reduced Intensity Alternative. The EIR does not evaluate a reasonable range of alternatives as only one alternative beyond the required No Project alternative is analyzed. The EIR must be revised to include analysis of a reasonable range of alternatives and foster informed decision making (CEQA § 15126.6). This could include alternatives such as development of the site with a project that reduces all of the project's significant and unavoidable impacts (Agricultural Resources) to less than significant levels a mixed-use project that provides affordable housing and local-serving commercial uses that may reduce VMT, GHG emissions, and improve Air Quality.

Conclusion

6-21 For the foregoing reasons, GSEJA believes the EIR is flawed and a revised EIR must be prepared for the proposed project and circulated for public review. Golden State Environmental Justice Alliance requests to be added to the public interest list regarding any subsequent environmental documents, public notices, public hearings, and notices of determination for this project. Send all communications to Golden State Environmental Justice Alliance P.O. Box 79222 Corona, CA 92877.

Sincerely,

Gary Ho
Blum, Collins & Ho LLP

Attachment: SWAPE Analysis

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

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October 11, 2023

Gary Ho
Blum, Collins & Ho LLP
707 Wilshire Blvd, Ste. 4880
Los Angeles, CA 90017

Subject: Comments on the SMP 38/SMP 39/SMP 40 Project (SCH No. 2023010091)

Dear Mr. Ho,

We have reviewed the August 2023 Draft Environmental Impact Report ("DEIR") for the SMP 38/SMP 39/SMP 40 Project ("Project") located in the City of Livermore ("City"). The Project proposes to construct a total of 1,514,775-square-feet ("SF") of industrial space on the 217.04-acre site.

6-22 Our review concludes that the DEIR fails to adequately evaluate the Project's air quality and health risk impacts. As a result, emissions and health risk impacts associated with construction and operation of the proposed Project may be underestimated and inadequately addressed. A revised Environmental Impact Report ("EIR") should be prepared to adequately assess and mitigate the potential air quality and health risk impacts that the project may have on the environment.

Air Quality

Unsubstantiated Input Parameters Used to Estimate Project Emissions

6-23 The DEIR's air quality analysis relies on emissions calculated with California Emissions Estimator Model ("CalEEMod") Version 2020.4.0 (p. 4.2-42).[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 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. Once all of the values are inputted into the model, the Project's construction and operational emissions are calculated, and

[1] "CalEEMod Version 2020.4.0." California Air Pollution Control Officers Association (CAPCOA), May 2021, *available at:* http://www.aqmd.gov/caleemod/download-model.

6-23 cont.

"output files" are generated. These output files disclose which parameters are used in calculating the Project's air pollutant emissions by identifying any changes to default values. Justifications are provided for each altered value.

When reviewing the Project's CalEEMod output files, provided in the Air Quality and GHG Modeling Results ("AQ & GHG Report") as Appendix C to the DEIR, we found that several model inputs are not consistent with information disclosed in the DEIR. As a result, the Project's construction and operational emissions may be underestimated. A revised EIR should be prepared to include an updated air quality analysis that adequately evaluates the impacts that operation of the Project will have on local and regional air quality.

Unsubstantiated Changes to Individual Construction Phase Lengths

Review of the CalEEMod output files demonstrates that the "SMPs Project (SMP 39)" and "SMPs Project - SMP 40" models include several changes to the default individual construction phase lengths (see excerpts below) (Appendix C, pp. 1272, 1306, 1335, 1375, 1409, 1438, 1478, 1512, 1541, 1672, 1702, 1727, 1763, 1793, 1818).

SMPs Project (SMP 39) Model

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	75.00	320.00
tblConstructionPhase	NumDays	1,110.00	320.00
tblConstructionPhase	NumDays	110.00	90.00
tblConstructionPhase	NumDays	75.00	60.00

SMPs Project - SMP 40 Model

Table Name	Column Name	Default Value	New Value
tblConstructionPhase	NumDays	55.00	240.00
tblConstructionPhase	NumDays	740.00	240.00
tblConstructionPhase	NumDays	75.00	60.00
tblConstructionPhase	NumDays	55.00	30.00

As a result of these changes, the models include the following construction schedules (see excerpt below) (Appendix C, pp. 1278, 1310, 1311, 1339, 1340, 1381, 1413, 1414, 1442, 1443, 1484, 1516, 1517, 1545, 1546, 1587, 1615, 1616, 1640, 1641, 1678, 1706, 1707, 1731, 1732, 1769, 1797, 1798, 1822, 1823).

SMPs Project (SMP 39) Model

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days
1	Grading	Grading	9/2/2024	1/3/2025	5	90
2	Paving	Paving	1/4/2025	3/28/2025	5	60
3	Building Construction	Building Construction	3/29/2025	6/19/2026	5	320
4	Architectural Coating	Architectural Coating	4/12/2025	7/3/2026	5	320

6-23 cont.

SMPs Project - SMP 40 Model

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days
1	Grading	Grading	9/1/2023	11/23/2023	5	60
2	Paving	Paving	11/24/2023	1/4/2024	5	30
3	Building Construction	Building Construction	1/5/2024	12/5/2024	5	240
4	Architectural Coating	Architectural Coating	1/19/2024	12/19/2024	5	240

As demonstrated above, in the "SMPs Project (SMP 39)" model, the grading phase is decreased by 18%, from the default value of 110 to 90 days; the paving phase is decreased by 20%, from the default value of 75 to 60 days; the building construction phase is decreased by 71%, from the default value of 1,110 to 320 days; and the architectural coating phase is increased by 327%, from the default value of 75 to 320 days.

In the "SMPs Project - SMP 40" model, the grading phase is decreased by 20%, from the default value of 75 to 60 days; the paving phase is decreased by 45%, from the default value of 55 to 30 days; the building construction phase is decreased by 68%, from the default value of 740 to 240 days; and the architectural coating phase is increased by 336%, from the default value of 55 to 240 days.

As previously mentioned, the CalEEMod User's Guide requires any changes to model defaults be justified.[2] According to the "User Entered Comments & Non-Default Data" table, the justification provided for these changes is:

> "Construction phase timing adjusted based on project-specific information provided by the project applicant" (Appendix C, pp. 1271, 1305, 1334, 1374, 1408, 1437, 1477, 1511, 1540, 1671, 1701, 1726, 1762, 1792, 1817).

Regarding construction activities for SMP 39, the DEIR states:

> "Construction would begin in September of 2024; Construction would occur over approximately two years" (p. 4.2-42).

Additionally, regarding construction activities for SMP 40, the DEIR states:

> "Construction would begin in September of 2023; Construction would occur over approximately two years" (p. 4.2-42).

However, the changes to the individual construction phase lengths remain unsubstantiated. While the DEIR states that the total lengths of both Project construction periods would each total to two years, the DEIR fails to substantiate the individual construction phase lengths. Until more information is provided, the model should have included proportionately altered individual phase lengths to match the proposed construction durations of two years, or 24 months.

[2] "CalEEMod User's Guide Version 2020.4.0." California Air Pollution Control Officers Association (CAPCOA), May 2021, *available at:* https://www.aqmd.gov/caleemod/user's-guide, p. 1, 14.

6-23 cont.

The construction schedules included in the model present an issue, as the construction emissions are improperly spread out over a longer period of time for some phases, but not for others. According to the CalEEMod User's Guide, each construction phase is associated with different emissions activities (see excerpt below).[3]

> ***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.

By disproportionately altering and extending some of the individual construction phase lengths without proper justification, the models assume there are a greater number of days to complete the construction activities required by the prolonged phases. As a result, there will be less construction activities required per day and, consequently, less pollutants emitted per day. Until we are able to verify the revised construction schedules, the models may underestimate the peak daily emissions associated with some phases of construction and should not be relied upon to determine Project significance.

Incorrect Application of Tier 4 Final Mitigation

6-24

Review of the CalEEMod output files demonstrates that the "SMPs Project – SMP 40" model assumes that the Project's off-road construction equipment fleet would meet Tier 4 Final emissions standards (see excerpt below) (Appendix C, pp. 1672, 1702, 1727).

[3] "CalEEMod User's Guide." California Air Pollution Control Officers Association (CAPCOA), May 2021, *available at:* https://www.aqmd.gov/caleemod/user's-guide, p. 32.

Table Name	Column Name	Default Value	New Value
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
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tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final
tblConstEquipMitigation	Tier	No Change	Tier 4 Final

6-24 cont.

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 these changes is:

> "Based on compliance with AQ mitigation in EIR" (Appendix C, pp. 1671, 1701, 1726).

Furthermore, the DEIR includes Mitigation Measure ("MM") 4.2-1, which states:

> "Prior to approval of any Improvement Plans, the project applicant shall provide proof of compliance with the following to the satisfaction of the City of Livermore Community Development Department:
>
> The project applicant shall show on the plans via notation that the contractor shall ensure that the heavy-duty off-road vehicles (50 horsepower or more) to be used in the construction of all project components (i.e., construction of SMP 39, SMP 40, and the chosen off-site trail connection option), including owned, leased, and subcontractor vehicles, shall be a combination of engine Tier 3 or *Tier 4 offroad construction equipment*, or hybrid, electric, or alternatively fueled equipment (or any combination of the above), sufficient to achieve a fleet-wide average reduction in construction-related ROG and NOX emissions to below the applicable BAAQMD thresholds of significance (54 lbs/day). For instance, the emissions presented in Table 4.2-9 were achieved by requiring all equipment used during construction to be engine *Tier 4*" (emphasis added) (p. 2-8, 2-9).

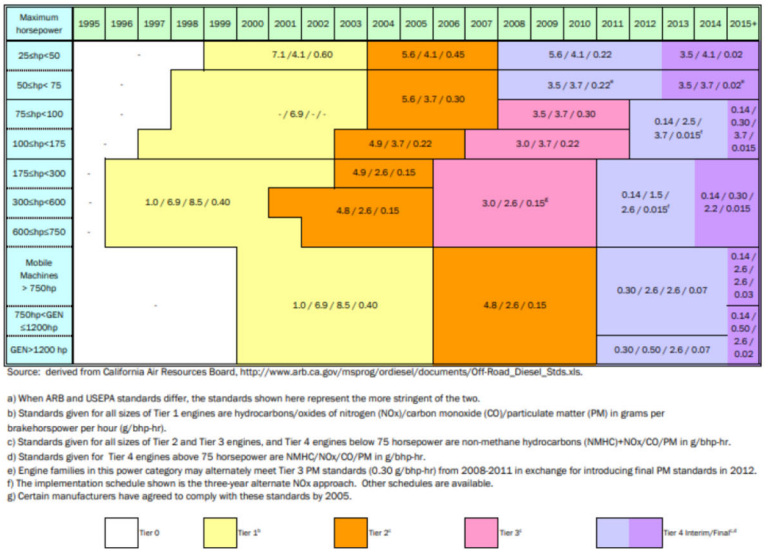
However, the inclusion of Tier 4 Final emissions standards remains unsupported. As demonstrated above, the DEIR fails to discuss the more efficient Tier 4 *Final* emission standards. The United States Environmental Protection Agency ("U.S. EPA") has slowly adopted more stringent standards to lower the emissions from off-road construction equipment. Since 1994, Tier 1, Tier 2, Tier 3, Tier 4 Interim, and

[4] "CalEEMod User's Guide Version 2020.4.0." California Air Pollution Control Officers Association (CAPCOA), May 2021, *available at:* https://www.aqmd.gov/caleemod/user's-guide, p. 1, 14.

5

6-24 cont.

Tier 4 Final construction equipment have been phased in over time. Tier 4 Final represents the cleanest burning equipment and therefore has the lowest emissions compared to other tiers, including Tier 4 Interim equipment (see excerpt below):[5]



Source: derived from California Air Resources Board, http://www.arb.ca.gov/msprog/ordiesel/documents/Off-Road_Diesel_Stds.xls.

a) When ARB and USEPA standards differ, the standards shown here represent the more stringent of the two.
b) Standards given for all sizes of Tier 1 engines are hydrocarbons/oxides of nitrogen (NOx)/carbon monoxide (CO)/particulate matter (PM) in grams per brakehorspower per hour (g/bhp-hr).
c) Standards given for all sizes of Tier 2 and Tier 3 engines, and Tier 4 engines below 75 horsepower are non-methane hydrocarbons (NMHC)+NOx/CO/PM in g/bhp-hr.
d) Standards given for Tier 4 engines above 75 horsepower are NMHC/NOx/CO/PM in g/bhp-hr.
e) Engine families in this power category may alternately meet Tier 3 PM standards (0.30 g/bhp-hr) from 2008-2011 in exchange for introducing final PM standards in 2012.
f) The implementation schedule shown is the three-year alternate NOx approach. Other schedules are available.
g) Certain manufacturers have agreed to comply with these standards by 2005.

As demonstrated in the figure above, Tier 4 Interim equipment has higher emission levels than Tier 4 Final equipment. Therefore, by modeling construction emissions assuming a full Tier 4 Final equipment fleet, the DEIR fails to account for higher emissions that may occur as a result of the use of Tier 4 Interim equipment. Since the DEIR fails to specify whether the Project would use Tier 4 Interim or Tier 4 Final equipment, it is incorrect to model emissions assuming that the more efficient Tier 4 Final equipment would be implemented. Until a revised EIR is prepared requiring Tier 4 Final engines during all phases of construction, and not Tier 4 Interim equipment, the model should not be relied upon to determine Project significance.

Diesel Particulate Matter Emissions Inadequately Evaluated

6-25

The DEIR conducts a health risk assessment ("HRA") evaluating the impacts from exposure to toxic air contaminant ("TAC") emissions from diesel-powered trucks during Project operation. Specifically, the DEIR estimates that the maximum cancer risk posed to nearby, existing residential sensitive receptors as a result of Project operation would be 4.46 in one million, which would not exceed the Bay Area Air Quality Management District ("BAAQMD") significance threshold of 10 in one million (see table below) (p. 5.2-45, Table 4.2-11).

[5] "San Francisco Clean Construction Ordinance Implementation Guide for San Francisco Public Projects." August 2015, *available at:* https://www.sfdph.org/dph/files/EHSdocs/AirQuality/San_Francisco_Clean_Construction_Ordinance_2015.pdf, p. 6.

Table 4.2-11
Maximum Cancer Risk and Hazard Index Associated with Heavy-Duty Diesel Trucks

	Cancer Risk (per million persons)	Acute Hazard Index	Chronic Hazard Index
At Maximally Exposed Receptor	4.46	0.00	0.00
Thresholds of Significance	*10*	*1.0*	*1.0*
Exceed Thresholds?	**NO**	**NO**	**NO**

Sources: EMFAC, AERMOD, and HARP 2 RAST, April 2023 (see Appendix C).

Furthermore, regarding Project construction, the DEIR states:

> "Because construction equipment on-site would not operate for long periods of time and would be used at varying locations within the sites, associated emissions of DPM would not occur at the same location (or be evenly spread throughout the entire project site) for long periods of time. Due to the temporary nature of construction and the relatively short duration of potential exposure to associated emissions, the potential for any one sensitive receptor in the area to be exposed to concentrations of pollutants for a substantially extended period of time would be low. In addition, as discussed above, the closest sensitive receptors to SMP 39 are the single-family residences located east of the site, across Isabel Avenue/SR 84. Future development on SMP 39 would be approximately 2,745 feet west of the single-family residences. The closest sensitive receptors to SMP 40 are the single-family residences located east of the project site, across Isabel Avenue/SR 84. Building 1 on the SMP 40 site would be approximately 1,785 feet west of the single-family residences and Building 2 on the SMP 40 site would be approximately 884 feet west of the single-family residences. Given the planned construction area of the proposed project, the single-family residences would be located approximately 500 feet east from the closest construction area associated with the proposed project. Therefore, construction associated with the proposed project would not be expected to expose any sensitive receptors to substantial pollutant concentrations" (p. 4.2-57, Table 4.2-11).

6-25 cont.

As demonstrated above, the DEIR states that since Project construction would be both relatively short in duration, and occur at a significant distance from sensitive receptors, the Project would result in a less-than-significant health risk analysis. However, the DEIR's evaluation of the Project's potential health risk impacts, as well as the subsequent less-than-significant impact conclusion, is incorrect for three reasons.

6-26

First, by failing to prepare a quantified construction HRA, the DEIR is inconsistent with CEQA's requirement to correlate the increase in emissions that the Project would generate to the adverse impacts on human health caused by those emissions.[6] This is incorrect, as construction of the proposed Project will produce DPM emissions through the exhaust stacks of construction equipment over a total construction duration of 24 months (p. 4.2-42). However, the DEIR fails to evaluate the potential

[6] "Sierra Club v. County of Fresno." Supreme Court of California, December 2018, *available at:* https://ceqaportal.org/decisions/1907/Sierra%20Club%20v.%20County%20of%20Fresno.pdf.

6-26 cont.

Project-generated TACs or indicate the concentrations at which such pollutants would trigger adverse health effects. Without making a reasonable effort to connect the Project's construction-related 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.

6-27

Second, the State of California Department of Justice recommends that warehouse projects prepare a quantitative HRA pursuant to the Office of Environmental Health Hazard Assessment ("OEHHA"), the organization responsible for providing guidance on conducting HRAs in California, as well as local air district guidelines.[7] OEHHA released its most recent *Risk Assessment Guidelines: Guidance Manual for Preparation of Health Risk Assessments* in February 2015, as referenced by the DEIR (p. 5.2-45). This guidance document describes the types of projects that warrant the preparation of an HRA. Specifically, OEHHA recommends that all short-term projects lasting at least 2 months assess cancer risks.[8] Furthermore, according to OEHHA:

> "Exposure from projects lasting more than 6 months should be evaluated for the duration of the project. In all cases, for assessing risk to residential receptors, the exposure should be assumed to start in the third trimester to allow for the use of the ASFs (OEHHA, 2009)."[9]

As the Project's anticipated construction duration exceeds the 2-month and 6-month requirements set forth by OEHHA, construction of the Project meets the threshold warranting a quantified HRA under OEHHA guidance and should be evaluated for the entire 24-month construction periods. These recommendations reflect the most recent state health risk policies, and as such, a revised EIR should be prepared to include an analysis of health risk impacts posed to nearby sensitive receptors from Project-generated DPM emissions.

6-28

Third, while the DEIR includes a HRA evaluating the health risk impacts to nearby, existing receptors as a result of Project operation, the HRA fails to evaluate the combined lifetime cancer risk to nearby, existing receptors as a result of Project construction and operation together. According to OEHHA guidance "the excess cancer risk is calculated separately for each age grouping and then summed to yield cancer risk at the receptor location."[10] However, the Project's HRA fails to sum each age bin to evaluate the total cancer risk over the course of the Project's total construction and operation. This is incorrect, and an updated analysis should quantify the entirety of the Project's construction and

[7] "Warehouse Projects: Best Practices and Mitigation Measures to Comply with the California Environmental Quality Act." State of California Department of Justice, *available at*: https://oag.ca.gov/sites/all/files/agweb/pdfs/environment/warehouse-best-practices.pdf, p. 6.
[8] "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. 8-18.
[9] "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. 8-18.
[10] "Guidance Manual for preparation of Health Risk Assessments." OEHHA, February 2015, *available at:* https://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf p. 8-4

6-28 cont.

operational health risks together to compare to the BAAMD threshold of 10 in one million, as referenced by the DEIR (p. 5.2-45).

Disclaimer

6-29

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 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: Matt Hagemann CV
Attachment B: Paul Rosenfeld CV

LETTER 6: GOLDEN STATE ENVIRONMENTAL JUSTICE ALLIANCE

Response to Comment 6-1

The comment is an introductory statement, summarizes the components of the proposed project, and does not address the adequacy of the Draft EIR. The comment is noted for the record and the commenter will be notified of future notices referring or related to the proposed project.

Response to Comment 6-2

Please see Response to Comment 2-2.

Response to Comment 6-3

As discussed on page 66 of the Initial Study prepared for the proposed project (see Appendix A of the Draft EIR), the determination that the proposed project is consistent or inconsistent with the City of Livermore General Plan policies or other City plans and policies is ultimately the decision of the Livermore City Council. Furthermore, although CEQA analysis may identify some areas of general consistency with City policies, the City has the ability to impose additional requirements or conditions of approval on a project, at the time of its approval, to bring a project into more complete conformance with existing policies. Should the Livermore City Council approve the entitlements requested by the proposed project (see pages 3-26 and 3-27 of the Draft EIR), the project would be rendered consistent with the City's General Plan and Municipal Code.

The Livermore General Plan goals, objectives, and policies cited by the commenter pertain to the protection of natural habitats and open space areas within the City, the minimization of impacts on the environment, consistency with applicable land use and zoning designations (including the ALUCP), and consistency with design principles and performance standards. CEQA Guidelines Section 15126.2(a) requires an EIR to identify and focus on the significant effects of a project on the environment. Thus, from the standpoint of potential impacts on the environment, the Initial Study and Draft EIR evaluate the proposed project's consistency with the Livermore General Plan goals, objectives, and policies through assessing the potential for the proposed project to result in physical impacts related to the environmental issue areas required for analysis under CEQA. Furthermore, it should be noted that each technical chapter of the Draft EIR includes a Regulatory Context section that includes applicable Livermore General Plan policies focused on avoiding or mitigating an environmental effect.

The wording of CEQA Guidelines Section 15125(d) is important, because EIRs are required only to discuss "inconsistencies" with plans. Contrary to the commenter's assertion, CEQA does not require an EIR to "…provide a consistency analysis with all land use plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect." Nevertheless, similar to many EIRs, the analysis of plan inconsistency is set forth in the analysis of environmental impacts. For example, as discussed in the Air Quality, Greenhouse Gas Emissions, and Energy chapter of the Draft EIR, the project is evaluated for consistency with the applicable air quality plan. Under Impact 4.2-1 (see page 4.2-25 of the Draft EIR), construction of the proposed project could significantly contribute to the region's nonattainment status for ozone or PM, given that construction of Trail Connection Option 3 on its own, as well as concurrent construction of SMP 40 and any of the off-site trail connection options, would result in NO_X emissions above the applicable BAAQMD threshold of significance. In addition, if SMP 39 is constructed concurrently with SMP 40, or if SMP 39, SMP 40, and the off-site Trail Connection Option 3 are constructed concurrently, the combined construction emissions would exceed the applicable thresholds of significance for ROG and NO_X emissions. As a result, the Draft EIR sets forth Mitigation Measures

4.2-1(a) and 4.2-1(b) to mitigate the potentially significant impact. Implementation of Mitigation Measure 4.2-1(a) would require the use of a combination of engine Tier 3 or Tier 4 off-road construction equipment, or hybrid, electric, or alternatively fueled equipment (or any combination of the above), during construction of the proposed project. With implementation of Mitigation Measure 4.2-1(b), building construction and architectural coating for SMP 39 would be restricted from occurring simultaneously with building construction and architectural coating for SMP 40, which would be sufficient to ensure ROG emissions would remain below the applicable BAAQMD threshold of significance during construction of the proposed project. Thus, with implementation of Mitigation Measures 4.2-1(a) and 4.2-1(b), the Draft EIR concludes that the proposed project would not conflict with or obstruct implementation of the applicable air quality plan during project construction.

Additionally, with respect to potential conversion of the site's existing land use, as detailed in the Agricultural Resources chapter of the Draft EIR under Impacts 4-1.2 and 4.1-3 (see pages 4.1-13 to 4.1-17 of the Draft EIR), the proposed project would result in a significant and unavoidable impact related to the conversion of prime agricultural land, as defined by the Alameda Local Agency Formation Commission (LAFCo), to non-agricultural use. Due to the project's significant and unavoidable agricultural resources impact, a statement of overriding considerations has been prepared separately by the City and will need to be adopted by the Livermore City Council should they vote to approve the project. Furthermore, as discussed in the Initial Study and Draft EIR, all other potential environmental impacts required for analysis under CEQA would be mitigated to a less-than-significant level through implementation of mitigation measures set forth by the Initial Study and Draft EIR prepared for the proposed project.

Thus, as demonstrated above, the Initial Study and Draft EIR prepared for the proposed project evaluate the potential for the proposed project to cause a significant environmental impact due to a conflict with a land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect. Thus, the analyses and conclusions in the Draft EIR are adequate.

Response to Comment 6-4

Please see Responses to Comments 2-2 and 6-3.

Response to Comment 6-5

The intersections listed by the commenter are under the jurisdiction of the California Department of Transportation (Caltrans). As such, any proposed improvements at the listed intersections or in-lieu fees paid are beyond the control/scope of the City of Livermore. Furthermore, as discussed on page 4.8-7 of the Draft EIR, intersection LOS is not a factor that is considered for the purposes of evaluating CEQA impacts. As a result of Senate Bill (SB) 743, passed in 2013, local jurisdictions may not rely on vehicle LOS and similar measures related to delay as the basis for determining the significance of transportation impacts under CEQA. Consistent with the CEQA Guidelines Section 15064.3(b), VMT is the primary metric used to identify transportation impacts to roadway systems in the Draft EIR. It should be noted that although the City may consider potential effects related to LOS as part of an evaluation of the proposed project's consistency with General Plan policies for planning purposes, the Draft EIR is not required to include or consider a LOS analysis, pursuant to the requirements established by CEQA.

Response to Comment 6-6

Pursuant to Section XIV, Population and Housing, of the CEQA Guidelines Appendix G environmental checklist, a potentially significant impact could occur if the proposed project would induce substantial unplanned population growth in the project area, either directly or indirectly. As discussed on page 73 of the Initial Study prepared for the proposed project, development of the project site for industrial purposes would not result in direct population growth by proposing new homes. Furthermore, as discussed on page 5-2 of the Draft EIR, the proposed project would employ approximately 1,478 employees, which would likely be filled from the local employee base. Given that the City of Livermore had an approximate population of 86,803 people in 2022, the proposed project could result in a 1.7 percent increase in population if all employees were considered new residents, which is an overly conservative assumption. As such, the Draft EIR concludes that the proposed project would not result in a substantial increase in permanent population or demand for housing in the vicinity of the project site. Thus, the analyses and conclusions in the Draft EIR are adequate.

Additionally, the commenter speculates that a proper accounting of VMT associated with worker vehicle trips was not completed as part of the Draft EIR, but does not provide any evidence to support such claims. The Draft EIR includes an analysis of project-related VMT under Impact 4.8-3 of the Draft EIR, which starts on page 4.8-19. As discussed therein, the Draft EIR includes an analysis of average VMT per employee, which is determined through the use of the Alameda CTC Travel Demand Model, and requires implementation of Mitigation Measure 4.8-3 to address a potentially significant impact. Mitigation Measure 4.8-3 mandates that the project applicant develop a TDM Program for both SMP 39 and SMP 40 and includes clear performance standards, developed through the use of the Alameda CTC VMT Reduction Calculation Tool, to ensure that the TDM strategies would reduce the project-specific VMT per employee by a minimum of four percent (or to 16.06, which would be below the applicable VMT per employee significance criteria of 16.20). With implementation of Mitigation Measure 4.8-3, the Draft EIR concludes that the potential impact would be reduced to a less-than-significant level. As discussed in the Method of Analysis section in the Transportation chapter, evaluation of potential VMT impacts and development of Mitigation Measure 4.8-3 were completed by following Alameda CTC guidance. Thus, the analyses and conclusions of potential VMT impacts in the Draft EIR are adequate.

Finally, the project site is located within the Westside Priority Production Area (PPA), as designated by Plan Bay Area 2050.[3] Plan Bay Area 2050 defines PPAs as "[l]ocally identified places for job growth in middle-wage industries like manufacturing, logistics or other trades. An area must be zoned for industrial use or have a predominantly industrial use to be a PPA." Additionally, Plan Bay Area 2050 provides that PPAs serve to support Strategy EC6 of the plan, which encourages retaining and investing in key industrial lands. Furthermore, as previously noted, the proposed project would help meet the existing demand within Northern California for warehouse/distribution properties. Based on the project site's designation of Westside PPA, the proposed project is consistent with the goals and vision of Plan Bay Area 2050 and would serve to meet the employment growth anticipated by Plan Bay Area 2050.

Response to Comment 6-7

The comment does not address the adequacy of the Draft EIR. Please see Responses to Comments 6-25 through 6-28 below.

[3] Association of Bay Area Governments. *Plan Bay Area 2050: A Vision for the Future*. Adopted October 21, 2021.

Response to Comment 6-8

The Draft EIR evaluates all environmental issue areas required for analysis, in accordance with the CEQA Guidelines Appendix G environmental checklist. It should be noted that CEQA Guidelines Appendix G does not include a section specifically dedicated to the topic of environmental justice.

Additionally, the Draft EIR includes an evaluation of aggregate total health risks in the Air Quality, Greenhouse Gas Emissions, and Energy chapter, starting on page 4.2-58. As detailed therein, in accordance with Bay Area Air Quality Management District (BAAQMD) Air Quality Guidelines, an analysis of all known sources of toxic air contaminants (TACs) within a 1,000-foot radius of the project site boundary was conducted, in conjunction with health risks associated with the proposed project, and compared to the applicable BAAQMD thresholds of significance. As shown in Table 4.2-12 of the Draft EIR on page 4.2-58, the evaluation included a quantitative analysis of health risks associated with heavy-duty truck operations, emergency generators, and vehicles traveling along Isabel Avenue/SR 84. The Draft EIR concludes that the proposed project would not cause an aggregate total increase in cancer risk levels of more than 100 persons in one million, a chronic non-cancer hazard index greater than 10.0, or result in an annual average concentration of 0.8 micrograms per cubic meter ($\mu g/m^3$) or greater of particulate matter 2.5 micrometers in diameter ($PM_{2.5}$), and a less-than-significant impact would occur.

Response to Comment 6-9

The comment does not address the adequacy of the Draft EIR. Please see Response to Comment 6-8 above. In addition, an analysis of potential impacts associated with hazards and hazardous materials that could occur through development of the proposed project is provided in Section IX, Hazards and Hazardous Materials, of the Initial Study prepared for the proposed project (see Appendix A of the Draft EIR).

Response to Comment 6-10

The comment does not address the adequacy of the Draft EIR. Please see Response to Comment 6-8 above. In addition, an analysis of potential impacts associated with groundwater that could occur through development of the proposed project is provided in Chapter 4.5, Hydrology and Water Quality, of the Draft EIR.

Response to Comment 6-11

The comment does not address the adequacy of the Draft EIR. Please see Responses to Comments 6-8 and 6-10 above.

Response to Comment 6-12

The CEQA Guidelines do not require that an EIR include modeling that was conducted with the California Building Energy Code Compliance Software. The commenter is conflating use of the foregoing software to demonstrate compliance with the Building Energy Efficiency Standards (Title 24, Part 6 of the California Code of Regulations [CCR]), with compliance with CEQA, which does not specify the use of the aforementioned software in order to conduct an energy analysis for an EIR.

Furthermore, as discussed on page 4.2-42 of the Draft EIR, the use of the California Emissions Estimator Model (CalEEMod) in the Draft EIR was for the purposes of estimating the proposed project's construction and operational emissions. It should be noted that CalEEMod is the recommended model for estimating a development project's construction and operational

emissions. A project's compliance with State regulations is inherently incorporated as part of the model. The current version of CalEEMod incorporates a project's compliance with the requirements set forth by the 2019 California Building Standards Code (CBSC) (CCR Title 24) related to energy efficiency. However the proposed project would be subject to the currently adopted 2022 CBSC requirements, which include more stringent standards related to energy efficiency, relative to those set forth by the 2019 CBSC. As such, compliance with the 2022 CBSC would result in greater energy efficiency and less associated emissions for the proposed project than the levels estimated as part of the Draft EIR. Thus, the Draft EIR provides a conservative analysis and does not underreport the project's potential energy impacts, as claimed by the commenter. Furthermore, as discussed on page 4.2-64, the proposed project would be required to comply with all applicable standards and regulations regarding energy conservation and fuel efficiency, including the California Air Resources Board (CARB) standards, which would ensure that the proposed project would be designed to be energy efficient to the maximum extent practicable.

Response to Comment 6-13

Please see Response to Comment 6-5 above.

Response to Comment 6-14

Please see Response to Comment 6-6 above.

CEQA Guidelines Section 15064.3 states "*[f]or the purposes of this section, 'vehicle miles traveled' refers to the amount and distance of automobile travel attributable to a project.*" (14 CCR Section 15064.3[a]). On the question of what types of vehicles are to be included in the VMT analysis, the Governor's Office of Planning and Research (OPR) stated in its 2018 Technical Advisory on Evaluating Transportation Impacts in CEQA (OPR Guidance) that:

> "[p]roposed Section 15064.3, subdivision (a), states, "For the purposes of this section, 'vehicle miles traveled' refers to the amount and distance of automobile travel attributable to a project.' **Here, the term 'automobile' refers to on-road passenger vehicles, specifically cars and light trucks.** Heavy-duty truck VMT **could** be included for modeling convenience and ease of calculation (for example, where models or data provide combined auto and heavy truck VMT). For an apples-to-apples comparison, vehicle types considered should be consistent across project assessment, significance thresholds, and mitigation" (OPR Guidance, page 4; Emphasis added.)

Accordingly, OPR advises that the term "automobile" was not meant to include heavy trucks, but rather, lead agencies could include heavy trucks, where doing so was convenient under the applicable traffic model. Additionally, the OPR Guidance addresses numerical transportation impact thresholds for a "land use project," but then only specifically describes residential, office, and retail projects, providing further evidence that movement of goods/materials in heavy trucks was meant to be excluded from CEQA's VMT requirement (OPR Guidance, pages 11-16). Furthermore, the only significance thresholds the project could be compared against are provided by ACTC and based on automobile VMT/employee. Therefore, the project is consistent with the legislative intent of SB 743 to reduce greenhouse gas emissions by reducing VMT. Based on the above, the legislative intent of SB 743 and the associated CEQA Guidelines Section 15064.3 is primarily to ensure that lead agencies analyze VMT for passenger car and light truck trips related to land use projects.

Response to Comment 6-15

The Draft EIR evaluates the potential for the proposed project to substantially increase hazards due to a geometric design feature or incompatible uses under Impact 4.8-4, which begins on page 4.8-21. As discussed therein, the proposed project would not include the installation of any sharp curves or dangerous intersections, or involve the use of incompatible equipment. Construction equipment would be staged on-site, and construction activities would not be anticipated to result in substantial road closures or interfere with citywide vehicle circulation. Furthermore, Mitigation Measure 4.8-1 requires implementation of a Traffic Management Plan during construction to ensure that temporary roadway hazards during construction would not occur. It should be noted that as part of the entitlement review process, City staff has reviewed and approved truck turning templates provided for SMP 39 and SMP 40. The foregoing templates demonstrate adequate space is available for the trucks to maneuver within the site.

Finally, on-site circulation is not an environmental issue area required for analysis under CEQA. Nonetheless, internal circulation within the SMP 39 and SMP 40 sites would be provided through 30- to 40-foot-wide roadways, which have been detailed in the Preliminary Site Plans prepared for each site and have been reviewed by the City of Livermore Engineering Division. According to the TIA prepared for the proposed project, which was similarly reviewed by the City's Engineering Division, the on-site roadways would be adequately sized to allow two-way circulation and truck circulation, as well as emergency vehicle access and circulation. Furthermore, the City's Engineering Division did not identify any concerns related to internal circulation. Thus, the analyses and conclusions in the Draft EIR related to transportation hazards are adequate.

Response to Comment 6-16

The comment expresses a general opinion that the analysis of potential impacts within the Draft EIR related to air quality, GHG emissions, and energy is "inaccurate and erroneous," but does not provide specific examples that would allow for a detailed response. Please see Response to Comment 6-12 above.

Response to Comment 6-17

Please see Response to Comment 6-6 above. In addition, a discussion of cumulative impacts, as they pertain to each environmental resource area, is provided within each of the technical chapters of the Draft EIR, pursuant to CEQA Guidelines Section 15130.

Response to Comment 6-18

Please see Responses to Comments 6-6 and 6-17 above.

Response to Comment 6-19

With respect to SMP 38, please see Response to Comment 5-7 above.

In addition, potential for the proposed project to eliminate obstacles to population growth is evaluated starting on page 5-2 of the Draft EIR. In addition, the physical environmental impacts that could occur through the City's approval of the entitlements associated with SMP 39 are discussed and evaluated throughout the Draft EIR. The claim that approval of such entitlements would set a precedent for future growth activities, especially in a manner that would not be planned or anticipated by the City, is speculative, with evidence to support such a claim not provided by the commenter.

Response to Comment 6-20

As discussed on page 6-1 of the Draft EIR, CEQA Guidelines Section 15126.6(a) provides that the primary intent of the alternatives evaluation in an EIR is to "[…] 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." An EIR must include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. The alternatives analysis is not required to consider every project alternative but is governed by a "rule of reason" that requires the EIR to set forth only those alternatives necessary to permit a reasoned choice (see CEQA Guidelines Section 15126.6[a]).

The intent of the project alternatives chosen for the Draft EIR was to develop alternatives to the proposed project that would accomplish most of the basic project objectives while avoiding or lessening the potential impacts of the proposed project. Because development of the proposed project at any intensity and/or use would still result in the conversion of the site from prime agricultural land, as defined by Alameda LAFCo, the significant and unavoidable impact identified under Impact 4.1-2 in the Agricultural Resources chapter of the Draft EIR would remain. Additionally, as detailed on page 6-8 of the Draft EIR, development of the proposed project at an off-site location would not be capable of meeting the majority of project objectives due to a number of the project objectives being specific to the project site. Furthermore, CEQA Guidelines Section 15126.6(b) provides that only locations that would avoid or substantially lessen any of the significant effects of the project need be considered for inclusion in the EIR. An Off-Site Alternative would have the same type and intensity of uses as the proposed project, as well as a similar area of disturbance, which would result in at least the same, if not greater, level of impacts as compared to the proposed project, depending on the resources on the off-site location. Furthermore, the project applicant does not own an alternative location that would be adequate to construct the proposed project, and vacant land that would be viable for development of a light industrial use similar to the proposed project does not exist within current Livermore City limits. Thus, any of the alternatives suggested by the commenter would result in similar significant and unavoidable impacts. As demonstrated in Chapter 6, Alternatives Analysis, of the Draft EIR, the project alternatives allow for meaningful evaluation, analysis, and comparison with the proposed project. As such, the analyses and conclusions in the Draft EIR of project alternatives are adequate.

Response to Comment 6-21

The comment is a conclusion and will be forwarded to the decision-makers for their consideration.

Response to Comment 6-22

The comment is an introductory statement and summarizes the project components, as well as the commenter's concerns regarding the air quality and health risk impacts analyzed within the EIR. Please see Responses to Comments 6-23 to 6-29 below for responses to the commenter's detailed concerns.

Response to Comment 6-23

Construction information, including the anticipated length of construction phases, was provided by the project applicant. Because project-specific information was provided by the applicant, the default construction phase lengths were adjusted to match the actual anticipated construction schedule for the project. Thus, the information used within the Draft EIR represents a more accurate depiction of project construction, as opposed to the CalEEMod defaults that are based

on a survey conducted by an air district with jurisdiction over a portion of the State located approximately 250 miles away from the project site. Considering that the construction phase lengths used in the emissions modeling are project-specific, the commenter's comparison of the percentage increase in phase lengths from the CalEEMod default values does not provide useful information regarding the accuracy of the emissions analysis prepared for the project. Therefore, the emissions modeling included as Appendix A of the Draft EIR was not revised, and the assumptions included in the Draft EIR regarding construction timing are adequate.

Nevertheless, in response to the comment, page 4.2-42 of the Draft EIR hereby revised as shown below to provide greater specificity regarding the overall length of construction that was assumed within the emissions modeling prepared for the proposed project and included as Appendix A to the Draft EIR:

> The following inherent design features and project-specific information were included in the modeling conducted for SMP 39:
>
> - Construction would begin in September of 2024;
> - Construction would occur over approximately ~~two years~~ 22 months;
> - 24,000 cubic yards (CY) of soil import would be required; and
> - Tier 3 engines would be used for all off-road heavy-duty equipment over 150 horsepower.
>
> Similarly, the following inherent design features and project-specific information were included in the modeling conducted for SMP 40:
>
> - Construction would begin in September of 2023;
> - Construction would occur over approximately ~~two years~~ 15 months;
> - 7,000 CY of soil import would be required; and
> - Tier 3 engines would be used for all off-road heavy-duty equipment over 150 horsepower.

The foregoing minor text revisions clarify the inputs used in the emissions modeling and reproduces information that was available in Appendix A of the Draft EIR. The foregoing changes do not affect the conclusions presented within the Draft EIR.

Response to Comment 6-24

In response to the comment, Mitigation Measure 4.2-1(a) of the Draft EIR is hereby revised as shown below to provide greater specificity regarding the use of Tier 4 final off-road construction equipment:

> *4.2-1(a)* *Prior to approval of any Improvement Plans, the project applicant shall provide proof of compliance with the following to the satisfaction of the City of Livermore Community Development Department:*
>
> *The project applicant shall show on the plans via notation that the contractor shall ensure that the heavy-duty off-road vehicles (50 horsepower or more) to be used in the construction of all project components (i.e., construction of SMP 39, SMP 40, and the chosen off-site trail connection option), including owned, leased, and subcontractor vehicles, shall be a combination of engine Tier 3 or Tier 4 off-road construction equipment, or hybrid, electric, or alternatively fueled equipment (or any combination of the above), sufficient to achieve a fleet-wide average reduction in construction-related ROG and*

> *NO_X emissions to below the applicable BAAQMD thresholds of significance (54 lbs/day). For instance, the emissions presented in Table 4.2-8 were achieved by requiring all equipment used during construction to be engine Tier 4 final.*
>
> *In addition, all off-road equipment operating at the construction site must be maintained in proper working condition according to manufacturer's specifications. Idling shall be limited to five minutes or less in accordance with the In-Use Off-Road Diesel Vehicle Regulation as required by CARB. Clear signage regarding idling restrictions shall be placed at the entrances to the construction site.*
>
> *Portable equipment over 50 horsepower must have either a valid BAAQMD Permit to Operate (PTO) or a valid statewide Portable Equipment Registration Program (PERP) placard and sticker issued by CARB.*
>
> *Conformance with the foregoing requirements shall be included as notes and be confirmed through review and approval of grading plans by the City of Livermore Community Development Department.*

The above revisions are for clarification purposes only and do not change the conclusions of the Draft EIR.

Response to Comment 6-25

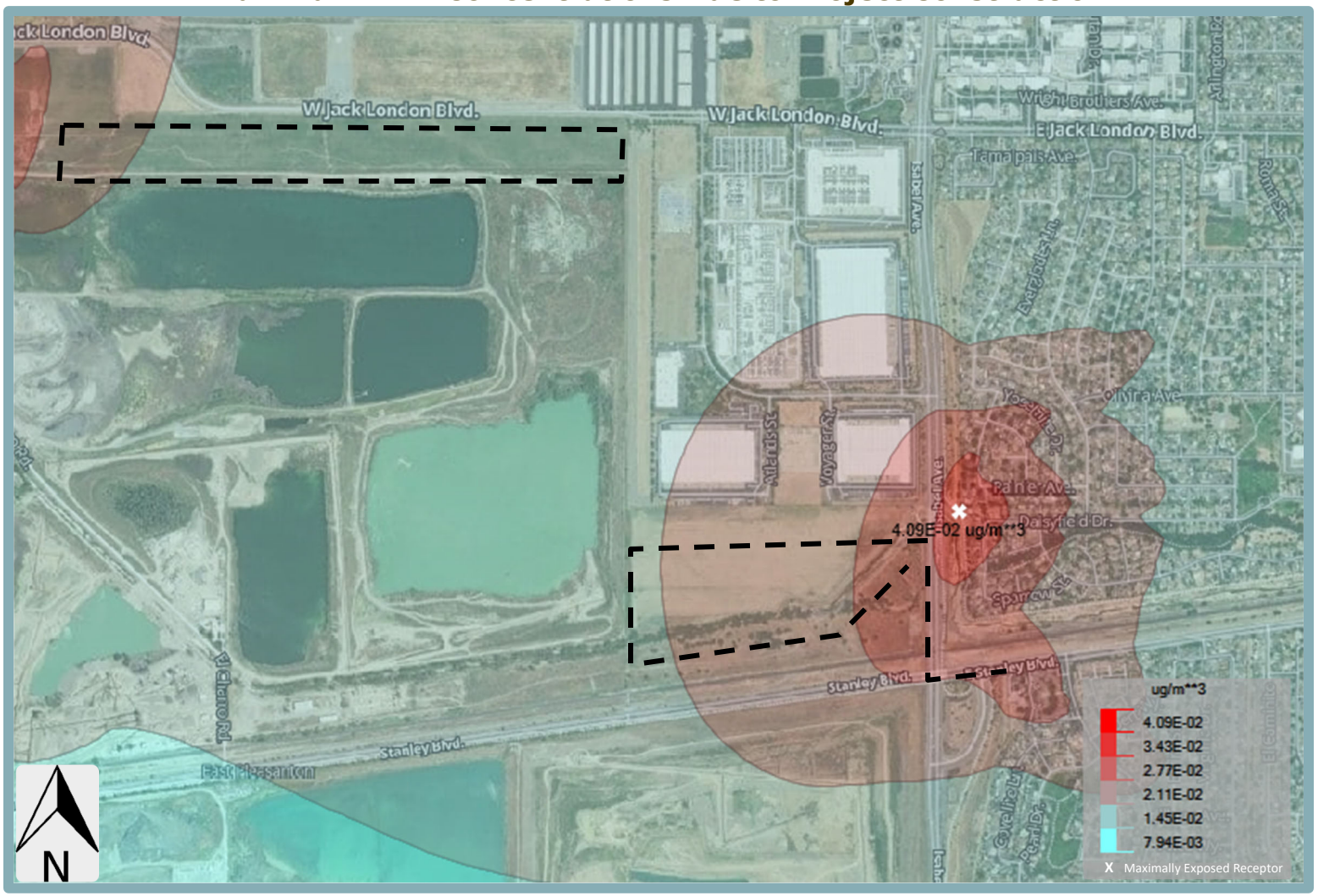
The comment summarizes the health risk assessment (HRA) included in the Draft EIR related to toxic air contaminants (TACs) from diesel-powered trucks during project operation, as well as the Draft EIR's analysis of construction-related TACs. Please see Responses to Comments 6-26 through 6-28 below for detailed responses to the commenter's specific concerns.

Response to Comment 6-26

As discussed in the Draft EIR, due to the cumulative and regional nature of effects from criteria pollutants, the analysis of potential health effects of criteria pollutants is discussed under Impact 4.2-6 of the Draft EIR which begins on page 4.2-54. Nonetheless, in response to the comment, to quantify the health risks associated with TACs that would be generated during construction of the proposed project, an additional, voluntary HRA has been conducted as part of this Final EIR.

To analyze potential health risks to nearby residents that could result from DPM emissions from off-road construction equipment at the project site, total DPM emissions that could result from construction of SMP 39, SMP 40, and a worst-case scenario of the highest amount of DPM associated with construction of an off-site trail connection option (Trail Connection Option 3) were estimated. DPM is considered a subset of $PM_{2.5}$, thus, the CalEEMod and RoadMod estimated $PM_{2.5}$ emissions from exhaust during construction were conservatively assumed to represent all DPM emitted during project construction. The mitigated levels of estimated $PM_{2.5}$ exhaust emissions, which would result from implementation of Mitigation Measure 4.2-1(a), were then used to calculate the concentration of DPM at the maximally exposed sensitive receptor near the project site. DPM concentrations resulting from project implementation were estimated using the American Meteorological Society/U.S. Environmental Protection Agency (AMS/USEPA) Regulatory Model (AERMOD). The results of AERMOD are presented in Figure 2-1 (see Appendix B of this Final EIR). As presented therein, the maximally exposed receptor, depicted by a white "X," is located northeast of SMP 40.

Figure 2-1
Maximum DPM Concentrations Due to Project Construction



Note: The figure shown above is intended to provide a visual representation of the worst-case, maximum emissions concentration dispersion within the project area due to project construction, as well as present the maximally exposed receptor.
Source: AERMOD, November 2023 (see Appendix B).

The associated cancer risk and non-cancer hazard index were calculated using the CARB's Hotspot Analysis Reporting Program Version 2 (HARP 2) Risk Assessment Standalone Tool (RAST), which calculates the cancer and non-cancer health impacts using the risk assessment guidelines of the 2015 Office of Environmental Health Hazard Assessment (OEHHA) Guidance Manual for Preparation of Health Risk Assessments.[4] The modeling was performed in accordance with the USEPA's User's Guide for the AERMOD[5] and the 2015 OEHHA Guidance Manual.

Based on the foregoing methodology, the cancer risk and non-cancer hazard indices at the maximally exposed receptor were estimated and are presented in Table 2-1.

Table 2-1
Maximum Mitigated Cancer Risk and Hazard Index Associated with Construction DPM

	Cancer Risk (per million persons)	Acute Hazard Index	Chronic Hazard Index
Construction DPM Health Risks	0.87	0.0000	0.0004
Thresholds of Significance	10	1.0	1.0
Exceed Thresholds?	**NO**	**NO**	**NO**

Source: AERMOD and HARP 2 RAST, November 2023 (see Appendix A).

As shown in Table 2-1, construction of the proposed project would not result in cancer risks in excess of BAAQMD's 10 cases per million threshold, or result in acute or chronic hazards in excess of BAAQMD's standards. In addition, according to the HRA, the $PM_{2.5}$ concentration would be 0.002 µg/m^3, which is well below the BAAQMD significance threshold of 0.3 µg/m^3 for $PM_{2.5}$. Thus, construction of the proposed project would not result in exposure of nearby receptors to substantial pollutant concentrations during construction, and the analyses and conclusions included within the Draft EIR are adequate.

Response to Comment 6-27

While the California Department of Justice does recommend preparing a quantitative HRA in accordance with OEHHA and local air district guidelines, the document referenced by the commenter does not specify that the HRA must assess construction-related impacts. As discussed above, a HRA was conducted as part of the Draft EIR to evaluate impacts from exposure to TACs generated by diesel-powered trucks during project operation.

Further, the commenter's claim that the "OEHHA document recommends that all short-term projects lasting at least two months be evaluated for cancer risks to nearby sensitive receptors" is misleading. The quoted text from the comment cites page 8-18, within Section 8.2.10, of the OEHHA Guidance Manual as the source of this information; however, page 8-18 does not contain such a recommendation. Rather, page 8-18 includes recommendations related to how to conduct a HRA for short-term projects, not whether or not a HRA is required to be prepared for short-term projects. The likely source of the commenter's claim is presented in the following quoted text from page 8-18 the OEHHA Guidance Manual:

[4] Office of Environmental Health Hazard Assessment. *Air Toxics Hot Spots Program Risk Assessment Guidelines* [pg. 8-18]. February 2015.
[5] U.S. Environmental Protection Agency. *User's Guide for the AMS/EPA Regulatory Model (AERMOD)*. December 2016.

> Due to the uncertainty in assessing cancer risk from very short-term exposures, we do not recommend assessing cancer risk for projects lasting less than two months at the MEIR. We recommend that exposure from projects longer than 2 months but less than 6 months be assumed to last 6 months (e.g., a 2-month project would be evaluated as if it lasted 6 months). Exposure from projects lasting more than 6 months should be evaluated for the duration of the project. In all cases, for assessing risk to residential receptors, the exposure should be assumed to start in the third trimester to allow for the use of the ASFs (OEHHA, 2009). Thus, for example, if the District is evaluating a proposed 5-year mitigation project at a hazardous waste site, the cancer risks for the residents would be calculated based on exposures starting in the third trimester through the first five years of life.

Based on the quoted text above, the commenter appears to misconstrue the OEHHA's recommendation that projects shorter than two months not be analyzed, as direction that all projects longer than two months be analyzed. However, in the context of the entire paragraph presented above, the OEHHA Guidance Manual seems instead to be providing recommendations on the exposure periods to be used in preparing HRAs without providing direct guidance as to whether or not a HRA should be prepared. In fact, in the Introduction section of the OEHHA Guidance Manual, OEHHA states "[t]he Hot Spots Act requires that each local Air Pollution Control District or Air Quality Management District (hereinafter referred to as District) determine which facilities will prepare a HRA."[6] The quoted text from the Introduction section of the OEHHA Guidance Manual demonstrates that the OEHHA Guidance Manual is not intended to define what projects must be assessed in a HRA, but instead that the guide is intended to establish consistent methodologies for the assessment of health risks where such assessments are deemed necessary by other entities. The conclusion that the OEHHA Guidance Manual is intended to provide methodological guidance rather than prescriptive guidance on when a HRA should be prepared is supported by the first paragraph of the section cited by the commenter, Section 8.2.10 of the OEHHA Guidance Manual:

> The local air pollution control districts sometimes use the risk assessment guidelines for the Hot Spots program in permitting decisions for short-term projects such as construction or waste site remediation. Frequently, the issue of how to address cancer risks from short-term projects arises.

Based on the text above, Section 8.2.10, which the commenter interprets as recommending HRAs for short-term projects, seems to instead be intended to provide information for such projects, without making conclusions as to where or when such HRAs should be prepared.

Nonetheless, as discussed in Response to Comment 6-27 above, construction of the proposed project would not result in exposure of nearby receptors to substantial pollutant concentrations during construction, and the analyses and conclusions included within the Draft EIR are adequate.

Response to Comment 6-28

In response to the comment, using the construction HRA results provided in Response to Comment 6-27, in combination with the operational HRA results from the Draft EIR, the combined cancer risk and hazard index as a result of project construction and operations is presented in Table 2-2 below.

[6] Office of Environmental Health Hazard Assessment. *Air Toxics Hot Spots Program Risk Assessment Guidelines* [pg 1-3]. February 2015.

Table 2-2
Combined Maximum Mitigated Cancer Risk and Hazard Index

	Cancer Risk (per million persons)	Acute Hazard Index	Chronic Hazard Index
Construction DPM Health Risks	0.87	0.00	0.0004
Heavy-Duty Diesel Truck DPM Health Risks	4.46	0.00	0.00
Total DPM Health Risks	*5.33*	*0.00*	*0.0004*
Thresholds of Significance	10	1.0	1.0
Exceed Thresholds?	**NO**	**NO**	**NO**

Source: AERMOD and HARP 2 RAST, April 2023/November 2023 (see Appendix C of Draft EIR and Appendix A of Final EIR).

As shown in Table 2-2, the combined DPM emissions associated with construction and operation of the proposed project would not result in cancer risks in excess of BAAQMD's 10 cases per million threshold, or result in acute or chronic hazards in excess of BAAQMD's standards. In addition, the combined $PM_{2.5}$ concentration would be 0.007 µg/m^3, which would be well below the BAAQMD significance threshold of 0.3 µg/m^3. Thus, the proposed project would not result in exposure of nearby receptors to substantial pollutant concentrations during construction and/or operations.

With respect to the commenter's concerns regarding age bins, according to the 2015 OEHHA Guidance Manual, the parameters used for all exposure durations should assume exposure begins in the last trimester of pregnancy and progresses through the exposure duration of interest (30 years, in the case of project operations, and approximately two years and 10 months in the case of project construction), which were the assumptions applied within the CARB's HARP 2 RAST, used to calculate the cancer and non-cancer health impacts for the proposed project. It should also be noted that the HARP 2 RAST program uses the risk assessment guidelines of the 2015 OEHHA Guidance Manual within the modeling assumptions.

Based on the above, the analyses and conclusions included within the Draft EIR are adequate.

Response to Comment 6-29

The comment is a conclusion and does not address the adequacy of the Draft EIR.

SMP 39/SMP 40 PROJECT **Letter 7**
DRAFT EIR COMMENT MEETING SUMMARY

Date: October 3, 2023
Time: 7:00 PM
Location: Civic Center Meeting Hall, City Council Chambers
1016 South Livermore Avenue
Livermore, CA 94550

Verbal Comments (arranged in order of "appearance" of commenter):

Public Comments

Commenter 1 (Brian)

7-1
- Commenter notes that the proposed project is set in a very fitting location, and the intent behind the project is desirable for the residents of the City.

Commenter 2 (John Steinbuch)

- Commenter supports the need for the project within the wider scope of industrial and commercial development within the City.

7-2
- Commenter describes the City's competitive market and how the proposed project would add to the stock of land reserved for interested businesses and would add jobs to the local economy.

Commenter 3 (David)

- Commenter is in favor of the proposed project, but requests accurate portrayal of the surrounding trails around the project site.

7-3
- Commenter requests a draft estimate of the cost of building the bridge, so the public understands the cost.
- Commenter requests the City update its website with the updated trail map file.

LETTER 7: PUBLIC COMMENT MEETING SUMMARY

Response to Comment 7-1

The comment does not address the adequacy of the Draft EIR. The comment is noted for the record and will be forwarded to the decision-makers for their consideration.

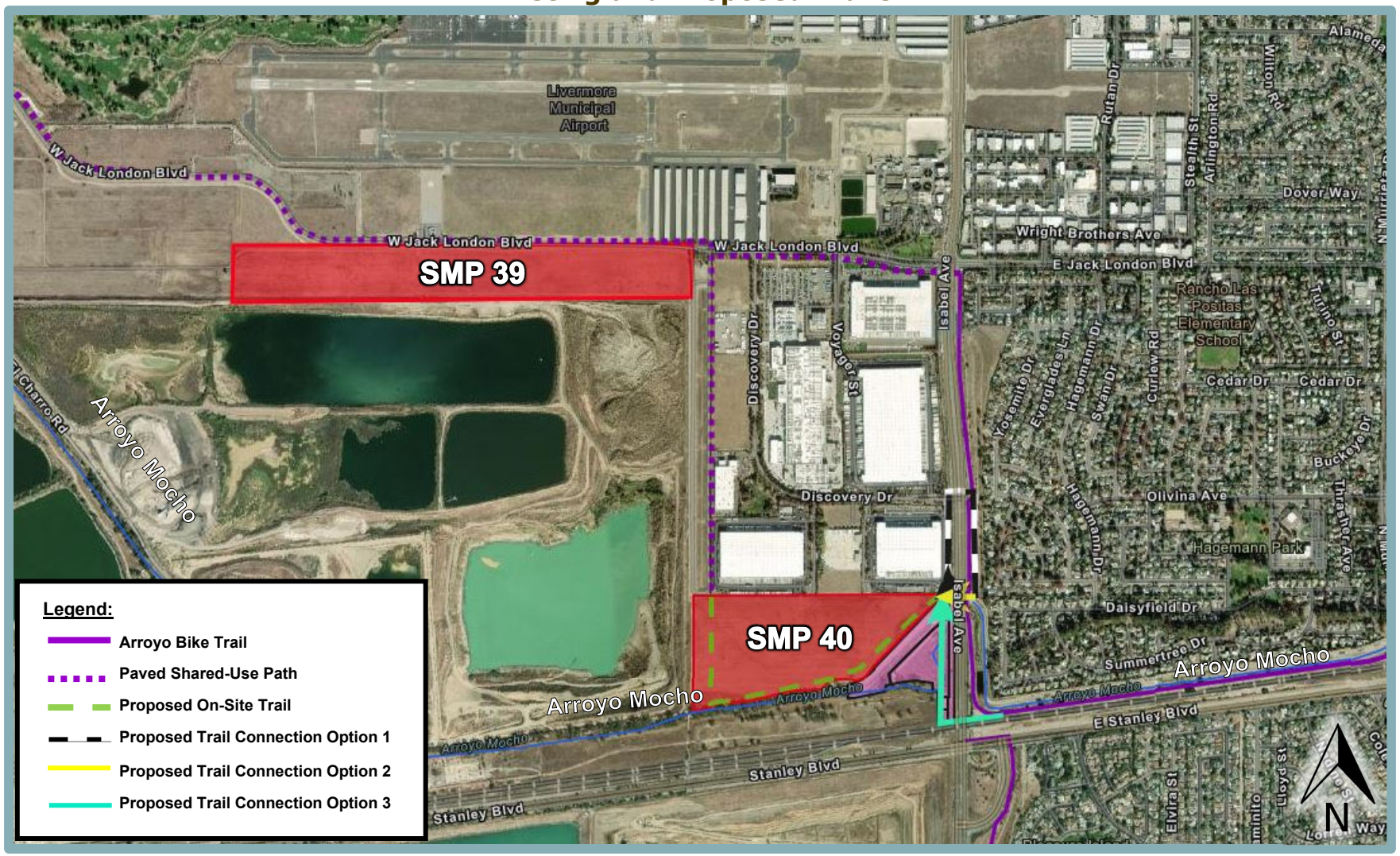
Response to Comment 7-2

The comment does not address the adequacy of the Draft EIR. The comment is noted for the record and will be forwarded to the decision-makers for their consideration.

Response to Comment 7-3

The comment does not address the adequacy of the Draft EIR. Nonetheless, in response to the comment and for clarification purposes, Figure 3-10 on page 3-20 of the Draft EIR is hereby replaced as shown on the following page. The comment is noted for the record and will be forwarded to the decision-makers for their consideration.

Figure 3-10
Existing and Proposed Trails



3. Revisions to the Draft EIR Text

3. REVISIONS TO THE DRAFT EIR TEXT

3.1 INTRODUCTION

The Revisions to the Draft EIR Text chapter presents minor corrections, additions, and revisions made to the Draft EIR initiated by the Lead Agency (City of Livermore) based on comments received during the public review period by reviewing agencies, the public, and/or consultants.

The changes represent minor clarifications/amplifications of the analysis contained in the Draft EIR and do not constitute significant new information that, in accordance with CEQA Guidelines, Section 15088.5, would trigger the need to recirculate portions or all of the Draft EIR.

3.2 DESCRIPTION OF CHANGES

New text is double underlined and deleted text is ~~struck through~~. Text changes are presented in the page order in which they appear in the Draft EIR.

1 Introduction

Page 1-1 of the Draft EIR is hereby revised as follows:

> The ~~SMP 38/SMP 39/SMP 40~~ SMP 39/SMP 40 Project Environmental Impact Report (EIR) has been prepared in accordance with the California Environmental Quality Act (CEQA) of 1970, Public Resources Code (PRC) Sections 21000-21178, as amended, and the Guidelines for Implementation of the California Environmental Quality Act, California Code of Regulations (CCR) Title 14, Sections 15000-15387 (CEQA Guidelines). The City of Livermore is the lead agency for the environmental review of ~~SMP 38/SMP 39/SMP 40~~ SMP 39/SMP 40 Project (proposed project) evaluated herein and has the principal responsibility for approving the project. As required by Section 15121 of the CEQA Guidelines, this EIR will (a) inform public agency decision-makers, and the public generally, of the significant environmental effects of the project, (b) identify possible ways to minimize the significant adverse environmental effects, and (c) describe reasonable and feasible project alternatives which reduce environmental effects. The public agency shall consider the information in the EIR along with other information that may be presented to the agency.
>
> The CEQA Guidelines identify several types of EIRs and associated titles. As explained in *Citizens for a Sustainable Treasure Island v. City and County of San Francisco* (2014) 227 Cal.App.4th 1036, 1047-1048 (*Treasure Island*), courts strive to avoid attaching too much significance to titles in ascertaining whether a legally adequate EIR has been prepared for a particular project. The level of specificity of an EIR is determined by the nature of the project and the "rule of reason," rather than any semantic label accorded to the EIR. This EIR includes both programmatic and project-level analyses, as appropriate for the level of information available for each entitlement request. For example, because the proposed project would not include any development of ~~SMP 38 or~~ the Additional Annexation Only Parcels at this time, this EIR includes a *program-level* analysis of the environmental impacts associated with the proposed ~~Sphere of Influence (SOI) Amendment for SMP 38 and~~ annexation of the Additional Annexation Only Parcels, pursuant to CEQA Guidelines Section 15168. With respect to the development of SMP 39~~,~~ and SMP 40, and the off-site trail connection, the project applicant has submitted project-specific information, allowing

for a more detailed analysis of the potential environmental impacts that would result from such development.

Pages 1-2 and 1-3 of the Draft EIR are hereby revised as follows:

Project Location

The approximately ~~217.04-acre~~ 105.34-acre project site consists of ~~nine~~ six separate parcels identified by Assessor's Parcel Numbers (APNs) ~~904-1-7-21; 904-1-2-12; 904-1-7-32;~~ 904-3-1-4; 904-10-2-2, -3, -5, -7, and -8 located in unincorporated Alameda County. The project site is located adjacent to the existing Oaks Business Park, which consists of eight light industrial warehouse buildings, in the northwestern corner of the City of Livermore. The project site is generally located west of Isabel Avenue/State Route (SR) 84, north of Stanley Boulevard, south of West Jack London Boulevard, and east of El Charro Road. ~~APNs 904-1-7-32, 904-1-2-12, and 904-1-7-21 are also known as SMP 38;~~ APN 904-3-1-4 is also known as SMP 39; and 904-10-2-2 is also known as SMP 40. The aforementioned SMP numbers are due to the Surface Mining Permit (SMP) numbers applicable to each site. The Surface Mining Permits for each of the sites were approved by Alameda County in 2004 to allow for the extraction of sand and gravel (i.e., aggregate) within the sites; however, aggregate mining has not occurred within any of the sites. Four additional parcels (APNs 904-10-2-3, -5, -7, and -8) located east of SMP 40 are included in the overall project area.

Project Description

~~SMP 38,~~ SMP 39, SMP 40, and the Additional Annexation Only Parcels are within the City of Livermore South Livermore Urban Growth Boundary (UGB); however, ~~SMP 38 and~~ SMP 39 ~~are~~ is also within the City of Pleasanton's SOI. Accordingly, an SOI Amendment for ~~SMP 38 and~~ SMP 39 is proposed in order to modify the City of Pleasanton SOI, align the SOI and South Livermore UGB boundaries to be consistent with one another, and provide a contiguous division of land between the cities of Livermore and Pleasanton. ~~Annexation of SMP 38 into the City of Livermore is not proposed as part of the project, nor is development of the three parcels representing SMP 38.~~ It should be noted that the likelihood for any future development on the Additional Annexation Only Parcels is low due to physical constraints to development present on the parcels and their small size. Thus, the analysis of this EIR assumes that any development on the Additional Annexation Only Parcels would be limited to cooperating with the project applicant regarding development of the proposed trail and trail connection.

Development of ~~SMP 38 or~~ the Additional Annexation Only Parcels is not proposed as part of the proposed project.

Page 1-4 of the Draft EIR is hereby revised as follows:

~~SMP 38~~

- ~~Resolution authorizing submittal of a SOI Amendment application to the Alameda County LAFCo.~~

The foregoing revisions are for clarification purposes and do not change the conclusions of the Draft EIR.

2 Executive Summary

Page 2-1 of the Draft EIR is hereby revised as follows:

The approximately ~~217.04-acre~~ 105.34-acre project site consists of ~~nine~~ six separate parcels identified by Assessor's Parcel Numbers (APNs) ~~904-1-7-21; 904-1-2-12; 904-1-7-32;~~ 904-3-1-4; 904-10-2-2, -3, -5, -7, and -8 located in unincorporated Alameda County. The project site is located adjacent to the existing Oaks Business Park, which consists of eight light industrial warehouse buildings, in the northwestern corner of the City of Livermore. The project site is generally located west of Isabel Avenue/State Route (SR) 84, north of Stanley Boulevard, south of West Jack London Boulevard, and east of El Charro Road. ~~APNs 904-1-7-32, 904-1-2-12, and 904-1-7-21 are also known as SMP 38;~~ APN 904-3-1-4 is also known as SMP 39; and 904-10-2-2 is also known as SMP 40. The aforementioned SMP numbers are due to the Surface Mining Permit (SMP) numbers applicable to each site. The Surface Mining Permits for each of the sites were approved by Alameda County in 2004 to allow for the extraction of sand and gravel (i.e., aggregate) within the sites; however, aggregate mining has not occurred within any of the sites. Four additional parcels (APNs 904-10-2-3, -5, -7, and -8) located east of SMP 40 are included in the overall project area.

Project Description

~~SMP 38,~~ SMP 39, SMP 40, and the Additional Annexation Only Parcels are within the City of Livermore South Livermore Urban Growth Boundary (UGB); however, ~~SMP 38 and~~ SMP 39 ~~are~~ is also within the City of Pleasanton's Sphere of Influence (SOI). Accordingly, an SOI Amendment for ~~SMP 38 and~~ SMP 39 is proposed in order to modify City of Pleasanton SOI, align the SOI and South Livermore UGB boundaries to be consistent with one another, and provide a contiguous division of land between the cities of Livermore and Pleasanton. ~~Annexation of SMP 38 into the City of Livermore is not proposed as part of the project, nor is development of the three parcels representing SMP 38.~~ It should be noted that the likelihood for any future development on the Additional Annexation Only Parcels is low due to physical constraints to development present on the parcels and their small size. Thus, the analysis of this EIR assumes that any development on the Additional Annexation Only Parcels would be limited to cooperating with the project applicant regarding development of the proposed trail and trail connection.

Page 2-2 of the Draft EIR is hereby revised as follows:

~~SMP 38~~

- ~~Resolution authorizing submittal of a SOI Amendment application to the Alameda County LAFCo.~~

Page 2-4 of the Draft EIR is hereby revised as follows:

No Project (No Build) Alternative

The City has decided to evaluate a No Project (No Build) Alternative, which assumes that the current conditions of the project site would remain, and the site would not be developed. A number of approvals would be required for development of SMP 39 and SMP 40 under the proposed project, including a SOI Amendment for SMP 39, General Plan Amendments, Pre-zoning and Annexation, Zoning Map Amendments/Planned Development, Vesting Tentative Subdivision Maps, Pre-Annexation Agreements, and Development Agreements. ~~The proposed project includes an SOI Amendment to include SMP 38 within the City of Livermore SOI.~~ None of the proposed entitlements for SMP 39 or SMP 40 would be required under the No Project (No Build) Alternative. Similarly, entitlements for ~~SMP 38,~~ the Additional Annexation Only Parcels, or any off-site improvements that would be required under the proposed project would not be required under the No Project (No Build) Alternative.

Although none of the impacts identified for the proposed project would occur under the No Project (No Build) Alternative, the No Project (No Build) Alternative would not meet any of the project objectives.

No Project (Maximum Allowable Operations) Alternative

Under the No Project (Maximum Allowable Operations) Alternative, SMP 39 and SMP 40 would be mined as allowed under the current surface mining permits previously approved for the sites by Alameda County. ~~It should be noted that mining on SMP 38 could occur under the existing zoning of the site; however, because development of SMP 38 is not proposed as part of the project, the No Project (Maximum Allowable Operations) Alternative also assumes no mining or physical changes on SMP 38 in order to provide a more direct comparison. Similarly,~~ ~~b~~Because the current mining operations permitted on SMP 40 do not extend to allow mining operations to occur on the Additional Annexation Only Parcels, and the likelihood for any future development on the Additional Annexation Only Parcels is low due to physical constraints to development present on the parcels, the parcels would still not be considered for mining under the Alternative. Thus, the analysis of the No Project (Maximum Allowable Operations) Alternative is focused on the potential impacts associated with the existing allowed mining operations on the SMP 39 and SMP 40 sites only. It should further be noted that the proposed off-site trail connections are assumed not to occur under the No Project (Maximum Allowable Operations) Alternative.

Page 2-7 of the Draft EIR is hereby revised as follows:

- ~~Potential allowed land use and zoning for SMP 38 in the future.~~

The foregoing revisions are for clarification purposes and do not change the conclusions of the Draft EIR.

For clarification purposes, Table 2-1 of Chapter 2, Executive Summary, of the Draft EIR, which begins on page 2-8, is hereby revised to reflect changes made to Mitigation Measures 4.2-1(a) and Mitigation Measure 4.6-1. Mitigation Measure 4.2-1(a) has been revised to provide greater specificity regarding the use of Tier 4 final off-road construction equipment. Mitigation Measure 4.6-1 has been revised to provide greater specificity regarding the use of mobile or fixed noise-producing equipment and the posting of signs prohibiting unnecessary idling of internal combustion engines. Rather than include the entirety of Table 2-1, only the impact for which mitigation has been revised as part of this Final EIR is presented at the end of this chapter. The revisions are for clarification purposes only and do not change the conclusions of the Draft EIR.

3 Project Description

The second paragraph under the Introduction section on page 3-1 of the Draft EIR is hereby revised as follows:

The Project Description chapter of this EIR provides a comprehensive description of the ~~SMP 38/~~SMP 39/SMP 40 Project (proposed project), in accordance with the CEQA Guidelines.

The Project Location section on page 3-1 of the Draft EIR is hereby revised as follows:

The approximately ~~217.04-acre~~ 105.34-acre project site consists of ~~nine~~ six separate parcels identified by Assessor's Parcel Numbers (APNs) ~~904-1-7-21; 904-1-2-12; 904-1-7-32;~~ 904-3-1-4; 904-10-2-2, -3, -5, -7, and -8 located in unincorporated Alameda County.

The last paragraph on page 3-1 of the Draft EIR is hereby revised as follows:

~~APNs 904-1-7-32, 904-1-2-12, and 904-1-7-21 are also known as SMP 38;~~ APN 904-3-1-4 is also known as SMP 39; and 904-10-2-2 is also known as SMP 40.

Tables 3-1 and 3-2 on page 3-4 of the Draft EIR are hereby revised as follows:

Table 3-1
Project Site Summary

Parcel Name	APN(s)	Existing General Plan Land Use Designation	Existing Zoning Designation	Proposed General Plan Land Use Designation	Proposed Zoning Designation
~~SMP 38~~	~~904-1-7-32, 904-1-2-12 and 904-1-7-21~~	~~City: Open Space Sand and Gravel/Limited Agriculture~~ ~~County: Industrial/Water Management~~	~~Agriculture (A) with an overlay permitting quarry operations~~	~~City: Open Space Sand and Gravel/Limited Agriculture~~ ~~County: Industrial/Water Management~~	~~Agriculture (A)~~
SMP 39	904-3-1-4	City: Open Space Sand and Gravel County: Industrial	Agriculture (A) with an overlay permitting quarry operations	City: Low Intensity Industrial	Planned Development-Industrial (PDI-22-001)
SMP 40	904-10-2-2	City: Open Space Sand and Gravel County: Industrial	Agriculture (A) with an overlay permitting quarry operations	City: Low Intensity Industrial	Planned Development-Industrial (PDI-22-001)
Additional Annexation Only Parcels	904-10-2-3, -5, -7, and -8	City: Open Space Sand and Gravel County: Industrial	Agriculture (A)	City: Parks, Trailways and Recreation Areas	Open Space Flood Plain (OS-F)

Table 3-2
Surrounding Land Use Summary

Parcel Name	Surrounding Land Uses
~~SMP 38~~	~~North: Undeveloped land, a paved shared-use path, the Las Positas Golf Course and retail outlets~~
	~~South: Industrial ponds associated with mining operations~~
	~~East: SMP 39~~
	~~West: Undeveloped land, Arroyo Mocho, and industrial ponds~~
SMP 39	North: A paved shared-use path and the Livermore Municipal Airport
	South: Gravel quarries and industrial ponds associated with mining
	East: Oaks Business Park; Arroyo Mocho Trail and single-family residences
	West: SMP 38, Arroyo Mocho, and industrial ponds
SMP 40	North: Oaks Business Park
	South: Arroyo Mocho, open fields, railroad tracks, and gravel quarries associated with mining operations
	East: Single-family residences

	West: Vacant land, gravel quarries, and industrial ponds associated with mining
Additional Annexation Only Parcels	North: Oaks Business Park
	South: Open fields, railroad tracks, Arroyo Mocho, and gravel quarries associated with mining operations
	East: Arroyo Mocho Trail and single-family residences
	West: SMP 40, Arroyo Mocho, gravel quarries and industrial ponds associated with mining operations

Page 3-5 of the Draft EIR is hereby revised as follows:

~~SMP 38~~

~~SMP 38 represents three parcels (APN 904-1-7-32, 904-1-2-12 and 904-1-7-21) and is approximately +/- 111.7 gross acres, located immediately west of SMP 39. SMP 38 is owned by Pacific Coast Aggregates LLC and is located within unincorporated Alameda County, the City of Pleasanton Sphere of Influence (SOI), and the City of Livermore South Livermore Urban Growth Boundary (UGB). Several structures exist in the northwest corner of the site related to a former horse ranch. The Livermore Municipal Airport is located approximately 100 feet north of SMP 38. As such, the site is included within the Airport's Land Use Compatibility Plan (ALUCP) area. SMP 38 is within the Airport Protection Area boundaries and the Airport Influence Area boundaries identified in the ALUCP. The majority of SMP 38 is within ALUCP Safety Zone 6, with portions within Safety Zones 2 and 3. Other surrounding existing uses include undeveloped land and a paved shared-use path to the north, and the Las Positas Golf Course and shopping centers further north beyond West Jack London Boulevard; SMP 39 to the east; gravel quarries and industrial ponds associated with mining operations to the south; and undeveloped land, Arroyo Mocho, and industrial ponds to the west. The City of Livermore General Plan designates SMP 38 as Limited Agriculture, as well as Open Space/Sand and Gravel. Because SMP 38 is within the City of Pleasanton SOI and is located outside of the City of Livermore limits, the site does not have a City zoning designation. SMP 38 is within the East County Area Plan (ECAP) of the Alameda County General Plan, which designates the site as Industrial and Water Management. The site is zoned Agriculture by Alameda County, with an overlay permitting quarry operations.~~

SMP 39

SMP 39 (APN 904-3-1-4) is a rectangular-shaped, +/- 51.9-acre parcel owned by SMP 39, LLC. It is located within unincorporated Alameda County, the City of Pleasanton SOI, and the City of Livermore South Livermore UGB. SMP 39 is currently undeveloped and surrounded by existing uses, including a paved shared-use path and the Livermore Municipal Airport to the north; the Oaks Business Park to the east and the Arroyo Mocho Trail and single-family residences further east, across Isabel Avenue/SR 84; gravel quarries and industrial ponds associated with mining operations to the south; and ~~SMP 38,~~ Arroyo Mocho~~,~~ and industrial ponds to the west.

The Project Components section on page 3-7 of the Draft EIR is hereby revised as follows:

For SMP 39, the proposed project would include development of a total of up to six light industrial buildings, consisting of up to approximately 755,500 square feet (sf) of new building space, and associated internal roadways and other improvements (which would include associated utility, and parking improvements, as well as new landscaping, all of which are discussed in further detail below); for SMP 40, the proposed project would include development of two industrial buildings consisting of up to 759,275 sf of new building space with related internal roadways and other improvements (which would include associated utility, and parking improvements, as well as new landscaping, all of

which are discussed in further detail below). A number of approvals would be required for development of SMP 39 and SMP 40, including a SOI Amendment for SMP 39, General Plan Amendment, Pre-zoning and Annexation, Zoning Map Amendment/Planned Development, Vesting Tentative Subdivision Maps, a Pre-Annexation Agreement, and Development Agreement. A Site Plan Design Review entitlement is required for SMP 39 and SMP 40, which would include a review of the site plan, building, and landscape design; however, the Site Plan Design Review entitlement is only proposed for SMP 40 at this time. A Site Plan Design Review entitlement will be required at a later date for the future development of SMP 39. ~~Development of SMP 38 is not proposed. The proposed project includes an SOI Amendment to include SMP 38 within the City of Livermore SOI. The City of Livermore General Plan land use designation for SMP 38 would remain Limited Agriculture and Open Space/Sand and Gravel and the Alameda County zoning would remain Agriculture.~~ A detailed description of the proposed project, including the necessary approvals, is provided below.

Annexation, SOI Amendment, and Pre-Annexation Agreement

~~SMP 38,~~ SMP 39, SMP 40, and the additional annexation only parcels described above are within the City of Livermore South Livermore UGB; however~~, SMP 38 and~~ SMP 39 ~~are~~ is within the City of Pleasanton's SOI. Accordingly, an SOI Amendment for ~~SMP 38 and~~ SMP 39 is proposed in order to modify SOI, align the SOI and South Livermore UGB boundaries to be consistent with one another, and provide a contiguous division of land between the cities of Livermore and Pleasanton (see Figure 3-3).

The first paragraph on page 3-9 of the Draft EIR is hereby revised as follows:

~~Annexation of SMP 38 into the City of Livermore is not proposed as part of the project, nor is development of the three parcels representing SMP 38.~~

The fifth paragraph on page 3-9 of the Draft EIR is hereby revised as follows:

First, the Pleasanton City Council must consider adopting a resolution supporting the SOI amendments for ~~SMP 38 and~~ SMP 39. Then, Livermore City Council would consider adopting a resolution to initiate the annexation and SOI amendment proceedings, which would subsequently be submitted to the Alameda County LAFCo for approval as a Responsible Agency. The City and the County would negotiate a property tax exchange agreement to determine how much property tax the City would receive and how much the County would retain. Annexation of SMP 39, SMP 40, and the Additional Annexation Only Parcels would formally transfer all governmental powers and municipal services pertaining to the parcels from Alameda County to the City of Livermore.

The first paragraph on page 3-13 of the Draft EIR is hereby revised as follows:

General Plan Amendment

The proposed project would include a General Plan Amendment to modify the existing land use designations for SMP 39 and SMP 40 from Open Space/Sand and Gravel to Low Intensity Industrial (LII), while the Annexation Only Parcels would be re-designated Parks, Trailways and Recreation Areas (OSP). ~~A General Plan Amendment is not proposed for SMP 38.~~

The third paragraph on page 3-14 of the Draft EIR is hereby revised as follows:

Stormwater from the new impervious areas within SMP 39 would be collected and treated pursuant to the requirements listed the City of Livermore's Municipal Separate Storm Sewer System (MS4) Permit. Stormwater quality and hydromodification controls would be

provided by a proposed bioretention planter in the expanded right-of-way of West Jack London Boulevard. ~~The~~ Stormwater flows from the eastern half of the site would be discharged ~~directly~~ to the existing storm drain system within West Jack London Boulevard, following treatment for water quality and hydromodification by the bioretention planter ~~through new service laterals connected to each lot~~. ~~The~~ Following treatment and hydromodification by the bioretention planter, stormwater flows from the remaining western portion would be routed through a three-acre-foot detention pond before discharging to a new 18- to 24-inch public storm drain line that runs approximately 600 feet north along the western property line of City of Livermore parcel APN 904-3-1-1 and connect to the existing storm drain system of West Jack London Boulevard. Additionally, it should be noted that the western detention pond is intended for detaining high-flow runoff and would not provide stormwater quality or hydromodification controls.

Page 3-17 of the Draft EIR is hereby revised as follows:

According to the Stormwater Quality Control Plan that has been prepared for the SMP 40 site, stormwater from impervious areas within SMP 40 would flow to a number of catch basin filtration inserts located throughout the SMP 40 site. The catch basins would connect a new network of stormwater lines to three 96-inch underground storage vaults located west of Building 1, within the internal drive aisle, between the dock doors and trailer parking. The storage vaults would be placed five feet underground and surrounded by rock. Stormwater from the storage vaults would be routed north and west to the existing detention basin located northwest of Building 1, within the Oaks Business Park, before being ultimately directed into a portion of the Arroyo Mocho Bypass Channel.

In addition, the SMP 40 storm drainage system would include installation of at least two Contech Engineered Solutions Vortech Systems Hydrodynamic Separators to provide pretreatment and trash capture, prior to conveyance of flows to the corrugated metal pipes. The Vortech Systems Hydrodynamic Separators meet emerging stormwater treatment technologies (TAPE) certification standards and would be installed in areas proposed for disturbance as part of development of SMP 40.

A portion of SMP 40 and the annexation only parcel, owned by the Zone 7 Water Agency and identified by APN 904-10-2-5, are within an area identified by FEMA as Zone AE, which is considered a SFHA within the 100-year floodplain. The proposed project would involve importing soils to bring the proposed building area above the 100-year floodplain, subject to approval of a Letter of Map Revision (LOMR) from FEMA.

The Required Public Approvals section on page 3-26 of the Draft EIR is hereby revised as follows:

The City of Livermore has discretionary authority, and is the lead agency for the proposed project. In addition to certification of this EIR and the associated Mitigation Monitoring and Reporting Program, the proposed project requires approval of the following entitlements and agreements by the City of Livermore and Responsible Agencies, including Alameda County and the City of Pleasanton:

~~**SMP-38**~~

- ~~Resolution authorizing submittal of a SOI Amendment application to the Alameda County LAFCo.~~

Figures 3-1, 3-2, 3-3, 3-4, 3-5, 3-6, and 3-10 on pages 3-2, 3-3, 3-8, 3-10, 3-11, 3-12, and 3-20, respectively, of the Draft EIR are hereby replaced as presented at the end of this chapter.

The foregoing revisions are for clarification purposes and do not change the conclusions of the Draft EIR.

4.0 Introduction to Analysis

The summary of impacts related to Agriculture and Forest Resources dismissed in the Initial Study on pages 4.0-2 and 4.0-3 of the Draft EIR is hereby revised as follows:

- *Agriculture and Forest Resources (Checklist Questions a, c, and d):* The majority of the project site is identified by the California Department of Conservation Farmland Mapping and Monitoring Program as Grazing Land. In addition, the off-site trail connection options are all located within lands designated as "Urban and Built-up Land." ~~While a portion of SMP 38 is designated as Prime Farmland, development of SMP 38 is not proposed as part of the proposed project.~~ Therefore, development of the proposed project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to a non-agricultural use, or otherwise result in the loss of Farmland to non-agricultural use. Furthermore, the project site is not considered forest land or timberland, and is not zoned for Timberland Production. Therefore, the proposed project would have *no impact* or a *less-than-significant* impact with regard to the aforementioned impacts related to agricultural and forest resources.

The summary of impacts related to Hazards and Hazardous Materials dismissed in the Initial Study on page 4.0-4 of the Draft EIR is hereby revised as follows:

> Although the Livermore Municipal Airport is located approximately 100 feet north of ~~SMP 38 and~~ SMP 39, the portions of the project site planned for development would be industrial in nature, which is a permitted use for the project site under the Airport's Land Use Compatibility Plan (ALUCP); thus, the proposed project would not result in a safety hazard for people working in the project area.

The foregoing revisions are for clarification purposes and do not change the conclusions of the Draft EIR.

4.1 Agricultural Resources

Table 4.1-3 on Page 4.1-4 of the Draft EIR is hereby revised as follows:

Table 4.1-3
On-Site Land Capability Classification and Storie Index Rating

Soil Map Symbol and Name	Soil Capability Classification (Irrigated)	Soil Capability Classification (Non-Irrigated)	Storie Index Grade	Percentage of the Project Site Area
Livermore very gravelly coarse sandy loam (Map Unit Symbol Lm)	IV	IV	3	3.3
Riverwash (Map Unit Symbol Rh)	Not Rated	VIII	Not Rated	1.6
~~Sunnyvale clay loam (Map Unit Symbol Sl)~~	~~II~~	~~IV~~	~~4~~	~~9.5~~

~~Sycamore silt loam, 0 to 2 percent slopes (Map Unit Symbol So)~~	~~I~~	~~IV~~	~~1~~	~~30.2~~
Yolo loam, calcareous substratum, 0 to 6 percent slopes (Map Unit Symbol YmA)	I	IV	1	89.5
Yolo gravelly loam, 0 to 3 percent slopes (Map Unit Symbol Yr)	II	IV	1	5.6
Source: USDA NRCS, Web Soil Survey, 2023.				

The second paragraph on page 4.1-6 of the Draft EIR is hereby revised as follows:

> ~~**SMP 38**~~
> ~~As shown in Figure 4.1-2, SMP 38 consists of lands classified as Prime Farmland, Grazing Land, and Other Land. In addition, as presented in Figure 4.1-1, the soil types present on SMP 38 consist of Sunnyvale clay loam, Sycamore silt loam, and Yolo gravelly loam. Sunnyvale clay loam has a Storie Index Grade of 4, which indicates poor soil quality. However, the other on-site soil types (Sycamore silt loam and Yolo gravelly loam) have a Storie Index Grade of 1, which indicates excellent soil quality with limited crop limitations. All on-site soils have a non-irrigated Soil Capability Classification of IV, which indicates that the soil, when not irrigated, has very severe limitations that restrict the choice of plants or that require very careful management.~~

Table 4.1-4 on page 4.1-12 of the Draft EIR is hereby revised as follows:

Table 4.1-4
Project Site Existing and Proposed Zoning

Parcel Name	APN(s)	Existing Zoning Designation	Proposed Zoning Designation
~~SMP 38~~	~~904-1-7-32, 904-1-2-12 and 904-1-7-21~~	~~Agriculture (A)~~	~~N/A~~
SMP 39	904-3-1-4	Agriculture (A)	Planned Development-Industrial (PDI-22-001)
SMP 40	904-10-2-2 (41-acre project portion only)	Agriculture (A)	Planned Development-Industrial (PDI-22-001)
Additional Annexation Only Parcels	904-10-2-3, -5, -7, and -8	Agriculture (A)	Open Space Flood Plain (OS-F)

The second paragraph under Impact 4.11 on page 4.1-12 of the Draft EIR is hereby revised as follows:

> ~~SMP 38 would not be rezoned as part of the proposed project; therefore, the following analysis focuses on the remaining parcels included in the overall project site.~~

The second paragraph on page 4.1-13 of the Draft EIR is hereby revised as follows:

It should also be noted that the properties immediately adjacent to the west and south of SMP 39, including ~~SMP 38, as well as~~ the properties immediately west of SMP 40, are currently zoned for agricultural use. However, the large majority of such lands are not currently used for agricultural purposes. For example, the parcels located south of ~~SMP 38 and~~ SMP 39~~,~~ and west of SMP 40 were previously mined and are currently being used as industrial ponds. Nonetheless, if the A-zoned properties within the project vicinity are to be used for agricultural purposes in the future, the City of Livermore's right-to-farm ordinance (Chapter 8.16 of the City's Municipal Code) would ensure that such agricultural uses would be protected from conflicts with non-agricultural land uses within the project vicinity. When fully operational, the proposed project would include development of a total of 755,500 square feet (sf) of new industrial warehouse space on SMP 39, and up to 759,275 sf of new industrial warehouse space on SMP 40. Development of the proposed project would not preclude the use of the surrounding parcels for agricultural purposes. Additionally, given the industrial nature of the proposed project, the proposed project would not result in any land use conflicts with current or future agricultural uses within the project vicinity. Therefore, the proposed project would not conflict with the City's right-to-farm ordinance or existing zoning for agricultural use.

The first paragraph under Impact 4.1-2 on pages 4.1-13 and 4.1-14 of the Draft EIR is hereby revised as follows:

~~As stated above, according to the FMMP, SMP 38 is designated as Prime Farmland, Grazing Land, and Other Land, and the Additional Annexation Only Parcels is designated as either Grazing Land or Other Land. As noted in Chapter 3, Project Description, of this EIR, development is not proposed on SMP 38, and SMP 38 would not require annexation. SMP 38 is included in the proposed project because a Sphere of Influence (SOI) Amendment for SMP 38 and SMP 39 is proposed in order to modify SOI, align the SOI and South Livermore UGB boundaries to be consistent with one another, and provide a contiguous division of land between the cities of Livermore and Pleasanton.~~ Although the proposed project includes the annexation of the Additional Annexation Only Parcels, the parcels are not currently planned for development, and are unlikely to be developed in the future; as such, the Additional Annexation Only Parcels would not be converted to a non-agricultural use. Therefore, the following discussion focuses only on SMP 39 and SMP 40.

The foregoing revisions are for clarification purposes and do not change the conclusions of the Draft EIR.

Figure 4.1-1 and Figure 4.1-2 on pages 4.1-5 and 4.1-7, respectively, of the Draft EIR are hereby replaced as presented at the end of this chapter.

4.2 Air Quality, Greenhouse Gas Emissions, and Energy

The Energy Consumption at the Project Site paragraph on pages 4.2-15 and 4.2-16 of the Draft EIR is hereby revised as follows:

Energy Consumption at the Project Site

PG&E currently provides service to the project area. However, currently, SMP 39~~,~~ and SMP 40, ~~and the majority of SMP 38~~ are vacant and undeveloped. ~~Although several structures exist in the northwest corner of SMP 38 related to a former horse ranch, the structures are vacant.~~ In addition, only minor structures associated with on-site infrastructure are located within a portion of the Additional Annexation Only Parcels. Thus, the existing energy demand associated with the project site is little to null.

The second paragraph of the Method of Analysis section on pages 4.2-41 and 4.2-42 of the Draft EIR are hereby revised as follows:

> It should be noted that development of ~~SMP 38, as well as~~ the four Additional Annexation Only Parcels~~,~~ is not proposed as part of the project. Therefore, the analysis included within this chapter is focused on the potential impacts associated with the development of SMP 39 and SMP 40, as well as the off-site trail connection options, which would connect to the existing Arroyo Mocho Trail located on the east side of Isabel Avenue/SR 84. The three trail connection options being considered and evaluated herein include Trail Connection Option 1 – At-Grade Crossing at Discovery Drive; Trail Connection Option 2 – Undercrossing at Isabel Bridge; and Trail Connection Option 3 – Overcrossing of Isabel Avenue/SR 84. Further detail of the trail connection options is provided in Chapter 3, Project Description, of this EIR.

Page 4.2-42 of the Draft EIR is hereby revised as follows:

> The following inherent design features and project-specific information were included in the modeling conducted for SMP 39:
>
> - Construction would begin in September of 2024;
> - Construction would occur over approximately ~~two years~~ 22 months;
> - 24,000 cubic yards (CY) of soil import would be required; and
> - Tier 3 engines would be used for all off-road heavy-duty equipment over 150 horsepower.
>
> Similarly, the following inherent design features and project-specific information were included in the modeling conducted for SMP 40:
>
> - Construction would begin in September of 2023;
> - Construction would occur over approximately ~~two years~~ 15 months;
> - 7,000 CY of soil import would be required; and
> - Tier 3 engines would be used for all off-road heavy-duty equipment over 150 horsepower.

Mitigation Measure 4.2-1(a) on pages 4.2-50 and 4.2-51 of the Draft EIR is hereby revised as follows:

> *4.2-1(a) Prior to approval of any Improvement Plans, the project applicant shall provide proof of compliance with the following to the satisfaction of the City of Livermore Community Development Department:*
>
> > *The project applicant shall show on the plans via notation that the contractor shall ensure that the heavy-duty off-road vehicles (50 horsepower or more) to be used in the construction of all project components (i.e., construction of SMP 39, SMP 40, and the chosen off-site trail connection option), including owned, leased, and subcontractor vehicles, shall be a combination of engine Tier 3 or Tier 4 off-road construction equipment, or hybrid, electric, or alternatively fueled equipment (or any combination of the above), sufficient to achieve a fleet-wide average reduction in construction-related ROG and NO_X emissions to below the applicable BAAQMD thresholds of significance (54 lbs/day). For instance, the emissions presented in Table 4.2-8 were achieved by requiring all equipment used during construction to be engine Tier 4 final.*

> *In addition, all off-road equipment operating at the construction site must be maintained in proper working condition according to manufacturer's specifications. Idling shall be limited to five minutes or less in accordance with the In-Use Off-Road Diesel Vehicle Regulation as required by CARB. Clear signage regarding idling restrictions shall be placed at the entrances to the construction site.*
>
> *Portable equipment over 50 horsepower must have either a valid BAAQMD Permit to Operate (PTO) or a valid statewide Portable Equipment Registration Program (PERP) placard and sticker issued by CARB.*
>
> *Conformance with the foregoing requirements shall be included as notes and be confirmed through review and approval of grading plans by the City of Livermore Community Development Department.*

The foregoing revisions are for clarification purposes and do not change the conclusions of the Draft EIR.

4.3 Biological Resources

The first paragraph of the Existing Environmental Setting section on page 4.3-1 of the Draft EIR is hereby revised as follows:

> As discussed in the Project Description chapter of this EIR, ~~neither the SMP 38, nor~~ the Additional Annexation Only Parcels located east of SMP 40~~,~~ would not be developed as part of the proposed project. Accordingly, the following sections provide further details regarding the existing environmental setting and biological resources occurring only in relation to SMP 39 and SMP 40.

Page 4.3-2 of the Draft EIR is hereby revised as follows:

> As discussed above, development of ~~SMP 38, as well as~~ the four Additional Annexation Only Parcels~~,~~ is not proposed as part of the project. Therefore, the analysis included within this chapter is focused on the potential impacts to biological resources associated with the development of SMP 39 and SMP 40, as well as the off-site trail connection options, which would connect to the existing Arroyo Mocho Trail, located on the east side of Isabel Avenue/SR 84.

The first paragraph on page 4.3-25 of the Draft EIR is hereby revised as follows:

> As discussed above, ~~neither the SMP 38, nor~~ the Additional Annexation Only Parcels located east of SMP 40 would not be developed as part of the proposed project. Therefore, the analysis included within this chapter is focused on the potential impacts associated with the development of SMP 39 and SMP 40, as well as the off-site trail connection options, which would connect to the existing Arroyo Mocho Trail, located on the east side of Isabel Avenue/SR 84. The three trail connection options being considered and evaluated herein include Trail Connection Option 1 – At-Grade Crossing at Discovery Drive; Trail Connection Option 2 – Undercrossing at Isabel Bridge; and Trail Connection Option 3 – Overcrossing of Isabel Avenue/SR 84. Further detail of the trail connection options is provided in Chapter 3, Project Description, of this EIR.

The foregoing revisions are for clarification purposes and do not change the conclusions of the Draft EIR.

4.4 Cultural and Tribal Cultural Resources

The second paragraph of the Existing Environmental Setting section on pages 4.4-1 and 4.4-2 of the Draft EIR is hereby revised as follows:

> As discussed in the Project Description chapter of this EIR, ~~neither SMP 38, nor~~ the Additional Annexation Only Parcels located east of SMP 40 would not be developed as part of the proposed project. Accordingly, the following sections provide further details regarding the prehistoric overview, ethnographic overview, and the historic overview of the SMP 39 and 40 sites, as well as the SMP 39 and 40 sites' histories and current uses. In addition, a description of any identified cultural or tribal cultural resources associated with the project site is provided below.

The second paragraph of the SMP 39 Setting section on page 4.4-4 of the Draft EIR is hereby revised as follows:

> The SMP 39 site has been vacant or used for agricultural purposes since at least 1906. Currently, the site is composed of vacant land. The vicinity surrounding the site similarly consisted of vacant land until the mid-1960s. By the 1990s, the vicinity was developed for commercial, industrial, and municipal airport purposes, as well as a sand and gravel quarry located on an adjoining property south of the site. Currently, the site is surrounded by uses, including a paved shared-use path and the Livermore Municipal Airport to the north, across West Jack London Boulevard; the Oaks Business Park to the east and the Arroyo Mocho Trail and single-family residences further east, across Isabel Avenue/State Route (SR) 84; gravel quarries and industrial ponds associated with mining operations to the south; and ~~SMP 38,~~ Arroyo Mocho~~,~~ and industrial ponds to the west.

The foregoing revisions are for clarification purposes and do not change the conclusions of the Draft EIR.

4.5 Hydrology and Water Quality

The first paragraph of the Project Site and Surrounding Area Drainage section on page 4.5-2 of the Draft EIR is hereby revised as follows:

> The +/-~~217.04-acre~~ 105.34-acre project site consists of nine separate parcels located in unincorporated Alameda County: ~~SMP 38;~~ SMP 39; SMP 40, and four Annexation Only Parcels. However, development of ~~SMP 38, as well as~~ the four Annexation Only Parcels, is not proposed as part of the project. Therefore, the analysis included within this chapter is focused on the potential impacts associated with the development of SMP 39 and SMP 40, as well as the off-site trail connection options, which would connect to the existing Arroyo Mocho Trail, located on the east side of Isabel Avenue/State Route (SR) 84. The three trail connection options being considered and evaluated herein include Trail Connection Option 1 – At-Grade Crossing at Discovery Drive; Trail Connection Option 2 – Undercrossing at Isabel Bridge; and Trail Connection Option 3 – Overcrossing of Isabel Avenue/SR 84. Further detail of the trail connection options is provided in Chapter 3, Project Description, of this EIR.

Page 4.5-16 of the Draft EIR is hereby revised as follows:

> ### Alameda County Flood Control and Water Conservation District
> ACFCWCD was created in 1949, and plans, designs, constructs, and maintains Western Alameda County's flood control systems such as natural creeks, channels, levees, pump stations, dams, and reservoirs. The ACFCWCD also cares for the natural environment through public outreach and enforcement of pollution control regulations governing County

waterways. The ACFCWCD's updated Hydrology and Hydraulics Manual defines current practices in the hydrologic and hydraulic design of all flood control facilities in Alameda County that are subject to district approval. The ACFCWCD is divided into 10 active flood control zones based on discrete drainage boundaries, one for which Zone 7 is responsible that includes the cities of Dublin, Livermore, and Pleasanton and unincorporated areas of Alameda County. Zone 7 owns and manages more than 37 miles of engineered and natural channels throughout its service area, including a portion of Arroyo Mocho adjacent to SMP 40 and a channel bypass section to the east of SMP 39. Zone 7 is committed to deliver safe, reliable, efficient, and sustainable water and flood protection services.

Pages 4.5-17 and 4.5-18 of the Draft EIR are hereby revised as follows:

Zone 7 Stream ~~Maintenance~~ Management Master Plan

The 2006 Zone 7 Stream ~~Maintenance~~ Management Master Plan (SMMP), which updates the Zone 7's 1966 Flood Control Master Plan, identifies 45 conceptual projects across 12 distinct reaches, which are delineated by the geography of the Alameda Creek watershed and its subbasins within Zone 7's service area. Zone 7 established a specific emphasis for each reach depending on that reach's role in providing flood protection to the valley and its relation to other resource areas such as water supply, habitat, and recreation. The 2006 SMMP includes a recommended project to divert stormwater in a major storm event within the Arroyo Mocho channel, referred to in the SMMP as the Arroyo Mocho Bypass and Regional Storage at Chain of Lakes (Project Number R.6-2). Because widening of the existing Arroyo Mocho in this area is likely to be infeasible, the bypass and regional storage at Chain of Lakes are considered a viable alternative to provide the 100-year flood protection. A major component of the approach to regional flood protection includes detention of flood water in the Chain of Lakes, which requires diversion of flood waters from the Arroyo Mocho during high flow events. The project involves routing peak flows into a bypass channel running within the western boundary of the SMP 40 property, located east of Lake E, ultimately traveling within the southern boundaries of the SMP ~~38 and~~ 39 ~~properties~~ property, located north of Lakes F and G, and eventually connecting to the Chain of Lakes for regional storage as shown on Figure 4.5-4. Zone 7 has informed the City that they are unsure whether the bypass will proceed and will be conducting further analysis through a system-wide evaluation as part of Phase 2a of the Flood Management Plan, the update to the 2006 SMMP.

Page 4.5-24 of the Draft EIR is hereby revised as follows:

SMP 39

Stormwater on the SMP 39 site would be collected through an on-site storm drainage system, which would be required to incorporate LID treatment features, before being routed to the existing drainage system located within West Jack London Boulevard. The drainage system for the eastern half of the site would convey flows to the new stormwater quality and hydromodification controls that would be provided by a proposed bioretention planter in the expanded right-of-way of West Jack London Boulevard. Following treatment and hydromodification by the bioretention planter, stormwater flows would be conveyed ~~connect~~ to multiple existing storm drains within West Jack London Boulevard, which would discharge north into the existing modified channels at the Livermore Municipal Airport, before ultimately discharging at the existing large drop structure under West Jack London Boulevard, west of the Livermore Municipal Airport.

~~The drainage system for~~ Following treatment and hydromodification by the bioretention planter, stormwater flows from the remaining the western half of the site would be routed through a three-acre-foot detention pond, which would ~~be required to incorporate LID treatment features~~ serve to detain high-flow runoff. The outflow from the detention pond

would flow north through an 18-inch storm drain and 24-inch storm drain within West Jack London Boulevard, before flowing into an existing modified channel located immediately north, along the northern edge of the roadway, before ultimately discharging at the existing large drop structure under West Jack London Boulevard, west of the Livermore Municipal Airport.

Page 4.5-25 of the Draft EIR is hereby revised as follows:

SMP 40

As shown on the Preliminary Stormwater Quality Control Plan prepared for SMP 40 (see Figure 4.5-5), stormwater on the SMP 40 site would be collected through an on-site storm drainage system, which would include an underground detention storage system comprised of three parallel 96-inch-wide, 1,000-foot-long corrugated metal pipes. The underground detention storage system would connect to the existing Oak Detention Basin, located to the north of the site, where water would be treated in accordance with the regional C.3 standards.

In addition, the SMP 40 storm drainage system would include installation of at least two Contech Engineered Solutions Vortech Systems Hydrodynamic Separators to provide pretreatment and trash capture, prior to conveyance of flows to the corrugated metal pipes. The Vortech Systems Hydrodynamic Separators meet emerging stormwater treatment technologies (TAPE) certification standards and would be installed in areas proposed for disturbance as part of development of SMP 40.

Outflow from the Oak Detention Basin would flow north through an existing 24-inch storm drain line to West Jack London Boulevard, where runoff would be conveyed north into the existing modified channels at the Livermore Municipal Airport, before ultimately discharging at the existing large drop structure under West Jack London Boulevard, west of the Livermore Municipal Airport.

The proposed detention system would include an overflow connection to Arroyo Mocho to the south. A flap gate would be installed on the outlet to prevent water from Arroyo Mocho to backflow into the underground storage system.

Page 4.5-27 of the Draft EIR is hereby revised as follows:

It should also be noted that given the nature of the off-site trail connection options, pollutants such as oil and grease from vehicle leaks, traffic, and maintenance activities are not anticipated to be carried into storm drainage systems, as the trail would be used for bicycle and pedestrian activities only. Although airborne contaminants have the potential to settle on impervious surfaces between storm events, which can eventually result in high levels of contaminants in runoff even from surfaces not used by motorized vehicles, as demonstrated throughout this chapter, the proposed project would be subject to applicable regulations and standards, as well as the mitigation measures set forth herein. Compliance with the aforementioned requirements would ensure runoff from the off-site trail connection options is directed to stormwater treatment features prior to entering the City's storm drainage system.

Page 4.5-31 of the Draft EIR is hereby revised as follows:

Furthermore, as discussed above, the proposed project would be required to implement BMPs, and a site-specific SWPPP would be prepared for proposed project. As designed, the proposed stormwater systems would be sized to provide hydromodification controls sufficient to provide adequate flow control. For example, the Bay Area Hydrology Model

(BAHM) calculations for the project demonstrate compliance with regulations by showing that the post-project discharge rates and durations for the selected hydromodification control structure would not exceed the pre-project discharge rates and durations from 10 percent of the pre-project two-year peak flow up to the pre-project 10-year peak flow. A Qualified SWPPP Practitioner (QSP) would ensure compliance with the SWPPP through regular monitoring and visual inspections, and would amend the SWPPP and revise project BMPs, as determined necessary through field inspections, to protect against substantial erosion or siltation on- or off-site.

The foregoing revisions are for clarification purposes and do not change the conclusions of the Draft EIR.

4.6 Noise

Figure 4.6-3 on page 4.6-6 of the Draft EIR is hereby replaced as presented at the end of this chapter.

The first paragraph on page 4.6-7 of the Draft EIR is hereby revised as follows:

Furthermore, the Livermore Municipal ALUCP includes noise contours established for the purpose of evaluating the noise compatibility of land use development in the Livermore Municipal Airport airport influence area (AIA). These noise contours are depicted on Figure 4.6-3 (Figure 3-2 in the ALUCP). The locations of ~~SMP 38,~~ SMP 39, SMP 40, and the Additional Annexation Only Parcels within the noise contours are outlined on Figure 4.6-3.

The first paragraph of the Method of Analysis section on page 4.6-16 of the Draft EIR is hereby revised as follows:

As discussed in the Project Description chapter of this EIR, the ~~SMP 38 site and the~~ Additional Annexation Only Parcels are not currently proposed for development. Accordingly, this chapter includes an analysis of impacts associated with development of only the SMP 39 and SMP 40 sites, as well as the off-site trail connections. Below are descriptions of the methodologies used in the Environmental Noise Studies prepared for the proposed project to measure background and ambient noise and estimate future traffic noise, construction noise, and vibration associated with development of SMP 39 and SMP 40. Further modeling details and calculations are provided in Appendix J and Appendix K to this EIR. The results of the noise and vibration impact analyses were compared to the standards of significance discussed above in order to determine the associated level of impact.

The Traffic Noise Levels section on page 4.6-17 of the Draft EIR is hereby revised as follows:

Traffic Noise Levels

To estimate traffic noise level increases as a result of development of the proposed project, Salter relied on traffic data provided by TJKM. Specifically, for the SMP 39 noise analysis, Salter relied on the Traffic Impact Analysis (April 4, 2023) prepared by TJKM, and for the SMP 40 noise analysis, Salter relied on traffic volumes provided by TJKM in ~~March 2022~~ December 2023. Salter also relied on additional details provided by the applicant regarding the potential hourly distribution of trucks at SMP 39 and SMP 40 throughout the 24-hour operation period. As discussed in Chapter 4.8, Transportation, of this EIR, TJKM's Traffic Impact Analysis determined that development of SMP 39 could generate approximately 3,596 daily vehicle trips and development of SMP 40 could generate approximately 1,062 daily vehicle trips. Based on supplemental information provided by TJKM, Salter assumed that 20 percent of the daily vehicle trips would be heavy-duty truck trips, which would result

in 719 truck trips per day associated with SMP 39 and 213 truck trips per day associated with SMP 40. According to the Environmental Noise Study prepared by Salter, the increase in cumulative traffic noise levels associated with SMP 39 and SMP 40 combined was based on the peak hour traffic volumes from TJKM for the cumulative without project and cumulative with project scenarios.

The assumptions related to truck trips associated with SMP 39 loading dock activity noise on page 4.6-18 of the Draft EIR are hereby revised as follows:

- Based on the project-specific traffic data provided by TJKM, Salter assumed the 719 daily truck trips during a 24-hour period of continuous 24/7 operations at SMP 39 would be distributed as follows:
  - ~~14~~ 10.8 percent of trips would occur during the AM peak hours between 7:00 AM to 9:00 AM;
  - ~~58~~ 61 percent of trips would occur between 9:00 AM to 4:00 PM;
  - ~~16~~ 10.8 percent of trips would occur during the PM peak hours between 4:00 PM to 6:00 PM;
  - ~~10~~ 3.9 percent of trips would occur between 6:00 PM to 10:00 PM; and
  - ~~Two~~ 13.4 percent of trips would occur between 10:00 PM to 7:00 AM.

The assumptions related to truck trips associated with SMP 40 loading dock activity noise on page 4.6-19 of the Draft EIR are hereby revised as follows:

- Based on the project-specific traffic data provided by TJKM, Salter assumed the 213 daily vehicle trips for SMP 40 would be distributed as follows:
  - ~~14~~ 9.4 percent of trips would occur during the AM peak hours between 7:00 AM to 9:00 AM;
  - ~~60~~ 42.7 percent of trips would occur between 9:00 AM to 4:00 PM;
  - ~~14~~ 12.7 percent of trips would occur during the PM peak hours between 4:00 PM to 6:00 PM;
  - ~~10~~ 16.4 percent of trips would occur between 6:00 PM to 10:00 PM; and
  - ~~Two~~ 18.8 percent of trips would occur between 10:00 PM to 7:00 AM.

The following text is added before the last paragraph on page 4.6-19, as follows:

Based on the results of the operation noise measurements taken at a local representative loading dock site, Salter estimated that 40 truck trips would occur during the nighttime within a nine-hour timeframe at SMP 39. Salter's calculations assumed the backup alarms would have a source height of approximately 2.5 feet from grade. Salter's calculations included the assumption that the proposed project would incorporate 6-foot-tall and 10-foot-tall berms. Salter estimated that the proposed berms would reduce intermittent noise levels (such as those produced by backup alarms) by up to six dB at the closest residences. Furthermore, to estimate the L_{50} for daytime and nighttime hours at the SMP 39 site, Salter included all of the assumptions outlined above for SMP 39 and assumed that the truck backup alarms would occur more than 15 minutes per hour during the daytime and less than 15 minutes per hour during the nighttime.

The last paragraph on page 4.6-19 is hereby revised as follows:

Based on the results of the operation noise measurements taken at a local representative loading dock site, Salter estimated that ~~four~~ 40 truck trips would occur during the nighttime within a nine-hour timeframe at SMP 40. Salter's calculations assumed the backup alarms would have a source height of approximately 2.5 feet from grade. Salter's calculations

incorporated the proposed 6-foot-tall berm on the northeast corner of SMP 40 and the 10-foot-tall screening wall along the eastern property line of SMP 40. Salter estimated that the proposed berms would reduce intermittent noise levels (such as those produced by backup alarms) by up to six dB at the closest residences.

The assumptions related to employee trips associated with SMP 39 loading dock activity noise on page 4.6-20 of the Draft EIR are hereby revised as follows:

- Based on the project-specific traffic data provided by TJKM, Salter assumed the employee vehicle trip distribution for SMP 39 would be as follows:
  - ~~14~~ 10.8 percent of trips would occur during the AM peak hours between 7:00 AM to 9:00 AM;
  - ~~58~~ 61 percent of trips would occur between 9:00 AM to 4:00 PM;
  - ~~16~~ 10.8 percent of trips would occur during the PM peak hours between 4:00 PM to 6:00 PM;
  - ~~10~~ 3.9 percent of trips would occur between 6:00 PM to 10:00 PM; and
  - ~~Two~~ 13.4 percent of trips would occur between 10:00 PM to 7:00 AM.

The assumptions related to employee trips associated with SMP 40 loading dock activity noise on page 4.6-20 of the Draft EIR are hereby revised as follows:

- Based on the project-specific traffic data provided by TJKM, Salter assumed the employee vehicle trip distribution for SMP 40 would be as follows:
  - ~~14~~ 9.4 percent of trips would occur during the AM peak hours between 7:00 AM to 9:00 AM;
  - ~~60~~ 42.7 percent of trips would occur between 9:00 AM to 4:00 PM;
  - ~~14~~ 12.7 percent of trips would occur during the PM peak hours between 4:00 PM to 6:00 PM;
  - ~~10~~ 16.4 percent of trips would occur between 6:00 PM to 10:00 PM; and
  - ~~Two~~ 18.8 percent of trips would occur between 10:00 PM to 7:00 AM.

The first paragraph of the Project-Specific Impacts and Mitigation Measures on page 4.6-21 of the Draft EIR is hereby revised as follows:

The following discussion of impacts related to noise is based on implementation of the proposed project in comparison with the baseline and standards of significance identified above. It should be noted that development of the Additional Annexation Only Parcels ~~or the SMP 38 site~~ is not proposed as part of the project. As such, the discussions and mitigation measures presented below only apply to the SMP 39 and SMP 40 sites, as well as the off-site trail connection options, unless otherwise stated.

Mitigation Measure 4.6-1 on page 4.6-24 of the Draft EIR is hereby revised as follows:

4.6-1 *Prior to issuance of a grading permit for the chosen off-site trail connection option, the project applicant shall prepare a construction noise management plan that identifies measures to be taken to minimize construction noise on surrounding sensitive land uses and include specific noise management measures to be included within the plans and specifications for the trail connection option, subject to review and approval by the City of Livermore Community Development Department. The project applicant shall demonstrate, to the satisfaction of the City that the project complies with the following:*

- *All heavy construction equipment used on the proposed project shall be maintained in good operating condition, with all internal combustion, engine-driven equipment fitted with intake and exhaust mufflers that are in good condition.*
- *All mobile or fixed noise producing equipment used on the proposed project that is regulated for noise output by a local, state, or federal agency shall comply with such regulations while ~~in the source of~~ involved with a project activity.*
- *Where feasible, electrically-powered equipment shall be used instead of pneumatic or internal combustion powered equipment.*
- *All stationary noise-generating equipment shall be located as far away as possible from the nearest residential uses.*
- *Signs prohibiting unnecessary idling of internal combustion engines shall be posted at entrances to construction sites and at construction equipment staging areas.*
- *The use of noise-producing signals, including horns, whistles, alarms and bells shall be for safety warning purposes only.*
- *The use of temporary sound barriers shall be incorporated along the outer work area of the construction site, east of Isabel Avenue/SR 84. Barrier height and location(s) shall be determined by a qualified acoustical engineer to ensure that the resultant construction noise levels at the nearest residence would meet the applicable standard. The sound barrier fencing shall consist of 0.5-inch plywood or minimum STC 27 sound curtains placed to shield nearby sensitive receptors. The plywood barrier shall be free from gaps, openings, or penetrations to ensure maximum performance.*

Table 4.6-7 on page 4.6-25 of the Draft EIR is hereby revised as shown below.

Table 4.6-7
Project Operational Noise Levels at Noise Sensitive Land Uses (CNEL/DNL, dBA)

Site	Nearby Receiving Locations	Existing Noise Level at Receiver	Loading Dock Activity Noise Level at Receiver	Employee Vehicle Circulation Noise Level at Receiver	Existing Noise Level Plus Project Noise Level	Change
SMP 39	~~East Property Line (Office and Warehouses Across Discovery Drive~~ Residences across Isabel Avenue~~)~~	~~76~~ 67	~~50~~ 61	32	~~76~~ 68	~~<~~ +1
SMP 40	East Property Line (Residences Across Isabel Avenue/SR 84)	67	~~52~~ 60	~~29~~ 32	~~67~~ 69	~~<1~~ +2
	North Property Line (Neighboring warehouse)	65	~~62~~ 65	~~34~~ 36	~~67~~ 68	~~+2~~ +3

Source: Salter, 2023

The discussion on pages 4.6-26 to 4.6-27 of the Draft EIR is hereby revised as follows:

Existing ~~Industrial~~ Residential Uses Nearest SMP 39

As presented in Table 4.6-7, the existing ambient noise level at the nearest existing ~~industrial~~ residential uses to the SMP 39 site, which would be the residences across Isabel Avenue, is ~~76~~ 67 dB, which, according to General Plan Policy N-1.1.P4, is conditionally acceptable for ~~industrial~~ residential uses. The noise-generating sources associated with operation of SMP 39 at the nearest ~~industrial~~ residential uses would result in a maximum noise level of approximately ~~76~~ 68 dBA DNL, which would remain within the conditionally acceptable noise level range for ~~industrial~~ residential uses, and would not increase the existing ambient level to a normally unacceptable level. In addition, based on the applicable noise level increase significance criterion of 3 dB or less, the calculated increase in DNL at the industrial use closest to the property line of SMP 39 of ~~less than 1~~ approximately 1 dB, as presented in Table 4.6-7, would be considered less than significant.

As previously discussed, in addition to the City's noise standards for DNL, as outlined in General Plan Policy N-1.1.P~~1~~4, the City's General Plan Policy N-1.5.P1 contains day and nighttime noise standards for L_{50} at sensitive land uses in proximity to industrial uses. ~~It should be noted that due to the substantial distance between SMP 39 and the existing residences, Salter did not estimate daytime and nighttime L_{50} for SMP 39, because the operational L_{50} noise levels are assumed to be below the threshold of 50 dBA during the daytime and 55 dBA during the nighttime for residential uses.~~ Table 4.6-8 summarizes the estimated daytime and nighttime L_{50} associated with operation of SMP 39 at the nearest residential uses.

Table 4.6-8
SMP 39 Operational L_{50} Noise Levels (dBA)

Time of Day	Estimated L_{50} Value	Allowable L_{50} Value
Daytime (7:00 AM to 10:00 PM)	40 dBA	55 dBA
Nighttime (10:00 PM to 7:00 AM)	35 dBA	50 dBA

Source: Salter, 2023.

Backup alarms associated with operations at the SMP 39 site during the nighttime are predicted to occur less than 15 minutes per hour. Therefore, consistent with General Plan Policy N-1.5.P2, the criterion can increase by 5.0 dBA. Because backup alarms would occur more than 15 minutes per hour during the daytime, the allowable L_{50} value for daytime noise levels would remain 55 dBA.

As presented in Table 4.6-8, Salter estimated the combined total operational L_{50} noise levels associated with SMP 39 at the nearest residential uses would be 40 dBA during the daytime and 35 dBA during the nighttime. Although backup alarms could be audible at the residences, the project would not exceed the L_{50} threshold of 55 dBA during the daytime or 50 dBA during nighttime hours. Furthermore, quieter backup alarms (also known as "squawkers") are becoming more prevalent in delivery vehicles for various large e-commerce websites and other vendors and may be used by trucking operators visiting the project site in the future. Therefore, backup alarm noise has the potential to be reduced further from what is anticipated and presented herein.

Overall, operation of SMP 39 would not result in noise levels in excess of the applicable City General Plan noise standards at the nearest residential receptor.

Existing Residential Uses Nearest SMP 40

As presented in Table 4.6-7, the existing ambient noise level at the nearest existing residences to the SMP 40 site is 67 dB, which, according to General Plan Policy N-1.1.P4, is conditionally acceptable for residential uses. The noise-generating sources associated with operation of SMP 40 at the nearest residential uses would result in a maximum noise

level of approximately ~~67~~ 69 dBA DNL, which would remain within the conditionally acceptable noise level range for residential uses, and would not increase the existing ambient level to a normally unacceptable level. In addition, based on the applicable noise level increase significance criterion of 3 dB or less, the calculated increase in DNL at the residential use closest to the property line of SMP 40 of ~~less than 1 dB~~ approximately 2 dB, as presented in Table 4.6-7, would be considered less than significant.

In addition to the City's noise standards for DNL, as outlined in General Plan Policy N-1.1.P1, the City's General Plan Policy N-1.5.P1 contains day and nighttime noise standards for L_{50} at sensitive land uses in proximity to industrial uses. Table 4.6-~~8~~9 summarizes the estimated daytime and nighttime L_{50} associated with operation of SMP 40 at the nearest residential uses.

Table 4.6-~~8~~9
SMP 40 Operational L_{50} Noise Levels (dBA)

Time of Day	Estimated L_{50} Value	Allowable L_{50} Value
Daytime (7:00 AM to 10:00 PM)	50 dBA	55 dBA
Nighttime (10:00 PM to 7:00 AM)	~~35~~ 45 dBA	50 dBA

Source: Salter, 2023.

Backup alarms associated with operations at the SMP 40 site during the nighttime are predicted to occur less than 15 minutes per hour; therefore, consistent with General Plan Policy N-1.5.P2, the criterion can increase by 5 dBA and the allowable L_{50} value for nighttime noise levels is increased from 45 dBA to 50 dBA. Because backup alarms would occur more than 15 minutes per hour during the daytime, the allowable L_{50} value for daytime noise levels would remain 55 dBA.

As presented in Table 4.6-~~8~~9, Salter estimated the combined total operational L_{50} noise levels associated with SMP 40 at the nearest residential uses would be 50 dBA during the daytime and ~~35~~ 45 dBA during the nighttime. Although backup alarms could be audible from the residences, the project would not exceed the L_{50} threshold of 55 dBA during the daytime or 50 dBA during nighttime hours. Furthermore, quieter backup alarms (aka "squawkers") are becoming more prevalent in delivery vehicles for various large e-commerce websites, and other vendors and may be used by trucking operators visiting the project site in the future; therefore, beeper noise has the potential to be reduced further from what is anticipated and presented herein.

Overall, operation of SMP 40 would not result in a combined noise level in excess of the applicable City General Plan noise standards at the nearest residential receptor during project operations.

Existing Industrial Uses Nearest SMP 40

As presented in Table 4.6-7, the existing ambient noise level at the nearest existing industrial uses to the SMP 40 site is 65 dB, which, according to General Plan Policy N-1.1.P4, is within the normally acceptable range for industrial uses. The noise-generating sources associated with operation of SMP 40 at the nearest industrial uses would result in a maximum noise level of approximately ~~67~~ 68 dBA DNL, which would remain within the normally acceptable noise level range for industrial uses. In addition, based on the applicable noise level increase significance criterion of 3 dB or less, the calculated increase in DNL at the industrial use closest to the property line of SMP 40 of ~~2~~ 3 dB, as presented in Table 4.6-7, would be considered less than significant.

Table 4.6-9 and the associated references on page 4.6-28 of the Draft EIR are hereby revised as shown below.

Project construction may include grading, excavation, paving, and building construction activities that would involve the use of heavy equipment such as concrete saws and rolling stock equipment (tracked vehicles, compactors, etc.). Heavy equipment would also be used during construction activities associated with the off-site trail connection. Use of heavy equipment associated with such would generate localized vibration in the immediate vicinity of the project site and off-site trail connection area. The aforementioned construction activities would have the potential to result in varying degrees of temporary ground vibration depending on the specific construction equipment used and operations involved. Project construction would use typical construction equipment and would not require activities or equipment that would be significant sources of vibration such as pile driving or blasting. Construction vibration levels associated with typical construction equipment at a reference distance of 50 feet are presented in Table 4.6-~~9~~10 below.

Table 4.6-~~9~~10
Vibration Levels for Various Construction Equipment

Type of Equipment	PPV at 50 feet (in/sec)
Vibratory Roller	0.049
Hydraulic Breaker	0.03 to 0.08
Large Bulldozer	0.03
Loaded Trucks	0.03
Excavator	0.03
Caisson/pier drilling	0.03
Jackhammer	0.01
Small Bulldozer	0.001
Crane, Forklift, Bobcat	No significant vibration

Source: Salter, 2023.

Based on the vibration levels shown in Table 4.6-~~9~~10, construction equipment anticipated for the proposed project would result in vibration levels less than the 1.0 PPV for transient events and 0.50 PPV for continuous events threshold of damage to buildings, as presented in Table 4.6-5, at distances of 50 feet. The nearest sensitive receptors include residences to the east, across Isabel Avenue/SR 84, which are located approximately 884 feet from the closest proposed building at the SMP 40 site. Therefore, the proposed project would not cause structural damage to structures on adjacent properties. In addition, project construction is expected to result in vibration levels within the barely/slightly perceptible range, as presented in Table 4.6-4. Therefore, vibration associated with construction of the proposed project would not cause annoyance to sensitive receptors.

The foregoing revisions are for clarification purposes and do not change the conclusions of the Draft EIR.

It should be noted that the above revisions are based on the revised Environmental Noise Study for SMP 39 and the revised Environmental Noise Study for SMP 40, which are provided as Appendices C and D, respectively, to this Final EIR.

4.7 Public Services, Utilities, and Service Systems

The second paragraph of the Existing Environmental Setting section on pages 4.7-1 and 4.7-2 of the Draft EIR is hereby revised as follows:

As discussed in the Project Description chapter of this EIR, ~~neither the SMP 38, nor~~ the Additional Annexation Only Parcels located east of SMP 40~~,~~ would not be developed as part of the proposed project. Accordingly, the following sections provide further details regarding the existing environmental setting occurring in relation to SMP 39 and SMP 40.

The fourth paragraph on page 4.7-5 of the Draft EIR is hereby revised as follows:

> According to the City of Livermore Water Master Plan, LMW's water service area consists of three water service area zones within the City's urban growth boundary (UGB): the Zone 1 Water Service Area on the west side of the City, which encompasses 2,530 acres, and the Zone 2 and Zone 3 Water Service Areas on the east side of the City, which encompass 5,740 acres. In total, the water service area zones encompass approximately 8,270 acres, or about 13 square miles. As shown in Figure 4.7-1, the SMP ~~38,~~ 39~~,~~ and 40 sites are within the Zone 1 Water Service Area.

The first paragraph of the Method of Analysis section on page 4.7-19 of the Draft EIR is hereby revised as follows:

> As noted above and discussed in the Project Description chapter of this EIR, ~~neither SMP 38 nor~~ the Additional Annexation Only Parcels would <u>not</u> be developed as part of the proposed project. Accordingly, the analysis within this chapter focuses on the evaluation of potential impacts related to public services, utilities, and service systems associated with development of SMP 39 and SMP 40.

The first paragraph of the Project-Specific Impacts and Mitigation Measures on page 4.7-22 of the Draft EIR is hereby revised as follows:

> As previously discussed~~, neither SMP 38 nor~~ the Additional Annexation Only Parcels would <u>not</u> be developed as part of the proposed project. The proposed project would consist of buildout of SMP 39 and SMP 40, as well as construction of a new off-site trail connection to the existing Arroyo Mocho Trail. However, the off-site trail connection would not necessitate additional provision of public services or utilities. Accordingly, the following discussion of impacts is based on development of SMP 39 and SMP 40 in comparison with the standards of significance identified above.

Impact 4.7-4 on pages 4.7-29 and 4.7-30 of the Draft EIR is hereby revised as follows:

> Based on the WSA, the total projected water supplies determined to be available for the proposed project and other development served by ~~Zone 7 Water Agency~~ <u>LMW</u>, as well as the anticipated demand, during normal, single dry, and multiple dry years during a 20-year projection is summarized in Table 4.7-8. The WSA determined anticipated demand within the LMW service area through incorporation of projections from the City's 2020 UWMP, which included the expected buildout of the Livermore General Plan planning area, as well as Isabel Neighborhood Specific Plan. As detailed in the City's 2020 UWMP, projections are developed based on expected retailer demands on Zone 7 Water Agency from an analysis conducted by Zone 7 Water Agency. Projected retailer demands were based on 2020 deliveries, retailer delivery requests for 2022 to 2025, and projected buildout demands. According to the WSA, in 2020, the City's potable and raw water demand was approximately 2,134 million gallons per year (mgy), or 6,549 AFY. The City is anticipated to be built out by 2040, when potable and raw water demands are projected to reach 2,263 mgy (6,945 AFY). The growth in potable and raw water demands equates to six percent, which reflects the City's status as being mostly built out already. <u>The projected water demands in the City's 2020 UWMP did not include the projected water demands for the proposed project. As shown in Table 4.7-4, the additional potable water demand for the proposed project is projected to be 88 AFY. The additional demand represents an approximately 1.3 percent increase in the City's projected potable water demands, which is considered to be well within the margin of error for water supply planning purposes. Furthermore, Zone 7's 2020 UWMP indicates that Zone 7 would have a supply surplus greater than the 88 AFY generated by the proposed project in all hydrologic</u>

conditions through 2045. Therefore, as shown in Table 4.7-8, water demand within the LMW's service area (including the proposed project) is not expected to exceed supplies in any year or hydrologic condition.

Table 4.7-8
Potable and Raw Water Supply and Demand During Normal, Single Dry, and Multiple Dry Years (AFY) in the LMW Service Area

Hydrologic Condition	2025	2030	2035	2040	2045
Normal Year					
Potable and Raw Water Supply[1]	6,533	6,702	6,868	7,033	7,033
Total Water Demand[2]	6,533	6,702	6,868	7,033	7,033
Shortfall?	**NO**	**NO**	**NO**	**NO**	**NO**
Single Dry Year					
Potable and Raw Water Supply[1]	6,533	6,702	6,868	7,033	7,033
Total Water Demand[2]	6,533	6,702	6,868	7,033	7,033
Shortfall?	**NO**	**NO**	**NO**	**NO**	**NO**
Multiple Dry Year 1					
Potable and Raw Water Supply[1]	6,533	6,702	6,868	7,033	7,033
Total Water Demand[2]	6,533	6,702	6,868	7,033	7,033
Shortfall?	**NO**	**NO**	**NO**	**NO**	**NO**
Multiple Dry Year 2					
Potable and Raw Water Supply[1]	6,567	6,735	6,901	7,033	7,033
Total Water Demand[2]	6,567	6,735	6,901	7,033	7,033
Shortfall?	**NO**	**NO**	**NO**	**NO**	**NO**
Multiple Dry Year 3					
Potable and Raw Water Supply[1]	6,601	6,768	6,934	7,033	7,033
Total Water Demand[2]	6,601	6,768	6,934	7,033	7,033
Shortfall?	**NO**	**NO**	**NO**	**NO**	**NO**
Multiple Dry Year 4					
Potable and Raw Water Supply[1]	6,634	6,801	6,967	7,033	7,033
Total Water Demand[2]	6,634	6,801	6,967	7,033	7,033
Shortfall?	**NO**	**NO**	**NO**	**NO**	**NO**
Multiple Dry Year 5					
Potable and Raw Water Supply[1]	6,668	6,834	7,000	7,033	7,033
Total Water Demand[2]	6,668	6,834	7,000	7,033	7,033
Shortfall?	**NO**	**NO**	**NO**	**NO**	**NO**

[1] ~~Based on excess supplies presented in Zone 7 Water Agency's 2020 UWMP and the relatively small demand from the proposed project,~~ Because the potable water demand associated with the proposed project represents less than a 1.3 percent increase from the demands evaluated in the City's 2020 UWMP, and because the Zone 7 2020 UWMP shows a supply surplus in all hydrologic conditions through 2045, the City's ~~Zone 7 Water Agency's~~ supplies are assumed to equal the LMW service area projected demands, including the proposed project.

[2] Equals the City's total projected potable and raw water demand (as shown in Table 4.7-3) with the additional potable water demand for the proposed project (as shown in Table 4.7-4) (see also Tables 4-2 and 4-4 of the WSA).

Source: West Yost Associates, 2023.

~~As shown in Table 4.7-8, water demand within the LMW's service area is not expected to exceed supplies in any year or hydrologic condition.~~ In addition, the WSA determined that the recycled water demand associated with the proposed project would be approximately 21 AFY, or about one percent of the City's annual projected recycled water demand through 2045, which would, similarly, not exceed anticipated recycled water supplies (see Table 4.7-4). Given the high reliability of the City's recycled water supply and the relatively small recycled water demand associated with the proposed project, the WSA concluded

the City would be capable of meeting the recycled water demand associated with the project under all hydrologic conditions.

Figure 4.7-1 on page 4.7-6 of the Draft EIR is hereby replaced as presented at the end of this chapter.

The foregoing revisions are for clarification purposes and do not change the conclusions of the Draft EIR.

4.8 Transportation

The first paragraph of the Method of Analysis section on page 4.8-15 of the Draft EIR is hereby revised as follows:

As noted previously, because ~~the SMP 38 site and~~ the Additional Annexation Only Parcels are not currently proposed for development, this chapter includes an analysis of impacts associated with development of the SMP 39 and SMP 40 sites, as well as the off-site trail connections. The information contained within this chapter is primarily based on the TIA prepared for the proposed project by TJKM Transportation Consultants (see Appendix N of this EIR), particularly the analysis of bicycle, pedestrian, and transit facilities, as well as VMT. It should be noted that the TIA also includes an analysis of consistency with City plans and standards, including LOS; however, because such an analysis is not within the scope of CEQA, the details of which are not presented in this chapter. Please refer to Appendix N for more details. Further details regarding the methodology used in the TIA for the CEQA analysis presented within this chapter is presented below.

The first paragraph of the Project-Specific Impacts and Mitigation Measures section on page 4.8-16 of the Draft EIR is hereby revised as follows:

The following discussion of impacts related to transportation is based on implementation of the proposed project in comparison to the existing conditions and the standards of significance presented above. It should be noted that development of the Additional Annexation Only Parcels ~~or the SMP 38 site~~ is not proposed as part of the proposed project. As such, the discussions and mitigation measures presented below only apply to the SMP 39 and SMP 40 sites, as well as the off-site trail connection options, unless otherwise stated.

The foregoing revisions are for clarification purposes and do not change the conclusions of the Draft EIR.

6 Alternatives

The No Project (No Build) Alternative section on pages 6-10 and 6-11 of the Draft EIR is hereby revised as follows:

A number of approvals would be required for development of SMP 39 and SMP 40 under the proposed project, including General Plan Amendments, Pre-zoning and Annexation, Zoning Map Amendments/Planned Development, Vesting Tentative Subdivision Maps, Pre-Annexation Agreements, and Development Agreements. The proposed project includes an SOI Amendment to include ~~SMP 38 and~~ SMP 39 within the City of Livermore SOI. None of the proposed entitlements for SMP 39 or SMP 40 would be required under the No Project (No Build) Alternative. Similarly, entitlements for ~~SMP 38,~~ the Additional Annexation Only Parcels~~,~~ or any off-site improvements that would be required under the proposed project would not be required under the No Project (No Build) Alternative.

The first paragraph of the No Project (Maximum Allowable Operations) Alternative section on page 6-12 of the Draft EIR is hereby revised as follows:

> Under the No Project (Maximum Allowable Operations) Alternative, SMP 39 and SMP 40 would be mined as allowed under the current surface mining permits previously approved for the sites by Alameda County. ~~For the purposes of this alternatives analysis, the assumption was made that new activities would not occur at the SMP 38 site, similar to the analysis in the EIR, though it is acknowledged that mining could also occur on SMP 38 under current zoning. Similarly, because~~ Because the current mining operations permitted on SMP 40 do not extend to allow mining operations to occur on the Additional Annexation Only Parcels, and the likelihood for any future development on the Additional Annexation Only Parcels is low due to physical constraints to development present on the parcels, the parcels would still not be considered for mining under the Alternative. Thus, the analysis of the No Project (Maximum Allowable Operations) Alternative is focused on the potential impacts associated with the existing allowed mining operation on the SMP 39 and SMP 40 sites. It should further be noted that the proposed off-site trail connections are assumed not to occur under the No Project (Maximum Allowable Operations) Alternative.

The foregoing revisions are for clarification purposes and do not change the conclusions of the Draft EIR.

Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
4.2-1 Conflict with or obstruct implementation of the applicable air quality plan during project construction.	S	*4.2-1(a) Prior to approval of any Improvement Plans, the project applicant shall provide proof of compliance with the following to the satisfaction of the City of Livermore Community Development Department:* *The project applicant shall show on the plans via notation that the contractor shall ensure that the heavy-duty off-road vehicles (50 horsepower or more) to be used in the construction of all project components (i.e., construction of SMP 39, SMP 40, and the chosen off-site trail connection option), including owned, leased, and subcontractor vehicles, shall be a combination of engine Tier 3 or Tier 4 off-road construction equipment, or hybrid, electric, or alternatively fueled equipment (or any combination of the above), sufficient to achieve a fleet-wide average reduction in construction-related ROG and NO_X emissions to below the applicable BAAQMD thresholds of significance (54 lbs/day). For instance, the emissions presented in Table 4.2-8 were achieved by requiring all equipment used during construction to be engine Tier 4 final.* *In addition, all off-road equipment operating at the construction site must be maintained in proper working condition according to manufacturer's specifications. Idling shall be limited to five minutes or less in accordance with the In-Use Off-Road Diesel Vehicle Regulation as required by CARB. Clear signage regarding idling restrictions shall be placed at the entrances to the construction site.*	LS

Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		Portable equipment over 50 horsepower must have either a valid BAAQMD Permit to Operate (PTO) or a valid statewide Portable Equipment Registration Program (PERP) placard and sticker issued by CARB. *Conformance with the foregoing requirements shall be included as notes and be confirmed through review and approval of grading plans by the City of Livermore Community Development Department.*	
4.6-1 Generation of a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	S	*4.6-1 Prior to issuance of a grading permit for the chosen off-site trail connection option, the project applicant shall prepare a construction noise management plan that identifies measures to be taken to minimize construction noise on surrounding sensitive land uses and include specific noise management measures to be included within the plans and specifications for the trail connection option, subject to review and approval by the City of Livermore Community Development Department. The project applicant shall demonstrate, to the satisfaction of the City, that the project complies with the following:* • *All heavy construction equipment used on the proposed project shall be maintained in good operating condition, with all internal combustion, engine-driven equipment fitted with intake and exhaust mufflers that are in good condition.* • *All mobile or fixed noise producing equipment used on the proposed project that is regulated for noise output by a local, state, or federal*	LS

Table 2-1
Summary of Impacts and Mitigation Measures

Impact	Level of Significance Prior to Mitigation	Mitigation Measures	Level of Significance After Mitigation
		agency shall comply with such regulations while ~~in the source of~~ involved with a project activity. • *Where feasible, electrically-powered equipment shall be used instead of pneumatic or internal combustion powered equipment.* • *All stationary noise-generating equipment shall be located as far away as possible from the nearest residential uses.* • *Signs prohibiting unnecessary idling of internal combustion engines shall be posted at entrances to construction sites and at construction equipment staging areas.* • *The use of noise-producing signals, including horns, whistles, alarms and bells shall be for safety warning purposes only.* • *The use of temporary sound barriers shall be incorporated along the outer work area of the construction site, east of Isabel Avenue/SR 84. Barrier height and location(s) shall be determined by a qualified acoustical engineer to ensure that the resultant construction noise levels at the nearest residence would meet the applicable standard. The sound barrier fencing shall consist of 0.5-inch plywood or minimum STC 27 sound curtains placed to shield nearby sensitive receptors. The plywood barrier shall be free from gaps, openings, or penetrations to ensure maximum performance.*	

The foregoing staff-initiated revisions are for clarification purposes and do not change the conclusions of the Draft EIR.

Figure 3-1
Regional Project Location

Figure 3-2
Approximate Project Site Boundaries Map

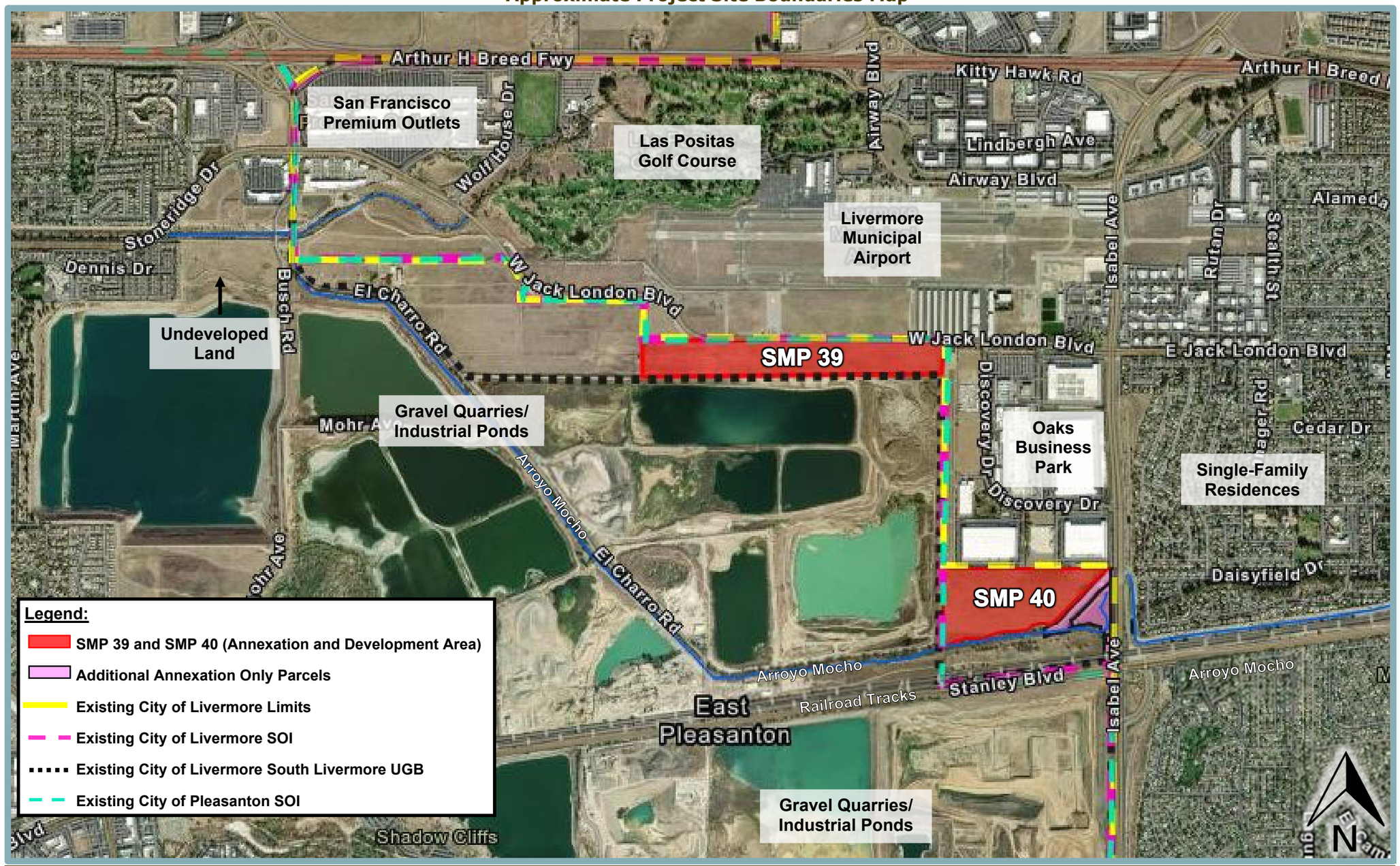


Figure 3-3
Proposed SOI Amendment Area

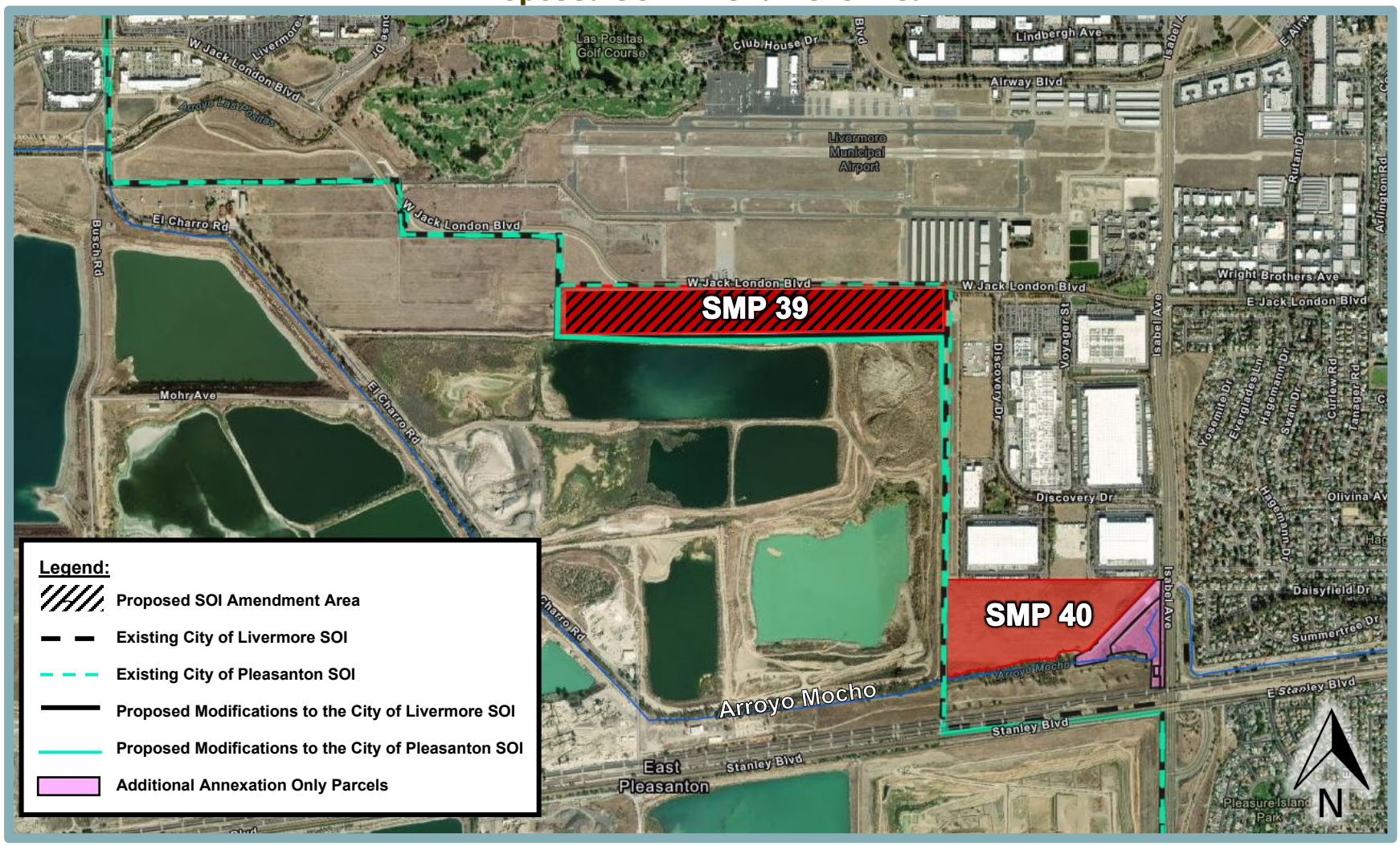


Figure 3-4
Proposed Annexation Area

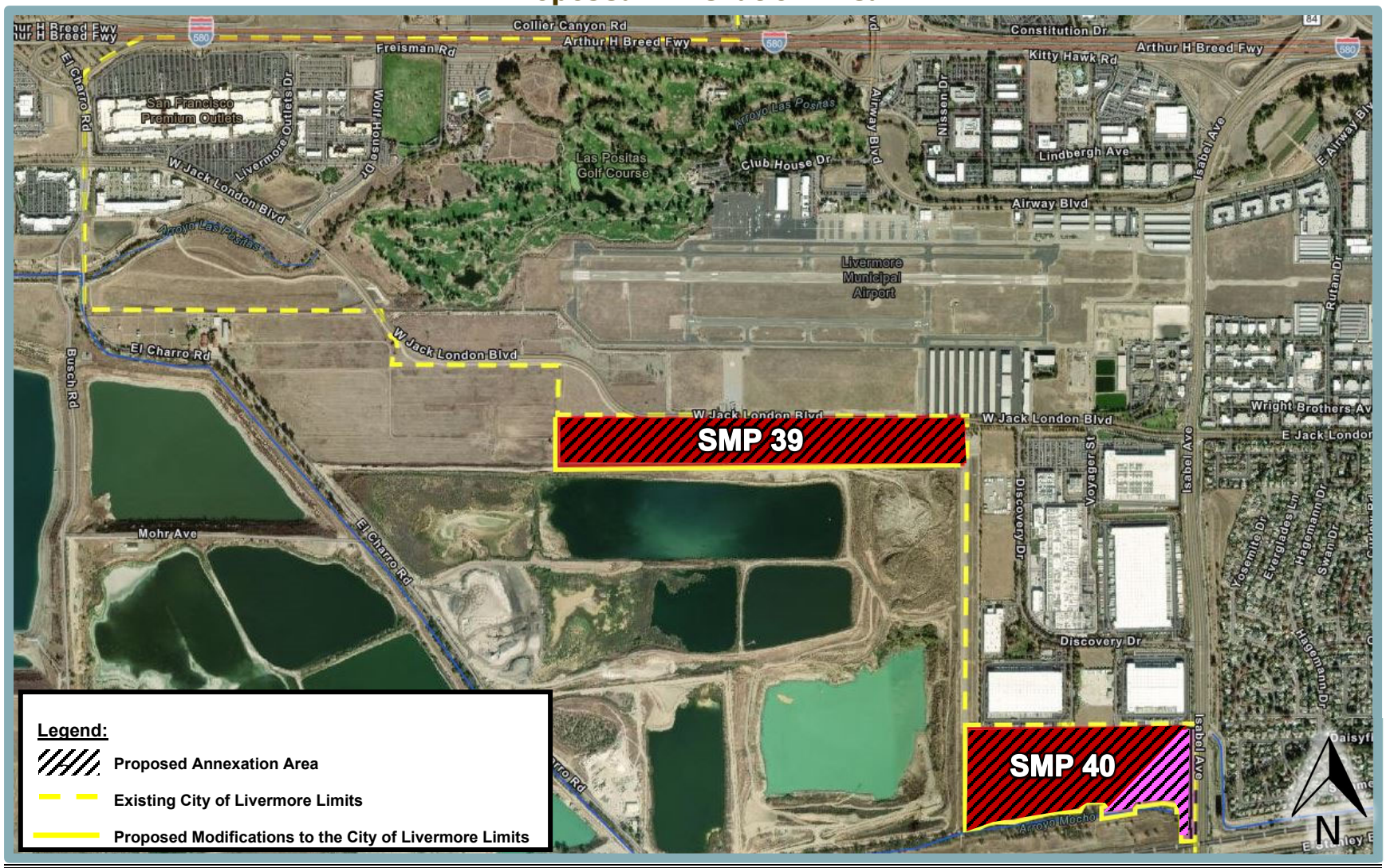


Figure 3-5
Proposed City of Livermore Boundary Amendments

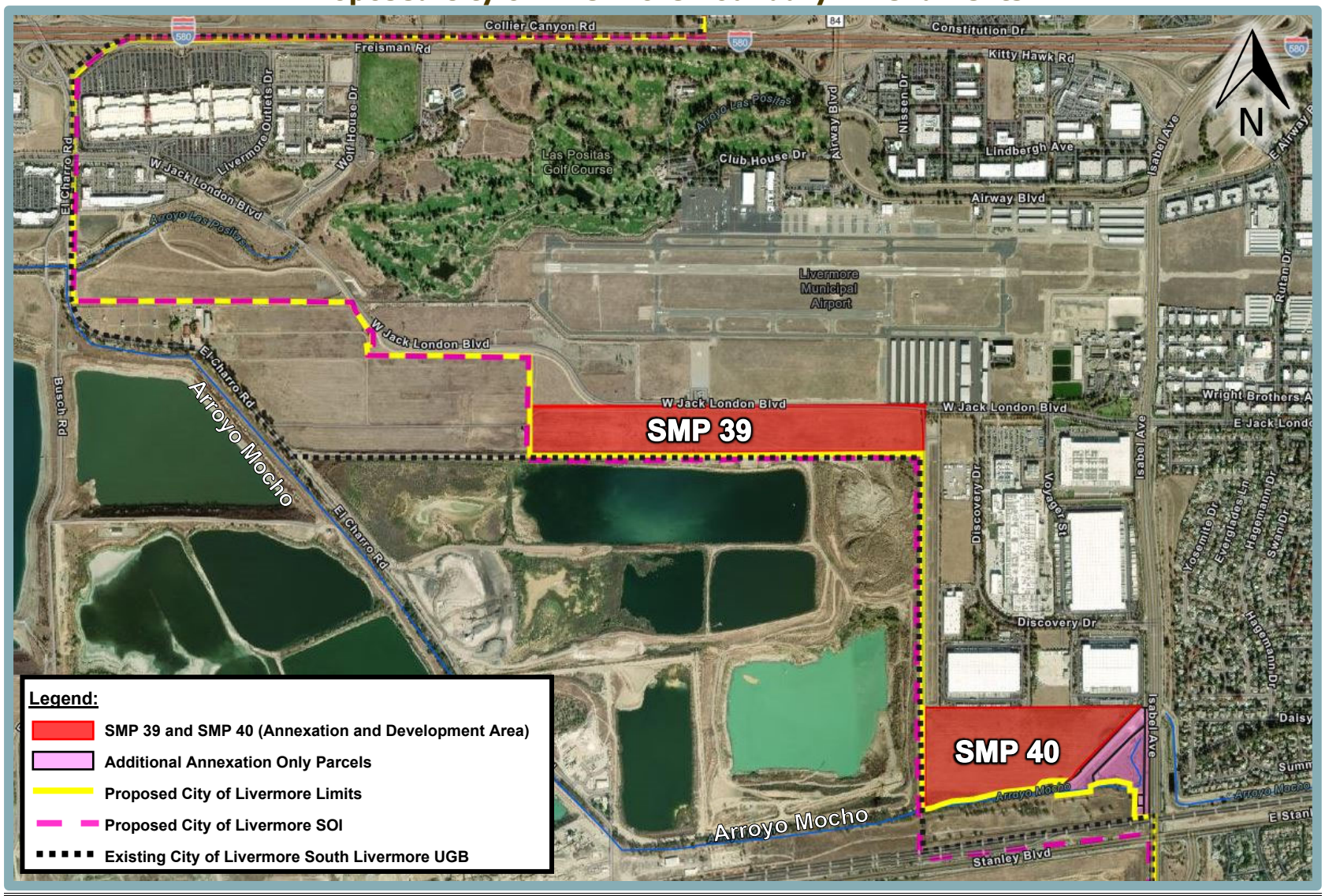


Figure 3-6
Proposed City of Pleasanton SOI Boundary Amendment

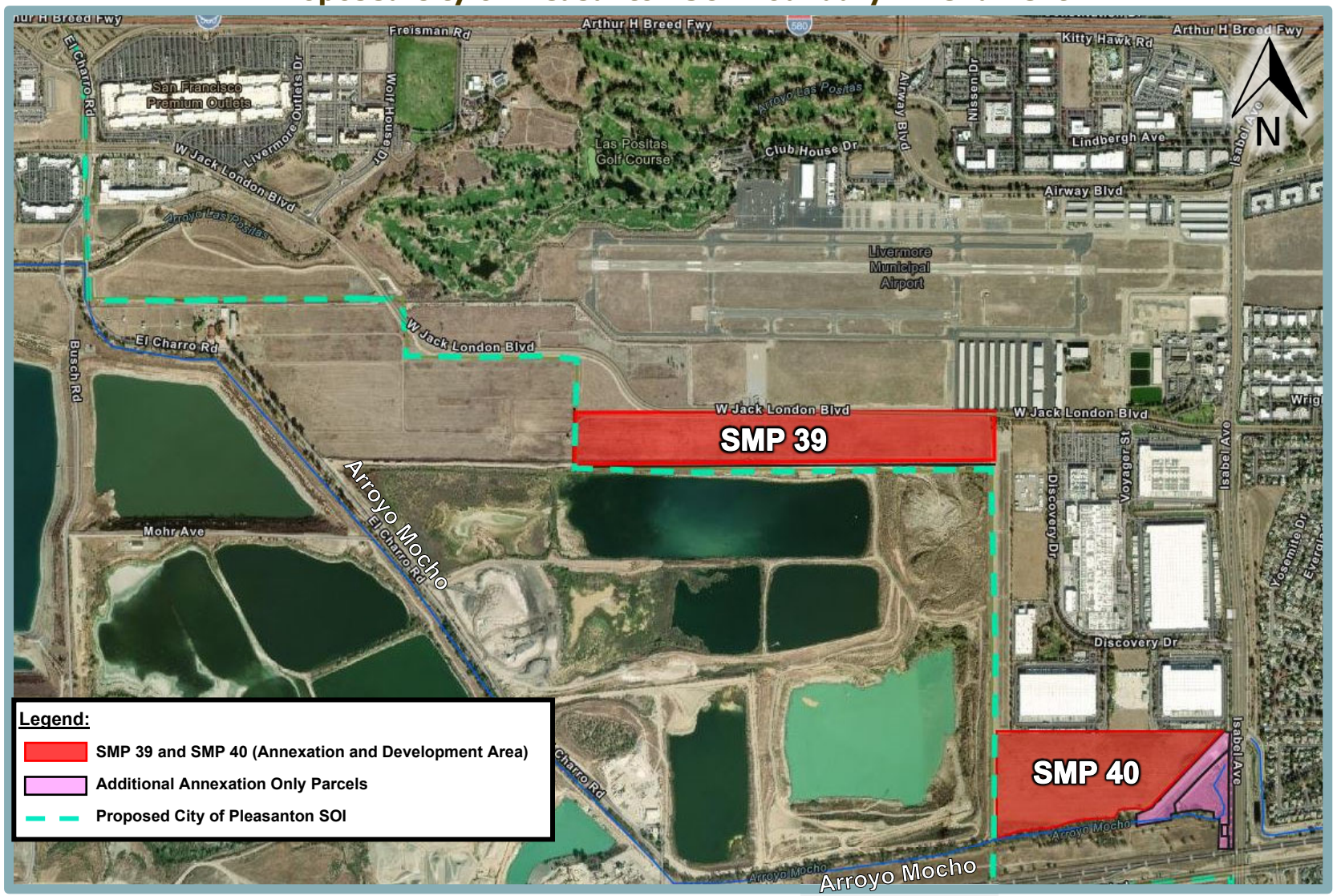


Figure 3-10
Existing and Proposed Trails

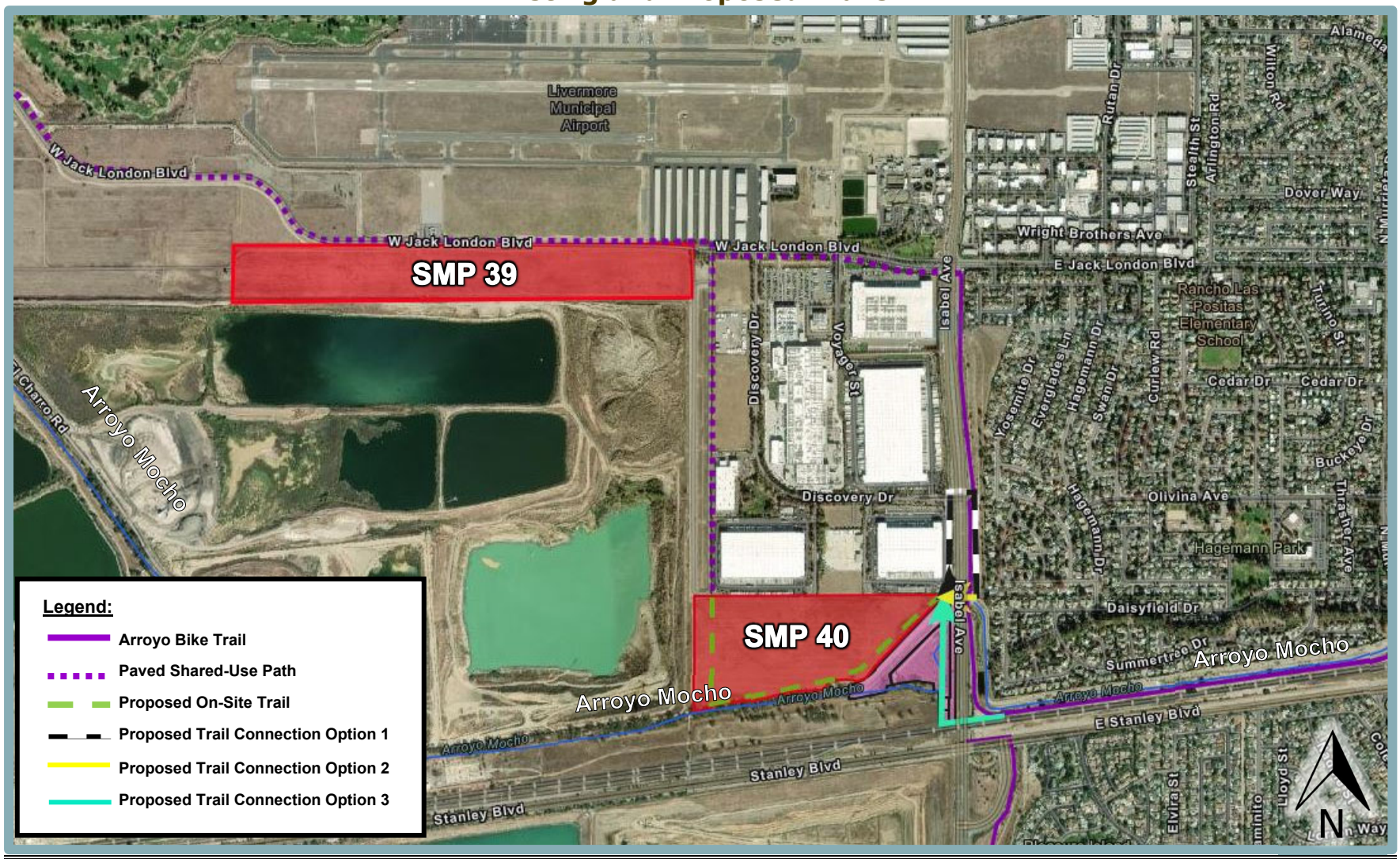
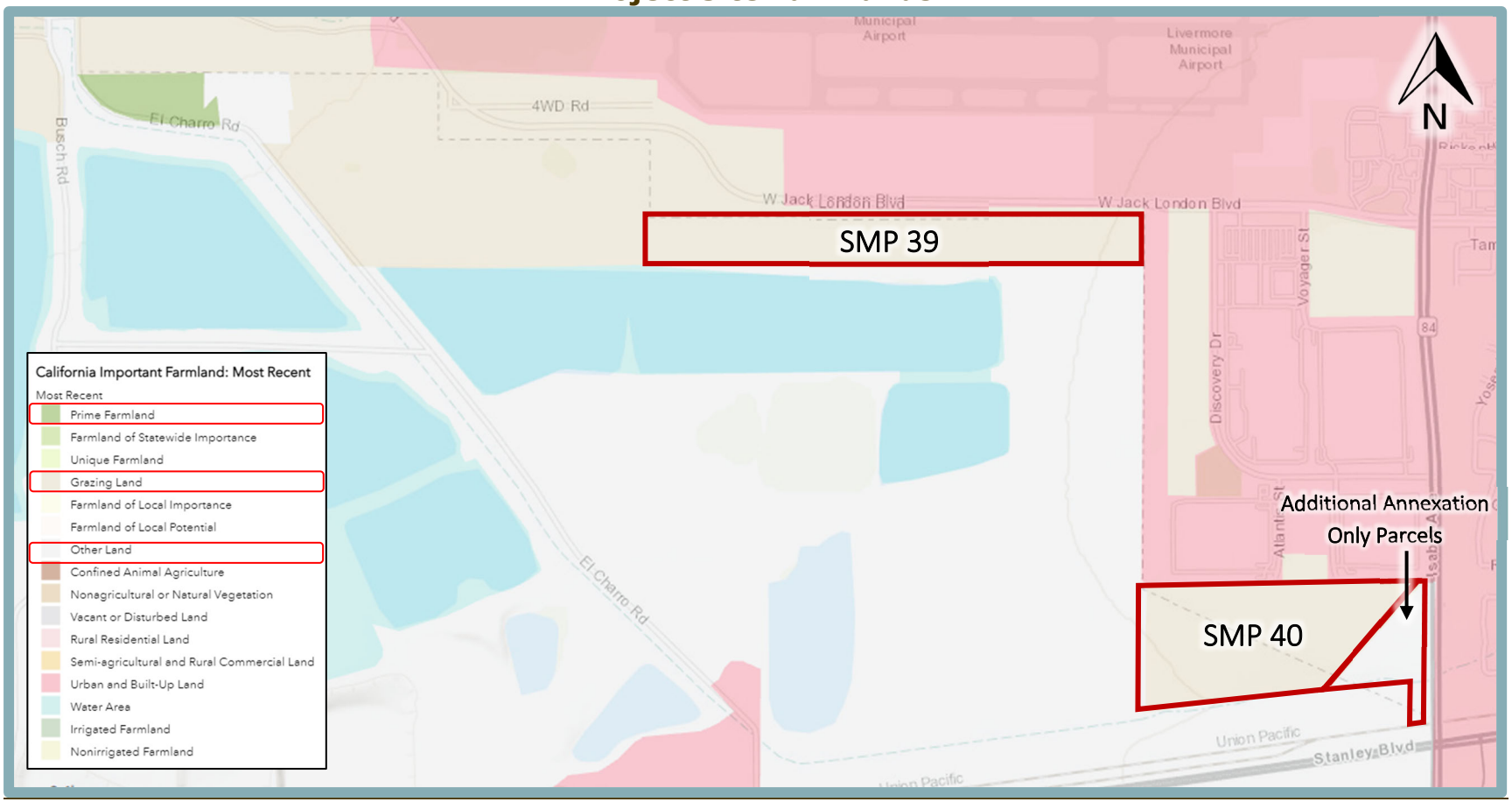


Figure 4.1-1
Project Site Soils

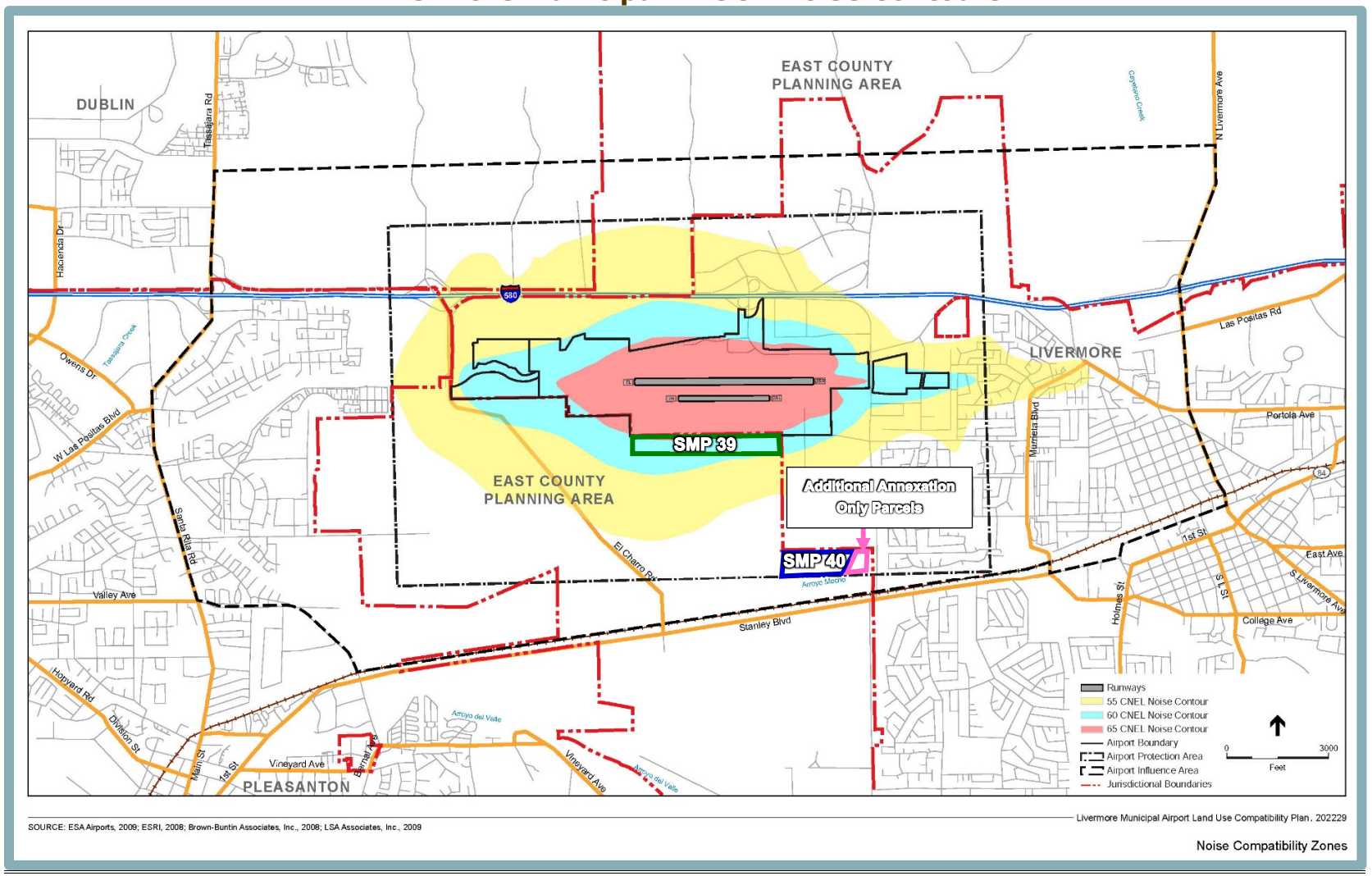
Note: Project site boundaries are approximate.
Source: USDA NRCS, Web Soil Survey, 2023.

Figure 4.1-2
Project Site Farmlands



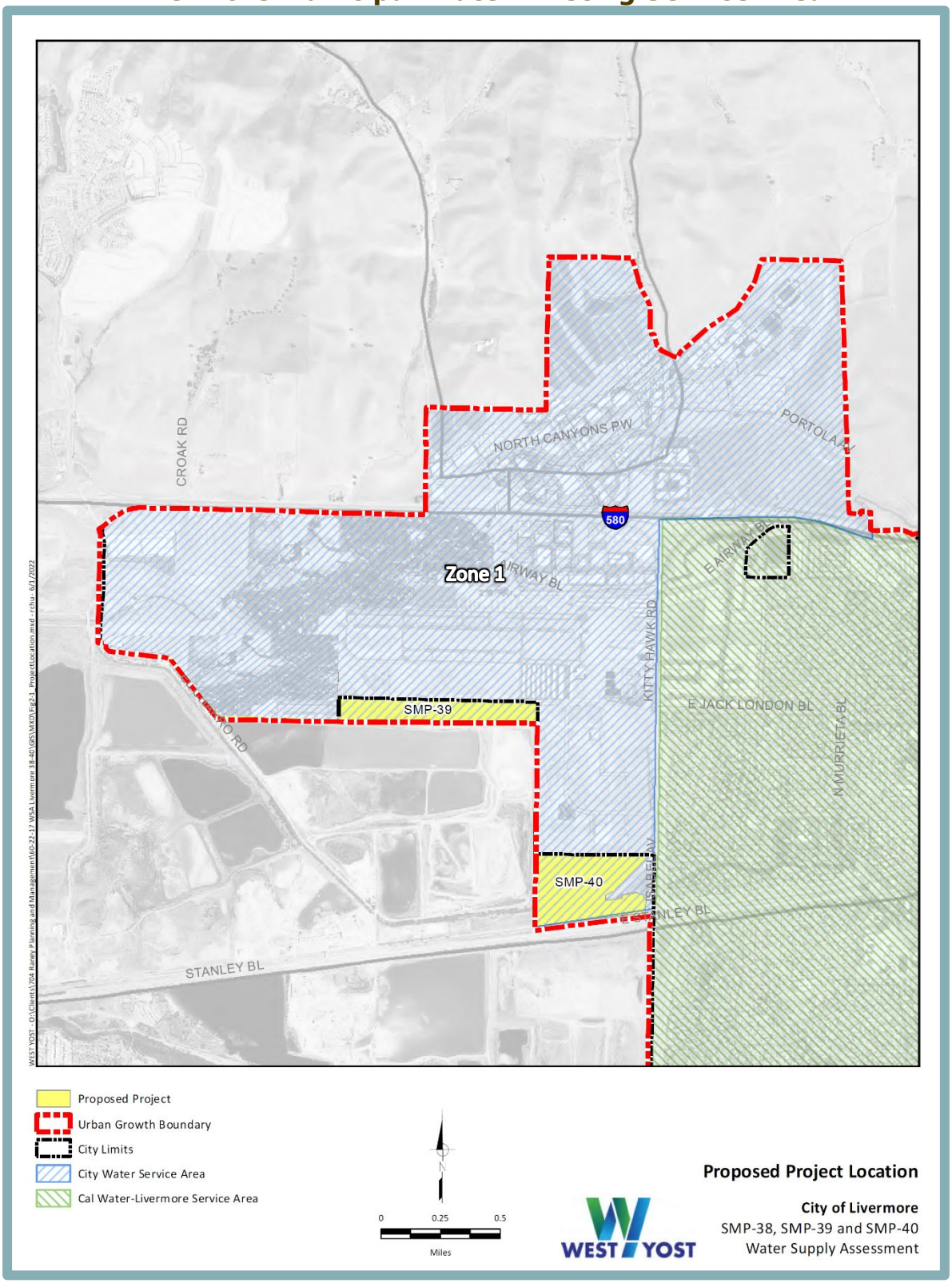
Note: Project site boundaries are approximate.
Source: California Department of Conservation, Division of Land Resource Protection, Farmland Mapping and Monitoring Program, 2023.

Figure 4.6-3
Livermore Municipal ALUCP Noise Contours



Source: Alameda County Community Development Agency, Livermore Executive Airport Land Use Compatibility Plan [Figure 3-2], August 2012.

Figure 4.7-1
Livermore Municipal Water Existing Service Area



4. Mitigation Monitoring and Reporting Program

4. MITIGATION MONITORING AND REPORTING PROGRAM

4.1 INTRODUCTION

Section 15097 of the California Environmental Quality Act (CEQA) requires all State and local agencies to establish monitoring or reporting programs for projects approved by a public agency whenever approval involves the adoption of either a "mitigated negative declaration" or specified environmental findings related to an EIR.

The following is the Mitigation Monitoring and Reporting Program (MMRP) for the SMP 39/SMP 40 Project (proposed project). The intent of the MMRP is to ensure implementation of the mitigation measures identified within the EIR and Initial Study (IS) for the SMP 39/SMP 40 Project. Unless otherwise noted, the cost of implementing the mitigation measures as prescribed by this MMRP shall be funded by the project applicant.

4.2 COMPLIANCE CHECKLIST

The MMRP contained herein is intended to satisfy the requirements of CEQA as they relate to the EIR for the SMP 39/SMP 40 Project prepared by the City of Livermore. This MMRP is intended to be used by City staff and mitigation monitoring personnel to ensure compliance with mitigation measures during project implementation. Mitigation measures identified in this MMRP were developed in the EIR and IS that were prepared for the proposed project.

The SMP 39/SMP 40 Project EIR and IS present a detailed set of mitigation measures that will be implemented throughout the lifetime of the project. Mitigation is defined by CEQA Guidelines, Section 15370, as a measure that:

- Avoids the impact altogether by not taking a certain action or parts of an action;
- Minimizes impacts by limiting the degree or magnitude of the action and its implementation;
- Rectifies the impact by repairing, rehabilitating, or restoring the impacted environment;
- Reduces or eliminates the impact over time by preservation and maintenance operations during the life of the project; or
- Compensates for the impact by replacing or providing substitute resources or environments.

The intent of the MMRP is to ensure the implementation of adopted mitigation measures. The MMRP will provide for monitoring of construction activities as necessary and in-the-field identification and resolution of environmental concerns.

Monitoring and documenting the implementation of mitigation measures will be coordinated by the City of Livermore. The table in Section 4.3 identifies the mitigation measure, the monitoring action for the mitigation measure, the responsible party for the monitoring action, and timing of the monitoring action. The applicant will be responsible for fully understanding and effectively implementing the mitigation measures contained within the MMRP. The City will be responsible for monitoring compliance.

4.3 MITIGATION MONITORING AND REPORTING PROGRAM

The following table indicates the mitigation measure number, the impact the measure is designed to address, the measure text, the monitoring agency, implementation schedule, and an area for sign-off indicating compliance.

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project					
Impact Number	**Impact**	**Mitigation Measure**	**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
4.2 Air Quality and Greenhouse Gas Emissions					
4.2-1	Conflict with or obstruct implementation of the applicable air quality plan during project construction.	*4.2-1(a)* *Prior to approval of any Improvement Plans, the project applicant shall provide proof of compliance with the following to the satisfaction of the City of Livermore Community Development Department:* *The project applicant shall show on the plans via notation that the contractor shall ensure that the heavy-duty off-road vehicles (50 horsepower or more) to be used in the construction of all project components (i.e., construction of SMP 39, SMP 40, and the chosen off-site trail connection option), including owned, leased, and subcontractor vehicles, shall be a combination of engine Tier 3 or Tier 4 off-road construction equipment, or hybrid, electric, or alternatively fueled equipment (or any combination of the above), sufficient to achieve a fleet-wide average reduction in construction-related ROG and NOX emissions to below the applicable BAAQMD thresholds of significance (54 lbs/day). For instance, the emissions presented in Table 4.2-8 were achieved by requiring all equipment used during construction to be engine Tier 4 final.*	City of Livermore Community Development Department	Prior to approval of any Improvement Plans	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project					
Impact Number	**Impact**	**Mitigation Measure**	**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
		In addition, all off-road equipment operating at the construction site must be maintained in proper working condition according to manufacturer's specifications. Idling shall be limited to five minutes or less in accordance with the In-Use Off-Road Diesel Vehicle Regulation as required by CARB. Clear signage regarding idling restrictions shall be placed at the entrances to the construction site. *Portable equipment over 50 horsepower must have either a valid BAAQMD Permit to Operate (PTO) or a valid statewide Portable Equipment Registration Program (PERP) placard and sticker issued by CARB.* *Conformance with the foregoing requirements shall be included as notes and be confirmed through review and approval of grading plans by the City of Livermore Community Development Department.*			
		4.2-1(b) The project applicant shall show on Improvement Plans via notation that the project contractor shall restrict the building construction and architectural coating phases of construction for SMP 39 from occurring simultaneously with the building construction and architectural coating	City of Livermore Community Development Department	Prior to approval of any Improvement Plans	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project					
Impact Number	**Impact**	**Mitigation Measure**	**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
		phases of construction for SMP 40. Conformance with this requirement shall be confirmed through review and approval of plans by the City of Livermore Community Development Department.			
4.2-2	Conflict with or obstruct implementation of the applicable air quality plan during project operation.	*4.2-2* *Prior to approval of any Improvement Plans, the project applicant shall provide proof of compliance with the following to the satisfaction of the City of Livermore Community Development Department:* • *The project applicant shall show on the Improvement Plans via notation that all off-road equipment (i.e., forklifts) to be used during operations of the proposed project shall be a combination of propane and electric, sufficient to achieve a fleet-wide average reduction in operational-related NOX emissions to below the applicable BAAQMD threshold of significance (54 lbs/day). For instance, the emissions presented in Table 4.2-10 were achieved by requiring that 27 percent of the forklifts used during operations on both SMP 39 and SMP 40 are electric.*	City of Livermore Community Development Department	Prior to approval of any Improvement Plans	
4.3 Biological Resources					
4.3-2	Have a substantial adverse effect, either directly or through habitat modifications, on special-	*Western Burrowing Owl* *4.3-2(a)* *If project construction begins during the western burrowing owl nesting season (February 15 to August 31), a qualified*	City of Livermore Community	Within 14 days prior to construction activities if project	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project					
Impact Number	**Impact**	**Mitigation Measure**	**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
	status wildlife species.	*biologist shall conduct targeted burrowing owl nest surveys within 14 days prior to construction activities using seven- to 20-foot transects. A separate preconstruction survey shall be conducted for SMP 39 and SMP 40 (including the off-site trail connection area) if the components of the project are not constructed concurrently. The survey shall include the project site and all accessible areas within 500 feet of the project impact zone, and shall follow CDFW guidelines outlined in the 2012 Staff Report on Burrowing Owl Mitigation. The results of the survey shall be submitted to the City of Livermore Community Development Department within 30 days of the completed survey. The survey report shall be valid for one construction season.* *If western burrowing owls are not detected on-site during the survey, further mitigation shall not be required. If any western burrowing owls are detected on-site, pursuant to the CDFW's 2012 Staff Report on Burrowing Owl Mitigation, the following restricted activity dates and setback distances shall be implemented:* • *From April 1 through October 15, low disturbance activities shall have a 200-meter buffer while high disturbance activities shall have a 500-meter buffer from occupied nests.*	Development Department	construction begins during the western burrowing owl nesting season (February 15 to August 31)	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project					
Impact Number	**Impact**	**Mitigation Measure**	**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
		• *From April 1 through August 15, medium disturbance activities shall have a 500-meter buffer from occupied nests. Medium disturbance activities can have a reduced buffer of 200 meters starting August 16 through October 15.* • *From October 16 through March 31, low disturbance activities shall have a 50-meter buffer, medium disturbance activities shall have a 100-meter buffer, and high disturbance activities shall have a 500-meter buffer from occupied nests.* • *Earth-moving activities or other disturbance shall not occur within the aforementioned buffer zones of occupied burrows unless monitoring of the nest site by a qualified biologist determines that the owls are acclimated to the disturbance and would not be disturbed by a smaller buffer. The buffer zones shall be fenced.* • *A qualified biologist shall delineate the extent of burrowing owl habitat on the site.* • *Owls may be passively relocated from the project site between October 1 and February 1. Passive removal shall be conducted by a qualified biologist with demonstrated experience with passive relocation.*			

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project					
Impact Number	**Impact**	**Mitigation Measure**	**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
		• *Credits shall be purchased from a mitigation bank in coordination with CDFW and the City of Livermore to offset the project's habitat loss on the burrowing owl.* *A report detailing compliance with the provisions set forth herein shall be prepared by the qualified biologist and submitted for review and approval to the City of Livermore Community Development Department.*			
		Western Burrowing Owl (Trail Connection Options 2 and 3) *4.3-2(b)* *In the event that Trail Connection Option 2 – Undercrossing at Isabel Bridge or Trail Connection Option 3 – Overcrossing of Isabel Avenue/SR 84 is the selected trail connection option for the proposed project, the requirements of Mitigation Measure 4.3-2(a) shall be implemented for the disturbance area associated with the trail connection option.*	City of Livermore Community Development Department	Within 14 days prior to construction activities if project construction begins during the western burrowing owl nesting season (February 15 to August 31)	
		Tricolored Blackbird *4.3-2(c)* *Prior to any ground disturbance on SMP 40, a qualified biologist shall conduct a preconstruction survey in all accessible areas identified as supporting potential tricolored blackbird nesting habitat. The survey shall document the current, and to the extent possible, historical presence or absence of nesting colonies of tricolored*	City of Livermore Community Development Department	Prior to any ground disturbance on SMP 40	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project					
Impact Number	**Impact**	**Mitigation Measure**	**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
		blackbird. Surveys shall conclude no more than two calendar days prior to construction. If a tricolored blackbird nesting colony is present, a 250-foot buffer shall be applied from the outer edge of all hydrophytic vegetation associated with the site and the site plus buffer shall be avoided. The Wildlife Agencies shall be notified immediately of nest locations. All survey results shall be submitted to the City of Livermore Community Development Department prior to the start of construction. If current or recent tricolored blackbird nesting colonies are not identified, further action is not required. *If construction takes place during the breeding season when an active colony is present, a qualified biologist shall monitor construction to ensure that the 250-foot buffer zone is enforced. If monitoring indicates that construction outside of the buffer is affecting a breeding colony, the buffer shall be increased if space allows (e.g., move staging areas farther away). If space does not allow, construction shall cease until the colony abandons the site or until the end of the breeding season, whichever occurs first. The biological monitor shall also conduct training of construction personnel on the avoidance procedures, buffer zones, and protocols in the event that tricolored blackbirds fly into an*			

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project					
Impact Number	**Impact**	**Mitigation Measure**	**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
		active construction zone (i.e., outside the buffer zone). *Nesting Birds and Raptors (Including Loggerhead Shrike)*			
		4.3-2(d) If project construction begins during the nesting season (February 1 to August 31), a qualified biologist shall conduct a nesting bird survey within 7 days prior to construction activities. A separate preconstruction survey shall be conducted for SMP 39 and SMP 40 (including the off-site trail connection area) if the components of the project are not constructed concurrently. The nesting bird survey shall include walking transects to search for ground nesting birds, and an examination of all trees on-site and within all accessible areas within 200 feet of the entire project site and off-site improvement areas (i.e., within a zone of influence of nesting birds). If nesting birds are not found within the project site or off-site improvement areas, further mitigation shall not be required. *If migratory birds are identified nesting on or within the zone of influence, the Wildlife Agencies shall be notified immediately of nest locations. A qualified biologist shall establish a temporary protective nest buffer around the nest(s). The nest buffer shall be staked with orange construction fencing. The buffer must be of sufficient size to*	City of Livermore Community Development Department	Within seven days prior to construction activities, if project construction begins during the nesting season (February 1 to August 31)	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project					
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		protect the nesting site from construction-related disturbance and shall be established by a qualified ornithologist or biologist with extensive experience working with nesting birds near and on construction sites. Typically, adequate nesting buffers are 75 feet from the nest site or nest tree dripline for small birds and up to 300 feet for sensitive nesting birds that include several raptor species known in the region of the project site but that are not expected to occur on the project site. Upon completion of nesting surveys, if nesting birds are identified on or within a zone of influence of the project site, a qualified ornithologist/biologist that frequently works with nesting birds shall prescribe adequate nesting buffers to protect the nesting birds from harm while the project is constructed. *Construction or earth-moving activity shall not occur within any established nest protection buffer prior to September 1 unless a qualified ornithologist/biologist determines that the young have fledged and have attained sufficient flight skills to avoid project construction zones, or that the nesting cycle is otherwise completed. In the region of the project site, most species complete nesting by mid-July; however, the date may be significantly earlier or later, and would have to be determined by the qualified biologist. At the end of the nesting cycle, and fledging*			

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project					
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		from the nest by its occupants, as determined by a qualified biologist, temporary nesting buffers may be removed and construction may commence in established nesting buffers without further regard for the nest site. If active nesting buffers are established and a biologist does not confirm that the nesting cycle is completed, then the nesting buffers must be maintained until the end of the CDFW recognized nesting season (September 1). *Should construction activities cause a nesting bird to do any of the following in a way that would be considered a result of construction activities, then the exclusionary buffer shall be increased such that activities are far enough from the nest to stop the following agitated behavior: vocalize, make defensive flights at intruders, get up from a brooding position, or fly off the nest. The revised non-disturbance buffer shall remain in place until the chicks have fledged or as otherwise determined by a qualified biologist in consultation with the City of Livermore.* *A report detailing compliance with the provisions set forth herein shall be prepared by the qualified biologist and submitted for review and approval to the City of Livermore Community Development Department.*			

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project					
Impact Number	**Impact**	**Mitigation Measure**	**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
4.3-3	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 CDFW or USFWS, or State or Federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.	*Trail Connection Option 2 – Undercrossing at Isabel Bridge* *4.3-3(a) Prior to the initiation of ground-disturbing activities, the project applicant shall submit a formal wetland delineation to the USACE for Trail Connection Option 2 for verification to determine the extent of all hydrological features, their jurisdictional status, and the extent of any impacts resulting from the proposed project. A copy of the wetland delineation and USACE verification letter shall be submitted to the City of Livermore Community Development Department. If Trail Connection Option 2 will result in impacts to features under the USACE's jurisdiction, Mitigation Measure 4.3-3(e) shall be required.* *Trail Connection Option 2 – Undercrossing at Isabel Bridge* *4.3-3(b) In the event that Trail Connection Option 2 – Undercrossing at Isabel Bridge is the selected Trail Connection Option for the proposed project, implement Mitigation Measures 4.5-1 and 4.5-2 related to the preparation of a SWPPP and final Stormwater Control Plan and Maintenance Plan during project construction and operations, respectively.* *SMP 40 and Trail Connection Option 2* *4.3-3(c) Prior to the commencement of ground-*	City of Livermore Community Development Department USACE City's Public Works Director City Engineer City of Livermore Public Works Department City of Livermore	Prior to initiation of ground-disturbing activities Prior to the issuance of any grading permits Prior to commencement of	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project					
Impact Number	**Impact**	**Mitigation Measure**	**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
		disturbing activities for SMP 40 or Trail Connection Option 2, if selected, the project contractor shall notify CDFW pursuant to Section 1600 of the CFGC. The notification shall include a description of all of the activities associated with the proposed project, not just those associated with the drainages and/or riparian vegetation. Impacts shall be outlined in the notification and are expected to be in substantial conformance with the impacts to biological resources outlined in the Biological Resources Assessments prepared for SMP 40 by Monk & Associates. Impacts for each activity shall be broken down by temporary and permanent impacts. A description of the proposed mitigation for biological resource impacts shall be outlined per activity and then by temporary and permanent impact. Information regarding project-specific drainage and hydrology changes resulting from project implementation shall be provided, as well as a description of stormwater treatment methods. Minimization and avoidance measures shall be proposed, as appropriate, and may include the following: • *To avoid fuels, lubricants, soils and other pollutants from entering Arroyo Mocho, wildlife friendly hay wattles (that is, no mono-filament netting) and silt fencing shall be installed at*	Community Development Department	ground-disturbing activities for SMP 40 or Trail Connection Option 2 (if selected)	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project					
Impact Number	**Impact**	**Mitigation Measure**	**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
		the top of bank. The use of mulch or any other substitute that may enter into the creek shall be prohibited. • *Staging, operation and maintenance of heavy duty construction equipment shall be located away from Arroyo Mocho at all times and well outside of the riparian corridor unless the equipment is needed to specifically work on the realignment of Arroyo Mocho or the outfalls for the project.* • *To mitigate for any impacts to the riparian corridor of Arroyo Mocho, disturbed areas shall be revegetated with native riparian plant species. Replacement of riparian trees to be removed shall be planted near the creek as feasible and/or adjacent to the existing limits of the riparian corridor to contribute to the existing riparian canopy. Riparian plantings shall be maintained for a minimum of 5 years to ensure that the canopy is enhanced and the understory restored.* • *Non-native and invasive ornamental landscaping shall be precluded from use proximate to Arroyo Mocho.* • *To avoid debris from entering Arroyo Mocho, the final project design shall provide for enclosed and accessible trash receptacles (located outside of the riparian corridor).*			

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project					
Impact Number	**Impact**	**Mitigation Measure**	**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
		• *New lighting introduced by the project shall be downcast and precluded from spilling over to the riparian corridor as direct lighting along creek corridors has a negative impact on nocturnal wildlife.* *Mitigation shall not result in a net loss of a Sensitive Natural Community. Written verification of Section 1600 of the LSAA shall be submitted to the City of Livermore Community Development Department.* *Trail Connection Option 2 – Undercrossing at Isabel Bridge* *4.3-3(d)* *Prior to the initiation of groundbreaking activity associated with Trail Connection Option 2, if selected, the project applicant shall ensure that authorization pursuant to the Clean Water Act (CWA) Section 401 from the San Francisco Bay Regional Water Quality Control board (RWQCB) is obtained.* *If Trail Connection Option 2 will result in impacts to features under the RWQCB's jurisdiction, the construction contractor shall adhere to all conditions outlined in the permit. The project applicant shall ensure that the proposed project replaces, restores, or enhances on a "no net loss" basis (in accordance with the RWQCB) the acreage of all riparian habitat and waters of the State that would be removed, lost, and/or*	The San Francisco Bay Regional Water Quality Control board (RWQCB)	Prior to the initiation of ground-breaking activity associated with Trail Connection Option 2 (if selected)	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project					
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		degraded due to project implementation by methods agreeable to the RWQCB and the City, as appropriate, depending on agency jurisdiction, and as determined during the Section 401 permitting processes. Methods include, but are not limited to implementation of a riparian enhancement planting plan and/or tree planting mitigation at a 1:1 ratio, or as otherwise prescribed by the RWQCB. *Trail Connection Option 2 – Undercrossing at Isabel Bridge* *4.3-3(e) If it is determined that work below the OHWM cannot be avoided for Trail Connection Option 2, prior to the issuance of grading permits, the project applicant shall apply for a CWA Section 404 permit from the USACE. Waters that would be lost or disturbed shall be restored, replaced, or rehabilitated on a "no-net-loss" basis. Habitat restoration, rehabilitation, and/or replacement, including the purchase of credits from a USACE approved mitigation bank at a 1:1 ratio, shall be at a location and by methods acceptable to the USACE. Documentation of compliance with the provisions set forth herein shall be submitted to the City of Livermore Community Development Department for verification.*	City of Livermore Community Development Department USACE	Prior to issuance of grading permits, if it is determined that work below the Ordinary High Water Mark (OHWM) cannot be avoided for Trail Connection Option 2 (if selected)	
Cultural and Tribal Cultural Resources					
4.4-2	Cause a substantial adverse change in the	*4.4-2 In the event a potentially significant cultural resource is encountered during subsurface*	The Confederated	In the event a potentially	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project					
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	significance of a unique archeological resource pursuant to CEQA Guidelines, Section 15064.5.	*earthwork activities, all construction activities within a 100-foot radius of the find shall cease and workers shall avoid altering the materials until an archaeologist who meets the Secretary of the Interior's Professional Qualification Standards for archaeology has evaluated the find. The project applicant shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. The qualified archeologist shall make recommendations to the City of Livermore on the measures that shall be implemented to protect the discovered resources, including, but not limited to, culturally appropriate temporary and permanent treatment, which may include avoidance of cultural resources, in-place preservation, and/or reburial on the project site so the resource(s) are not subject to further disturbance in perpetuity. In addition, The Confederated Villages of Lisjan shall be notified of the discovery. If avoidance is determined to be infeasible, pursuant to CEQA Guidelines Section 15126.4(b)(3)(C), a data recovery plan, which makes provisions for adequately recovering the scientifically consequential information from and about the historical resource, shall be prepared and adopted prior to any excavation being undertaken. If necessary, excavation and evaluation of the finds shall*	Villages of Lisjan City of Livermore Community Development Department The Northwest Information Center (NWIC) The State Historic Preservation Office (SHPO)	significant cultural resource is encountered during subsurface earthwork activities	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project					
Impact Number	**Impact**	**Mitigation Measure**	**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
		comply with Section 15064.5 of the CEQA Guidelines. *Potentially significant archaeological site indicators include obsidian and chert flakes and chipped stone tools; grinding and mashing implements (e.g., slabs and handstones and mortars and pestles); bedrock outcrops and boulders with mortar cups; and locally darkened midden soils. Midden soils may contain a combination of any of the previously listed items with the possible addition of bone and shell remains, and fire-affected stones. Any previously undiscovered resources found during construction within the project site shall be recorded on appropriate Department of Parks and Recreation (DPR) 523 forms and will be submitted to the City of Livermore, the Northwest Information Center (NWIC), and the State Historic Preservation Office (SHPO), as required.*			
4.4-3	Disturb any human remains, including those interred outside of dedicated cemeteries.	*4.4-3* *In the event of the accidental discovery or recognition of any human remains, further excavation or disturbance of the find or any nearby area reasonably suspected to overlie adjacent human remains shall not occur until compliance with the provisions of CEQA Guidelines Section 15064.5(e)(1) and (2) has occurred. The Guidelines specify that in the event of the discovery of human remains other than in a dedicated cemetery, no further excavation at the site or any nearby*	Alameda County Coroner Native American Heritage Commission (NAHC)	In the event of the accidental discovery or recognition of any human remains	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project					
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		area suspected to contain human remains shall occur until the Alameda County Coroner has been notified to determine if an investigation into the cause of death is required. If the County Coroner determines that the remains are Native American, then, within 24 hours, the Coroner must notify the Native American Heritage Commission (NAHC), which in turn will notify the most likely descendants who may recommend treatment of the remains and any grave goods. The potential exists that the NAHC may be unable to identify a most likely descendant, the most likely descendant fails to make a recommendation within 48 hours after notification by the NAHC, or the landowner or his authorized agent rejects the recommendation by the most likely descendant and mediation by the NAHC fails to provide a measure acceptable to the landowner. In such case, the landowner or his authorized representative shall rebury the human remains and grave goods with appropriate dignity at a location on the property not subject to further disturbances. Should human remains be encountered, a copy of the resulting County Coroner report noting any written consultation with the NAHC shall be submitted as proof of compliance to the City of Livermore Community Development Department.	City of Livermore Community Development Department		

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project						
Impact Number	**Impact**	**Mitigation Measure**		**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
4.4-4	Cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074.	*4.4-4*	*Implement Mitigation Measures 4.4-2 and 4.4-3.*	See Mitigation Measures 4.4-2 and 4.4-3	See Mitigation Measures 4.4-2 and 4.4-3	
Hydrology and Water Quality						
4.5-1	Violate any water quality standards or waste discharge requirements or otherwise substantially degrade water quality during construction.	*4.5-1*	*Prior to issuance of any grading permits, the contractor shall prepare a Storm Water Pollution Prevention Plan (SWPPP) for review and approval by the San Francisco Bay RWQCB. The contractor shall file the Notice of Intent (NOI) and associated fee to the SWRCB. A separate SWPPP shall be prepared for SMP 39 and SMP 40 (including the off-site trail connection area) if the components of the project are not constructed concurrently. The SWPPP shall serve as the framework for identification, assignment, and implementation of BMPs. The contractor shall implement BMPs to reduce pollutants in stormwater discharges to the maximum extent practicable. Construction (temporary) BMPs for the project may include, but are not limited to: fiber rolls, straw bale barrier, straw wattles, storm drain inlet protection, velocity dissipation devices, silt fences, wind erosion control, stabilized construction entrance, hydroseeding, revegetation techniques, and dust control measures. The SWPPP shall be submitted to the City's Director of Public Works and the City Engineer for review and*	City of Livermore Public Works Director City Engineer	Prior to issuance of any grading permits	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project						
Impact Number	**Impact**	**Mitigation Measure**		**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
			approval and shall remain on the project site during all phases of construction. Following implementation of the SWPPP, the contractor shall subsequently demonstrate the SWPPP's effectiveness and provide for necessary and appropriate revisions, modifications, and improvements to reduce pollutants in stormwater discharges to the maximum extent practicable.			
4.5-2	Violate any water quality standards or waste discharge requirements or otherwise substantially degrade water quality during operations.	*4.5-2(a)*	*Prior to approval of final project improvement plans for SMP 39, SMP 40, and the selected off-site trail connection option, a final Stormwater Control Plan and Maintenance Plan shall be submitted to the City Director of Public Works, and the City Engineer for review and approval. A separate Stormwater Control Plan and Maintenance Plan shall be prepared for SMP 39, SMP 40, and the selected off-site trail connection option, if the components of the project are not constructed concurrently. The final Stormwater Control Plan and Maintenance Plan shall be in compliance with all applicable provisions of the C.3 Standards, and shall meet the standards of the California Stormwater Quality Association (CASQA) Stormwater BMP Handbook for New Development and Redevelopment. Site design measures, source control measures, hydromodification management, and Low Impact Development (LID) standards, as necessary, shall be incorporated into the design and shown on the improvement*	City of Livermore Public Works Director City Engineer City of Livermore Public Works Department	Prior to approval of final project improvement plans for SMP 39, SMP 40, and the selected off-site trail connection option	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project						
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			plans. The final plans shall include calculations demonstrating that the water quality BMPs are appropriately sized, using methodology in the CASQA Stormwater BMP Handbook for New Development and Redevelopment. The final plans shall be submitted to the Public Works Department for review and approval.			
		4.5-2(b)	*Implement Mitigation Measures 4.3-3(b) through 4.3-3(e).*	See Mitigation Measures 4.3-3(b) through 4.3-3(e)	See Mitigation Measures 4.3-3(b) through 4.3-3(e)	
4.5-4	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial	*4.5-4*	*Prior to approval of final project improvement plans for SMP 39, SMP 40, and the selected off-site trail connection option, a final drainage plan shall be submitted to the City Director of Public Works, and the City Engineer for review and approval demonstrating the project's compliance with all State stormwater standards and requirements. A separate drainage plan shall be prepared for SMP 39, SMP 40, and the selected off-site trail connection option, if the components of the project are not constructed concurrently. The final drainage plan shall identify the water quality treatment and source control measures needed to ensure that stormwater runoff from the proposed project is adequately treated and peak flows do not exceed the capacity of the receiving storm drainage system.*	City of Livermore Public Works Director City Engineer	Prior to approval of final project improvement plans for SMP 39, SMP 40, and the selected off-site trail connection option	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project						
Impact Number	**Impact**	**Mitigation Measure**		**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
	additional sources of polluted runoff; or result in substantial erosion or siltation on- or off-site.					
4.5-5	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows, or in flood hazard, tsunami, or seiche zone, risk release of pollutants due to project inundation.	*4.5-5*	*Prior to Building Permit issuance for SMP 39 (if buildings are determined to be within a SFHA) and SMP 40, the City or applicant shall obtain from the Federal Emergency Management Agency (FEMA), a Letter of Map Revision (LOMR).*	Federal Emergency Management Agency Chief Building Official	Prior to Building Permit issuance for SMP 39 (if buildings are determined to be within a Special Flood Hazard Zone [SFHA]) and SMP 40	
Noise						
4.6-1	Generation of a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	*4.6-1*	*Prior to issuance of a grading permit for the chosen off-site trail connection option, the project applicant shall prepare a construction noise management plan that identifies measures to be taken to minimize construction noise on surrounding sensitive land uses and include specific noise management measures to be included within the plans and specifications for the trail connection option, subject to review and approval by the City of Livermore Community Development Department. The project applicant shall demonstrate, to the*	City of Livermore Community Development Department	Prior to issuance of a grading permit for the chosen off-site trail connection option	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project					
Impact Number	**Impact**	**Mitigation Measure**	**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
		satisfaction of the City, that the project complies with the following: • *All heavy construction equipment used on the proposed project shall be maintained in good operating condition, with all internal combustion, engine-driven equipment fitted with intake and exhaust mufflers that are in good condition.* • *All mobile or fixed noise producing equipment used on the proposed project that is regulated for noise output by a local, state, or federal agency shall comply with such regulations while involved with a project activity.* • *Where feasible, electrically-powered equipment shall be used instead of pneumatic or internal combustion powered equipment.* • *All stationary noise-generating equipment shall be located as far away as possible from the nearest residential uses.* • *Signs prohibiting unnecessary idling of internal combustion engines shall be posted at entrances to construction sites and at construction equipment staging areas.* • *The use of noise-producing signals, including horns, whistles, alarms and*			

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project					
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		bells shall be for safety warning purposes only. • *The use of temporary sound barriers shall be incorporated along the outer work area of the construction site, east of Isabel Avenue/SR 84. Barrier height and location(s) shall be determined by a qualified acoustical engineer to ensure that the resultant construction noise levels at the nearest residence would meet the applicable standard. The sound barrier fencing shall consist of 0.5-inch plywood or minimum STC 27 sound curtains placed to shield nearby sensitive receptors. The plywood barrier shall be free from gaps, openings, or penetrations to ensure maximum performance.*			
Public Services, Utilities, and Service Systems					
4.7-8	Increase in demand for utilities and service systems associated with the proposed project, in combination with future buildout of the Livermore General Plan.	*4.7-8(a)* *Prior to approval of improvement plans, the project applicant shall pay the applicable sewer fair share fees to the City of Livermore Community Development Department. Payment of such fees shall be made in compliance with Livermore Municipal Code Chapter 13.28.*	City of Livermore Community Development Department	Prior to approval of improvement plans	
		4.7-8(b) *In conjunction with submittal of improvement plans for SMP 39 or SMP 40, whichever is developed second as part of the proposed project, the project applicant shall submit an*	City of Livermore Community	In conjunction with submittal of improvement plans for SMP 39 or SMP	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project					
Impact Number	**Impact**	**Mitigation Measure**	**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
		analysis of the pumping capacity available at the Airport Lift Station to convey additional flows generated by SMP 39 and SMP 40. The lift station capacity analysis shall be prepared by a registered civil engineer. According to the 2022 Airport Lift Station Analysis prepared by West Yost Associates, the City of Livermore has indicated that the pumping capacity necessary to accommodate SMP 39 and SMP 40 would be 2,088 gallons per minute (gpm). The subsequent evaluation shall confirm the aforementioned estimate and be submitted for review and approval to the City of Livermore Community Development Department. *If the Airport Lift Station pumping capacity is determined to be inadequate, the project applicant shall ensure the pumping capacity is increased to the necessary gpm determined by the subsequent analysis, with all design recommendations contained therein incorporated into the improvement plans for SMP 39 or SMP 40, whichever is developed second as part of the proposed project. Incorporation of the design recommendations to increase the Airport Lift Station pumping capacity shall be submitted for review and approval to the City Engineer.*	Development Department	40, whichever is developed second as part of the proposed project	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project						
Impact Number	**Impact**	**Mitigation Measure**		**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
Transportation						
4.8-1	Conflict with a program, plan, ordinance, or policy addressing the circulation system during construction activities.	*4.8-1*	*Prior to grading permit issuance for the SMP 39 and SMP 40 sites, as well as the chosen off-site trail connection option, the project applicant shall prepare a Construction Traffic Management Plan for review and approval by the City Engineer. The plan shall include the following:* • *A project staging plan to maximize on-site storage of materials and equipment;* • *A set of comprehensive traffic control measures, including scheduling of major truck trips and deliveries to avoid peak hours; lane closure proceedings; signs, cones and other warning devices for drivers; and designation of construction access routes;* • *Provisions for maintaining adequate emergency access to the project site;* • *Permitted construction hours, per City of Livermore standards;* • *Designated locations for construction staging areas;* • *Identification of parking areas for construction employees, site visitors, and inspectors, including on-site locations;* • *Signs posted at the entrances to the construction sites noting who to*	City Engineer	Prior to grading permit issuance for the SMP 39 and SMP 40 sites, as well as the chosen off-site trail connection option	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project						
Impact Number	**Impact**	**Mitigation Measure**		**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
			contact if there are questions or concerns, along with a contact phone number; and • *Provisions for street sweeping to remove construction-related debris on public streets.*			
4.8-3	Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b).	*4.8-3*	*Prior to the issuance of the first building permit, the project applicant shall be required to develop a Transportation Demand Management (TDM) Program for SMP 39 and SMP 40. The TDM Program shall be monitored by the project applicant/operator on an annual basis to determine the efficacy of the selected TDM strategies in achieving the reduction below the regional average VMT per employee of three percent (i.e., the performance target). An Annual Status Report on the TDM Program shall be submitted to the City of Livermore Engineering Division beginning a year after the issuance of any certificate of occupancy and shall include details on the TDM strategies, including an Employer Carpool Program which has a goal to reduce VMT per employee by approximately four percent and, thus, would meet and exceed the performance target. The Employer Carpool Program shall implement a ridesharing program and establish a permanent transportation management association with funding requirements for employers. Data shall be collected in October of each year and the Annual Status*	City of Livermore Engineering Division Chief Building Official	Prior to the issuance of the first building permit	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project					
Impact Number	**Impact**	**Mitigation Measure**	**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
		Report shall be submitted by December 31st of each year. The report shall be prepared in the form and format designated by the City. The data shall include project-generated VMT estimates compatible with the methodology used to estimate the benchmark VMT so that performance comparisons can be made. If the Annual Status Report demonstrates that the project is not in compliance with the performance target set forth in this mitigation measure, the project must incorporate additional TDM strategies to meet the performance target in coordination with City staff. The project applicant/operator may propose new TDM strategies that develop over time to further reduce project-generated VMT if substantial evidence is provided to support the efficacy of the strategy. If the Annual Status Reports demonstrate that the performance target has been achieved for three consecutive years once SMP 39 and SMP 40 are both fully occupied and operational, the project shall no longer need to provide annual reporting.			
Initial Study					
I-a,b.	Would the project have a substantial adverse effect on a scenic vista? Would the project substantially damage scenic resources,	*I-1.*	*In the event that Trail Connection Option 3 – Overcrossing of Isabel Avenue/SR 84 is the selected Trail Connection Option for the proposed project, improvement plans associated with the proposed above-grade crossing shall be submitted to the City's Community Development Department for*	City of Livermore Community Development Department	In the event that Trail Connection Option 3 is the selected trail connection option for the proposed project	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project						
Impact Number	**Impact**	**Mitigation Measure**		**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
	including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?		*review and approval to ensure that the proposed above-grade crossing is constructed using soft earth tone colors that help the bridge blend in with the surrounding landscape.*			
VII-a.iii, a.iv,c,d.	Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: seismic-related ground failure, including liquefaction or landslides? Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? Would the project be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial direct	*VII-1.*	*All grading and foundation plans for the development shall be designed by a Civil and Structural Engineer and reviewed and approved by the City Engineer, Chief Building Official, and a qualified Geotechnical Engineer prior to the issuance of building permits or grading permits, whichever comes first, to ensure that all geotechnical recommendations specified in the geotechnical recommendations specified in the Geotechnical Investigation prepared for the proposed project by Cornerstone Earth Group are properly incorporated and utilized in the project design.*	City Engineer Chief Building Official Qualified Geotechnical Engineer	Prior to issuance of building permits or grading permits, whichever comes first	
		VII-2.	*In the event that Trail Connection Option 2 – Undercrossing at Isabel Bridge or Trail Connection Option 3 – Overcrossing of Isabel Avenue/SR 84 is the selected Trail Connection Option for the proposed project, in conjunction with the submittal of improvement plans associated with the proposed above-grade crossing, a final design-level geotechnical report shall be prepared and submitted to the City for review and approval. The site-specific geotechnical report shall be prepared by a State-*	City Engineer	In the event that Trail Connection Option 2 or Trail Connection Option 3 is the selected trail connection option for the proposed project in conjunction with the submittal of improvement plans associated with the	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project					
Impact Number	**Impact**	**Mitigation Measure**	**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
	or indirect risks to life or property?	*registered civil engineer with the purpose of observing and sampling the subsurface conditions encountered at the proposed undercrossing or above-grade crossing sites and providing conclusions and recommendations relative to each crossing, as proposed. The recommendations presented therein shall be based on analysis of the data obtained during the geotechnical investigation and the local experience of the civil engineer regarding similar soil and geologic conditions. All recommendations set forth in the final design-level geotechnical report shall be appropriately incorporated into the design of the project and shall be subject to review and approval by the City Engineer.*		proposed above-grade crossing	
VII-f.	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	*VII-3. The applicant shall retain the services of a professional paleontologist to educate the construction crew that will be conducting grading and excavation at the project site, as well as the off-site trail improvement areas. The education shall consist of an introduction to the geology of the project site and the kinds of fossils that may be encountered, as well as what to do in case of a discovery. Should any vertebrate fossils (e.g., teeth, bones), an unusually large or dense accumulation of intact invertebrates, or well-preserved plant material (e.g., leaves) be unearthed by the construction crew, then ground-disturbing activity shall be diverted to another part of the project site*	City of Livermore Community Development Department	Prior to any ground-disturbing activities	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project						
Impact Number	**Impact**	**Mitigation Measure**		**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
			and the paleontologist shall be called on-site to assess the find and, if significant, recover the find in a timely matter. Finds determined significant by the paleontologist shall then be conserved and deposited with a recognized repository, such as the University of California Museum of Paleontology. The alternative mitigation would be to leave the significant finds in place, determine the extent of significant deposit, and avoid further disturbance of the significant deposit. Proof of the construction crew awareness training shall be submitted to the City's Community Development Department in the form of a copy of training materials and the completed training attendance roster.			
IX-b.	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?	*IX-1.*	*Prior to any ground-disturbing activities, the groundwater well observed along the western boundary of SMP 39 shall be assessed to determine whether it is located on-site. If the well is determined to be located on-site, the project applicant shall hire a licensed contractor to obtain the applicable abandonment permit from Alameda County Department of Environmental Health (ACDEH), and properly abandon the on-site well for review and approval by the ACDEH.* *In addition, the licensed contractor shall contact Zone 7 regarding its well located towards the middle of the SMP 39 site, and if feasible, obtain the applicable*	Alameda County Department of Environmental Health (ACDEH) City of Livermore Community Development Department	Prior to any ground-disturbing activities	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project					
Impact Number	**Impact**	**Mitigation Measure**	**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
		abandonment permit from ACDEH to properly abandon the well. Alternatively, if required by Zone 7, the applicant shall implement other measures identified by Zone 7, such as providing any necessary upgrades or adjustments to the well and/or well box elevation to match the final grade.			
		IX-2. In the event that Trail Connection Option 2 – Undercrossing at Isabel Bridge or Trail Connection Option 3 – Overcrossing of Isabel Avenue/SR 84 is the selected Trail Connection Option for the proposed project, in conjunction with the submittal of improvement plans associated with the proposed above-grade crossing, a Phase I Environmental Site Assessment (ESA) shall be prepared and submitted to the City for review and approval. The Phase I Environmental Site Assessment (ESA) shall be prepared by a licensed contractor with the purpose of observing and assessing the conditions encountered at the proposed undercrossing or above-grade crossing sites and providing conclusions and recommendations relative to any hazardous conditions or materials identified on-site. All recommendations set forth in the Phase I Environmental Site Assessment (ESA) shall be appropriately incorporated into the project and shall be subject to review and approval by the City of Livermore Community Development Department.	City of Livermore Community Development Department	In the event that Trail Connection Option 2 or Trail Connection Option 3 is the selected trail connection option for the proposed project in conjunction with the submittal of improvement plans associated with the proposed above-grade crossing	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project					
Impact Number	**Impact**	**Mitigation Measure**	**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
4.3-3	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 CDFW or USFWS, or State or Federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.	*Trail Connection Option 2 – Undercrossing at Isabel Bridge* *4.3-3(a) Prior to the initiation of ground-disturbing activities, the project applicant shall submit a formal wetland delineation to the USACE for Trail Connection Option 2 for verification to determine the extent of all hydrological features, their jurisdictional status, and the extent of any impacts resulting from the proposed project. A copy of the wetland delineation and USACE verification letter shall be submitted to the City of Livermore Community Development Department. If Trail Connection Option 2 will result in impacts to features under the USACE's jurisdiction, Mitigation Measure 4.3-3(e) shall be required.* *Trail Connection Option 2 – Undercrossing at Isabel Bridge* *4.3-3(b) In the event that Trail Connection Option 2 – Undercrossing at Isabel Bridge is the selected Trail Connection Option for the proposed project, implement Mitigation Measures 4.5-1 and 4.5-2 related to the preparation of a SWPPP and final Stormwater Control Plan and Maintenance Plan during project construction and operations, respectively.* *SMP 40 and Trail Connection Option 2* *4.3-3(c) Prior to the commencement of ground-*	City of Livermore Community Development Department USACE City's Public Works Director City Engineer City of Livermore Public Works Department City of Livermore	Prior to initiation of ground-disturbing activities Prior to the issuance of any grading permits Prior to commencement of	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project					
Impact Number	**Impact**	**Mitigation Measure**	**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
		disturbing activities for SMP 40 or Trail Connection Option 2, if selected, the project contractor shall notify CDFW pursuant to Section 1600 of the CFGC. The notification shall include a description of all of the activities associated with the proposed project, not just those associated with the drainages and/or riparian vegetation. Impacts shall be outlined in the notification and are expected to be in substantial conformance with the impacts to biological resources outlined in the Biological Resources Assessments prepared for SMP 40 by Monk & Associates. Impacts for each activity shall be broken down by temporary and permanent impacts. A description of the proposed mitigation for biological resource impacts shall be outlined per activity and then by temporary and permanent impact. Information regarding project-specific drainage and hydrology changes resulting from project implementation shall be provided, as well as a description of stormwater treatment methods. Minimization and avoidance measures shall be proposed, as appropriate, and may include the following: • *To avoid fuels, lubricants, soils and other pollutants from entering Arroyo Mocho, wildlife friendly hay wattles (that is, no mono-filament netting) and silt fencing shall be installed at*	Community Development Department	ground-disturbing activities for SMP 40 or Trail Connection Option 2 (if selected)	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project					
Impact Number	**Impact**	**Mitigation Measure**	**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
		the top of bank. The use of mulch or any other substitute that may enter into the creek shall be prohibited. • *Staging, operation and maintenance of heavy duty construction equipment shall be located away from Arroyo Mocho at all times and well outside of the riparian corridor unless the equipment is needed to specifically work on the realignment of Arroyo Mocho or the outfalls for the project.* • *To mitigate for any impacts to the riparian corridor of Arroyo Mocho, disturbed areas shall be revegetated with native riparian plant species. Replacement of riparian trees to be removed shall be planted near the creek as feasible and/or adjacent to the existing limits of the riparian corridor to contribute to the existing riparian canopy. Riparian plantings shall be maintained for a minimum of 5 years to ensure that the canopy is enhanced and the understory restored.* • *Non-native and invasive ornamental landscaping shall be precluded from use proximate to Arroyo Mocho.* • *To avoid debris from entering Arroyo Mocho, the final project design shall provide for enclosed and accessible trash receptacles (located outside of the riparian corridor).*			

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project					
Impact Number	**Impact**	**Mitigation Measure**	**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
		• *New lighting introduced by the project shall be downcast and precluded from spilling over to the riparian corridor as direct lighting along creek corridors has a negative impact on nocturnal wildlife.* *Mitigation shall not result in a net loss of a Sensitive Natural Community. Written verification of Section 1600 of the LSAA shall be submitted to the City of Livermore Community Development Department.* *Trail Connection Option 2 – Undercrossing at Isabel Bridge* *4.3-3(d)* *Prior to the initiation of groundbreaking activity associated with Trail Connection Option 2, if selected, the project applicant shall ensure that authorization pursuant to the Clean Water Act (CWA) Section 401 from the San Francisco Bay Regional Water Quality Control board (RWQCB) is obtained.* *If Trail Connection Option 2 will result in impacts to features under the RWQCB's jurisdiction, the construction contractor shall adhere to all conditions outlined in the permit. The project applicant shall ensure that the proposed project replaces, restores, or enhances on a "no net loss" basis (in accordance with the RWQCB) the acreage of all riparian habitat and waters of the State that would be removed, lost, and/or*	The San Francisco Bay Regional Water Quality Control board (RWQCB)	Prior to the initiation of ground-breaking activity associated with Trail Connection Option 2 (if selected)	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project					
Impact Number	**Impact**	**Mitigation Measure**	**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
		degraded due to project implementation by methods agreeable to the RWQCB and the City, as appropriate, depending on agency jurisdiction, and as determined during the Section 401 permitting processes. Methods include, but are not limited to implementation of a riparian enhancement planting plan and/or tree planting mitigation at a 1:1 ratio, or as otherwise prescribed by the RWQCB. *Trail Connection Option 2 – Undercrossing at Isabel Bridge* *4.3-3(e) If it is determined that work below the OHWM cannot be avoided for Trail Connection Option 2, prior to the issuance of grading permits, the project applicant shall apply for a CWA Section 404 permit from the USACE. Waters that would be lost or disturbed shall be restored, replaced, or rehabilitated on a "no-net-loss" basis. Habitat restoration, rehabilitation, and/or replacement, including the purchase of credits from a USACE approved mitigation bank at a 1:1 ratio, shall be at a location and by methods acceptable to the USACE. Documentation of compliance with the provisions set forth herein shall be submitted to the City of Livermore Community Development Department for verification.*	City of Livermore Community Development Department USACE	Prior to issuance of grading permits, if it is determined that work below the Ordinary High Water Mark (OHWM) cannot be avoided for Trail Connection Option 2 (if selected)	
Cultural and Tribal Cultural Resources					
4.4-2	Cause a substantial adverse change in the	*4.4-2 In the event a potentially significant cultural resource is encountered during subsurface*	The Confederated	In the event a potentially	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project					
Impact Number	**Impact**	**Mitigation Measure**	**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
	significance of a unique archeological resource pursuant to CEQA Guidelines, Section 15064.5.	*earthwork activities, all construction activities within a 100-foot radius of the find shall cease and workers shall avoid altering the materials until an archaeologist who meets the Secretary of the Interior's Professional Qualification Standards for archaeology has evaluated the find. The project applicant shall include a standard inadvertent discovery clause in every construction contract to inform contractors of this requirement. The qualified archeologist shall make recommendations to the City of Livermore on the measures that shall be implemented to protect the discovered resources, including, but not limited to, culturally appropriate temporary and permanent treatment, which may include avoidance of cultural resources, in-place preservation, and/or reburial on the project site so the resource(s) are not subject to further disturbance in perpetuity. In addition, The Confederated Villages of Lisjan shall be notified of the discovery. If avoidance is determined to be infeasible, pursuant to CEQA Guidelines Section 15126.4(b)(3)(C), a data recovery plan, which makes provisions for adequately recovering the scientifically consequential information from and about the historical resource, shall be prepared and adopted prior to any excavation being undertaken. If necessary, excavation and evaluation of the finds shall*	Villages of Lisjan City of Livermore Community Development Department The Northwest Information Center (NWIC) The State Historic Preservation Office (SHPO)	significant cultural resource is encountered during subsurface earthwork activities	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project					
Impact Number	**Impact**	**Mitigation Measure**	**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
		comply with Section 15064.5 of the CEQA Guidelines. *Potentially significant archaeological site indicators include obsidian and chert flakes and chipped stone tools; grinding and mashing implements (e.g., slabs and handstones and mortars and pestles); bedrock outcrops and boulders with mortar cups; and locally darkened midden soils. Midden soils may contain a combination of any of the previously listed items with the possible addition of bone and shell remains, and fire-affected stones. Any previously undiscovered resources found during construction within the project site shall be recorded on appropriate Department of Parks and Recreation (DPR) 523 forms and will be submitted to the City of Livermore, the Northwest Information Center (NWIC), and the State Historic Preservation Office (SHPO), as required.*			
4.4-3	Disturb any human remains, including those interred outside of dedicated cemeteries.	*4.4-3* *In the event of the accidental discovery or recognition of any human remains, further excavation or disturbance of the find or any nearby area reasonably suspected to overlie adjacent human remains shall not occur until compliance with the provisions of CEQA Guidelines Section 15064.5(e)(1) and (2) has occurred. The Guidelines specify that in the event of the discovery of human remains other than in a dedicated cemetery, no further excavation at the site or any nearby*	Alameda County Coroner Native American Heritage Commission (NAHC)	In the event of the accidental discovery or recognition of any human remains	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project					
Impact Number	**Impact**	**Mitigation Measure**	**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
		area suspected to contain human remains shall occur until the Alameda County Coroner has been notified to determine if an investigation into the cause of death is required. If the County Coroner determines that the remains are Native American, then, within 24 hours, the Coroner must notify the Native American Heritage Commission (NAHC), which in turn will notify the most likely descendants who may recommend treatment of the remains and any grave goods. The potential exists that the NAHC may be unable to identify a most likely descendant, the most likely descendant fails to make a recommendation within 48 hours after notification by the NAHC, or the landowner or his authorized agent rejects the recommendation by the most likely descendant and mediation by the NAHC fails to provide a measure acceptable to the landowner. In such case, the landowner or his authorized representative shall rebury the human remains and grave goods with appropriate dignity at a location on the property not subject to further disturbances. Should human remains be encountered, a copy of the resulting County Coroner report noting any written consultation with the NAHC shall be submitted as proof of compliance to the City of Livermore Community Development Department.	City of Livermore Community Development Department		

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project						
Impact Number	**Impact**	**Mitigation Measure**		**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
4.4-4	Cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074.	*4.4-4*	*Implement Mitigation Measures 4.4-2 and 4.4-3.*	See Mitigation Measures 4.4-2 and 4.4-3	See Mitigation Measures 4.4-2 and 4.4-3	
Hydrology and Water Quality						
4.5-1	Violate any water quality standards or waste discharge requirements or otherwise substantially degrade water quality during construction.	*4.5-1*	*Prior to issuance of any grading permits, the contractor shall prepare a Storm Water Pollution Prevention Plan (SWPPP) for review and approval by the San Francisco Bay RWQCB. The contractor shall file the Notice of Intent (NOI) and associated fee to the SWRCB. A separate SWPPP shall be prepared for SMP 39 and SMP 40 (including the off-site trail connection area) if the components of the project are not constructed concurrently. The SWPPP shall serve as the framework for identification, assignment, and implementation of BMPs. The contractor shall implement BMPs to reduce pollutants in stormwater discharges to the maximum extent practicable. Construction (temporary) BMPs for the project may include, but are not limited to: fiber rolls, straw bale barrier, straw wattles, storm drain inlet protection, velocity dissipation devices, silt fences, wind erosion control, stabilized construction entrance, hydroseeding, revegetation techniques, and dust control measures. The SWPPP shall be submitted to the City's Director of Public Works and the City Engineer for review and*	City of Livermore Public Works Director City Engineer	Prior to issuance of any grading permits	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project						
Impact Number	**Impact**	**Mitigation Measure**		**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
			approval and shall remain on the project site during all phases of construction. Following implementation of the SWPPP, the contractor shall subsequently demonstrate the SWPPP's effectiveness and provide for necessary and appropriate revisions, modifications, and improvements to reduce pollutants in stormwater discharges to the maximum extent practicable.			
4.5-2	Violate any water quality standards or waste discharge requirements or otherwise substantially degrade water quality during operations.	*4.5-2(a)*	*Prior to approval of final project improvement plans for SMP 39, SMP 40, and the selected off-site trail connection option, a final Stormwater Control Plan and Maintenance Plan shall be submitted to the City Director of Public Works, and the City Engineer for review and approval. A separate Stormwater Control Plan and Maintenance Plan shall be prepared for SMP 39, SMP 40, and the selected off-site trail connection option, if the components of the project are not constructed concurrently. The final Stormwater Control Plan and Maintenance Plan shall be in compliance with all applicable provisions of the C.3 Standards, and shall meet the standards of the California Stormwater Quality Association (CASQA) Stormwater BMP Handbook for New Development and Redevelopment. Site design measures, source control measures, hydromodification management, and Low Impact Development (LID) standards, as necessary, shall be incorporated into the design and shown on the improvement*	City of Livermore Public Works Director City Engineer City of Livermore Public Works Department	Prior to approval of final project improvement plans for SMP 39, SMP 40, and the selected off-site trail connection option	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project						
Impact Number	**Impact**	**Mitigation Measure**		**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
			plans. The final plans shall include calculations demonstrating that the water quality BMPs are appropriately sized, using methodology in the CASQA Stormwater BMP Handbook for New Development and Redevelopment. The final plans shall be submitted to the Public Works Department for review and approval.			
		4.5-2(b)	*Implement Mitigation Measures 4.3-3(b) through 4.3-3(e).*	See Mitigation Measures 4.3-3(b) through 4.3-3(e)	See Mitigation Measures 4.3-3(b) through 4.3-3(e)	
4.5-4	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site; create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial	*4.5-4*	*Prior to approval of final project improvement plans for SMP 39, SMP 40, and the selected off-site trail connection option, a final drainage plan shall be submitted to the City Director of Public Works, and the City Engineer for review and approval demonstrating the project's compliance with all State stormwater standards and requirements. A separate drainage plan shall be prepared for SMP 39, SMP 40, and the selected off-site trail connection option, if the components of the project are not constructed concurrently. The final drainage plan shall identify the water quality treatment and source control measures needed to ensure that stormwater runoff from the proposed project is adequately treated and peak flows do not exceed the capacity of the receiving storm drainage system.*	City of Livermore Public Works Director City Engineer	Prior to approval of final project improvement plans for SMP 39, SMP 40, and the selected off-site trail connection option	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project						
Impact Number	**Impact**	**Mitigation Measure**		**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
	additional sources of polluted runoff; or result in substantial erosion or siltation on- or off-site.					
4.5-5	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would impede or redirect flood flows, or in flood hazard, tsunami, or seiche zone, risk release of pollutants due to project inundation.	*4.5-5*	*Prior to Building Permit issuance for SMP 39 (if buildings are determined to be within a SFHA) and SMP 40, the City or applicant shall obtain from the Federal Emergency Management Agency (FEMA), a Letter of Map Revision (LOMR).*	Federal Emergency Management Agency Chief Building Official	Prior to Building Permit issuance for SMP 39 (if buildings are determined to be within a Special Flood Hazard Zone [SFHA]) and SMP 40	
Noise						
4.6-1	Generation of a substantial temporary increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	*4.6-1*	*Prior to issuance of a grading permit for the chosen off-site trail connection option, the project applicant shall prepare a construction noise management plan that identifies measures to be taken to minimize construction noise on surrounding sensitive land uses and include specific noise management measures to be included within the plans and specifications for the trail connection option, subject to review and approval by the City of Livermore Community Development Department. The project applicant shall demonstrate, to the*	City of Livermore Community Development Department	Prior to issuance of a grading permit for the chosen off-site trail connection option	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project					
Impact Number	**Impact**	**Mitigation Measure**	**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
		satisfaction of the City, that the project complies with the following: • *All heavy construction equipment used on the proposed project shall be maintained in good operating condition, with all internal combustion, engine-driven equipment fitted with intake and exhaust mufflers that are in good condition.* • *All mobile or fixed noise producing equipment used on the proposed project that is regulated for noise output by a local, state, or federal agency shall comply with such regulations while involved with a project activity.* • *Where feasible, electrically-powered equipment shall be used instead of pneumatic or internal combustion powered equipment.* • *All stationary noise-generating equipment shall be located as far away as possible from the nearest residential uses.* • *Signs prohibiting unnecessary idling of internal combustion engines shall be posted at entrances to construction sites and at construction equipment staging areas.* • *The use of noise-producing signals, including horns, whistles, alarms and*			

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project					
Impact Number	**Impact**	**Mitigation Measure**	**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
		bells shall be for safety warning purposes only. • *The use of temporary sound barriers shall be incorporated along the outer work area of the construction site, east of Isabel Avenue/SR 84. Barrier height and location(s) shall be determined by a qualified acoustical engineer to ensure that the resultant construction noise levels at the nearest residence would meet the applicable standard. The sound barrier fencing shall consist of 0.5-inch plywood or minimum STC 27 sound curtains placed to shield nearby sensitive receptors. The plywood barrier shall be free from gaps, openings, or penetrations to ensure maximum performance.*			
Public Services, Utilities, and Service Systems					
4.7-8	Increase in demand for utilities and service systems associated with the proposed project, in combination with future buildout of the Livermore General Plan.	*4.7-8(a)* *Prior to approval of improvement plans, the project applicant shall pay the applicable sewer fair share fees to the City of Livermore Community Development Department. Payment of such fees shall be made in compliance with Livermore Municipal Code Chapter 13.28.*	City of Livermore Community Development Department	Prior to approval of improvement plans	
		4.7-8(b) *In conjunction with submittal of improvement plans for SMP 39 or SMP 40, whichever is developed second as part of the proposed project, the project applicant shall submit an*	City of Livermore Community	In conjunction with submittal of improvement plans for SMP 39 or SMP	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project					
Impact Number	**Impact**	**Mitigation Measure**	**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
		analysis of the pumping capacity available at the Airport Lift Station to convey additional flows generated by SMP 39 and SMP 40. The lift station capacity analysis shall be prepared by a registered civil engineer. According to the 2022 Airport Lift Station Analysis prepared by West Yost Associates, the City of Livermore has indicated that the pumping capacity necessary to accommodate SMP 39 and SMP 40 would be 2,088 gallons per minute (gpm). The subsequent evaluation shall confirm the aforementioned estimate and be submitted for review and approval to the City of Livermore Community Development Department. *If the Airport Lift Station pumping capacity is determined to be inadequate, the project applicant shall ensure the pumping capacity is increased to the necessary gpm determined by the subsequent analysis, with all design recommendations contained therein incorporated into the improvement plans for SMP 39 or SMP 40, whichever is developed second as part of the proposed project. Incorporation of the design recommendations to increase the Airport Lift Station pumping capacity shall be submitted for review and approval to the City Engineer.*	Development Department	40, whichever is developed second as part of the proposed project	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project						
Impact Number	**Impact**	**Mitigation Measure**		**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
Transportation						
4.8-1	Conflict with a program, plan, ordinance, or policy addressing the circulation system during construction activities.	*4.8-1*	*Prior to grading permit issuance for the SMP 39 and SMP 40 sites, as well as the chosen off-site trail connection option, the project applicant shall prepare a Construction Traffic Management Plan for review and approval by the City Engineer. The plan shall include the following:* • *A project staging plan to maximize on-site storage of materials and equipment;* • *A set of comprehensive traffic control measures, including scheduling of major truck trips and deliveries to avoid peak hours; lane closure proceedings; signs, cones and other warning devices for drivers; and designation of construction access routes;* • *Provisions for maintaining adequate emergency access to the project site;* • *Permitted construction hours, per City of Livermore standards;* • *Designated locations for construction staging areas;* • *Identification of parking areas for construction employees, site visitors, and inspectors, including on-site locations;* • *Signs posted at the entrances to the construction sites noting who to*	City Engineer	Prior to grading permit issuance for the SMP 39 and SMP 40 sites, as well as the chosen off-site trail connection option	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project						
Impact Number	**Impact**	**Mitigation Measure**		**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
			contact if there are questions or concerns, along with a contact phone number; and • *Provisions for street sweeping to remove construction-related debris on public streets.*			
4.8-3	Conflict or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b).	*4.8-3*	*Prior to the issuance of the first building permit, the project applicant shall be required to develop a Transportation Demand Management (TDM) Program for SMP 39 and SMP 40. The TDM Program shall be monitored by the project applicant/operator on an annual basis to determine the efficacy of the selected TDM strategies in achieving the reduction below the regional average VMT per employee of three percent (i.e., the performance target). An Annual Status Report on the TDM Program shall be submitted to the City of Livermore Engineering Division beginning a year after the issuance of any certificate of occupancy and shall include details on the TDM strategies, including an Employer Carpool Program which has a goal to reduce VMT per employee by approximately four percent and, thus, would meet and exceed the performance target. The Employer Carpool Program shall implement a ridesharing program and establish a permanent transportation management association with funding requirements for employers. Data shall be collected in October of each year and the Annual Status*	City of Livermore Engineering Division Chief Building Official	Prior to the issuance of the first building permit	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project					
Impact Number	**Impact**	**Mitigation Measure**	**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
		Report shall be submitted by December 31st of each year. The report shall be prepared in the form and format designated by the City. The data shall include project-generated VMT estimates compatible with the methodology used to estimate the benchmark VMT so that performance comparisons can be made. If the Annual Status Report demonstrates that the project is not in compliance with the performance target set forth in this mitigation measure, the project must incorporate additional TDM strategies to meet the performance target in coordination with City staff. The project applicant/operator may propose new TDM strategies that develop over time to further reduce project-generated VMT if substantial evidence is provided to support the efficacy of the strategy. If the Annual Status Reports demonstrate that the performance target has been achieved for three consecutive years once SMP 39 and SMP 40 are both fully occupied and operational, the project shall no longer need to provide annual reporting.			
Initial Study					
I-a,b.	Would the project have a substantial adverse effect on a scenic vista? Would the project substantially damage scenic resources,	*I-1.*	*In the event that Trail Connection Option 3 – Overcrossing of Isabel Avenue/SR 84 is the selected Trail Connection Option for the proposed project, improvement plans associated with the proposed above-grade crossing shall be submitted to the City's Community Development Department for*	City of Livermore Community Development Department	In the event that Trail Connection Option 3 is the selected trail connection option for the proposed project	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project						
Impact Number	**Impact**	**Mitigation Measure**		**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
	including, but not limited to, trees, rock outcroppings, and historic buildings within a State scenic highway?		*review and approval to ensure that the proposed above-grade crossing is constructed using soft earth tone colors that help the bridge blend in with the surrounding landscape.*			
VII-a.iii, a.iv,c,d.	Would the project directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving: seismic-related ground failure, including liquefaction or landslides? Would the project be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse? Would the project be located on expansive soil, as defined in Table 18-1B of the Uniform Building Code (1994), creating substantial direct	*VII-1.*	*All grading and foundation plans for the development shall be designed by a Civil and Structural Engineer and reviewed and approved by the City Engineer, Chief Building Official, and a qualified Geotechnical Engineer prior to the issuance of building permits or grading permits, whichever comes first, to ensure that all geotechnical recommendations specified in the geotechnical recommendations specified in the Geotechnical Investigation prepared for the proposed project by Cornerstone Earth Group are properly incorporated and utilized in the project design.*	City Engineer Chief Building Official Qualified Geotechnical Engineer	Prior to issuance of building permits or grading permits, whichever comes first	
		VII-2.	*In the event that Trail Connection Option 2 – Undercrossing at Isabel Bridge or Trail Connection Option 3 – Overcrossing of Isabel Avenue/SR 84 is the selected Trail Connection Option for the proposed project, in conjunction with the submittal of improvement plans associated with the proposed above-grade crossing, a final design-level geotechnical report shall be prepared and submitted to the City for review and approval. The site-specific geotechnical report shall be prepared by a State-*	City Engineer	In the event that Trail Connection Option 2 or Trail Connection Option 3 is the selected trail connection option for the proposed project in conjunction with the submittal of improvement plans associated with the	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project					
Impact Number	**Impact**	**Mitigation Measure**	**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
	or indirect risks to life or property?	*registered civil engineer with the purpose of observing and sampling the subsurface conditions encountered at the proposed undercrossing or above-grade crossing sites and providing conclusions and recommendations relative to each crossing, as proposed. The recommendations presented therein shall be based on analysis of the data obtained during the geotechnical investigation and the local experience of the civil engineer regarding similar soil and geologic conditions. All recommendations set forth in the final design-level geotechnical report shall be appropriately incorporated into the design of the project and shall be subject to review and approval by the City Engineer.*		proposed above-grade crossing	
VII-f.	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	*VII-3. The applicant shall retain the services of a professional paleontologist to educate the construction crew that will be conducting grading and excavation at the project site, as well as the off-site trail improvement areas. The education shall consist of an introduction to the geology of the project site and the kinds of fossils that may be encountered, as well as what to do in case of a discovery. Should any vertebrate fossils (e.g., teeth, bones), an unusually large or dense accumulation of intact invertebrates, or well-preserved plant material (e.g., leaves) be unearthed by the construction crew, then ground-disturbing activity shall be diverted to another part of the project site*	City of Livermore Community Development Department	Prior to any ground-disturbing activities	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project						
Impact Number	**Impact**	**Mitigation Measure**		**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
			and the paleontologist shall be called on-site to assess the find and, if significant, recover the find in a timely matter. Finds determined significant by the paleontologist shall then be conserved and deposited with a recognized repository, such as the University of California Museum of Paleontology. The alternative mitigation would be to leave the significant finds in place, determine the extent of significant deposit, and avoid further disturbance of the significant deposit. Proof of the construction crew awareness training shall be submitted to the City's Community Development Department in the form of a copy of training materials and the completed training attendance roster.			
IX-b.	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment?	*IX-1.*	*Prior to any ground-disturbing activities, the groundwater well observed along the western boundary of SMP 39 shall be assessed to determine whether it is located on-site. If the well is determined to be located on-site, the project applicant shall hire a licensed contractor to obtain the applicable abandonment permit from Alameda County Department of Environmental Health (ACDEH), and properly abandon the on-site well for review and approval by the ACDEH.* *In addition, the licensed contractor shall contact Zone 7 regarding its well located towards the middle of the SMP 39 site, and if feasible, obtain the applicable*	Alameda County Department of Environmental Health (ACDEH) City of Livermore Community Development Department	Prior to any ground-disturbing activities	

MITIGATION MONITORING AND REPORTING PROGRAM SMP 39/SMP 40 Project					
Impact Number	**Impact**	**Mitigation Measure**	**Monitoring Agency**	**Implementation Schedule**	**Sign-off**
		abandonment permit from ACDEH to properly abandon the well. Alternatively, if required by Zone 7, the applicant shall implement other measures identified by Zone 7, such as providing any necessary upgrades or adjustments to the well and/or well box elevation to match the final grade.			
		IX-2. In the event that Trail Connection Option 2 – Undercrossing at Isabel Bridge or Trail Connection Option 3 – Overcrossing of Isabel Avenue/SR 84 is the selected Trail Connection Option for the proposed project, in conjunction with the submittal of improvement plans associated with the proposed above-grade crossing, a Phase I Environmental Site Assessment (ESA) shall be prepared and submitted to the City for review and approval. The Phase I Environmental Site Assessment (ESA) shall be prepared by a licensed contractor with the purpose of observing and assessing the conditions encountered at the proposed undercrossing or above-grade crossing sites and providing conclusions and recommendations relative to any hazardous conditions or materials identified on-site. All recommendations set forth in the Phase I Environmental Site Assessment (ESA) shall be appropriately incorporated into the project and shall be subject to review and approval by the City of Livermore Community Development Department.	City of Livermore Community Development Department	In the event that Trail Connection Option 2 or Trail Connection Option 3 is the selected trail connection option for the proposed project in conjunction with the submittal of improvement plans associated with the proposed above-grade crossing	

Appendix A

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

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March 8, 2021

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

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.

Specifically, the number and length of vehicle trips is utilized to estimate the vehicle miles travelled ("VMT") associated with construction. Then, utilizing vehicle-class specific EMFAC 2014 emission factors, CalEEMod calculates the vehicle exhaust, evaporative, and dust emissions resulting from construction-related VMT, including personal vehicles for worker commuting.[4]

Specifically, in order to calculate VMT, CalEEMod multiplies the average daily trip rate by the average overall trip length (see excerpt below):

> "$VMT_d = \Sigma(\text{Average Daily Trip Rate}_i * \text{Average Overall Trip Length}_i)_n$
>
> Where:
>
> n = Number of land uses being modeled."[5]

Furthermore, to calculate the on-road emissions associated with worker trips, CalEEMod utilizes the following equation (see excerpt below):

> "$\text{Emissions}_{pollutant} = VMT * EF_{running,pollutant}$
>
> Where:
>
> $\text{Emissions}_{pollutant}$ = emissions from vehicle running for each pollutant
>
> VMT = vehicle miles traveled
>
> $EF_{running,pollutant}$ = emission factor for running emissions."[6]

Thus, there is a direct relationship between trip length and VMT, as well as a direct relationship between VMT and vehicle running emissions. In other words, when the trip length is increased, the VMT and vehicle running emissions increase as a result. Thus, vehicle running emissions can be reduced by decreasing the average overall trip length, by way of a local hire requirement or otherwise.

Default Worker Trip Parameters and Potential Local Hire Requirements

As previously discussed, 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.[7] In order to understand how local hire requirements and associated worker trip length reductions impact GHG emissions calculations, it is important to consider the CalEEMod default worker trip parameters. 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 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.[8] The default number of construction-related worker trips is calculated by multiplying the

[4] "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. 14-15.
[5] "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. 23.
[6] "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.
[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. 34.
[8] CalEEMod User Guide, *available at:* http://www.caleemod.com/, p. 1, 9.

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.

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.

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.

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.

Location Type	Location Name	Rural H-W (miles)	Urban H-W (miles)
Air Basin	Great Basin	16.8	10.8
Air Basin	Lake County	16.8	10.8
Air Basin	Lake Tahoe	16.8	10.8
Air Basin	Mojave Desert	16.8	10.8
Air Basin	Mountain	16.8	10.8
Air Basin	North Central	17.1	12.3
Air Basin	North Coast	16.8	10.8
Air Basin	Northeast	16.8	10.8
Air Basin	Sacramento	16.8	10.8
Air Basin	Salton Sea	14.6	11
Air Basin	San Diego	16.8	10.8
Air Basin	San Francisco	10.8	10.8
Air Basin	San Joaquin	16.8	10.8
Air Basin	South Central	16.8	10.8
Air Basin	South Coast	19.8	14.7
Air District	Amador County	16.8	10.8
Air District	Antelope Valley	16.8	10.8
Air District	Bay Area AQMD	10.8	10.8
Air District	Butte County	12.54	12.54
Air District	Calaveras	16.8	10.8
Air District	Colusa County	16.8	10.8
Air District	El Dorado	16.8	10.8
Air District	Feather River	16.8	10.8
Air District	Glenn County	16.8	10.8
Air District	Great Basin	16.8	10.8
Air District	Imperial County	10.2	7.3
Air District	Kern County	16.8	10.8
Air District	Lake County	16.8	10.8
Air District	Lassen County	16.8	10.8
Air District	Mariposa	16.8	10.8
Air District	Mendocino	16.8	10.8
Air District	Modoc County	16.8	10.8
Air District	Mojave Desert	16.8	10.8
Air District	Monterey Bay	16.8	10.8
Air District	North Coast	16.8	10.8
Air District	Northern Sierra	16.8	10.8
Air District	Northern	16.8	10.8
Air District	Placer County	16.8	10.8
Air District	Sacramento	15	10

Air District	San Diego	16.8	10.8
Air District	San Joaquin	16.8	10.8
Air District	San Luis Obispo	13	13
Air District	Santa Barbara	8.3	8.3
Air District	Shasta County	16.8	10.8
Air District	Siskiyou County	16.8	10.8
Air District	South Coast	19.8	14.7
Air District	Tehama County	16.8	10.8
Air District	Tuolumne	16.8	10.8
Air District	Ventura County	16.8	10.8
Air District	Yolo/Solano	15	10
County	Alameda	10.8	10.8
County	Alpine	16.8	10.8
County	Amador	16.8	10.8
County	Butte	12.54	12.54
County	Calaveras	16.8	10.8
County	Colusa	16.8	10.8
County	Contra Costa	10.8	10.8
County	Del Norte	16.8	10.8
County	El Dorado-Lake	16.8	10.8
County	El Dorado-	16.8	10.8
County	Fresno	16.8	10.8
County	Glenn	16.8	10.8
County	Humboldt	16.8	10.8
County	Imperial	10.2	7.3
County	Inyo	16.8	10.8
County	Kern-Mojave	16.8	10.8
County	Kern-San	16.8	10.8
County	Kings	16.8	10.8
County	Lake	16.8	10.8
County	Lassen	16.8	10.8
County	Los Angeles-	16.8	10.8
County	Los Angeles-	19.8	14.7
County	Madera	16.8	10.8
County	Marin	10.8	10.8
County	Mariposa	16.8	10.8
County	Mendocino-	16.8	10.8
County	Mendocino-	16.8	10.8
County	Mendocino-	16.8	10.8
County	Mendocino-	16.8	10.8
County	Merced	16.8	10.8
County	Modoc	16.8	10.8
County	Mono	16.8	10.8
County	Monterey	16.8	10.8
County	Napa	10.8	10.8

County	Nevada	16.8	10.8
County	Orange	19.8	14.7
County	Placer-Lake	16.8	10.8
County	Placer-Mountain	16.8	10.8
County	Placer-	16.8	10.8
County	Plumas	16.8	10.8
County	Riverside-	16.8	10.8
County	Riverside-	19.8	14.7
County	Riverside-Salton	14.6	11
County	Riverside-South	19.8	14.7
County	Sacramento	15	10
County	San Benito	16.8	10.8
County	San Bernardino-	16.8	10.8
County	San Bernardino-	19.8	14.7
County	San Diego	16.8	10.8
County	San Francisco	10.8	10.8
County	San Joaquin	16.8	10.8
County	San Luis Obispo	13	13
County	San Mateo	10.8	10.8
County	Santa Barbara-	8.3	8.3
County	Santa Barbara-	8.3	8.3
County	Santa Clara	10.8	10.8
County	Santa Cruz	16.8	10.8
County	Shasta	16.8	10.8
County	Sierra	16.8	10.8
County	Siskiyou	16.8	10.8
County	Solano-	15	10
County	Solano-San	16.8	10.8
County	Sonoma-North	16.8	10.8
County	Sonoma-San	10.8	10.8
County	Stanislaus	16.8	10.8
County	Sutter	16.8	10.8
County	Tehama	16.8	10.8
County	Trinity	16.8	10.8
County	Tulare	16.8	10.8
County	Tuolumne	16.8	10.8
County	Ventura	16.8	10.8
County	Yolo	15	10
County	Yuba	16.8	10.8
Statewide	Statewide	16.8	10.8

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
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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**
Mininum	**10.80**	**10.80**
Maximum	**19.80**	**14.70**
Range	**9.00**	**3.90**

Village South Specific Plan (Proposed)

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	45.00	1000sqft	1.03	45,000.00	0
High Turnover (Sit Down Restaurant)	36.00	1000sqft	0.83	36,000.00	0
Hotel	50.00	Room	1.67	72,600.00	0
Quality Restaurant	8.00	1000sqft	0.18	8,000.00	0
Apartments Low Rise	25.00	Dwelling Unit	1.56	25,000.00	72
Apartments Mid Rise	975.00	Dwelling Unit	25.66	975,000.00	2789
Regional Shopping Center	56.00	1000sqft	1.29	56,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2028
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

Project Characteristics - Consistent with the DEIR's model.

Land Use - See SWAPE comment regarding residential and retail land uses.

Construction Phase - See SWAPE comment regarding individual construction phase lengths.

Demolition - Consistent with the DEIR's model. See SWAPE comment regarding demolition.

Vehicle Trips - Saturday trips consistent with the DEIR's model. See SWAPE comment regarding weekday and Sunday trips.

Woodstoves - Woodstoves and wood-burning fireplaces consistent with the DEIR's model. See SWAPE comment regarding gas fireplaces.

Energy Use -

Construction Off-road Equipment Mitigation - See SWAPE comment on construction-related mitigation.

Area Mitigation - See SWAPE comment regarding operational mitigation measures.

Water Mitigation - See SWAPE comment regarding operational mitigation measures.

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	1.25	0.00
tblFireplaces	NumberWood	48.75	0.00
tblVehicleTrips	ST_TR	7.16	6.17
tblVehicleTrips	ST_TR	6.39	3.87
tblVehicleTrips	ST_TR	2.46	1.39
tblVehicleTrips	ST_TR	158.37	79.82
tblVehicleTrips	ST_TR	8.19	3.75
tblVehicleTrips	ST_TR	94.36	63.99
tblVehicleTrips	ST_TR	49.97	10.74
tblVehicleTrips	SU_TR	6.07	6.16
tblVehicleTrips	SU_TR	5.86	4.18
tblVehicleTrips	SU_TR	1.05	0.69
tblVehicleTrips	SU_TR	131.84	78.27

tblVehicleTrips	SU_TR	5.95	3.20
tblVehicleTrips	SU_TR	72.16	57.65
tblVehicleTrips	SU_TR	25.24	6.39
tblVehicleTrips	WD_TR	6.59	5.83
tblVehicleTrips	WD_TR	6.65	4.13
tblVehicleTrips	WD_TR	11.03	6.41
tblVehicleTrips	WD_TR	127.15	65.80
tblVehicleTrips	WD_TR	8.17	3.84
tblVehicleTrips	WD_TR	89.95	62.64
tblVehicleTrips	WD_TR	42.70	9.43
tblWoodstoves	NumberCatalytic	1.25	0.00
tblWoodstoves	NumberCatalytic	48.75	0.00
tblWoodstoves	NumberNoncatalytic	1.25	0.00
tblWoodstoves	NumberNoncatalytic	48.75	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	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	0.1713	1.8242	1.1662	2.4000e-003	0.4169	0.0817	0.4986	0.1795	0.0754	0.2549	0.0000	213.1969	213.1969	0.0601	0.0000	214.6993
2022	0.6904	4.1142	6.1625	0.0189	1.3058	0.1201	1.4259	0.3460	0.1128	0.4588	0.0000	1,721.6826	1,721.6826	0.1294	0.0000	1,724.9187
2023	0.6148	3.3649	5.6747	0.0178	1.1963	0.0996	1.2959	0.3203	0.0935	0.4138	0.0000	1,627.5295	1,627.5295	0.1185	0.0000	1,630.4925
2024	4.1619	0.1335	0.2810	5.9000e-004	0.0325	6.4700e-003	0.0390	8.6300e-003	6.0400e-003	0.0147	0.0000	52.9078	52.9078	8.0200e-003	0.0000	53.1082
Maximum	**4.1619**	**4.1142**	**6.1625**	**0.0189**	**1.3058**	**0.1201**	**1.4259**	**0.3460**	**0.1128**	**0.4588**	**0.0000**	**1,721.6826**	**1,721.6826**	**0.1294**	**0.0000**	**1,724.9187**

2.1 Overall Construction

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	0.1713	1.8242	1.1662	2.4000e-003	0.4169	0.0817	0.4986	0.1795	0.0754	0.2549	0.0000	213.1967	213.1967	0.0601	0.0000	214.6991
2022	0.6904	4.1142	6.1625	0.0189	1.3058	0.1201	1.4259	0.3460	0.1128	0.4588	0.0000	1,721.6823	1,721.6823	0.1294	0.0000	1,724.9183
2023	0.6148	3.3648	5.6747	0.0178	1.1963	0.0996	1.2959	0.3203	0.0935	0.4138	0.0000	1,627.5291	1,627.5291	0.1185	0.0000	1,630.4921
2024	4.1619	0.1335	0.2810	5.9000e-004	0.0325	6.4700e-003	0.0390	8.6300e-003	6.0400e-003	0.0147	0.0000	52.9077	52.9077	8.0200e-003	0.0000	53.1082
Maximum	**4.1619**	**4.1142**	**6.1625**	**0.0189**	**1.3058**	**0.1201**	**1.4259**	**0.3460**	**0.1128**	**0.4588**	**0.0000**	**1,721.6823**	**1,721.6823**	**0.1294**	**0.0000**	**1,724.9183**

	ROG	NOx	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)
1	**9-1-2021**	**11-30-2021**	1.4103	1.4103
2	**12-1-2021**	**2-28-2022**	1.3613	1.3613
3	**3-1-2022**	**5-31-2022**	1.1985	1.1985
4	**6-1-2022**	**8-31-2022**	1.1921	1.1921
5	**9-1-2022**	**11-30-2022**	1.1918	1.1918
6	**12-1-2022**	**2-28-2023**	1.0774	1.0774
7	**3-1-2023**	**5-31-2023**	1.0320	1.0320
8	**6-1-2023**	**8-31-2023**	1.0260	1.0260

9	**9-1-2023**	**11-30-2023**	1.0265	1.0265
10	**12-1-2023**	**2-29-2024**	2.8857	2.8857
11	**3-1-2024**	**5-31-2024**	1.6207	1.6207
		Highest	2.8857	2.8857

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	5.1437	0.2950	10.3804	1.6700e-003		0.0714	0.0714		0.0714	0.0714	0.0000	220.9670	220.9670	0.0201	3.7400e-003	222.5835
Energy	0.1398	1.2312	0.7770	7.6200e-003		0.0966	0.0966		0.0966	0.0966	0.0000	3,896.0732	3,896.0732	0.1303	0.0468	3,913.2833
Mobile	1.5857	7.9962	19.1834	0.0821	7.7979	0.0580	7.8559	2.0895	0.0539	2.1434	0.0000	7,620.4986	7,620.4986	0.3407	0.0000	7,629.0162
Waste						0.0000	0.0000		0.0000	0.0000	207.8079	0.0000	207.8079	12.2811	0.0000	514.8354
Water						0.0000	0.0000		0.0000	0.0000	29.1632	556.6420	585.8052	3.0183	0.0755	683.7567
Total	**6.8692**	**9.5223**	**30.3407**	**0.0914**	**7.7979**	**0.2260**	**8.0240**	**2.0895**	**0.2219**	**2.3114**	**236.9712**	**12,294.1807**	**12,531.1519**	**15.7904**	**0.1260**	**12,963.4751**

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	5.1437	0.2950	10.3804	1.6700e-003		0.0714	0.0714		0.0714	0.0714	0.0000	220.9670	220.9670	0.0201	3.7400e-003	222.5835
Energy	0.1398	1.2312	0.7770	7.6200e-003		0.0966	0.0966		0.0966	0.0966	0.0000	3,896.0732	3,896.0732	0.1303	0.0468	3,913.2833
Mobile	1.5857	7.9962	19.1834	0.0821	7.7979	0.0580	7.8559	2.0895	0.0539	2.1434	0.0000	7,620.4986	7,620.4986	0.3407	0.0000	7,629.0162
Waste						0.0000	0.0000		0.0000	0.0000	207.8079	0.0000	207.8079	12.2811	0.0000	514.8354
Water						0.0000	0.0000		0.0000	0.0000	29.1632	556.6420	585.8052	3.0183	0.0755	683.7567
Total	**6.8692**	**9.5223**	**30.3407**	**0.0914**	**7.7979**	**0.2260**	**8.0240**	**2.0895**	**0.2219**	**2.3114**	**236.9712**	**12,294.1807**	**12,531.1519**	**15.7904**	**0.1260**	**12,963.4751**

	ROG	NOx	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

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2021	10/12/2021	5	30	
2	Site Preparation	Site Preparation	10/13/2021	11/9/2021	5	20	
3	Grading	Grading	11/10/2021	1/11/2022	5	45	
4	Building Construction	Building Construction	1/12/2022	12/12/2023	5	500	
5	Paving	Paving	12/13/2023	1/30/2024	5	35	
6	Architectural Coating	Architectural Coating	1/31/2024	3/19/2024	5	35	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 112.5

Acres of Paving: 0

Residential Indoor: 2,025,000; Residential Outdoor: 675,000; Non-Residential Indoor: 326,400; Non-Residential Outdoor: 108,800; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	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	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	458.00	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	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	801.00	143.00	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	160.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 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					0.0496	0.0000	0.0496	7.5100e-003	0.0000	7.5100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0475	0.4716	0.3235	5.8000e-004		0.0233	0.0233		0.0216	0.0216	0.0000	51.0012	51.0012	0.0144	0.0000	51.3601
Total	**0.0475**	**0.4716**	**0.3235**	**5.8000e-004**	**0.0496**	**0.0233**	**0.0729**	**7.5100e-003**	**0.0216**	**0.0291**	**0.0000**	**51.0012**	**51.0012**	**0.0144**	**0.0000**	**51.3601**

3.2 Demolition - 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	1.9300e-003	0.0634	0.0148	1.8000e-004	3.9400e-003	1.9000e-004	4.1300e-003	1.0800e-003	1.8000e-004	1.2600e-003	0.0000	17.4566	17.4566	1.2100e-003	0.0000	17.4869
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.7000e-004	7.5000e-004	8.5100e-003	2.0000e-005	2.4700e-003	2.0000e-005	2.4900e-003	6.5000e-004	2.0000e-005	6.7000e-004	0.0000	2.2251	2.2251	7.0000e-005	0.0000	2.2267
Total	**2.9000e-003**	**0.0641**	**0.0233**	**2.0000e-004**	**6.4100e-003**	**2.1000e-004**	**6.6200e-003**	**1.7300e-003**	**2.0000e-004**	**1.9300e-003**	**0.0000**	**19.6816**	**19.6816**	**1.2800e-003**	**0.0000**	**19.7136**

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					0.0496	0.0000	0.0496	7.5100e-003	0.0000	7.5100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0475	0.4716	0.3235	5.8000e-004		0.0233	0.0233		0.0216	0.0216	0.0000	51.0011	51.0011	0.0144	0.0000	51.3600
Total	**0.0475**	**0.4716**	**0.3235**	**5.8000e-004**	**0.0496**	**0.0233**	**0.0729**	**7.5100e-003**	**0.0216**	**0.0291**	**0.0000**	**51.0011**	**51.0011**	**0.0144**	**0.0000**	**51.3600**

3.2 Demolition - 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	1.9300e-003	0.0634	0.0148	1.8000e-004	3.9400e-003	1.9000e-004	4.1300e-003	1.0800e-003	1.8000e-004	1.2600e-003	0.0000	17.4566	17.4566	1.2100e-003	0.0000	17.4869
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	9.7000e-004	7.5000e-004	8.5100e-003	2.0000e-005	2.4700e-003	2.0000e-005	2.4900e-003	6.5000e-004	2.0000e-005	6.7000e-004	0.0000	2.2251	2.2251	7.0000e-005	0.0000	2.2267
Total	**2.9000e-003**	**0.0641**	**0.0233**	**2.0000e-004**	**6.4100e-003**	**2.1000e-004**	**6.6200e-003**	**1.7300e-003**	**2.0000e-004**	**1.9300e-003**	**0.0000**	**19.6816**	**19.6816**	**1.2800e-003**	**0.0000**	**19.7136**

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					0.1807	0.0000	0.1807	0.0993	0.0000	0.0993	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0389	0.4050	0.2115	3.8000e-004		0.0204	0.0204		0.0188	0.0188	0.0000	33.4357	33.4357	0.0108	0.0000	33.7061
Total	**0.0389**	**0.4050**	**0.2115**	**3.8000e-004**	**0.1807**	**0.0204**	**0.2011**	**0.0993**	**0.0188**	**0.1181**	**0.0000**	**33.4357**	**33.4357**	**0.0108**	**0.0000**	**33.7061**

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	7.7000e-004	6.0000e-004	6.8100e-003	2.0000e-005	1.9700e-003	2.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.7801	1.7801	5.0000e-005	0.0000	1.7814
Total	**7.7000e-004**	**6.0000e-004**	**6.8100e-003**	**2.0000e-005**	**1.9700e-003**	**2.0000e-005**	**1.9900e-003**	**5.2000e-004**	**1.0000e-005**	**5.4000e-004**	**0.0000**	**1.7801**	**1.7801**	**5.0000e-005**	**0.0000**	**1.7814**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.1807	0.0000	0.1807	0.0993	0.0000	0.0993	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0389	0.4050	0.2115	3.8000e-004		0.0204	0.0204		0.0188	0.0188	0.0000	33.4357	33.4357	0.0108	0.0000	33.7060
Total	**0.0389**	**0.4050**	**0.2115**	**3.8000e-004**	**0.1807**	**0.0204**	**0.2011**	**0.0993**	**0.0188**	**0.1181**	**0.0000**	**33.4357**	**33.4357**	**0.0108**	**0.0000**	**33.7060**

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	7.7000e-004	6.0000e-004	6.8100e-003	2.0000e-005	1.9700e-003	2.0000e-005	1.9900e-003	5.2000e-004	1.0000e-005	5.4000e-004	0.0000	1.7801	1.7801	5.0000e-005	0.0000	1.7814
Total	**7.7000e-004**	**6.0000e-004**	**6.8100e-003**	**2.0000e-005**	**1.9700e-003**	**2.0000e-005**	**1.9900e-003**	**5.2000e-004**	**1.0000e-005**	**5.4000e-004**	**0.0000**	**1.7801**	**1.7801**	**5.0000e-005**	**0.0000**	**1.7814**

3.4 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					0.1741	0.0000	0.1741	0.0693	0.0000	0.0693	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0796	0.8816	0.5867	1.1800e-003		0.0377	0.0377		0.0347	0.0347	0.0000	103.5405	103.5405	0.0335	0.0000	104.3776
Total	**0.0796**	**0.8816**	**0.5867**	**1.1800e-003**	**0.1741**	**0.0377**	**0.2118**	**0.0693**	**0.0347**	**0.1040**	**0.0000**	**103.5405**	**103.5405**	**0.0335**	**0.0000**	**104.3776**

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	0.0000	0.0000	0.0000	0.0000	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	1.6400e-003	1.2700e-003	0.0144	4.0000e-005	4.1600e-003	3.0000e-005	4.2000e-003	1.1100e-003	3.0000e-005	1.1400e-003	0.0000	3.7579	3.7579	1.1000e-004	0.0000	3.7607
Total	**1.6400e-003**	**1.2700e-003**	**0.0144**	**4.0000e-005**	**4.1600e-003**	**3.0000e-005**	**4.2000e-003**	**1.1100e-003**	**3.0000e-005**	**1.1400e-003**	**0.0000**	**3.7579**	**3.7579**	**1.1000e-004**	**0.0000**	**3.7607**

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					0.1741	0.0000	0.1741	0.0693	0.0000	0.0693	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0796	0.8816	0.5867	1.1800e-003		0.0377	0.0377		0.0347	0.0347	0.0000	103.5403	103.5403	0.0335	0.0000	104.3775
Total	**0.0796**	**0.8816**	**0.5867**	**1.1800e-003**	**0.1741**	**0.0377**	**0.2118**	**0.0693**	**0.0347**	**0.1040**	**0.0000**	**103.5403**	**103.5403**	**0.0335**	**0.0000**	**104.3775**

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	0.0000	0.0000	0.0000	0.0000	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	1.6400e-003	1.2700e-003	0.0144	4.0000e-005	4.1600e-003	3.0000e-005	4.2000e-003	1.1100e-003	3.0000e-005	1.1400e-003	0.0000	3.7579	3.7579	1.1000e-004	0.0000	3.7607
Total	**1.6400e-003**	**1.2700e-003**	**0.0144**	**4.0000e-005**	**4.1600e-003**	**3.0000e-005**	**4.2000e-003**	**1.1100e-003**	**3.0000e-005**	**1.1400e-003**	**0.0000**	**3.7579**	**3.7579**	**1.1000e-004**	**0.0000**	**3.7607**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0807	0.0000	0.0807	0.0180	0.0000	0.0180	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0127	0.1360	0.1017	2.2000e-004		5.7200e-003	5.7200e-003		5.2600e-003	5.2600e-003	0.0000	19.0871	19.0871	6.1700e-003	0.0000	19.2414
Total	**0.0127**	**0.1360**	**0.1017**	**2.2000e-004**	**0.0807**	**5.7200e-003**	**0.0865**	**0.0180**	**5.2600e-003**	**0.0233**	**0.0000**	**19.0871**	**19.0871**	**6.1700e-003**	**0.0000**	**19.2414**

3.4 Grading - 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	2.8000e-004	2.1000e-004	2.4400e-003	1.0000e-005	7.7000e-004	1.0000e-005	7.7000e-004	2.0000e-004	1.0000e-005	2.1000e-004	0.0000	0.6679	0.6679	2.0000e-005	0.0000	0.6684
Total	**2.8000e-004**	**2.1000e-004**	**2.4400e-003**	**1.0000e-005**	**7.7000e-004**	**1.0000e-005**	**7.7000e-004**	**2.0000e-004**	**1.0000e-005**	**2.1000e-004**	**0.0000**	**0.6679**	**0.6679**	**2.0000e-005**	**0.0000**	**0.6684**

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					0.0807	0.0000	0.0807	0.0180	0.0000	0.0180	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0127	0.1360	0.1017	2.2000e-004		5.7200e-003	5.7200e-003		5.2600e-003	5.2600e-003	0.0000	19.0871	19.0871	6.1700e-003	0.0000	19.2414
Total	**0.0127**	**0.1360**	**0.1017**	**2.2000e-004**	**0.0807**	**5.7200e-003**	**0.0865**	**0.0180**	**5.2600e-003**	**0.0233**	**0.0000**	**19.0871**	**19.0871**	**6.1700e-003**	**0.0000**	**19.2414**

3.4 Grading - 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	2.8000e-004	2.1000e-004	2.4400e-003	1.0000e-005	7.7000e-004	1.0000e-005	7.7000e-004	2.0000e-004	1.0000e-005	2.1000e-004	0.0000	0.6679	0.6679	2.0000e-005	0.0000	0.6684
Total	**2.8000e-004**	**2.1000e-004**	**2.4400e-003**	**1.0000e-005**	**7.7000e-004**	**1.0000e-005**	**7.7000e-004**	**2.0000e-004**	**1.0000e-005**	**2.1000e-004**	**0.0000**	**0.6679**	**0.6679**	**2.0000e-005**	**0.0000**	**0.6684**

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	0.2158	1.9754	2.0700	3.4100e-003		0.1023	0.1023		0.0963	0.0963	0.0000	293.1324	293.1324	0.0702	0.0000	294.8881
Total	**0.2158**	**1.9754**	**2.0700**	**3.4100e-003**		**0.1023**	**0.1023**		**0.0963**	**0.0963**	**0.0000**	**293.1324**	**293.1324**	**0.0702**	**0.0000**	**294.8881**

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	0.0527	1.6961	0.4580	4.5500e-003	0.1140	3.1800e-003	0.1171	0.0329	3.0400e-003	0.0359	0.0000	441.9835	441.9835	0.0264	0.0000	442.6435
Worker	0.4088	0.3066	3.5305	0.0107	1.1103	8.8700e-003	1.1192	0.2949	8.1700e-003	0.3031	0.0000	966.8117	966.8117	0.0266	0.0000	967.4773
Total	**0.4616**	**2.0027**	**3.9885**	**0.0152**	**1.2243**	**0.0121**	**1.2363**	**0.3278**	**0.0112**	**0.3390**	**0.0000**	**1,408.7952**	**1,408.7952**	**0.0530**	**0.0000**	**1,410.1208**

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	0.2158	1.9754	2.0700	3.4100e-003		0.1023	0.1023		0.0963	0.0963	0.0000	293.1321	293.1321	0.0702	0.0000	294.8877
Total	**0.2158**	**1.9754**	**2.0700**	**3.4100e-003**		**0.1023**	**0.1023**		**0.0963**	**0.0963**	**0.0000**	**293.1321**	**293.1321**	**0.0702**	**0.0000**	**294.8877**

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	0.0527	1.6961	0.4580	4.5500e-003	0.1140	3.1800e-003	0.1171	0.0329	3.0400e-003	0.0359	0.0000	441.9835	441.9835	0.0264	0.0000	442.6435
Worker	0.4088	0.3066	3.5305	0.0107	1.1103	8.8700e-003	1.1192	0.2949	8.1700e-003	0.3031	0.0000	966.8117	966.8117	0.0266	0.0000	967.4773
Total	**0.4616**	**2.0027**	**3.9885**	**0.0152**	**1.2243**	**0.0121**	**1.2363**	**0.3278**	**0.0112**	**0.3390**	**0.0000**	**1,408.7952**	**1,408.7952**	**0.0530**	**0.0000**	**1,410.1208**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1942	1.7765	2.0061	3.3300e-003		0.0864	0.0864		0.0813	0.0813	0.0000	286.2789	286.2789	0.0681	0.0000	287.9814
Total	**0.1942**	**1.7765**	**2.0061**	**3.3300e-003**		**0.0864**	**0.0864**		**0.0813**	**0.0813**	**0.0000**	**286.2789**	**286.2789**	**0.0681**	**0.0000**	**287.9814**

3.5 Building Construction - 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	0.0382	1.2511	0.4011	4.3000e-003	0.1113	1.4600e-003	0.1127	0.0321	1.4000e-003	0.0335	0.0000	417.9930	417.9930	0.0228	0.0000	418.5624
Worker	0.3753	0.2708	3.1696	0.0101	1.0840	8.4100e-003	1.0924	0.2879	7.7400e-003	0.2957	0.0000	909.3439	909.3439	0.0234	0.0000	909.9291
Total	**0.4135**	**1.5218**	**3.5707**	**0.0144**	**1.1953**	**9.8700e-003**	**1.2051**	**0.3200**	**9.1400e-003**	**0.3292**	**0.0000**	**1,327.3369**	**1,327.3369**	**0.0462**	**0.0000**	**1,328.4916**

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	0.1942	1.7765	2.0061	3.3300e-003		0.0864	0.0864		0.0813	0.0813	0.0000	286.2785	286.2785	0.0681	0.0000	287.9811
Total	**0.1942**	**1.7765**	**2.0061**	**3.3300e-003**		**0.0864**	**0.0864**		**0.0813**	**0.0813**	**0.0000**	**286.2785**	**286.2785**	**0.0681**	**0.0000**	**287.9811**

3.5 Building Construction - 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	0.0382	1.2511	0.4011	4.3000e-003	0.1113	1.4600e-003	0.1127	0.0321	1.4000e-003	0.0335	0.0000	417.9930	417.9930	0.0228	0.0000	418.5624
Worker	0.3753	0.2708	3.1696	0.0101	1.0840	8.4100e-003	1.0924	0.2879	7.7400e-003	0.2957	0.0000	909.3439	909.3439	0.0234	0.0000	909.9291
Total	**0.4135**	**1.5218**	**3.5707**	**0.0144**	**1.1953**	**9.8700e-003**	**1.2051**	**0.3200**	**9.1400e-003**	**0.3292**	**0.0000**	**1,327.3369**	**1,327.3369**	**0.0462**	**0.0000**	**1,328.4916**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.7100e-003	0.0663	0.0948	1.5000e-004		3.3200e-003	3.3200e-003		3.0500e-003	3.0500e-003	0.0000	13.0175	13.0175	4.2100e-003	0.0000	13.1227
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.7100e-003**	**0.0663**	**0.0948**	**1.5000e-004**		**3.3200e-003**	**3.3200e-003**		**3.0500e-003**	**3.0500e-003**	**0.0000**	**13.0175**	**13.0175**	**4.2100e-003**	**0.0000**	**13.1227**

3.6 Paving - 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	3.7000e-004	2.7000e-004	3.1200e-003	1.0000e-005	1.0700e-003	1.0000e-005	1.0800e-003	2.8000e-004	1.0000e-005	2.9000e-004	0.0000	0.8963	0.8963	2.0000e-005	0.0000	0.8968
Total	**3.7000e-004**	**2.7000e-004**	**3.1200e-003**	**1.0000e-005**	**1.0700e-003**	**1.0000e-005**	**1.0800e-003**	**2.8000e-004**	**1.0000e-005**	**2.9000e-004**	**0.0000**	**0.8963**	**0.8963**	**2.0000e-005**	**0.0000**	**0.8968**

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	6.7100e-003	0.0663	0.0948	1.5000e-004		3.3200e-003	3.3200e-003		3.0500e-003	3.0500e-003	0.0000	13.0175	13.0175	4.2100e-003	0.0000	13.1227
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.7100e-003**	**0.0663**	**0.0948**	**1.5000e-004**		**3.3200e-003**	**3.3200e-003**		**3.0500e-003**	**3.0500e-003**	**0.0000**	**13.0175**	**13.0175**	**4.2100e-003**	**0.0000**	**13.1227**

3.6 Paving - 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	3.7000e-004	2.7000e-004	3.1200e-003	1.0000e-005	1.0700e-003	1.0000e-005	1.0800e-003	2.8000e-004	1.0000e-005	2.9000e-004	0.0000	0.8963	0.8963	2.0000e-005	0.0000	0.8968
Total	**3.7000e-004**	**2.7000e-004**	**3.1200e-003**	**1.0000e-005**	**1.0700e-003**	**1.0000e-005**	**1.0800e-003**	**2.8000e-004**	**1.0000e-005**	**2.9000e-004**	**0.0000**	**0.8963**	**0.8963**	**2.0000e-005**	**0.0000**	**0.8968**

3.6 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0109	0.1048	0.1609	2.5000e-004		5.1500e-003	5.1500e-003		4.7400e-003	4.7400e-003	0.0000	22.0292	22.0292	7.1200e-003	0.0000	22.2073
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0109**	**0.1048**	**0.1609**	**2.5000e-004**		**5.1500e-003**	**5.1500e-003**		**4.7400e-003**	**4.7400e-003**	**0.0000**	**22.0292**	**22.0292**	**7.1200e-003**	**0.0000**	**22.2073**

3.6 Paving - 2024

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	5.9000e-004	4.1000e-004	4.9200e-003	2.0000e-005	1.8100e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.4697	1.4697	4.0000e-005	0.0000	1.4706
Total	**5.9000e-004**	**4.1000e-004**	**4.9200e-003**	**2.0000e-005**	**1.8100e-003**	**1.0000e-005**	**1.8200e-003**	**4.8000e-004**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**1.4697**	**1.4697**	**4.0000e-005**	**0.0000**	**1.4706**

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	0.0109	0.1048	0.1609	2.5000e-004		5.1500e-003	5.1500e-003		4.7400e-003	4.7400e-003	0.0000	22.0292	22.0292	7.1200e-003	0.0000	22.2073
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0109**	**0.1048**	**0.1609**	**2.5000e-004**		**5.1500e-003**	**5.1500e-003**		**4.7400e-003**	**4.7400e-003**	**0.0000**	**22.0292**	**22.0292**	**7.1200e-003**	**0.0000**	**22.2073**

3.6 Paving - 2024

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	5.9000e-004	4.1000e-004	4.9200e-003	2.0000e-005	1.8100e-003	1.0000e-005	1.8200e-003	4.8000e-004	1.0000e-005	4.9000e-004	0.0000	1.4697	1.4697	4.0000e-005	0.0000	1.4706
Total	**5.9000e-004**	**4.1000e-004**	**4.9200e-003**	**2.0000e-005**	**1.8100e-003**	**1.0000e-005**	**1.8200e-003**	**4.8000e-004**	**1.0000e-005**	**4.9000e-004**	**0.0000**	**1.4697**	**1.4697**	**4.0000e-005**	**0.0000**	**1.4706**

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	4.1372					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.1600e-003	0.0213	0.0317	5.0000e-005		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	4.4682	4.4682	2.5000e-004	0.0000	4.4745
Total	**4.1404**	**0.0213**	**0.0317**	**5.0000e-005**		**1.0700e-003**	**1.0700e-003**		**1.0700e-003**	**1.0700e-003**	**0.0000**	**4.4682**	**4.4682**	**2.5000e-004**	**0.0000**	**4.4745**

3.7 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0101	6.9900e-003	0.0835	2.8000e-004	0.0307	2.3000e-004	0.0309	8.1500e-003	2.2000e-004	8.3700e-003	0.0000	24.9407	24.9407	6.1000e-004	0.0000	24.9558
Total	**0.0101**	**6.9900e-003**	**0.0835**	**2.8000e-004**	**0.0307**	**2.3000e-004**	**0.0309**	**8.1500e-003**	**2.2000e-004**	**8.3700e-003**	**0.0000**	**24.9407**	**24.9407**	**6.1000e-004**	**0.0000**	**24.9558**

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	4.1372					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.1600e-003	0.0213	0.0317	5.0000e-005		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	4.4682	4.4682	2.5000e-004	0.0000	4.4745
Total	**4.1404**	**0.0213**	**0.0317**	**5.0000e-005**		**1.0700e-003**	**1.0700e-003**		**1.0700e-003**	**1.0700e-003**	**0.0000**	**4.4682**	**4.4682**	**2.5000e-004**	**0.0000**	**4.4745**

3.7 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	0.0101	6.9900e-003	0.0835	2.8000e-004	0.0307	2.3000e-004	0.0309	8.1500e-003	2.2000e-004	8.3700e-003	0.0000	24.9407	24.9407	6.1000e-004	0.0000	24.9558
Total	**0.0101**	**6.9900e-003**	**0.0835**	**2.8000e-004**	**0.0307**	**2.3000e-004**	**0.0309**	**8.1500e-003**	**2.2000e-004**	**8.3700e-003**	**0.0000**	**24.9407**	**24.9407**	**6.1000e-004**	**0.0000**	**24.9558**

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	1.5857	7.9962	19.1834	0.0821	7.7979	0.0580	7.8559	2.0895	0.0539	2.1434	0.0000	7,620.4986	7,620.4986	0.3407	0.0000	7,629.0162
Unmitigated	1.5857	7.9962	19.1834	0.0821	7.7979	0.0580	7.8559	2.0895	0.0539	2.1434	0.0000	7,620.4986	7,620.4986	0.3407	0.0000	7,629.0162

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	145.75	154.25	154.00	506,227	506,227
Apartments Mid Rise	4,026.75	3,773.25	4075.50	13,660,065	13,660,065
General Office Building	288.45	62.55	31.05	706,812	706,812
High Turnover (Sit Down Restaurant)	2,368.80	2,873.52	2817.72	3,413,937	3,413,937
Hotel	192.00	187.50	160.00	445,703	445,703
Quality Restaurant	501.12	511.92	461.20	707,488	707,488
Regional Shopping Center	528.08	601.44	357.84	1,112,221	1,112,221
Total	8,050.95	8,164.43	8,057.31	20,552,452	20,552,452

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	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Apartments Mid Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
General Office Building	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
High Turnover (Sit Down Restaurant)	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Hotel	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Quality Restaurant	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Regional Shopping Center	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

	ROG	NOx	CO	SO2	Fugitive 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	2,512.6465	2,512.6465	0.1037	0.0215	2,521.6356
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2,512.6465	2,512.6465	0.1037	0.0215	2,521.6356
NaturalGas Mitigated	0.1398	1.2312	0.7770	7.6200e-003		0.0966	0.0966		0.0966	0.0966	0.0000	1,383.4267	1,383.4267	0.0265	0.0254	1,391.6478
NaturalGas Unmitigated	0.1398	1.2312	0.7770	7.6200e-003		0.0966	0.0966		0.0966	0.0966	0.0000	1,383.4267	1,383.4267	0.0265	0.0254	1,391.6478

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	408494	2.2000e-003	0.0188	8.0100e-003	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	21.7988	21.7988	4.2000e-004	4.0000e-004	21.9284
Apartments Mid Rise	1.30613e+007	0.0704	0.6018	0.2561	3.8400e-003		0.0487	0.0487		0.0487	0.0487	0.0000	696.9989	696.9989	0.0134	0.0128	701.1408
General Office Building	468450	2.5300e-003	0.0230	0.0193	1.4000e-004		1.7500e-003	1.7500e-003		1.7500e-003	1.7500e-003	0.0000	24.9983	24.9983	4.8000e-004	4.6000e-004	25.1468
High Turnover (Sit Down Restaurant)	8.30736e+006	0.0448	0.4072	0.3421	2.4400e-003		0.0310	0.0310		0.0310	0.0310	0.0000	443.3124	443.3124	8.5000e-003	8.1300e-003	445.9468
Hotel	1.74095e+006	9.3900e-003	0.0853	0.0717	5.1000e-004		6.4900e-003	6.4900e-003		6.4900e-003	6.4900e-003	0.0000	92.9036	92.9036	1.7800e-003	1.7000e-003	93.4557
Quality Restaurant	1.84608e+006	9.9500e-003	0.0905	0.0760	5.4000e-004		6.8800e-003	6.8800e-003		6.8800e-003	6.8800e-003	0.0000	98.5139	98.5139	1.8900e-003	1.8100e-003	99.0993
Regional Shopping Center	91840	5.0000e-004	4.5000e-003	3.7800e-003	3.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004	0.0000	4.9009	4.9009	9.0000e-005	9.0000e-005	4.9301
Total		**0.1398**	**1.2312**	**0.7770**	**7.6200e-003**		**0.0966**	**0.0966**		**0.0966**	**0.0966**	**0.0000**	**1,383.4268**	**1,383.4268**	**0.0265**	**0.0254**	**1,391.6478**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	408494	2.2000e-003	0.0188	8.0100e-003	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	21.7988	21.7988	4.2000e-004	4.0000e-004	21.9284
Apartments Mid Rise	1.30613e+007	0.0704	0.6018	0.2561	3.8400e-003		0.0487	0.0487		0.0487	0.0487	0.0000	696.9989	696.9989	0.0134	0.0128	701.1408
General Office Building	468450	2.5300e-003	0.0230	0.0193	1.4000e-004		1.7500e-003	1.7500e-003		1.7500e-003	1.7500e-003	0.0000	24.9983	24.9983	4.8000e-004	4.6000e-004	25.1468
High Turnover (Sit Down Restaurant)	8.30736e+006	0.0448	0.4072	0.3421	2.4400e-003		0.0310	0.0310		0.0310	0.0310	0.0000	443.3124	443.3124	8.5000e-003	8.1300e-003	445.9468
Hotel	1.74095e+006	9.3900e-003	0.0853	0.0717	5.1000e-004		6.4900e-003	6.4900e-003		6.4900e-003	6.4900e-003	0.0000	92.9036	92.9036	1.7800e-003	1.7000e-003	93.4557
Quality Restaurant	1.84608e+006	9.9500e-003	0.0905	0.0760	5.4000e-004		6.8800e-003	6.8800e-003		6.8800e-003	6.8800e-003	0.0000	98.5139	98.5139	1.8900e-003	1.8100e-003	99.0993
Regional Shopping Center	91840	5.0000e-004	4.5000e-003	3.7800e-003	3.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004	0.0000	4.9009	4.9009	9.0000e-005	9.0000e-005	4.9301
Total		**0.1398**	**1.2312**	**0.7770**	**7.6200e-003**		**0.0966**	**0.0966**		**0.0966**	**0.0966**	**0.0000**	**1,383.4268**	**1,383.4268**	**0.0265**	**0.0254**	**1,391.6478**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	106010	33.7770	1.3900e-003	2.9000e-004	33.8978
Apartments Mid Rise	3.94697e+006	1,257.5879	0.0519	0.0107	1,262.0869
General Office Building	584550	186.2502	7.6900e-003	1.5900e-003	186.9165
High Turnover (Sit Down Restaurant)	1.58904e+006	506.3022	0.0209	4.3200e-003	508.1135
Hotel	550308	175.3399	7.2400e-003	1.5000e-003	175.9672
Quality Restaurant	353120	112.5116	4.6500e-003	9.6000e-004	112.9141
Regional Shopping Center	756000	240.8778	9.9400e-003	2.0600e-003	241.7395
Total		**2,512.6465**	**0.1037**	**0.0215**	**2,521.6356**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	106010	33.7770	1.3900e-003	2.9000e-004	33.8978
Apartments Mid Rise	3.94697e+006	1,257.5879	0.0519	0.0107	1,262.0869
General Office Building	584550	186.2502	7.6900e-003	1.5900e-003	186.9165
High Turnover (Sit Down Restaurant)	1.58904e+006	506.3022	0.0209	4.3200e-003	508.1135
Hotel	550308	175.3399	7.2400e-003	1.5000e-003	175.9672
Quality Restaurant	353120	112.5116	4.6500e-003	9.6000e-004	112.9141
Regional Shopping Center	756000	240.8778	9.9400e-003	2.0600e-003	241.7395
Total		**2,512.6465**	**0.1037**	**0.0215**	**2,521.6356**

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	5.1437	0.2950	10.3804	1.6700e-003		0.0714	0.0714		0.0714	0.0714	0.0000	220.9670	220.9670	0.0201	3.7400e-003	222.5835
Unmitigated	5.1437	0.2950	10.3804	1.6700e-003		0.0714	0.0714		0.0714	0.0714	0.0000	220.9670	220.9670	0.0201	3.7400e-003	222.5835

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	0.4137					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.3998					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0206	0.1763	0.0750	1.1200e-003		0.0143	0.0143		0.0143	0.0143	0.0000	204.1166	204.1166	3.9100e-003	3.7400e-003	205.3295
Landscaping	0.3096	0.1187	10.3054	5.4000e-004		0.0572	0.0572		0.0572	0.0572	0.0000	16.8504	16.8504	0.0161	0.0000	17.2540
Total	**5.1437**	**0.2950**	**10.3804**	**1.6600e-003**		**0.0714**	**0.0714**		**0.0714**	**0.0714**	**0.0000**	**220.9670**	**220.9670**	**0.0201**	**3.7400e-003**	**222.5835**

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	0.4137					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.3998					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0206	0.1763	0.0750	1.1200e-003		0.0143	0.0143		0.0143	0.0143	0.0000	204.1166	204.1166	3.9100e-003	3.7400e-003	205.3295
Landscaping	0.3096	0.1187	10.3054	5.4000e-004		0.0572	0.0572		0.0572	0.0572	0.0000	16.8504	16.8504	0.0161	0.0000	17.2540
Total	**5.1437**	**0.2950**	**10.3804**	**1.6600e-003**		**0.0714**	**0.0714**		**0.0714**	**0.0714**	**0.0000**	**220.9670**	**220.9670**	**0.0201**	**3.7400e-003**	**222.5835**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	585.8052	3.0183	0.0755	683.7567
Unmitigated	585.8052	3.0183	0.0755	683.7567

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	1.62885 / 1.02688	10.9095	0.0535	1.3400e-003	12.6471
Apartments Mid Rise	63.5252 / 40.0485	425.4719	2.0867	0.0523	493.2363
General Office Building	7.99802 / 4.90201	53.0719	0.2627	6.5900e-003	61.6019
High Turnover (Sit Down Restaurant)	10.9272 / 0.697482	51.2702	0.3580	8.8200e-003	62.8482
Hotel	1.26834 / 0.140927	6.1633	0.0416	1.0300e-003	7.5079
Quality Restaurant	2.42827 / 0.154996	11.3934	0.0796	1.9600e-003	13.9663
Regional Shopping Center	4.14806 / 2.54236	27.5250	0.1363	3.4200e-003	31.9490
Total		**585.8052**	**3.0183**	**0.0755**	**683.7567**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	1.62885 / 1.02688	10.9095	0.0535	1.3400e-003	12.6471
Apartments Mid Rise	63.5252 / 40.0485	425.4719	2.0867	0.0523	493.2363
General Office Building	7.99802 / 4.90201	53.0719	0.2627	6.5900e-003	61.6019
High Turnover (Sit Down Restaurant)	10.9272 / 0.697482	51.2702	0.3580	8.8200e-003	62.8482
Hotel	1.26834 / 0.140927	6.1633	0.0416	1.0300e-003	7.5079
Quality Restaurant	2.42827 / 0.154996	11.3934	0.0796	1.9600e-003	13.9663
Regional Shopping Center	4.14806 / 2.54236	27.5250	0.1363	3.4200e-003	31.9490
Total		**585.8052**	**3.0183**	**0.0755**	**683.7567**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	207.8079	12.2811	0.0000	514.8354
Unmitigated	207.8079	12.2811	0.0000	514.8354

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	11.5	2.3344	0.1380	0.0000	5.7834
Apartments Mid Rise	448.5	91.0415	5.3804	0.0000	225.5513
General Office Building	41.85	8.4952	0.5021	0.0000	21.0464
High Turnover (Sit Down Restaurant)	428.4	86.9613	5.1393	0.0000	215.4430
Hotel	27.38	5.5579	0.3285	0.0000	13.7694
Quality Restaurant	7.3	1.4818	0.0876	0.0000	3.6712
Regional Shopping Center	58.8	11.9359	0.7054	0.0000	29.5706
Total		**207.8079**	**12.2811**	**0.0000**	**514.8354**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	11.5	2.3344	0.1380	0.0000	5.7834
Apartments Mid Rise	448.5	91.0415	5.3804	0.0000	225.5513
General Office Building	41.85	8.4952	0.5021	0.0000	21.0464
High Turnover (Sit Down Restaurant)	428.4	86.9613	5.1393	0.0000	215.4430
Hotel	27.38	5.5579	0.3285	0.0000	13.7694
Quality Restaurant	7.3	1.4818	0.0876	0.0000	3.6712
Regional Shopping Center	58.8	11.9359	0.7054	0.0000	29.5706
Total		**207.8079**	**12.2811**	**0.0000**	**514.8354**

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

Village South Specific Plan (Proposed)

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	45.00	1000sqft	1.03	45,000.00	0
High Turnover (Sit Down Restaurant)	36.00	1000sqft	0.83	36,000.00	0
Hotel	50.00	Room	1.67	72,600.00	0
Quality Restaurant	8.00	1000sqft	0.18	8,000.00	0
Apartments Low Rise	25.00	Dwelling Unit	1.56	25,000.00	72
Apartments Mid Rise	975.00	Dwelling Unit	25.66	975,000.00	2789
Regional Shopping Center	56.00	1000sqft	1.29	56,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2028
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

Project Characteristics - Consistent with the DEIR's model.

Land Use - See SWAPE comment regarding residential and retail land uses.

Construction Phase - See SWAPE comment regarding individual construction phase lengths.

Demolition - Consistent with the DEIR's model. See SWAPE comment regarding demolition.

Vehicle Trips - Saturday trips consistent with the DEIR's model. See SWAPE comment regarding weekday and Sunday trips.

Woodstoves - Woodstoves and wood-burning fireplaces consistent with the DEIR's model. See SWAPE comment regarding gas fireplaces.

Energy Use -

Construction Off-road Equipment Mitigation - See SWAPE comment on construction-related mitigation.

Area Mitigation - See SWAPE comment regarding operational mitigation measures.

Water Mitigation - See SWAPE comment regarding operational mitigation measures.

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	1.25	0.00
tblFireplaces	NumberWood	48.75	0.00
tblVehicleTrips	ST_TR	7.16	6.17
tblVehicleTrips	ST_TR	6.39	3.87
tblVehicleTrips	ST_TR	2.46	1.39
tblVehicleTrips	ST_TR	158.37	79.82
tblVehicleTrips	ST_TR	8.19	3.75
tblVehicleTrips	ST_TR	94.36	63.99
tblVehicleTrips	ST_TR	49.97	10.74
tblVehicleTrips	SU_TR	6.07	6.16
tblVehicleTrips	SU_TR	5.86	4.18
tblVehicleTrips	SU_TR	1.05	0.69
tblVehicleTrips	SU_TR	131.84	78.27

tblVehicleTrips	SU_TR	5.95	3.20
tblVehicleTrips	SU_TR	72.16	57.65
tblVehicleTrips	SU_TR	25.24	6.39
tblVehicleTrips	WD_TR	6.59	5.83
tblVehicleTrips	WD_TR	6.65	4.13
tblVehicleTrips	WD_TR	11.03	6.41
tblVehicleTrips	WD_TR	127.15	65.80
tblVehicleTrips	WD_TR	8.17	3.84
tblVehicleTrips	WD_TR	89.95	62.64
tblVehicleTrips	WD_TR	42.70	9.43
tblWoodstoves	NumberCatalytic	1.25	0.00
tblWoodstoves	NumberCatalytic	48.75	0.00
tblWoodstoves	NumberNoncatalytic	1.25	0.00
tblWoodstoves	NumberNoncatalytic	48.75	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	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	4.2769	46.4588	31.6840	0.0643	18.2675	2.0461	20.3135	9.9840	1.8824	11.8664	0.0000	6,234.7974	6,234.7974	1.9495	0.0000	6,283.5352
2022	5.3304	38.8967	49.5629	0.1517	9.8688	1.6366	10.7727	3.6558	1.5057	5.1615	0.0000	15,251.5674	15,251.5674	1.9503	0.0000	15,278.5288
2023	4.8957	26.3317	46.7567	0.1472	9.8688	0.7794	10.6482	2.6381	0.7322	3.3702	0.0000	14,807.5269	14,807.5269	1.0250	0.0000	14,833.1521
2024	237.1630	9.5575	15.1043	0.0244	1.7884	0.4698	1.8628	0.4743	0.4322	0.5476	0.0000	2,361.3989	2,361.3989	0.7177	0.0000	2,379.3421
Maximum	**237.1630**	**46.4588**	**49.5629**	**0.1517**	**18.2675**	**2.0461**	**20.3135**	**9.9840**	**1.8824**	**11.8664**	**0.0000**	**15,251.5674**	**15,251.5674**	**1.9503**	**0.0000**	**15,278.5288**

2.1 Overall Construction (Maximum Daily Emission)

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	4.2769	46.4588	31.6840	0.0643	18.2675	2.0461	20.3135	9.9840	1.8824	11.8664	0.0000	6,234.7974	6,234.7974	1.9495	0.0000	6,283.5352
2022	5.3304	38.8967	49.5629	0.1517	9.8688	1.6366	10.7727	3.6558	1.5057	5.1615	0.0000	15,251.5674	15,251.5674	1.9503	0.0000	15,278.5288
2023	4.8957	26.3317	46.7567	0.1472	9.8688	0.7794	10.6482	2.6381	0.7322	3.3702	0.0000	14,807.5269	14,807.5269	1.0250	0.0000	14,833.1520
2024	237.1630	9.5575	15.1043	0.0244	1.7884	0.4698	1.8628	0.4743	0.4322	0.5476	0.0000	2,361.3989	2,361.3989	0.7177	0.0000	2,379.3421
Maximum	**237.1630**	**46.4588**	**49.5629**	**0.1517**	**18.2675**	**2.0461**	**20.3135**	**9.9840**	**1.8824**	**11.8664**	**0.0000**	**15,251.5674**	**15,251.5674**	**1.9503**	**0.0000**	**15,278.5288**

	ROG	NOx	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	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192
Energy	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387
Mobile	9.8489	45.4304	114.8495	0.4917	45.9592	0.3360	46.2951	12.2950	0.3119	12.6070		50,306.6034	50,306.6034	2.1807		50,361.1208
Total	**41.1168**	**67.2262**	**207.5497**	**0.6278**	**45.9592**	**2.4626**	**48.4217**	**12.2950**	**2.4385**	**14.7336**	**0.0000**	**76,811.1816**	**76,811.1816**	**2.8282**	**0.4832**	**77,025.8786**

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	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192
Energy	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387
Mobile	9.8489	45.4304	114.8495	0.4917	45.9592	0.3360	46.2951	12.2950	0.3119	12.6070		50,306.6034	50,306.6034	2.1807		50,361.1208
Total	**41.1168**	**67.2262**	**207.5497**	**0.6278**	**45.9592**	**2.4626**	**48.4217**	**12.2950**	**2.4385**	**14.7336**	**0.0000**	**76,811.1816**	**76,811.1816**	**2.8282**	**0.4832**	**77,025.8786**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2021	10/12/2021	5	30	
2	Site Preparation	Site Preparation	10/13/2021	11/9/2021	5	20	
3	Grading	Grading	11/10/2021	1/11/2022	5	45	
4	Building Construction	Building Construction	1/12/2022	12/12/2023	5	500	
5	Paving	Paving	12/13/2023	1/30/2024	5	35	
6	Architectural Coating	Architectural Coating	1/31/2024	3/19/2024	5	35	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 112.5

Acres of Paving: 0

Residential Indoor: 2,025,000; Residential Outdoor: 675,000; Non-Residential Indoor: 326,400; Non-Residential Outdoor: 108,800; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	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	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	458.00	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	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	801.00	143.00	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	160.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 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					3.3074	0.0000	3.3074	0.5008	0.0000	0.5008			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411		3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**3.3074**	**1.5513**	**4.8588**	**0.5008**	**1.4411**	**1.9419**		**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

3.2 Demolition - 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	0.1273	4.0952	0.9602	0.0119	0.2669	0.0126	0.2795	0.0732	0.0120	0.0852		1,292.2413	1,292.2413	0.0877		1,294.4337
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	0.0643	0.0442	0.6042	1.7100e-003	0.1677	1.3500e-003	0.1690	0.0445	1.2500e-003	0.0457		170.8155	170.8155	5.0300e-003		170.9413
Total	**0.1916**	**4.1394**	**1.5644**	**0.0136**	**0.4346**	**0.0139**	**0.4485**	**0.1176**	**0.0133**	**0.1309**		**1,463.0568**	**1,463.0568**	**0.0927**		**1,465.3750**

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					3.3074	0.0000	3.3074	0.5008	0.0000	0.5008			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411	0.0000	3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**3.3074**	**1.5513**	**4.8588**	**0.5008**	**1.4411**	**1.9419**	**0.0000**	**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

3.2 Demolition - 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	0.1273	4.0952	0.9602	0.0119	0.2669	0.0126	0.2795	0.0732	0.0120	0.0852		1,292.2413	1,292.2413	0.0877		1,294.4337
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	0.0643	0.0442	0.6042	1.7100e-003	0.1677	1.3500e-003	0.1690	0.0445	1.2500e-003	0.0457		170.8155	170.8155	5.0300e-003		170.9413
Total	**0.1916**	**4.1394**	**1.5644**	**0.0136**	**0.4346**	**0.0139**	**0.4485**	**0.1176**	**0.0133**	**0.1309**		**1,463.0568**	**1,463.0568**	**0.0927**		**1,465.3750**

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**		**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

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	0.0772	0.0530	0.7250	2.0600e-003	0.2012	1.6300e-003	0.2028	0.0534	1.5000e-003	0.0549		204.9786	204.9786	6.0400e-003		205.1296
Total	**0.0772**	**0.0530**	**0.7250**	**2.0600e-003**	**0.2012**	**1.6300e-003**	**0.2028**	**0.0534**	**1.5000e-003**	**0.0549**		**204.9786**	**204.9786**	**6.0400e-003**		**205.1296**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**	**0.0000**	**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

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	0.0772	0.0530	0.7250	2.0600e-003	0.2012	1.6300e-003	0.2028	0.0534	1.5000e-003	0.0549		204.9786	204.9786	6.0400e-003		205.1296
Total	**0.0772**	**0.0530**	**0.7250**	**2.0600e-003**	**0.2012**	**1.6300e-003**	**0.2028**	**0.0534**	**1.5000e-003**	**0.0549**		**204.9786**	**204.9786**	**6.0400e-003**		**205.1296**

3.4 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					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265		6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**8.6733**	**1.9853**	**10.6587**	**3.5965**	**1.8265**	**5.4230**		**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

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	0.0000	0.0000	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	0.0857	0.0589	0.8056	2.2900e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610		227.7540	227.7540	6.7100e-003		227.9217
Total	**0.0857**	**0.0589**	**0.8056**	**2.2900e-003**	**0.2236**	**1.8100e-003**	**0.2254**	**0.0593**	**1.6600e-003**	**0.0610**		**227.7540**	**227.7540**	**6.7100e-003**		**227.9217**

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					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**8.6733**	**1.9853**	**10.6587**	**3.5965**	**1.8265**	**5.4230**	**0.0000**	**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

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	0.0000	0.0000	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	0.0857	0.0589	0.8056	2.2900e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610		227.7540	227.7540	6.7100e-003		227.9217
Total	**0.0857**	**0.0589**	**0.8056**	**2.2900e-003**	**0.2236**	**1.8100e-003**	**0.2254**	**0.0593**	**1.6600e-003**	**0.0610**		**227.7540**	**227.7540**	**6.7100e-003**		**227.9217**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041		6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**8.6733**	**1.6349**	**10.3082**	**3.5965**	**1.5041**	**5.1006**		**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

3.4 Grading - 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	0.0803	0.0532	0.7432	2.2100e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6100e-003	0.0609		219.7425	219.7425	6.0600e-003		219.8941
Total	**0.0803**	**0.0532**	**0.7432**	**2.2100e-003**	**0.2236**	**1.7500e-003**	**0.2253**	**0.0593**	**1.6100e-003**	**0.0609**		**219.7425**	**219.7425**	**6.0600e-003**		**219.8941**

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					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041	0.0000	6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**8.6733**	**1.6349**	**10.3082**	**3.5965**	**1.5041**	**5.1006**	**0.0000**	**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

3.4 Grading - 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	0.0803	0.0532	0.7432	2.2100e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6100e-003	0.0609		219.7425	219.7425	6.0600e-003		219.8941
Total	**0.0803**	**0.0532**	**0.7432**	**2.2100e-003**	**0.2236**	**1.7500e-003**	**0.2253**	**0.0593**	**1.6100e-003**	**0.0609**		**219.7425**	**219.7425**	**6.0600e-003**		**219.8941**

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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

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	0.4079	13.2032	3.4341	0.0364	0.9155	0.0248	0.9404	0.2636	0.0237	0.2873		3,896.5482	3,896.5482	0.2236		3,902.1384
Worker	3.2162	2.1318	29.7654	0.0883	8.9533	0.0701	9.0234	2.3745	0.0646	2.4390		8,800.6857	8,800.6857	0.2429		8,806.7582
Total	**3.6242**	**15.3350**	**33.1995**	**0.1247**	**9.8688**	**0.0949**	**9.9637**	**2.6381**	**0.0883**	**2.7263**		**12,697.2339**	**12,697.2339**	**0.4665**		**12,708.8966**

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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

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	0.4079	13.2032	3.4341	0.0364	0.9155	0.0248	0.9404	0.2636	0.0237	0.2873		3,896.5482	3,896.5482	0.2236		3,902.1384
Worker	3.2162	2.1318	29.7654	0.0883	8.9533	0.0701	9.0234	2.3745	0.0646	2.4390		8,800.6857	8,800.6857	0.2429		8,806.7582
Total	**3.6242**	**15.3350**	**33.1995**	**0.1247**	**9.8688**	**0.0949**	**9.9637**	**2.6381**	**0.0883**	**2.7263**		**12,697.2339**	**12,697.2339**	**0.4665**		**12,708.8966**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.5 Building Construction - 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	0.3027	10.0181	3.1014	0.0352	0.9156	0.0116	0.9271	0.2636	0.0111	0.2747		3,773.8762	3,773.8762	0.1982		3,778.8300
Worker	3.0203	1.9287	27.4113	0.0851	8.9533	0.0681	9.0214	2.3745	0.0627	2.4372		8,478.4408	8,478.4408	0.2190		8,483.9160
Total	**3.3229**	**11.9468**	**30.5127**	**0.1203**	**9.8688**	**0.0797**	**9.9485**	**2.6381**	**0.0738**	**2.7118**		**12,252.3170**	**12,252.3170**	**0.4172**		**12,262.7460**

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	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.5 Building Construction - 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	0.3027	10.0181	3.1014	0.0352	0.9156	0.0116	0.9271	0.2636	0.0111	0.2747		3,773.8762	3,773.8762	0.1982		3,778.8300
Worker	3.0203	1.9287	27.4113	0.0851	8.9533	0.0681	9.0214	2.3745	0.0627	2.4372		8,478.4408	8,478.4408	0.2190		8,483.9160
Total	**3.3229**	**11.9468**	**30.5127**	**0.1203**	**9.8688**	**0.0797**	**9.9485**	**2.6381**	**0.0738**	**2.7118**		**12,252.3170**	**12,252.3170**	**0.4172**		**12,262.7460**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0327**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

3.6 Paving - 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	0.0566	0.0361	0.5133	1.5900e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1700e-003	0.0456		158.7723	158.7723	4.1000e-003		158.8748
Total	**0.0566**	**0.0361**	**0.5133**	**1.5900e-003**	**0.1677**	**1.2800e-003**	**0.1689**	**0.0445**	**1.1700e-003**	**0.0456**		**158.7723**	**158.7723**	**4.1000e-003**		**158.8748**

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	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0327**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

3.6 Paving - 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	0.0566	0.0361	0.5133	1.5900e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1700e-003	0.0456		158.7723	158.7723	4.1000e-003		158.8748
Total	**0.0566**	**0.0361**	**0.5133**	**1.5900e-003**	**0.1677**	**1.2800e-003**	**0.1689**	**0.0445**	**1.1700e-003**	**0.0456**		**158.7723**	**158.7723**	**4.1000e-003**		**158.8748**

3.6 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**		**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

3.6 Paving - 2024

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	0.0535	0.0329	0.4785	1.5400e-003	0.1677	1.2600e-003	0.1689	0.0445	1.1600e-003	0.0456		153.8517	153.8517	3.7600e-003		153.9458
Total	**0.0535**	**0.0329**	**0.4785**	**1.5400e-003**	**0.1677**	**1.2600e-003**	**0.1689**	**0.0445**	**1.1600e-003**	**0.0456**		**153.8517**	**153.8517**	**3.7600e-003**		**153.9458**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**	**0.0000**	**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

3.6 Paving - 2024

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	0.0535	0.0329	0.4785	1.5400e-003	0.1677	1.2600e-003	0.1689	0.0445	1.1600e-003	0.0456		153.8517	153.8517	3.7600e-003		153.9458
Total	**0.0535**	**0.0329**	**0.4785**	**1.5400e-003**	**0.1677**	**1.2600e-003**	**0.1689**	**0.0445**	**1.1600e-003**	**0.0456**		**153.8517**	**153.8517**	**3.7600e-003**		**153.9458**

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	236.4115					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**236.5923**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.7 Architectural Coating - 2024

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	0.5707	0.3513	5.1044	0.0165	1.7884	0.0134	1.8018	0.4743	0.0123	0.4866		1,641.0852	1,641.0852	0.0401		1,642.0886
Total	**0.5707**	**0.3513**	**5.1044**	**0.0165**	**1.7884**	**0.0134**	**1.8018**	**0.4743**	**0.0123**	**0.4866**		**1,641.0852**	**1,641.0852**	**0.0401**		**1,642.0886**

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	236.4115					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**236.5923**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.7 Architectural Coating - 2024

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	0.5707	0.3513	5.1044	0.0165	1.7884	0.0134	1.8018	0.4743	0.0123	0.4866		1,641.0852	1,641.0852	0.0401		1,642.0886
Total	**0.5707**	**0.3513**	**5.1044**	**0.0165**	**1.7884**	**0.0134**	**1.8018**	**0.4743**	**0.0123**	**0.4866**		**1,641.0852**	**1,641.0852**	**0.0401**		**1,642.0886**

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	9.8489	45.4304	114.8495	0.4917	45.9592	0.3360	46.2951	12.2950	0.3119	12.6070		50,306.6034	50,306.6034	2.1807		50,361.1208
Unmitigated	9.8489	45.4304	114.8495	0.4917	45.9592	0.3360	46.2951	12.2950	0.3119	12.6070		50,306.6034	50,306.6034	2.1807		50,361.1208

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	145.75	154.25	154.00	506,227	506,227
Apartments Mid Rise	4,026.75	3,773.25	4075.50	13,660,065	13,660,065
General Office Building	288.45	62.55	31.05	706,812	706,812
High Turnover (Sit Down Restaurant)	2,368.80	2,873.52	2817.72	3,413,937	3,413,937
Hotel	192.00	187.50	160.00	445,703	445,703
Quality Restaurant	501.12	511.92	461.20	707,488	707,488
Regional Shopping Center	528.08	601.44	357.84	1,112,221	1,112,221
Total	8,050.95	8,164.43	8,057.31	20,552,452	20,552,452

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	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Apartments Mid Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
General Office Building	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
High Turnover (Sit Down Restaurant)	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Hotel	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Quality Restaurant	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Regional Shopping Center	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387
NaturalGas Unmitigated	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387

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	1119.16	0.0121	0.1031	0.0439	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.6662	131.6662	2.5200e-003	2.4100e-003	132.4486
Apartments Mid Rise	35784.3	0.3859	3.2978	1.4033	0.0211		0.2666	0.2666		0.2666	0.2666		4,209.9164	4,209.9164	0.0807	0.0772	4,234.9339
General Office Building	1283.42	0.0138	0.1258	0.1057	7.5000e-004		9.5600e-003	9.5600e-003		9.5600e-003	9.5600e-003		150.9911	150.9911	2.8900e-003	2.7700e-003	151.8884
High Turnover (Sit Down Restaurant)	22759.9	0.2455	2.2314	1.8743	0.0134		0.1696	0.1696		0.1696	0.1696		2,677.6342	2,677.6342	0.0513	0.0491	2,693.5460
Hotel	4769.72	0.0514	0.4676	0.3928	2.8100e-003		0.0355	0.0355		0.0355	0.0355		561.1436	561.1436	0.0108	0.0103	564.4782
Quality Restaurant	5057.75	0.0545	0.4959	0.4165	2.9800e-003		0.0377	0.0377		0.0377	0.0377		595.0298	595.0298	0.0114	0.0109	598.5658
Regional Shopping Center	251.616	2.7100e-003	0.0247	0.0207	1.5000e-004		1.8700e-003	1.8700e-003		1.8700e-003	1.8700e-003		29.6019	29.6019	5.7000e-004	5.4000e-004	29.7778
Total		**0.7660**	**6.7463**	**4.2573**	**0.0418**		**0.5292**	**0.5292**		**0.5292**	**0.5292**		**8,355.9832**	**8,355.9832**	**0.1602**	**0.1532**	**8,405.6387**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	1.11916	0.0121	0.1031	0.0439	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.6662	131.6662	2.5200e-003	2.4100e-003	132.4486
Apartments Mid Rise	35.7843	0.3859	3.2978	1.4033	0.0211		0.2666	0.2666		0.2666	0.2666		4,209.9164	4,209.9164	0.0807	0.0772	4,234.9339
General Office Building	1.28342	0.0138	0.1258	0.1057	7.5000e-004		9.5600e-003	9.5600e-003		9.5600e-003	9.5600e-003		150.9911	150.9911	2.8900e-003	2.7700e-003	151.8884
High Turnover (Sit Down Restaurant)	22.7599	0.2455	2.2314	1.8743	0.0134		0.1696	0.1696		0.1696	0.1696		2,677.6342	2,677.6342	0.0513	0.0491	2,693.5460
Hotel	4.76972	0.0514	0.4676	0.3928	2.8100e-003		0.0355	0.0355		0.0355	0.0355		561.1436	561.1436	0.0108	0.0103	564.4782
Quality Restaurant	5.05775	0.0545	0.4959	0.4165	2.9800e-003		0.0377	0.0377		0.0377	0.0377		595.0298	595.0298	0.0114	0.0109	598.5658
Regional Shopping Center	0.251616	2.7100e-003	0.0247	0.0207	1.5000e-004		1.8700e-003	1.8700e-003		1.8700e-003	1.8700e-003		29.6019	29.6019	5.7000e-004	5.4000e-004	29.7778
Total		**0.7660**	**6.7463**	**4.2573**	**0.0418**		**0.5292**	**0.5292**		**0.5292**	**0.5292**		**8,355.9832**	**8,355.9832**	**0.1602**	**0.1532**	**8,405.6387**

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	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192
Unmitigated	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192

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	2.2670					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	24.1085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.6500	14.1000	6.0000	0.0900		1.1400	1.1400		1.1400	1.1400	0.0000	18,000.0000	18,000.0000	0.3450	0.3300	18,106.9650
Landscaping	2.4766	0.9496	82.4430	4.3600e-003		0.4574	0.4574		0.4574	0.4574		148.5950	148.5950	0.1424		152.1542
Total	**30.5020**	**15.0496**	**88.4430**	**0.0944**		**1.5974**	**1.5974**		**1.5974**	**1.5974**	**0.0000**	**18,148.5950**	**18,148.5950**	**0.4874**	**0.3300**	**18,259.1192**

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	2.2670					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	24.1085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.6500	14.1000	6.0000	0.0900		1.1400	1.1400		1.1400	1.1400	0.0000	18,000.0000	18,000.0000	0.3450	0.3300	18,106.9650
Landscaping	2.4766	0.9496	82.4430	4.3600e-003		0.4574	0.4574		0.4574	0.4574		148.5950	148.5950	0.1424		152.1542
Total	**30.5020**	**15.0496**	**88.4430**	**0.0944**		**1.5974**	**1.5974**		**1.5974**	**1.5974**	**0.0000**	**18,148.5950**	**18,148.5950**	**0.4874**	**0.3300**	**18,259.1192**

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

Village South Specific Plan (Proposed)

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	45.00	1000sqft	1.03	45,000.00	0
High Turnover (Sit Down Restaurant)	36.00	1000sqft	0.83	36,000.00	0
Hotel	50.00	Room	1.67	72,600.00	0
Quality Restaurant	8.00	1000sqft	0.18	8,000.00	0
Apartments Low Rise	25.00	Dwelling Unit	1.56	25,000.00	72
Apartments Mid Rise	975.00	Dwelling Unit	25.66	975,000.00	2789
Regional Shopping Center	56.00	1000sqft	1.29	56,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2028
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

Project Characteristics - Consistent with the DEIR's model.

Land Use - See SWAPE comment regarding residential and retail land uses.

Construction Phase - See SWAPE comment regarding individual construction phase lengths.

Demolition - Consistent with the DEIR's model. See SWAPE comment regarding demolition.

Vehicle Trips - Saturday trips consistent with the DEIR's model. See SWAPE comment regarding weekday and Sunday trips.

Woodstoves - Woodstoves and wood-burning fireplaces consistent with the DEIR's model. See SWAPE comment regarding gas fireplaces.

Energy Use -

Construction Off-road Equipment Mitigation - See SWAPE comment on construction-related mitigation.

Area Mitigation - See SWAPE comment regarding operational mitigation measures.

Water Mitigation - See SWAPE comment regarding operational mitigation measures.

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	1.25	0.00
tblFireplaces	NumberWood	48.75	0.00
tblVehicleTrips	ST_TR	7.16	6.17
tblVehicleTrips	ST_TR	6.39	3.87
tblVehicleTrips	ST_TR	2.46	1.39
tblVehicleTrips	ST_TR	158.37	79.82
tblVehicleTrips	ST_TR	8.19	3.75
tblVehicleTrips	ST_TR	94.36	63.99
tblVehicleTrips	ST_TR	49.97	10.74
tblVehicleTrips	SU_TR	6.07	6.16
tblVehicleTrips	SU_TR	5.86	4.18
tblVehicleTrips	SU_TR	1.05	0.69
tblVehicleTrips	SU_TR	131.84	78.27

tblVehicleTrips	SU_TR	5.95	3.20
tblVehicleTrips	SU_TR	72.16	57.65
tblVehicleTrips	SU_TR	25.24	6.39
tblVehicleTrips	WD_TR	6.59	5.83
tblVehicleTrips	WD_TR	6.65	4.13
tblVehicleTrips	WD_TR	11.03	6.41
tblVehicleTrips	WD_TR	127.15	65.80
tblVehicleTrips	WD_TR	8.17	3.84
tblVehicleTrips	WD_TR	89.95	62.64
tblVehicleTrips	WD_TR	42.70	9.43
tblWoodstoves	NumberCatalytic	1.25	0.00
tblWoodstoves	NumberCatalytic	48.75	0.00
tblWoodstoves	NumberNoncatalytic	1.25	0.00
tblWoodstoves	NumberNoncatalytic	48.75	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	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	4.2865	46.4651	31.6150	0.0642	18.2675	2.0461	20.3135	9.9840	1.8824	11.8664	0.0000	6,221.4937	6,221.4937	1.9491	0.0000	6,270.2214
2022	5.7218	38.9024	47.3319	0.1455	9.8688	1.6366	10.7736	3.6558	1.5057	5.1615	0.0000	14,630.3099	14,630.3099	1.9499	0.0000	14,657.2663
2023	5.2705	26.4914	44.5936	0.1413	9.8688	0.7800	10.6488	2.6381	0.7328	3.3708	0.0000	14,210.3424	14,210.3424	1.0230	0.0000	14,235.9160
2024	237.2328	9.5610	15.0611	0.0243	1.7884	0.4698	1.8628	0.4743	0.4322	0.5476	0.0000	2,352.4178	2,352.4178	0.7175	0.0000	2,370.3550
Maximum	**237.2328**	**46.4651**	**47.3319**	**0.1455**	**18.2675**	**2.0461**	**20.3135**	**9.9840**	**1.8824**	**11.8664**	**0.0000**	**14,630.3099**	**14,630.3099**	**1.9499**	**0.0000**	**14,657.2663**

2.1 Overall Construction (Maximum Daily Emission)

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	4.2865	46.4651	31.6150	0.0642	18.2675	2.0461	20.3135	9.9840	1.8824	11.8664	0.0000	6,221.4937	6,221.4937	1.9491	0.0000	6,270.2214
2022	5.7218	38.9024	47.3319	0.1455	9.8688	1.6366	10.7736	3.6558	1.5057	5.1615	0.0000	14,630.3099	14,630.3099	1.9499	0.0000	14,657.2663
2023	5.2705	26.4914	44.5936	0.1413	9.8688	0.7800	10.6488	2.6381	0.7328	3.3708	0.0000	14,210.3424	14,210.3424	1.0230	0.0000	14,235.9160
2024	237.2328	9.5610	15.0611	0.0243	1.7884	0.4698	1.8628	0.4743	0.4322	0.5476	0.0000	2,352.4178	2,352.4178	0.7175	0.0000	2,370.3550
Maximum	**237.2328**	**46.4651**	**47.3319**	**0.1455**	**18.2675**	**2.0461**	**20.3135**	**9.9840**	**1.8824**	**11.8664**	**0.0000**	**14,630.3099**	**14,630.3099**	**1.9499**	**0.0000**	**14,657.2663**

	ROG	NOx	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	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192
Energy	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387
Mobile	9.5233	45.9914	110.0422	0.4681	45.9592	0.3373	46.2965	12.2950	0.3132	12.6083		47,917.8005	47,917.8005	2.1953		47,972.6839
Total	**40.7912**	**67.7872**	**202.7424**	**0.6043**	**45.9592**	**2.4640**	**48.4231**	**12.2950**	**2.4399**	**14.7349**	**0.0000**	**74,422.3787**	**74,422.3787**	**2.8429**	**0.4832**	**74,637.4417**

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	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192
Energy	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387
Mobile	9.5233	45.9914	110.0422	0.4681	45.9592	0.3373	46.2965	12.2950	0.3132	12.6083		47,917.8005	47,917.8005	2.1953		47,972.6839
Total	**40.7912**	**67.7872**	**202.7424**	**0.6043**	**45.9592**	**2.4640**	**48.4231**	**12.2950**	**2.4399**	**14.7349**	**0.0000**	**74,422.3787**	**74,422.3787**	**2.8429**	**0.4832**	**74,637.4417**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2021	10/12/2021	5	30	
2	Site Preparation	Site Preparation	10/13/2021	11/9/2021	5	20	
3	Grading	Grading	11/10/2021	1/11/2022	5	45	
4	Building Construction	Building Construction	1/12/2022	12/12/2023	5	500	
5	Paving	Paving	12/13/2023	1/30/2024	5	35	
6	Architectural Coating	Architectural Coating	1/31/2024	3/19/2024	5	35	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 112.5

Acres of Paving: 0

Residential Indoor: 2,025,000; Residential Outdoor: 675,000; Non-Residential Indoor: 326,400; Non-Residential Outdoor: 108,800; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	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	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	458.00	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	20.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	801.00	143.00	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	160.00	0.00	0.00	14.70	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 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					3.3074	0.0000	3.3074	0.5008	0.0000	0.5008			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411		3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**3.3074**	**1.5513**	**4.8588**	**0.5008**	**1.4411**	**1.9419**		**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

3.2 Demolition - 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	0.1304	4.1454	1.0182	0.0117	0.2669	0.0128	0.2797	0.0732	0.0122	0.0854		1,269.8555	1,269.8555	0.0908		1,272.1252
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	0.0715	0.0489	0.5524	1.6100e-003	0.1677	1.3500e-003	0.1690	0.0445	1.2500e-003	0.0457		160.8377	160.8377	4.7300e-003		160.9560
Total	**0.2019**	**4.1943**	**1.5706**	**0.0133**	**0.4346**	**0.0141**	**0.4487**	**0.1176**	**0.0135**	**0.1311**		**1,430.6932**	**1,430.6932**	**0.0955**		**1,433.0812**

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					3.3074	0.0000	3.3074	0.5008	0.0000	0.5008			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411	0.0000	3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**3.3074**	**1.5513**	**4.8588**	**0.5008**	**1.4411**	**1.9419**	**0.0000**	**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

3.2 Demolition - 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	0.1304	4.1454	1.0182	0.0117	0.2669	0.0128	0.2797	0.0732	0.0122	0.0854		1,269.8555	1,269.8555	0.0908		1,272.1252
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	0.0715	0.0489	0.5524	1.6100e-003	0.1677	1.3500e-003	0.1690	0.0445	1.2500e-003	0.0457		160.8377	160.8377	4.7300e-003		160.9560
Total	**0.2019**	**4.1943**	**1.5706**	**0.0133**	**0.4346**	**0.0141**	**0.4487**	**0.1176**	**0.0135**	**0.1311**		**1,430.6932**	**1,430.6932**	**0.0955**		**1,433.0812**

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**		**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

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	0.0858	0.0587	0.6629	1.9400e-003	0.2012	1.6300e-003	0.2028	0.0534	1.5000e-003	0.0549		193.0052	193.0052	5.6800e-003		193.1472
Total	**0.0858**	**0.0587**	**0.6629**	**1.9400e-003**	**0.2012**	**1.6300e-003**	**0.2028**	**0.0534**	**1.5000e-003**	**0.0549**		**193.0052**	**193.0052**	**5.6800e-003**		**193.1472**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**	**0.0000**	**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

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	0.0858	0.0587	0.6629	1.9400e-003	0.2012	1.6300e-003	0.2028	0.0534	1.5000e-003	0.0549		193.0052	193.0052	5.6800e-003		193.1472
Total	**0.0858**	**0.0587**	**0.6629**	**1.9400e-003**	**0.2012**	**1.6300e-003**	**0.2028**	**0.0534**	**1.5000e-003**	**0.0549**		**193.0052**	**193.0052**	**5.6800e-003**		**193.1472**

3.4 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					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265		6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**8.6733**	**1.9853**	**10.6587**	**3.5965**	**1.8265**	**5.4230**		**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

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	0.0000	0.0000	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	0.0954	0.0652	0.7365	2.1500e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610		214.4502	214.4502	6.3100e-003		214.6080
Total	**0.0954**	**0.0652**	**0.7365**	**2.1500e-003**	**0.2236**	**1.8100e-003**	**0.2254**	**0.0593**	**1.6600e-003**	**0.0610**		**214.4502**	**214.4502**	**6.3100e-003**		**214.6080**

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					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**8.6733**	**1.9853**	**10.6587**	**3.5965**	**1.8265**	**5.4230**	**0.0000**	**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

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	0.0000	0.0000	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	0.0954	0.0652	0.7365	2.1500e-003	0.2236	1.8100e-003	0.2254	0.0593	1.6600e-003	0.0610		214.4502	214.4502	6.3100e-003		214.6080
Total	**0.0954**	**0.0652**	**0.7365**	**2.1500e-003**	**0.2236**	**1.8100e-003**	**0.2254**	**0.0593**	**1.6600e-003**	**0.0610**		**214.4502**	**214.4502**	**6.3100e-003**		**214.6080**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041		6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**8.6733**	**1.6349**	**10.3082**	**3.5965**	**1.5041**	**5.1006**		**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

3.4 Grading - 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	0.0896	0.0589	0.6784	2.0800e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6100e-003	0.0609		206.9139	206.9139	5.7000e-003		207.0563
Total	**0.0896**	**0.0589**	**0.6784**	**2.0800e-003**	**0.2236**	**1.7500e-003**	**0.2253**	**0.0593**	**1.6100e-003**	**0.0609**		**206.9139**	**206.9139**	**5.7000e-003**		**207.0563**

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					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041	0.0000	6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**8.6733**	**1.6349**	**10.3082**	**3.5965**	**1.5041**	**5.1006**	**0.0000**	**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

3.4 Grading - 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	0.0896	0.0589	0.6784	2.0800e-003	0.2236	1.7500e-003	0.2253	0.0593	1.6100e-003	0.0609		206.9139	206.9139	5.7000e-003		207.0563
Total	**0.0896**	**0.0589**	**0.6784**	**2.0800e-003**	**0.2236**	**1.7500e-003**	**0.2253**	**0.0593**	**1.6100e-003**	**0.0609**		**206.9139**	**206.9139**	**5.7000e-003**		**207.0563**

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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

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	0.4284	13.1673	3.8005	0.0354	0.9155	0.0256	0.9412	0.2636	0.0245	0.2881		3,789.0750	3,789.0750	0.2381		3,795.0283
Worker	3.5872	2.3593	27.1680	0.0832	8.9533	0.0701	9.0234	2.3745	0.0646	2.4390		8,286.9013	8,286.9013	0.2282		8,292.6058
Total	**4.0156**	**15.5266**	**30.9685**	**0.1186**	**9.8688**	**0.0957**	**9.9645**	**2.6381**	**0.0891**	**2.7271**		**12,075.9763**	**12,075.9763**	**0.4663**		**12,087.6341**

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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

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	0.4284	13.1673	3.8005	0.0354	0.9155	0.0256	0.9412	0.2636	0.0245	0.2881		3,789.0750	3,789.0750	0.2381		3,795.0283
Worker	3.5872	2.3593	27.1680	0.0832	8.9533	0.0701	9.0234	2.3745	0.0646	2.4390		8,286.9013	8,286.9013	0.2282		8,292.6058
Total	**4.0156**	**15.5266**	**30.9685**	**0.1186**	**9.8688**	**0.0957**	**9.9645**	**2.6381**	**0.0891**	**2.7271**		**12,075.9763**	**12,075.9763**	**0.4663**		**12,087.6341**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.5 Building Construction - 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	0.3183	9.9726	3.3771	0.0343	0.9156	0.0122	0.9277	0.2636	0.0116	0.2752		3,671.4007	3,671.4007	0.2096		3,676.6417
Worker	3.3795	2.1338	24.9725	0.0801	8.9533	0.0681	9.0214	2.3745	0.0627	2.4372		7,983.7318	7,983.7318	0.2055		7,988.8683
Total	**3.6978**	**12.1065**	**28.3496**	**0.1144**	**9.8688**	**0.0803**	**9.9491**	**2.6381**	**0.0743**	**2.7124**		**11,655.1325**	**11,655.1325**	**0.4151**		**11,665.5099**

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	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.5 Building Construction - 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	0.3183	9.9726	3.3771	0.0343	0.9156	0.0122	0.9277	0.2636	0.0116	0.2752		3,671.4007	3,671.4007	0.2096		3,676.6417
Worker	3.3795	2.1338	24.9725	0.0801	8.9533	0.0681	9.0214	2.3745	0.0627	2.4372		7,983.7318	7,983.7318	0.2055		7,988.8683
Total	**3.6978**	**12.1065**	**28.3496**	**0.1144**	**9.8688**	**0.0803**	**9.9491**	**2.6381**	**0.0743**	**2.7124**		**11,655.1325**	**11,655.1325**	**0.4151**		**11,665.5099**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0327**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

3.6 Paving - 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	0.0633	0.0400	0.4677	1.5000e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1700e-003	0.0456		149.5081	149.5081	3.8500e-003		149.6043
Total	**0.0633**	**0.0400**	**0.4677**	**1.5000e-003**	**0.1677**	**1.2800e-003**	**0.1689**	**0.0445**	**1.1700e-003**	**0.0456**		**149.5081**	**149.5081**	**3.8500e-003**		**149.6043**

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	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0327**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

3.6 Paving - 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	0.0633	0.0400	0.4677	1.5000e-003	0.1677	1.2800e-003	0.1689	0.0445	1.1700e-003	0.0456		149.5081	149.5081	3.8500e-003		149.6043
Total	**0.0633**	**0.0400**	**0.4677**	**1.5000e-003**	**0.1677**	**1.2800e-003**	**0.1689**	**0.0445**	**1.1700e-003**	**0.0456**		**149.5081**	**149.5081**	**3.8500e-003**		**149.6043**

3.6 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**		**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

3.6 Paving - 2024

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	0.0601	0.0364	0.4354	1.4500e-003	0.1677	1.2600e-003	0.1689	0.0445	1.1600e-003	0.0456		144.8706	144.8706	3.5300e-003		144.9587
Total	**0.0601**	**0.0364**	**0.4354**	**1.4500e-003**	**0.1677**	**1.2600e-003**	**0.1689**	**0.0445**	**1.1600e-003**	**0.0456**		**144.8706**	**144.8706**	**3.5300e-003**		**144.9587**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**	**0.0000**	**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

3.6 Paving - 2024

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	0.0601	0.0364	0.4354	1.4500e-003	0.1677	1.2600e-003	0.1689	0.0445	1.1600e-003	0.0456		144.8706	144.8706	3.5300e-003		144.9587
Total	**0.0601**	**0.0364**	**0.4354**	**1.4500e-003**	**0.1677**	**1.2600e-003**	**0.1689**	**0.0445**	**1.1600e-003**	**0.0456**		**144.8706**	**144.8706**	**3.5300e-003**		**144.9587**

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	236.4115					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**236.5923**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.7 Architectural Coating - 2024

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	0.6406	0.3886	4.6439	0.0155	1.7884	0.0134	1.8018	0.4743	0.0123	0.4866		1,545.2860	1,545.2860	0.0376		1,546.2262
Total	**0.6406**	**0.3886**	**4.6439**	**0.0155**	**1.7884**	**0.0134**	**1.8018**	**0.4743**	**0.0123**	**0.4866**		**1,545.2860**	**1,545.2860**	**0.0376**		**1,546.2262**

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	236.4115					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**236.5923**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.7 Architectural Coating - 2024

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	0.6406	0.3886	4.6439	0.0155	1.7884	0.0134	1.8018	0.4743	0.0123	0.4866		1,545.2860	1,545.2860	0.0376		1,546.2262
Total	**0.6406**	**0.3886**	**4.6439**	**0.0155**	**1.7884**	**0.0134**	**1.8018**	**0.4743**	**0.0123**	**0.4866**		**1,545.2860**	**1,545.2860**	**0.0376**		**1,546.2262**

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	9.5233	45.9914	110.0422	0.4681	45.9592	0.3373	46.2965	12.2950	0.3132	12.6083		47,917.8005	47,917.8005	2.1953		47,972.6839
Unmitigated	9.5233	45.9914	110.0422	0.4681	45.9592	0.3373	46.2965	12.2950	0.3132	12.6083		47,917.8005	47,917.8005	2.1953		47,972.6839

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	145.75	154.25	154.00	506,227	506,227
Apartments Mid Rise	4,026.75	3,773.25	4075.50	13,660,065	13,660,065
General Office Building	288.45	62.55	31.05	706,812	706,812
High Turnover (Sit Down Restaurant)	2,368.80	2,873.52	2817.72	3,413,937	3,413,937
Hotel	192.00	187.50	160.00	445,703	445,703
Quality Restaurant	501.12	511.92	461.20	707,488	707,488
Regional Shopping Center	528.08	601.44	357.84	1,112,221	1,112,221
Total	8,050.95	8,164.43	8,057.31	20,552,452	20,552,452

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	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Apartments Mid Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
General Office Building	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
High Turnover (Sit Down Restaurant)	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Hotel	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Quality Restaurant	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Regional Shopping Center	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Village South Specific Plan (Proposed) - Los Angeles-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
Category	lb/day										lb/day					
NaturalGas Mitigated	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387
NaturalGas Unmitigated	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387

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	1119.16	0.0121	0.1031	0.0439	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.6662	131.6662	2.5200e-003	2.4100e-003	132.4486
Apartments Mid Rise	35784.3	0.3859	3.2978	1.4033	0.0211		0.2666	0.2666		0.2666	0.2666		4,209.9164	4,209.9164	0.0807	0.0772	4,234.9339
General Office Building	1283.42	0.0138	0.1258	0.1057	7.5000e-004		9.5600e-003	9.5600e-003		9.5600e-003	9.5600e-003		150.9911	150.9911	2.8900e-003	2.7700e-003	151.8884
High Turnover (Sit Down Restaurant)	22759.9	0.2455	2.2314	1.8743	0.0134		0.1696	0.1696		0.1696	0.1696		2,677.6342	2,677.6342	0.0513	0.0491	2,693.5460
Hotel	4769.72	0.0514	0.4676	0.3928	2.8100e-003		0.0355	0.0355		0.0355	0.0355		561.1436	561.1436	0.0108	0.0103	564.4782
Quality Restaurant	5057.75	0.0545	0.4959	0.4165	2.9800e-003		0.0377	0.0377		0.0377	0.0377		595.0298	595.0298	0.0114	0.0109	598.5658
Regional Shopping Center	251.616	2.7100e-003	0.0247	0.0207	1.5000e-004		1.8700e-003	1.8700e-003		1.8700e-003	1.8700e-003		29.6019	29.6019	5.7000e-004	5.4000e-004	29.7778
Total		**0.7660**	**6.7463**	**4.2573**	**0.0418**		**0.5292**	**0.5292**		**0.5292**	**0.5292**		**8,355.9832**	**8,355.9832**	**0.1602**	**0.1532**	**8,405.6387**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	1.11916	0.0121	0.1031	0.0439	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.6662	131.6662	2.5200e-003	2.4100e-003	132.4486
Apartments Mid Rise	35.7843	0.3859	3.2978	1.4033	0.0211		0.2666	0.2666		0.2666	0.2666		4,209.9164	4,209.9164	0.0807	0.0772	4,234.9339
General Office Building	1.28342	0.0138	0.1258	0.1057	7.5000e-004		9.5600e-003	9.5600e-003		9.5600e-003	9.5600e-003		150.9911	150.9911	2.8900e-003	2.7700e-003	151.8884
High Turnover (Sit Down Restaurant)	22.7599	0.2455	2.2314	1.8743	0.0134		0.1696	0.1696		0.1696	0.1696		2,677.6342	2,677.6342	0.0513	0.0491	2,693.5460
Hotel	4.76972	0.0514	0.4676	0.3928	2.8100e-003		0.0355	0.0355		0.0355	0.0355		561.1436	561.1436	0.0108	0.0103	564.4782
Quality Restaurant	5.05775	0.0545	0.4959	0.4165	2.9800e-003		0.0377	0.0377		0.0377	0.0377		595.0298	595.0298	0.0114	0.0109	598.5658
Regional Shopping Center	0.251616	2.7100e-003	0.0247	0.0207	1.5000e-004		1.8700e-003	1.8700e-003		1.8700e-003	1.8700e-003		29.6019	29.6019	5.7000e-004	5.4000e-004	29.7778
Total		**0.7660**	**6.7463**	**4.2573**	**0.0418**		**0.5292**	**0.5292**		**0.5292**	**0.5292**		**8,355.9832**	**8,355.9832**	**0.1602**	**0.1532**	**8,405.6387**

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	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192
Unmitigated	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192

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	2.2670					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	24.1085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.6500	14.1000	6.0000	0.0900		1.1400	1.1400		1.1400	1.1400	0.0000	18,000.0000	18,000.0000	0.3450	0.3300	18,106.9650
Landscaping	2.4766	0.9496	82.4430	4.3600e-003		0.4574	0.4574		0.4574	0.4574		148.5950	148.5950	0.1424		152.1542
Total	**30.5020**	**15.0496**	**88.4430**	**0.0944**		**1.5974**	**1.5974**		**1.5974**	**1.5974**	**0.0000**	**18,148.5950**	**18,148.5950**	**0.4874**	**0.3300**	**18,259.1192**

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	2.2670					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	24.1085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.6500	14.1000	6.0000	0.0900		1.1400	1.1400		1.1400	1.1400	0.0000	18,000.0000	18,000.0000	0.3450	0.3300	18,106.9650
Landscaping	2.4766	0.9496	82.4430	4.3600e-003		0.4574	0.4574		0.4574	0.4574		148.5950	148.5950	0.1424		152.1542
Total	**30.5020**	**15.0496**	**88.4430**	**0.0944**		**1.5974**	**1.5974**		**1.5974**	**1.5974**	**0.0000**	**18,148.5950**	**18,148.5950**	**0.4874**	**0.3300**	**18,259.1192**

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

Village South Specific Plan (Proposed)

Los Angeles-South Coast County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	45.00	1000sqft	1.03	45,000.00	0
High Turnover (Sit Down Restaurant)	36.00	1000sqft	0.83	36,000.00	0
Hotel	50.00	Room	1.67	72,600.00	0
Quality Restaurant	8.00	1000sqft	0.18	8,000.00	0
Apartments Low Rise	25.00	Dwelling Unit	1.56	25,000.00	72
Apartments Mid Rise	975.00	Dwelling Unit	25.66	975,000.00	2789
Regional Shopping Center	56.00	1000sqft	1.29	56,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2028
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

Project Characteristics - Consistent with the DEIR's model.

Land Use - See SWAPE comment regarding residential and retail land uses.

Construction Phase - See SWAPE comment regarding individual construction phase lengths.

Demolition - Consistent with the DEIR's model. See SWAPE comment regarding demolition.

Vehicle Trips - Saturday trips consistent with the DEIR's model. See SWAPE comment regarding weekday and Sunday trips.

Woodstoves - Woodstoves and wood-burning fireplaces consistent with the DEIR's model. See SWAPE comment regarding gas fireplaces.

Energy Use -

Construction Off-road Equipment Mitigation - See SWAPE comment on construction-related mitigation.

Area Mitigation - See SWAPE comment regarding operational mitigation measures.

Water Mitigation - See SWAPE comment regarding operational mitigation measures.

Trips and VMT - Local hire provision

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	1.25	0.00
tblFireplaces	NumberWood	48.75	0.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblVehicleTrips	ST_TR	7.16	6.17
tblVehicleTrips	ST_TR	6.39	3.87
tblVehicleTrips	ST_TR	2.46	1.39
tblVehicleTrips	ST_TR	158.37	79.82

tblVehicleTrips	ST_TR	8.19	3.75
tblVehicleTrips	ST_TR	94.36	63.99
tblVehicleTrips	ST_TR	49.97	10.74
tblVehicleTrips	SU_TR	6.07	6.16
tblVehicleTrips	SU_TR	5.86	4.18
tblVehicleTrips	SU_TR	1.05	0.69
tblVehicleTrips	SU_TR	131.84	78.27
tblVehicleTrips	SU_TR	5.95	3.20
tblVehicleTrips	SU_TR	72.16	57.65
tblVehicleTrips	SU_TR	25.24	6.39
tblVehicleTrips	WD_TR	6.59	5.83
tblVehicleTrips	WD_TR	6.65	4.13
tblVehicleTrips	WD_TR	11.03	6.41
tblVehicleTrips	WD_TR	127.15	65.80
tblVehicleTrips	WD_TR	8.17	3.84
tblVehicleTrips	WD_TR	89.95	62.64
tblVehicleTrips	WD_TR	42.70	9.43
tblWoodstoves	NumberCatalytic	1.25	0.00
tblWoodstoves	NumberCatalytic	48.75	0.00
tblWoodstoves	NumberNoncatalytic	1.25	0.00
tblWoodstoves	NumberNoncatalytic	48.75	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	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	0.1704	1.8234	1.1577	2.3800e-003	0.4141	0.0817	0.4958	0.1788	0.0754	0.2542	0.0000	210.7654	210.7654	0.0600	0.0000	212.2661
2022	0.5865	4.0240	5.1546	0.0155	0.9509	0.1175	1.0683	0.2518	0.1103	0.3621	0.0000	1,418.6554	1,418.6554	0.1215	0.0000	1,421.6925
2023	0.5190	3.2850	4.7678	0.0147	0.8497	0.0971	0.9468	0.2283	0.0912	0.3195	0.0000	1,342.4412	1,342.4412	0.1115	0.0000	1,345.2291
2024	4.1592	0.1313	0.2557	5.0000e-004	0.0221	6.3900e-003	0.0285	5.8700e-003	5.9700e-003	0.0118	0.0000	44.6355	44.6355	7.8300e-003	0.0000	44.8311
Maximum	**4.1592**	**4.0240**	**5.1546**	**0.0155**	**0.9509**	**0.1175**	**1.0683**	**0.2518**	**0.1103**	**0.3621**	**0.0000**	**1,418.6554**	**1,418.6554**	**0.1215**	**0.0000**	**1,421.6925**

2.1 Overall Construction

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	0.1704	1.8234	1.1577	2.3800e-003	0.4141	0.0817	0.4958	0.1788	0.0754	0.2542	0.0000	210.7651	210.7651	0.0600	0.0000	212.2658
2022	0.5865	4.0240	5.1546	0.0155	0.9509	0.1175	1.0683	0.2518	0.1103	0.3621	0.0000	1,418.6550	1,418.6550	0.1215	0.0000	1,421.6921
2023	0.5190	3.2850	4.7678	0.0147	0.8497	0.0971	0.9468	0.2283	0.0912	0.3195	0.0000	1,342.4409	1,342.4409	0.1115	0.0000	1,345.2287
2024	4.1592	0.1313	0.2557	5.0000e-004	0.0221	6.3900e-003	0.0285	5.8700e-003	5.9700e-003	0.0118	0.0000	44.6354	44.6354	7.8300e-003	0.0000	44.8311
Maximum	**4.1592**	**4.0240**	**5.1546**	**0.0155**	**0.9509**	**0.1175**	**1.0683**	**0.2518**	**0.1103**	**0.3621**	**0.0000**	**1,418.6550**	**1,418.6550**	**0.1215**	**0.0000**	**1,421.6921**

	ROG	NOx	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)
1	**9-1-2021**	**11-30-2021**	1.4091	1.4091
2	**12-1-2021**	**2-28-2022**	1.3329	1.3329
3	**3-1-2022**	**5-31-2022**	1.1499	1.1499
4	**6-1-2022**	**8-31-2022**	1.1457	1.1457
5	**9-1-2022**	**11-30-2022**	1.1415	1.1415
6	**12-1-2022**	**2-28-2023**	1.0278	1.0278
7	**3-1-2023**	**5-31-2023**	0.9868	0.9868
8	**6-1-2023**	**8-31-2023**	0.9831	0.9831

9	**9-1-2023**	**11-30-2023**	0.9798	0.9798
10	**12-1-2023**	**2-29-2024**	2.8757	2.8757
11	**3-1-2024**	**5-31-2024**	1.6188	1.6188
		Highest	2.8757	2.8757

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	5.1437	0.2950	10.3804	1.6700e-003		0.0714	0.0714		0.0714	0.0714	0.0000	220.9670	220.9670	0.0201	3.7400e-003	222.5835
Energy	0.1398	1.2312	0.7770	7.6200e-003		0.0966	0.0966		0.0966	0.0966	0.0000	3,896.0732	3,896.0732	0.1303	0.0468	3,913.2833
Mobile	1.5857	7.9962	19.1834	0.0821	7.7979	0.0580	7.8559	2.0895	0.0539	2.1434	0.0000	7,620.4986	7,620.4986	0.3407	0.0000	7,629.0162
Waste						0.0000	0.0000		0.0000	0.0000	207.8079	0.0000	207.8079	12.2811	0.0000	514.8354
Water						0.0000	0.0000		0.0000	0.0000	29.1632	556.6420	585.8052	3.0183	0.0755	683.7567
Total	**6.8692**	**9.5223**	**30.3407**	**0.0914**	**7.7979**	**0.2260**	**8.0240**	**2.0895**	**0.2219**	**2.3114**	**236.9712**	**12,294.1807**	**12,531.1519**	**15.7904**	**0.1260**	**12,963.4751**

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	5.1437	0.2950	10.3804	1.6700e-003		0.0714	0.0714		0.0714	0.0714	0.0000	220.9670	220.9670	0.0201	3.7400e-003	222.5835
Energy	0.1398	1.2312	0.7770	7.6200e-003		0.0966	0.0966		0.0966	0.0966	0.0000	3,896.0732	3,896.0732	0.1303	0.0468	3,913.2833
Mobile	1.5857	7.9962	19.1834	0.0821	7.7979	0.0580	7.8559	2.0895	0.0539	2.1434	0.0000	7,620.4986	7,620.4986	0.3407	0.0000	7,629.0162
Waste						0.0000	0.0000		0.0000	0.0000	207.8079	0.0000	207.8079	12.2811	0.0000	514.8354
Water						0.0000	0.0000		0.0000	0.0000	29.1632	556.6420	585.8052	3.0183	0.0755	683.7567
Total	**6.8692**	**9.5223**	**30.3407**	**0.0914**	**7.7979**	**0.2260**	**8.0240**	**2.0895**	**0.2219**	**2.3114**	**236.9712**	**12,294.1807**	**12,531.1519**	**15.7904**	**0.1260**	**12,963.4751**

	ROG	NOx	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

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2021	10/12/2021	5	30	
2	Site Preparation	Site Preparation	10/13/2021	11/9/2021	5	20	
3	Grading	Grading	11/10/2021	1/11/2022	5	45	
4	Building Construction	Building Construction	1/12/2022	12/12/2023	5	500	
5	Paving	Paving	12/13/2023	1/30/2024	5	35	
6	Architectural Coating	Architectural Coating	1/31/2024	3/19/2024	5	35	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 112.5

Acres of Paving: 0

Residential Indoor: 2,025,000; Residential Outdoor: 675,000; Non-Residential Indoor: 326,400; Non-Residential Outdoor: 108,800; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	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	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	458.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	801.00	143.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	160.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 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					0.0496	0.0000	0.0496	7.5100e-003	0.0000	7.5100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0475	0.4716	0.3235	5.8000e-004		0.0233	0.0233		0.0216	0.0216	0.0000	51.0012	51.0012	0.0144	0.0000	51.3601
Total	**0.0475**	**0.4716**	**0.3235**	**5.8000e-004**	**0.0496**	**0.0233**	**0.0729**	**7.5100e-003**	**0.0216**	**0.0291**	**0.0000**	**51.0012**	**51.0012**	**0.0144**	**0.0000**	**51.3601**

3.2 Demolition - 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	1.9300e-003	0.0634	0.0148	1.8000e-004	3.9400e-003	1.9000e-004	4.1300e-003	1.0800e-003	1.8000e-004	1.2600e-003	0.0000	17.4566	17.4566	1.2100e-003	0.0000	17.4869
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2000e-004	5.3000e-004	6.0900e-003	2.0000e-005	1.6800e-003	1.0000e-005	1.6900e-003	4.5000e-004	1.0000e-005	4.6000e-004	0.0000	1.5281	1.5281	5.0000e-005	0.0000	1.5293
Total	**2.6500e-003**	**0.0639**	**0.0209**	**2.0000e-004**	**5.6200e-003**	**2.0000e-004**	**5.8200e-003**	**1.5300e-003**	**1.9000e-004**	**1.7200e-003**	**0.0000**	**18.9847**	**18.9847**	**1.2600e-003**	**0.0000**	**19.0161**

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					0.0496	0.0000	0.0496	7.5100e-003	0.0000	7.5100e-003	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0475	0.4716	0.3235	5.8000e-004		0.0233	0.0233		0.0216	0.0216	0.0000	51.0011	51.0011	0.0144	0.0000	51.3600
Total	**0.0475**	**0.4716**	**0.3235**	**5.8000e-004**	**0.0496**	**0.0233**	**0.0729**	**7.5100e-003**	**0.0216**	**0.0291**	**0.0000**	**51.0011**	**51.0011**	**0.0144**	**0.0000**	**51.3600**

3.2 Demolition - 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	1.9300e-003	0.0634	0.0148	1.8000e-004	3.9400e-003	1.9000e-004	4.1300e-003	1.0800e-003	1.8000e-004	1.2600e-003	0.0000	17.4566	17.4566	1.2100e-003	0.0000	17.4869
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.2000e-004	5.3000e-004	6.0900e-003	2.0000e-005	1.6800e-003	1.0000e-005	1.6900e-003	4.5000e-004	1.0000e-005	4.6000e-004	0.0000	1.5281	1.5281	5.0000e-005	0.0000	1.5293
Total	**2.6500e-003**	**0.0639**	**0.0209**	**2.0000e-004**	**5.6200e-003**	**2.0000e-004**	**5.8200e-003**	**1.5300e-003**	**1.9000e-004**	**1.7200e-003**	**0.0000**	**18.9847**	**18.9847**	**1.2600e-003**	**0.0000**	**19.0161**

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					0.1807	0.0000	0.1807	0.0993	0.0000	0.0993	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0389	0.4050	0.2115	3.8000e-004		0.0204	0.0204		0.0188	0.0188	0.0000	33.4357	33.4357	0.0108	0.0000	33.7061
Total	**0.0389**	**0.4050**	**0.2115**	**3.8000e-004**	**0.1807**	**0.0204**	**0.2011**	**0.0993**	**0.0188**	**0.1181**	**0.0000**	**33.4357**	**33.4357**	**0.0108**	**0.0000**	**33.7061**

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	5.8000e-004	4.3000e-004	4.8700e-003	1.0000e-005	1.3400e-003	1.0000e-005	1.3500e-003	3.6000e-004	1.0000e-005	3.7000e-004	0.0000	1.2225	1.2225	4.0000e-005	0.0000	1.2234
Total	**5.8000e-004**	**4.3000e-004**	**4.8700e-003**	**1.0000e-005**	**1.3400e-003**	**1.0000e-005**	**1.3500e-003**	**3.6000e-004**	**1.0000e-005**	**3.7000e-004**	**0.0000**	**1.2225**	**1.2225**	**4.0000e-005**	**0.0000**	**1.2234**

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					0.1807	0.0000	0.1807	0.0993	0.0000	0.0993	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0389	0.4050	0.2115	3.8000e-004		0.0204	0.0204		0.0188	0.0188	0.0000	33.4357	33.4357	0.0108	0.0000	33.7060
Total	**0.0389**	**0.4050**	**0.2115**	**3.8000e-004**	**0.1807**	**0.0204**	**0.2011**	**0.0993**	**0.0188**	**0.1181**	**0.0000**	**33.4357**	**33.4357**	**0.0108**	**0.0000**	**33.7060**

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	5.8000e-004	4.3000e-004	4.8700e-003	1.0000e-005	1.3400e-003	1.0000e-005	1.3500e-003	3.6000e-004	1.0000e-005	3.7000e-004	0.0000	1.2225	1.2225	4.0000e-005	0.0000	1.2234
Total	**5.8000e-004**	**4.3000e-004**	**4.8700e-003**	**1.0000e-005**	**1.3400e-003**	**1.0000e-005**	**1.3500e-003**	**3.6000e-004**	**1.0000e-005**	**3.7000e-004**	**0.0000**	**1.2225**	**1.2225**	**4.0000e-005**	**0.0000**	**1.2234**

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					0.1741	0.0000	0.1741	0.0693	0.0000	0.0693	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0796	0.8816	0.5867	1.1800e-003		0.0377	0.0377		0.0347	0.0347	0.0000	103.5405	103.5405	0.0335	0.0000	104.3776
Total	**0.0796**	**0.8816**	**0.5867**	**1.1800e-003**	**0.1741**	**0.0377**	**0.2118**	**0.0693**	**0.0347**	**0.1040**	**0.0000**	**103.5405**	**103.5405**	**0.0335**	**0.0000**	**104.3776**

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	0.0000	0.0000	0.0000	0.0000	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	1.2200e-003	9.0000e-004	0.0103	3.0000e-005	2.8300e-003	2.0000e-005	2.8600e-003	7.5000e-004	2.0000e-005	7.8000e-004	0.0000	2.5808	2.5808	8.0000e-005	0.0000	2.5828
Total	**1.2200e-003**	**9.0000e-004**	**0.0103**	**3.0000e-005**	**2.8300e-003**	**2.0000e-005**	**2.8600e-003**	**7.5000e-004**	**2.0000e-005**	**7.8000e-004**	**0.0000**	**2.5808**	**2.5808**	**8.0000e-005**	**0.0000**	**2.5828**

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					0.1741	0.0000	0.1741	0.0693	0.0000	0.0693	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0796	0.8816	0.5867	1.1800e-003		0.0377	0.0377		0.0347	0.0347	0.0000	103.5403	103.5403	0.0335	0.0000	104.3775
Total	**0.0796**	**0.8816**	**0.5867**	**1.1800e-003**	**0.1741**	**0.0377**	**0.2118**	**0.0693**	**0.0347**	**0.1040**	**0.0000**	**103.5403**	**103.5403**	**0.0335**	**0.0000**	**104.3775**

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	0.0000	0.0000	0.0000	0.0000	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	1.2200e-003	9.0000e-004	0.0103	3.0000e-005	2.8300e-003	2.0000e-005	2.8600e-003	7.5000e-004	2.0000e-005	7.8000e-004	0.0000	2.5808	2.5808	8.0000e-005	0.0000	2.5828
Total	**1.2200e-003**	**9.0000e-004**	**0.0103**	**3.0000e-005**	**2.8300e-003**	**2.0000e-005**	**2.8600e-003**	**7.5000e-004**	**2.0000e-005**	**7.8000e-004**	**0.0000**	**2.5808**	**2.5808**	**8.0000e-005**	**0.0000**	**2.5828**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					0.0807	0.0000	0.0807	0.0180	0.0000	0.0180	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0127	0.1360	0.1017	2.2000e-004		5.7200e-003	5.7200e-003		5.2600e-003	5.2600e-003	0.0000	19.0871	19.0871	6.1700e-003	0.0000	19.2414
Total	**0.0127**	**0.1360**	**0.1017**	**2.2000e-004**	**0.0807**	**5.7200e-003**	**0.0865**	**0.0180**	**5.2600e-003**	**0.0233**	**0.0000**	**19.0871**	**19.0871**	**6.1700e-003**	**0.0000**	**19.2414**

3.4 Grading - 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	2.1000e-004	1.5000e-004	1.7400e-003	1.0000e-005	5.2000e-004	0.0000	5.3000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4587	0.4587	1.0000e-005	0.0000	0.4590
Total	**2.1000e-004**	**1.5000e-004**	**1.7400e-003**	**1.0000e-005**	**5.2000e-004**	**0.0000**	**5.3000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.4587**	**0.4587**	**1.0000e-005**	**0.0000**	**0.4590**

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					0.0807	0.0000	0.0807	0.0180	0.0000	0.0180	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	0.0127	0.1360	0.1017	2.2000e-004		5.7200e-003	5.7200e-003		5.2600e-003	5.2600e-003	0.0000	19.0871	19.0871	6.1700e-003	0.0000	19.2414
Total	**0.0127**	**0.1360**	**0.1017**	**2.2000e-004**	**0.0807**	**5.7200e-003**	**0.0865**	**0.0180**	**5.2600e-003**	**0.0233**	**0.0000**	**19.0871**	**19.0871**	**6.1700e-003**	**0.0000**	**19.2414**

3.4 Grading - 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	2.1000e-004	1.5000e-004	1.7400e-003	1.0000e-005	5.2000e-004	0.0000	5.3000e-004	1.4000e-004	0.0000	1.4000e-004	0.0000	0.4587	0.4587	1.0000e-005	0.0000	0.4590
Total	**2.1000e-004**	**1.5000e-004**	**1.7400e-003**	**1.0000e-005**	**5.2000e-004**	**0.0000**	**5.3000e-004**	**1.4000e-004**	**0.0000**	**1.4000e-004**	**0.0000**	**0.4587**	**0.4587**	**1.0000e-005**	**0.0000**	**0.4590**

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	0.2158	1.9754	2.0700	3.4100e-003		0.1023	0.1023		0.0963	0.0963	0.0000	293.1324	293.1324	0.0702	0.0000	294.8881
Total	**0.2158**	**1.9754**	**2.0700**	**3.4100e-003**		**0.1023**	**0.1023**		**0.0963**	**0.0963**	**0.0000**	**293.1324**	**293.1324**	**0.0702**	**0.0000**	**294.8881**

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	0.0527	1.6961	0.4580	4.5500e-003	0.1140	3.1800e-003	0.1171	0.0329	3.0400e-003	0.0359	0.0000	441.9835	441.9835	0.0264	0.0000	442.6435
Worker	0.3051	0.2164	2.5233	7.3500e-003	0.7557	6.2300e-003	0.7619	0.2007	5.7400e-003	0.2065	0.0000	663.9936	663.9936	0.0187	0.0000	664.4604
Total	**0.3578**	**1.9125**	**2.9812**	**0.0119**	**0.8696**	**9.4100e-003**	**0.8790**	**0.2336**	**8.7800e-003**	**0.2424**	**0.0000**	**1,105.9771**	**1,105.9771**	**0.0451**	**0.0000**	**1,107.1039**

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	0.2158	1.9754	2.0700	3.4100e-003		0.1023	0.1023		0.0963	0.0963	0.0000	293.1321	293.1321	0.0702	0.0000	294.8877
Total	**0.2158**	**1.9754**	**2.0700**	**3.4100e-003**		**0.1023**	**0.1023**		**0.0963**	**0.0963**	**0.0000**	**293.1321**	**293.1321**	**0.0702**	**0.0000**	**294.8877**

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	0.0527	1.6961	0.4580	4.5500e-003	0.1140	3.1800e-003	0.1171	0.0329	3.0400e-003	0.0359	0.0000	441.9835	441.9835	0.0264	0.0000	442.6435
Worker	0.3051	0.2164	2.5233	7.3500e-003	0.7557	6.2300e-003	0.7619	0.2007	5.7400e-003	0.2065	0.0000	663.9936	663.9936	0.0187	0.0000	664.4604
Total	**0.3578**	**1.9125**	**2.9812**	**0.0119**	**0.8696**	**9.4100e-003**	**0.8790**	**0.2336**	**8.7800e-003**	**0.2424**	**0.0000**	**1,105.9771**	**1,105.9771**	**0.0451**	**0.0000**	**1,107.1039**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1942	1.7765	2.0061	3.3300e-003		0.0864	0.0864		0.0813	0.0813	0.0000	286.2789	286.2789	0.0681	0.0000	287.9814
Total	**0.1942**	**1.7765**	**2.0061**	**3.3300e-003**		**0.0864**	**0.0864**		**0.0813**	**0.0813**	**0.0000**	**286.2789**	**286.2789**	**0.0681**	**0.0000**	**287.9814**

3.5 Building Construction - 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	0.0382	1.2511	0.4011	4.3000e-003	0.1113	1.4600e-003	0.1127	0.0321	1.4000e-003	0.0335	0.0000	417.9930	417.9930	0.0228	0.0000	418.5624
Worker	0.2795	0.1910	2.2635	6.9100e-003	0.7377	5.9100e-003	0.7436	0.1960	5.4500e-003	0.2014	0.0000	624.5363	624.5363	0.0164	0.0000	624.9466
Total	**0.3177**	**1.4420**	**2.6646**	**0.0112**	**0.8490**	**7.3700e-003**	**0.8564**	**0.2281**	**6.8500e-003**	**0.2349**	**0.0000**	**1,042.5294**	**1,042.5294**	**0.0392**	**0.0000**	**1,043.5090**

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	0.1942	1.7765	2.0061	3.3300e-003		0.0864	0.0864		0.0813	0.0813	0.0000	286.2785	286.2785	0.0681	0.0000	287.9811
Total	**0.1942**	**1.7765**	**2.0061**	**3.3300e-003**		**0.0864**	**0.0864**		**0.0813**	**0.0813**	**0.0000**	**286.2785**	**286.2785**	**0.0681**	**0.0000**	**287.9811**

3.5 Building Construction - 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	0.0382	1.2511	0.4011	4.3000e-003	0.1113	1.4600e-003	0.1127	0.0321	1.4000e-003	0.0335	0.0000	417.9930	417.9930	0.0228	0.0000	418.5624
Worker	0.2795	0.1910	2.2635	6.9100e-003	0.7377	5.9100e-003	0.7436	0.1960	5.4500e-003	0.2014	0.0000	624.5363	624.5363	0.0164	0.0000	624.9466
Total	**0.3177**	**1.4420**	**2.6646**	**0.0112**	**0.8490**	**7.3700e-003**	**0.8564**	**0.2281**	**6.8500e-003**	**0.2349**	**0.0000**	**1,042.5294**	**1,042.5294**	**0.0392**	**0.0000**	**1,043.5090**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	6.7100e-003	0.0663	0.0948	1.5000e-004		3.3200e-003	3.3200e-003		3.0500e-003	3.0500e-003	0.0000	13.0175	13.0175	4.2100e-003	0.0000	13.1227
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.7100e-003**	**0.0663**	**0.0948**	**1.5000e-004**		**3.3200e-003**	**3.3200e-003**		**3.0500e-003**	**3.0500e-003**	**0.0000**	**13.0175**	**13.0175**	**4.2100e-003**	**0.0000**	**13.1227**

3.6 Paving - 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	2.8000e-004	1.9000e-004	2.2300e-003	1.0000e-005	7.3000e-004	1.0000e-005	7.3000e-004	1.9000e-004	1.0000e-005	2.0000e-004	0.0000	0.6156	0.6156	2.0000e-005	0.0000	0.6160
Total	**2.8000e-004**	**1.9000e-004**	**2.2300e-003**	**1.0000e-005**	**7.3000e-004**	**1.0000e-005**	**7.3000e-004**	**1.9000e-004**	**1.0000e-005**	**2.0000e-004**	**0.0000**	**0.6156**	**0.6156**	**2.0000e-005**	**0.0000**	**0.6160**

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	6.7100e-003	0.0663	0.0948	1.5000e-004		3.3200e-003	3.3200e-003		3.0500e-003	3.0500e-003	0.0000	13.0175	13.0175	4.2100e-003	0.0000	13.1227
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**6.7100e-003**	**0.0663**	**0.0948**	**1.5000e-004**		**3.3200e-003**	**3.3200e-003**		**3.0500e-003**	**3.0500e-003**	**0.0000**	**13.0175**	**13.0175**	**4.2100e-003**	**0.0000**	**13.1227**

3.6 Paving - 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	2.8000e-004	1.9000e-004	2.2300e-003	1.0000e-005	7.3000e-004	1.0000e-005	7.3000e-004	1.9000e-004	1.0000e-005	2.0000e-004	0.0000	0.6156	0.6156	2.0000e-005	0.0000	0.6160
Total	**2.8000e-004**	**1.9000e-004**	**2.2300e-003**	**1.0000e-005**	**7.3000e-004**	**1.0000e-005**	**7.3000e-004**	**1.9000e-004**	**1.0000e-005**	**2.0000e-004**	**0.0000**	**0.6156**	**0.6156**	**2.0000e-005**	**0.0000**	**0.6160**

3.6 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0109	0.1048	0.1609	2.5000e-004		5.1500e-003	5.1500e-003		4.7400e-003	4.7400e-003	0.0000	22.0292	22.0292	7.1200e-003	0.0000	22.2073
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0109**	**0.1048**	**0.1609**	**2.5000e-004**		**5.1500e-003**	**5.1500e-003**		**4.7400e-003**	**4.7400e-003**	**0.0000**	**22.0292**	**22.0292**	**7.1200e-003**	**0.0000**	**22.2073**

3.6 Paving - 2024

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	4.4000e-004	2.9000e-004	3.5100e-003	1.0000e-005	1.2300e-003	1.0000e-005	1.2400e-003	3.3000e-004	1.0000e-005	3.4000e-004	0.0000	1.0094	1.0094	3.0000e-005	0.0000	1.0100
Total	**4.4000e-004**	**2.9000e-004**	**3.5100e-003**	**1.0000e-005**	**1.2300e-003**	**1.0000e-005**	**1.2400e-003**	**3.3000e-004**	**1.0000e-005**	**3.4000e-004**	**0.0000**	**1.0094**	**1.0094**	**3.0000e-005**	**0.0000**	**1.0100**

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	0.0109	0.1048	0.1609	2.5000e-004		5.1500e-003	5.1500e-003		4.7400e-003	4.7400e-003	0.0000	22.0292	22.0292	7.1200e-003	0.0000	22.2073
Paving	0.0000					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Total	**0.0109**	**0.1048**	**0.1609**	**2.5000e-004**		**5.1500e-003**	**5.1500e-003**		**4.7400e-003**	**4.7400e-003**	**0.0000**	**22.0292**	**22.0292**	**7.1200e-003**	**0.0000**	**22.2073**

3.6 Paving - 2024

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	4.4000e-004	2.9000e-004	3.5100e-003	1.0000e-005	1.2300e-003	1.0000e-005	1.2400e-003	3.3000e-004	1.0000e-005	3.4000e-004	0.0000	1.0094	1.0094	3.0000e-005	0.0000	1.0100
Total	**4.4000e-004**	**2.9000e-004**	**3.5100e-003**	**1.0000e-005**	**1.2300e-003**	**1.0000e-005**	**1.2400e-003**	**3.3000e-004**	**1.0000e-005**	**3.4000e-004**	**0.0000**	**1.0094**	**1.0094**	**3.0000e-005**	**0.0000**	**1.0100**

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	4.1372					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.1600e-003	0.0213	0.0317	5.0000e-005		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	4.4682	4.4682	2.5000e-004	0.0000	4.4745
Total	**4.1404**	**0.0213**	**0.0317**	**5.0000e-005**		**1.0700e-003**	**1.0700e-003**		**1.0700e-003**	**1.0700e-003**	**0.0000**	**4.4682**	**4.4682**	**2.5000e-004**	**0.0000**	**4.4745**

3.7 Architectural Coating - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.4800e-003	4.9300e-003	0.0596	1.9000e-004	0.0209	1.6000e-004	0.0211	5.5500e-003	1.5000e-004	5.7000e-003	0.0000	17.1287	17.1287	4.3000e-004	0.0000	17.1394
Total	**7.4800e-003**	**4.9300e-003**	**0.0596**	**1.9000e-004**	**0.0209**	**1.6000e-004**	**0.0211**	**5.5500e-003**	**1.5000e-004**	**5.7000e-003**	**0.0000**	**17.1287**	**17.1287**	**4.3000e-004**	**0.0000**	**17.1394**

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	4.1372					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Off-Road	3.1600e-003	0.0213	0.0317	5.0000e-005		1.0700e-003	1.0700e-003		1.0700e-003	1.0700e-003	0.0000	4.4682	4.4682	2.5000e-004	0.0000	4.4745
Total	**4.1404**	**0.0213**	**0.0317**	**5.0000e-005**		**1.0700e-003**	**1.0700e-003**		**1.0700e-003**	**1.0700e-003**	**0.0000**	**4.4682**	**4.4682**	**2.5000e-004**	**0.0000**	**4.4745**

3.7 Architectural Coating - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Worker	7.4800e-003	4.9300e-003	0.0596	1.9000e-004	0.0209	1.6000e-004	0.0211	5.5500e-003	1.5000e-004	5.7000e-003	0.0000	17.1287	17.1287	4.3000e-004	0.0000	17.1394
Total	**7.4800e-003**	**4.9300e-003**	**0.0596**	**1.9000e-004**	**0.0209**	**1.6000e-004**	**0.0211**	**5.5500e-003**	**1.5000e-004**	**5.7000e-003**	**0.0000**	**17.1287**	**17.1287**	**4.3000e-004**	**0.0000**	**17.1394**

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	1.5857	7.9962	19.1834	0.0821	7.7979	0.0580	7.8559	2.0895	0.0539	2.1434	0.0000	7,620.4986	7,620.4986	0.3407	0.0000	7,629.0162
Unmitigated	1.5857	7.9962	19.1834	0.0821	7.7979	0.0580	7.8559	2.0895	0.0539	2.1434	0.0000	7,620.4986	7,620.4986	0.3407	0.0000	7,629.0162

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	145.75	154.25	154.00	506,227	506,227
Apartments Mid Rise	4,026.75	3,773.25	4075.50	13,660,065	13,660,065
General Office Building	288.45	62.55	31.05	706,812	706,812
High Turnover (Sit Down Restaurant)	2,368.80	2,873.52	2817.72	3,413,937	3,413,937
Hotel	192.00	187.50	160.00	445,703	445,703
Quality Restaurant	501.12	511.92	461.20	707,488	707,488
Regional Shopping Center	528.08	601.44	357.84	1,112,221	1,112,221
Total	8,050.95	8,164.43	8,057.31	20,552,452	20,552,452

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	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Apartments Mid Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
General Office Building	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
High Turnover (Sit Down Restaurant)	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Hotel	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Quality Restaurant	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Regional Shopping Center	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

	ROG	NOx	CO	SO2	Fugitive 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	2,512.6465	2,512.6465	0.1037	0.0215	2,521.6356
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	2,512.6465	2,512.6465	0.1037	0.0215	2,521.6356
NaturalGas Mitigated	0.1398	1.2312	0.7770	7.6200e-003		0.0966	0.0966		0.0966	0.0966	0.0000	1,383.4267	1,383.4267	0.0265	0.0254	1,391.6478
NaturalGas Unmitigated	0.1398	1.2312	0.7770	7.6200e-003		0.0966	0.0966		0.0966	0.0966	0.0000	1,383.4267	1,383.4267	0.0265	0.0254	1,391.6478

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	408494	2.2000e-003	0.0188	8.0100e-003	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	21.7988	21.7988	4.2000e-004	4.0000e-004	21.9284
Apartments Mid Rise	1.30613e+007	0.0704	0.6018	0.2561	3.8400e-003		0.0487	0.0487		0.0487	0.0487	0.0000	696.9989	696.9989	0.0134	0.0128	701.1408
General Office Building	468450	2.5300e-003	0.0230	0.0193	1.4000e-004		1.7500e-003	1.7500e-003		1.7500e-003	1.7500e-003	0.0000	24.9983	24.9983	4.8000e-004	4.6000e-004	25.1468
High Turnover (Sit Down Restaurant)	8.30736e+006	0.0448	0.4072	0.3421	2.4400e-003		0.0310	0.0310		0.0310	0.0310	0.0000	443.3124	443.3124	8.5000e-003	8.1300e-003	445.9468
Hotel	1.74095e+006	9.3900e-003	0.0853	0.0717	5.1000e-004		6.4900e-003	6.4900e-003		6.4900e-003	6.4900e-003	0.0000	92.9036	92.9036	1.7800e-003	1.7000e-003	93.4557
Quality Restaurant	1.84608e+006	9.9500e-003	0.0905	0.0760	5.4000e-004		6.8800e-003	6.8800e-003		6.8800e-003	6.8800e-003	0.0000	98.5139	98.5139	1.8900e-003	1.8100e-003	99.0993
Regional Shopping Center	91840	5.0000e-004	4.5000e-003	3.7800e-003	3.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004	0.0000	4.9009	4.9009	9.0000e-005	9.0000e-005	4.9301
Total		**0.1398**	**1.2312**	**0.7770**	**7.6200e-003**		**0.0966**	**0.0966**		**0.0966**	**0.0966**	**0.0000**	**1,383.4268**	**1,383.4268**	**0.0265**	**0.0254**	**1,391.6478**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Low Rise	408494	2.2000e-003	0.0188	8.0100e-003	1.2000e-004		1.5200e-003	1.5200e-003		1.5200e-003	1.5200e-003	0.0000	21.7988	21.7988	4.2000e-004	4.0000e-004	21.9284
Apartments Mid Rise	1.30613e+007	0.0704	0.6018	0.2561	3.8400e-003		0.0487	0.0487		0.0487	0.0487	0.0000	696.9989	696.9989	0.0134	0.0128	701.1408
General Office Building	468450	2.5300e-003	0.0230	0.0193	1.4000e-004		1.7500e-003	1.7500e-003		1.7500e-003	1.7500e-003	0.0000	24.9983	24.9983	4.8000e-004	4.6000e-004	25.1468
High Turnover (Sit Down Restaurant)	8.30736e+006	0.0448	0.4072	0.3421	2.4400e-003		0.0310	0.0310		0.0310	0.0310	0.0000	443.3124	443.3124	8.5000e-003	8.1300e-003	445.9468
Hotel	1.74095e+006	9.3900e-003	0.0853	0.0717	5.1000e-004		6.4900e-003	6.4900e-003		6.4900e-003	6.4900e-003	0.0000	92.9036	92.9036	1.7800e-003	1.7000e-003	93.4557
Quality Restaurant	1.84608e+006	9.9500e-003	0.0905	0.0760	5.4000e-004		6.8800e-003	6.8800e-003		6.8800e-003	6.8800e-003	0.0000	98.5139	98.5139	1.8900e-003	1.8100e-003	99.0993
Regional Shopping Center	91840	5.0000e-004	4.5000e-003	3.7800e-003	3.0000e-005		3.4000e-004	3.4000e-004		3.4000e-004	3.4000e-004	0.0000	4.9009	4.9009	9.0000e-005	9.0000e-005	4.9301
Total		**0.1398**	**1.2312**	**0.7770**	**7.6200e-003**		**0.0966**	**0.0966**		**0.0966**	**0.0966**	**0.0000**	**1,383.4268**	**1,383.4268**	**0.0265**	**0.0254**	**1,391.6478**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	106010	33.7770	1.3900e-003	2.9000e-004	33.8978
Apartments Mid Rise	3.94697e+006	1,257.5879	0.0519	0.0107	1,262.0869
General Office Building	584550	186.2502	7.6900e-003	1.5900e-003	186.9165
High Turnover (Sit Down Restaurant)	1.58904e+006	506.3022	0.0209	4.3200e-003	508.1135
Hotel	550308	175.3399	7.2400e-003	1.5000e-003	175.9672
Quality Restaurant	353120	112.5116	4.6500e-003	9.6000e-004	112.9141
Regional Shopping Center	756000	240.8778	9.9400e-003	2.0600e-003	241.7395
Total		**2,512.6465**	**0.1037**	**0.0215**	**2,521.6356**

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Low Rise	106010	33.7770	1.3900e-003	2.9000e-004	33.8978
Apartments Mid Rise	3.94697e+006	1,257.5879	0.0519	0.0107	1,262.0869
General Office Building	584550	186.2502	7.6900e-003	1.5900e-003	186.9165
High Turnover (Sit Down Restaurant)	1.58904e+006	506.3022	0.0209	4.3200e-003	508.1135
Hotel	550308	175.3399	7.2400e-003	1.5000e-003	175.9672
Quality Restaurant	353120	112.5116	4.6500e-003	9.6000e-004	112.9141
Regional Shopping Center	756000	240.8778	9.9400e-003	2.0600e-003	241.7395
Total		**2,512.6465**	**0.1037**	**0.0215**	**2,521.6356**

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	5.1437	0.2950	10.3804	1.6700e-003		0.0714	0.0714		0.0714	0.0714	0.0000	220.9670	220.9670	0.0201	3.7400e-003	222.5835
Unmitigated	5.1437	0.2950	10.3804	1.6700e-003		0.0714	0.0714		0.0714	0.0714	0.0000	220.9670	220.9670	0.0201	3.7400e-003	222.5835

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	0.4137					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.3998					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0206	0.1763	0.0750	1.1200e-003		0.0143	0.0143		0.0143	0.0143	0.0000	204.1166	204.1166	3.9100e-003	3.7400e-003	205.3295
Landscaping	0.3096	0.1187	10.3054	5.4000e-004		0.0572	0.0572		0.0572	0.0572	0.0000	16.8504	16.8504	0.0161	0.0000	17.2540
Total	**5.1437**	**0.2950**	**10.3804**	**1.6600e-003**		**0.0714**	**0.0714**		**0.0714**	**0.0714**	**0.0000**	**220.9670**	**220.9670**	**0.0201**	**3.7400e-003**	**222.5835**

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	0.4137					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	4.3998					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0206	0.1763	0.0750	1.1200e-003		0.0143	0.0143		0.0143	0.0143	0.0000	204.1166	204.1166	3.9100e-003	3.7400e-003	205.3295
Landscaping	0.3096	0.1187	10.3054	5.4000e-004		0.0572	0.0572		0.0572	0.0572	0.0000	16.8504	16.8504	0.0161	0.0000	17.2540
Total	**5.1437**	**0.2950**	**10.3804**	**1.6600e-003**		**0.0714**	**0.0714**		**0.0714**	**0.0714**	**0.0000**	**220.9670**	**220.9670**	**0.0201**	**3.7400e-003**	**222.5835**

7.0 Water Detail

7.1 Mitigation Measures Water

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Annual

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	585.8052	3.0183	0.0755	683.7567
Unmitigated	585.8052	3.0183	0.0755	683.7567

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	1.62885 / 1.02688	10.9095	0.0535	1.3400e-003	12.6471
Apartments Mid Rise	63.5252 / 40.0485	425.4719	2.0867	0.0523	493.2363
General Office Building	7.99802 / 4.90201	53.0719	0.2627	6.5900e-003	61.6019
High Turnover (Sit Down Restaurant)	10.9272 / 0.697482	51.2702	0.3580	8.8200e-003	62.8482
Hotel	1.26834 / 0.140927	6.1633	0.0416	1.0300e-003	7.5079
Quality Restaurant	2.42827 / 0.154996	11.3934	0.0796	1.9600e-003	13.9663
Regional Shopping Center	4.14806 / 2.54236	27.5250	0.1363	3.4200e-003	31.9490
Total		**585.8052**	**3.0183**	**0.0755**	**683.7567**

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Low Rise	1.62885 / 1.02688	10.9095	0.0535	1.3400e-003	12.6471
Apartments Mid Rise	63.5252 / 40.0485	425.4719	2.0867	0.0523	493.2363
General Office Building	7.99802 / 4.90201	53.0719	0.2627	6.5900e-003	61.6019
High Turnover (Sit Down Restaurant)	10.9272 / 0.697482	51.2702	0.3580	8.8200e-003	62.8482
Hotel	1.26834 / 0.140927	6.1633	0.0416	1.0300e-003	7.5079
Quality Restaurant	2.42827 / 0.154996	11.3934	0.0796	1.9600e-003	13.9663
Regional Shopping Center	4.14806 / 2.54236	27.5250	0.1363	3.4200e-003	31.9490
Total		**585.8052**	**3.0183**	**0.0755**	**683.7567**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	207.8079	12.2811	0.0000	514.8354
Unmitigated	207.8079	12.2811	0.0000	514.8354

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	11.5	2.3344	0.1380	0.0000	5.7834
Apartments Mid Rise	448.5	91.0415	5.3804	0.0000	225.5513
General Office Building	41.85	8.4952	0.5021	0.0000	21.0464
High Turnover (Sit Down Restaurant)	428.4	86.9613	5.1393	0.0000	215.4430
Hotel	27.38	5.5579	0.3285	0.0000	13.7694
Quality Restaurant	7.3	1.4818	0.0876	0.0000	3.6712
Regional Shopping Center	58.8	11.9359	0.7054	0.0000	29.5706
Total		**207.8079**	**12.2811**	**0.0000**	**514.8354**

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Low Rise	11.5	2.3344	0.1380	0.0000	5.7834
Apartments Mid Rise	448.5	91.0415	5.3804	0.0000	225.5513
General Office Building	41.85	8.4952	0.5021	0.0000	21.0464
High Turnover (Sit Down Restaurant)	428.4	86.9613	5.1393	0.0000	215.4430
Hotel	27.38	5.5579	0.3285	0.0000	13.7694
Quality Restaurant	7.3	1.4818	0.0876	0.0000	3.6712
Regional Shopping Center	58.8	11.9359	0.7054	0.0000	29.5706
Total		**207.8079**	**12.2811**	**0.0000**	**514.8354**

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

Village South Specific Plan (Proposed)

Los Angeles-South Coast County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	45.00	1000sqft	1.03	45,000.00	0
High Turnover (Sit Down Restaurant)	36.00	1000sqft	0.83	36,000.00	0
Hotel	50.00	Room	1.67	72,600.00	0
Quality Restaurant	8.00	1000sqft	0.18	8,000.00	0
Apartments Low Rise	25.00	Dwelling Unit	1.56	25,000.00	72
Apartments Mid Rise	975.00	Dwelling Unit	25.66	975,000.00	2789
Regional Shopping Center	56.00	1000sqft	1.29	56,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2028
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

Project Characteristics - Consistent with the DEIR's model.

Land Use - See SWAPE comment regarding residential and retail land uses.

Construction Phase - See SWAPE comment regarding individual construction phase lengths.

Demolition - Consistent with the DEIR's model. See SWAPE comment regarding demolition.

Vehicle Trips - Saturday trips consistent with the DEIR's model. See SWAPE comment regarding weekday and Sunday trips.

Woodstoves - Woodstoves and wood-burning fireplaces consistent with the DEIR's model. See SWAPE comment regarding gas fireplaces.

Energy Use -

Construction Off-road Equipment Mitigation - See SWAPE comment on construction-related mitigation.

Area Mitigation - See SWAPE comment regarding operational mitigation measures.

Water Mitigation - See SWAPE comment regarding operational mitigation measures.

Trips and VMT - Local hire provision

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	1.25	0.00
tblFireplaces	NumberWood	48.75	0.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblVehicleTrips	ST_TR	7.16	6.17
tblVehicleTrips	ST_TR	6.39	3.87
tblVehicleTrips	ST_TR	2.46	1.39
tblVehicleTrips	ST_TR	158.37	79.82

tblVehicleTrips	ST_TR	8.19	3.75
tblVehicleTrips	ST_TR	94.36	63.99
tblVehicleTrips	ST_TR	49.97	10.74
tblVehicleTrips	SU_TR	6.07	6.16
tblVehicleTrips	SU_TR	5.86	4.18
tblVehicleTrips	SU_TR	1.05	0.69
tblVehicleTrips	SU_TR	131.84	78.27
tblVehicleTrips	SU_TR	5.95	3.20
tblVehicleTrips	SU_TR	72.16	57.65
tblVehicleTrips	SU_TR	25.24	6.39
tblVehicleTrips	WD_TR	6.59	5.83
tblVehicleTrips	WD_TR	6.65	4.13
tblVehicleTrips	WD_TR	11.03	6.41
tblVehicleTrips	WD_TR	127.15	65.80
tblVehicleTrips	WD_TR	8.17	3.84
tblVehicleTrips	WD_TR	89.95	62.64
tblVehicleTrips	WD_TR	42.70	9.43
tblWoodstoves	NumberCatalytic	1.25	0.00
tblWoodstoves	NumberCatalytic	48.75	0.00
tblWoodstoves	NumberNoncatalytic	1.25	0.00
tblWoodstoves	NumberNoncatalytic	48.75	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	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	4.2561	46.4415	31.4494	0.0636	18.2032	2.0456	20.2488	9.9670	1.8820	11.8490	0.0000	6,163.4166	6,163.4166	1.9475	0.0000	6,212.1039
2022	4.5441	38.8811	40.8776	0.1240	8.8255	1.6361	10.4616	3.6369	1.5052	5.1421	0.0000	12,493.4403	12,493.4403	1.9485	0.0000	12,518.5707
2023	4.1534	25.7658	38.7457	0.1206	7.0088	0.7592	7.7679	1.8799	0.7136	2.5935	0.0000	12,150.4890	12,150.4890	0.9589	0.0000	12,174.4615
2024	237.0219	9.5478	14.9642	0.0239	1.2171	0.4694	1.2875	0.3229	0.4319	0.4621	0.0000	2,313.1808	2,313.1808	0.7166	0.0000	2,331.0956
Maximum	**237.0219**	**46.4415**	**40.8776**	**0.1240**	**18.2032**	**2.0456**	**20.2488**	**9.9670**	**1.8820**	**11.8490**	**0.0000**	**12,493.4403**	**12,493.4403**	**1.9485**	**0.0000**	**12,518.5707**

2.1 Overall Construction (Maximum Daily Emission)

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	4.2561	46.4415	31.4494	0.0636	18.2032	2.0456	20.2488	9.9670	1.8820	11.8490	0.0000	6,163.4166	6,163.4166	1.9475	0.0000	6,212.1039
2022	4.5441	38.8811	40.8776	0.1240	8.8255	1.6361	10.4616	3.6369	1.5052	5.1421	0.0000	12,493.4403	12,493.4403	1.9485	0.0000	12,518.5707
2023	4.1534	25.7658	38.7457	0.1206	7.0088	0.7592	7.7679	1.8799	0.7136	2.5935	0.0000	12,150.4890	12,150.4890	0.9589	0.0000	12,174.4615
2024	237.0219	9.5478	14.9642	0.0239	1.2171	0.4694	1.2875	0.3229	0.4319	0.4621	0.0000	2,313.1808	2,313.1808	0.7166	0.0000	2,331.0955
Maximum	**237.0219**	**46.4415**	**40.8776**	**0.1240**	**18.2032**	**2.0456**	**20.2488**	**9.9670**	**1.8820**	**11.8490**	**0.0000**	**12,493.4403**	**12,493.4403**	**1.9485**	**0.0000**	**12,518.5707**

	ROG	NOx	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	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192
Energy	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387
Mobile	9.8489	45.4304	114.8495	0.4917	45.9592	0.3360	46.2951	12.2950	0.3119	12.6070		50,306.6034	50,306.6034	2.1807		50,361.1208
Total	**41.1168**	**67.2262**	**207.5497**	**0.6278**	**45.9592**	**2.4626**	**48.4217**	**12.2950**	**2.4385**	**14.7336**	**0.0000**	**76,811.1816**	**76,811.1816**	**2.8282**	**0.4832**	**77,025.8786**

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	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192
Energy	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387
Mobile	9.8489	45.4304	114.8495	0.4917	45.9592	0.3360	46.2951	12.2950	0.3119	12.6070		50,306.6034	50,306.6034	2.1807		50,361.1208
Total	**41.1168**	**67.2262**	**207.5497**	**0.6278**	**45.9592**	**2.4626**	**48.4217**	**12.2950**	**2.4385**	**14.7336**	**0.0000**	**76,811.1816**	**76,811.1816**	**2.8282**	**0.4832**	**77,025.8786**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2021	10/12/2021	5	30	
2	Site Preparation	Site Preparation	10/13/2021	11/9/2021	5	20	
3	Grading	Grading	11/10/2021	1/11/2022	5	45	
4	Building Construction	Building Construction	1/12/2022	12/12/2023	5	500	
5	Paving	Paving	12/13/2023	1/30/2024	5	35	
6	Architectural Coating	Architectural Coating	1/31/2024	3/19/2024	5	35	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 112.5

Acres of Paving: 0

Residential Indoor: 2,025,000; Residential Outdoor: 675,000; Non-Residential Indoor: 326,400; Non-Residential Outdoor: 108,800; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	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	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	458.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	801.00	143.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	160.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 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					3.3074	0.0000	3.3074	0.5008	0.0000	0.5008			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411		3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**3.3074**	**1.5513**	**4.8588**	**0.5008**	**1.4411**	**1.9419**		**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

3.2 Demolition - 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	0.1273	4.0952	0.9602	0.0119	0.2669	0.0126	0.2795	0.0732	0.0120	0.0852		1,292.2413	1,292.2413	0.0877		1,294.4337
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	0.0487	0.0313	0.4282	1.1800e-003	0.1141	9.5000e-004	0.1151	0.0303	8.8000e-004	0.0311		117.2799	117.2799	3.5200e-003		117.3678
Total	**0.1760**	**4.1265**	**1.3884**	**0.0131**	**0.3810**	**0.0135**	**0.3946**	**0.1034**	**0.0129**	**0.1163**		**1,409.5212**	**1,409.5212**	**0.0912**		**1,411.8015**

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					3.3074	0.0000	3.3074	0.5008	0.0000	0.5008			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411	0.0000	3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**3.3074**	**1.5513**	**4.8588**	**0.5008**	**1.4411**	**1.9419**	**0.0000**	**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

3.2 Demolition - 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	0.1273	4.0952	0.9602	0.0119	0.2669	0.0126	0.2795	0.0732	0.0120	0.0852		1,292.2413	1,292.2413	0.0877		1,294.4337
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	0.0487	0.0313	0.4282	1.1800e-003	0.1141	9.5000e-004	0.1151	0.0303	8.8000e-004	0.0311		117.2799	117.2799	3.5200e-003		117.3678
Total	**0.1760**	**4.1265**	**1.3884**	**0.0131**	**0.3810**	**0.0135**	**0.3946**	**0.1034**	**0.0129**	**0.1163**		**1,409.5212**	**1,409.5212**	**0.0912**		**1,411.8015**

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**		**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

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	0.0584	0.0375	0.5139	1.4100e-003	0.1369	1.1400e-003	0.1381	0.0363	1.0500e-003	0.0374		140.7359	140.7359	4.2200e-003		140.8414
Total	**0.0584**	**0.0375**	**0.5139**	**1.4100e-003**	**0.1369**	**1.1400e-003**	**0.1381**	**0.0363**	**1.0500e-003**	**0.0374**		**140.7359**	**140.7359**	**4.2200e-003**		**140.8414**

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**	**0.0000**	**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

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	0.0584	0.0375	0.5139	1.4100e-003	0.1369	1.1400e-003	0.1381	0.0363	1.0500e-003	0.0374		140.7359	140.7359	4.2200e-003		140.8414
Total	**0.0584**	**0.0375**	**0.5139**	**1.4100e-003**	**0.1369**	**1.1400e-003**	**0.1381**	**0.0363**	**1.0500e-003**	**0.0374**		**140.7359**	**140.7359**	**4.2200e-003**		**140.8414**

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					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265		6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**8.6733**	**1.9853**	**10.6587**	**3.5965**	**1.8265**	**5.4230**		**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

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	0.0000	0.0000	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	0.0649	0.0417	0.5710	1.5700e-003	0.1521	1.2700e-003	0.1534	0.0404	1.1700e-003	0.0415		156.3732	156.3732	4.6900e-003		156.4904
Total	**0.0649**	**0.0417**	**0.5710**	**1.5700e-003**	**0.1521**	**1.2700e-003**	**0.1534**	**0.0404**	**1.1700e-003**	**0.0415**		**156.3732**	**156.3732**	**4.6900e-003**		**156.4904**

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					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**8.6733**	**1.9853**	**10.6587**	**3.5965**	**1.8265**	**5.4230**	**0.0000**	**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

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	0.0000	0.0000	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	0.0649	0.0417	0.5710	1.5700e-003	0.1521	1.2700e-003	0.1534	0.0404	1.1700e-003	0.0415		156.3732	156.3732	4.6900e-003		156.4904
Total	**0.0649**	**0.0417**	**0.5710**	**1.5700e-003**	**0.1521**	**1.2700e-003**	**0.1534**	**0.0404**	**1.1700e-003**	**0.0415**		**156.3732**	**156.3732**	**4.6900e-003**		**156.4904**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041		6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**8.6733**	**1.6349**	**10.3082**	**3.5965**	**1.5041**	**5.1006**		**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

3.4 Grading - 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	0.0607	0.0376	0.5263	1.5100e-003	0.1521	1.2300e-003	0.1534	0.0404	1.1300e-003	0.0415		150.8754	150.8754	4.2400e-003		150.9813
Total	**0.0607**	**0.0376**	**0.5263**	**1.5100e-003**	**0.1521**	**1.2300e-003**	**0.1534**	**0.0404**	**1.1300e-003**	**0.0415**		**150.8754**	**150.8754**	**4.2400e-003**		**150.9813**

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					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041	0.0000	6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**8.6733**	**1.6349**	**10.3082**	**3.5965**	**1.5041**	**5.1006**	**0.0000**	**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

3.4 Grading - 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	0.0607	0.0376	0.5263	1.5100e-003	0.1521	1.2300e-003	0.1534	0.0404	1.1300e-003	0.0415		150.8754	150.8754	4.2400e-003		150.9813
Total	**0.0607**	**0.0376**	**0.5263**	**1.5100e-003**	**0.1521**	**1.2300e-003**	**0.1534**	**0.0404**	**1.1300e-003**	**0.0415**		**150.8754**	**150.8754**	**4.2400e-003**		**150.9813**

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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

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	0.4079	13.2032	3.4341	0.0364	0.9155	0.0248	0.9404	0.2636	0.0237	0.2873		3,896.5482	3,896.5482	0.2236		3,902.1384
Worker	2.4299	1.5074	21.0801	0.0607	6.0932	0.0493	6.1425	1.6163	0.0454	1.6617		6,042.5585	6,042.5585	0.1697		6,046.8000
Total	**2.8378**	**14.7106**	**24.5142**	**0.0971**	**7.0087**	**0.0741**	**7.0828**	**1.8799**	**0.0691**	**1.9490**		**9,939.1067**	**9,939.1067**	**0.3933**		**9,948.9384**

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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

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	0.4079	13.2032	3.4341	0.0364	0.9155	0.0248	0.9404	0.2636	0.0237	0.2873		3,896.5482	3,896.5482	0.2236		3,902.1384
Worker	2.4299	1.5074	21.0801	0.0607	6.0932	0.0493	6.1425	1.6163	0.0454	1.6617		6,042.5585	6,042.5585	0.1697		6,046.8000
Total	**2.8378**	**14.7106**	**24.5142**	**0.0971**	**7.0087**	**0.0741**	**7.0828**	**1.8799**	**0.0691**	**1.9490**		**9,939.1067**	**9,939.1067**	**0.3933**		**9,948.9384**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.5 Building Construction - 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	0.3027	10.0181	3.1014	0.0352	0.9156	0.0116	0.9271	0.2636	0.0111	0.2747		3,773.8762	3,773.8762	0.1982		3,778.8300
Worker	2.2780	1.3628	19.4002	0.0584	6.0932	0.0479	6.1411	1.6163	0.0441	1.6604		5,821.4028	5,821.4028	0.1529		5,825.2254
Total	**2.5807**	**11.3809**	**22.5017**	**0.0936**	**7.0088**	**0.0595**	**7.0682**	**1.8799**	**0.0552**	**1.9350**		**9,595.2790**	**9,595.2790**	**0.3511**		**9,604.0554**

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	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.5 Building Construction - 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	0.3027	10.0181	3.1014	0.0352	0.9156	0.0116	0.9271	0.2636	0.0111	0.2747		3,773.8762	3,773.8762	0.1982		3,778.8300
Worker	2.2780	1.3628	19.4002	0.0584	6.0932	0.0479	6.1411	1.6163	0.0441	1.6604		5,821.4028	5,821.4028	0.1529		5,825.2254
Total	**2.5807**	**11.3809**	**22.5017**	**0.0936**	**7.0088**	**0.0595**	**7.0682**	**1.8799**	**0.0552**	**1.9350**		**9,595.2790**	**9,595.2790**	**0.3511**		**9,604.0554**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0327**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

3.6 Paving - 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	0.0427	0.0255	0.3633	1.0900e-003	0.1141	9.0000e-004	0.1150	0.0303	8.3000e-004	0.0311		109.0150	109.0150	2.8600e-003		109.0866
Total	**0.0427**	**0.0255**	**0.3633**	**1.0900e-003**	**0.1141**	**9.0000e-004**	**0.1150**	**0.0303**	**8.3000e-004**	**0.0311**		**109.0150**	**109.0150**	**2.8600e-003**		**109.0866**

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	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0327**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

3.6 Paving - 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	0.0427	0.0255	0.3633	1.0900e-003	0.1141	9.0000e-004	0.1150	0.0303	8.3000e-004	0.0311		109.0150	109.0150	2.8600e-003		109.0866
Total	**0.0427**	**0.0255**	**0.3633**	**1.0900e-003**	**0.1141**	**9.0000e-004**	**0.1150**	**0.0303**	**8.3000e-004**	**0.0311**		**109.0150**	**109.0150**	**2.8600e-003**		**109.0866**

3.6 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**		**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

3.6 Paving - 2024

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	0.0403	0.0233	0.3384	1.0600e-003	0.1141	8.8000e-004	0.1150	0.0303	8.1000e-004	0.0311		105.6336	105.6336	2.6300e-003		105.6992
Total	**0.0403**	**0.0233**	**0.3384**	**1.0600e-003**	**0.1141**	**8.8000e-004**	**0.1150**	**0.0303**	**8.1000e-004**	**0.0311**		**105.6336**	**105.6336**	**2.6300e-003**		**105.6992**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**	**0.0000**	**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

3.6 Paving - 2024

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	0.0403	0.0233	0.3384	1.0600e-003	0.1141	8.8000e-004	0.1150	0.0303	8.1000e-004	0.0311		105.6336	105.6336	2.6300e-003		105.6992
Total	**0.0403**	**0.0233**	**0.3384**	**1.0600e-003**	**0.1141**	**8.8000e-004**	**0.1150**	**0.0303**	**8.1000e-004**	**0.0311**		**105.6336**	**105.6336**	**2.6300e-003**		**105.6992**

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	236.4115					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**236.5923**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.7 Architectural Coating - 2024

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	0.4296	0.2481	3.6098	0.0113	1.2171	9.4300e-003	1.2266	0.3229	8.6800e-003	0.3315		1,126.7583	1,126.7583	0.0280		1,127.4583
Total	**0.4296**	**0.2481**	**3.6098**	**0.0113**	**1.2171**	**9.4300e-003**	**1.2266**	**0.3229**	**8.6800e-003**	**0.3315**		**1,126.7583**	**1,126.7583**	**0.0280**		**1,127.4583**

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	236.4115					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**236.5923**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.7 Architectural Coating - 2024

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	0.4296	0.2481	3.6098	0.0113	1.2171	9.4300e-003	1.2266	0.3229	8.6800e-003	0.3315		1,126.7583	1,126.7583	0.0280		1,127.4583
Total	**0.4296**	**0.2481**	**3.6098**	**0.0113**	**1.2171**	**9.4300e-003**	**1.2266**	**0.3229**	**8.6800e-003**	**0.3315**		**1,126.7583**	**1,126.7583**	**0.0280**		**1,127.4583**

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	9.8489	45.4304	114.8495	0.4917	45.9592	0.3360	46.2951	12.2950	0.3119	12.6070		50,306.6034	50,306.6034	2.1807		50,361.1208
Unmitigated	9.8489	45.4304	114.8495	0.4917	45.9592	0.3360	46.2951	12.2950	0.3119	12.6070		50,306.6034	50,306.6034	2.1807		50,361.1208

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	145.75	154.25	154.00	506,227	506,227
Apartments Mid Rise	4,026.75	3,773.25	4075.50	13,660,065	13,660,065
General Office Building	288.45	62.55	31.05	706,812	706,812
High Turnover (Sit Down Restaurant)	2,368.80	2,873.52	2817.72	3,413,937	3,413,937
Hotel	192.00	187.50	160.00	445,703	445,703
Quality Restaurant	501.12	511.92	461.20	707,488	707,488
Regional Shopping Center	528.08	601.44	357.84	1,112,221	1,112,221
Total	8,050.95	8,164.43	8,057.31	20,552,452	20,552,452

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	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Apartments Mid Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
General Office Building	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
High Turnover (Sit Down Restaurant)	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Hotel	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Quality Restaurant	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Regional Shopping Center	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Summer

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 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	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387
NaturalGas Unmitigated	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387

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	1119.16	0.0121	0.1031	0.0439	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.6662	131.6662	2.5200e-003	2.4100e-003	132.4486
Apartments Mid Rise	35784.3	0.3859	3.2978	1.4033	0.0211		0.2666	0.2666		0.2666	0.2666		4,209.9164	4,209.9164	0.0807	0.0772	4,234.9339
General Office Building	1283.42	0.0138	0.1258	0.1057	7.5000e-004		9.5600e-003	9.5600e-003		9.5600e-003	9.5600e-003		150.9911	150.9911	2.8900e-003	2.7700e-003	151.8884
High Turnover (Sit Down Restaurant)	22759.9	0.2455	2.2314	1.8743	0.0134		0.1696	0.1696		0.1696	0.1696		2,677.6342	2,677.6342	0.0513	0.0491	2,693.5460
Hotel	4769.72	0.0514	0.4676	0.3928	2.8100e-003		0.0355	0.0355		0.0355	0.0355		561.1436	561.1436	0.0108	0.0103	564.4782
Quality Restaurant	5057.75	0.0545	0.4959	0.4165	2.9800e-003		0.0377	0.0377		0.0377	0.0377		595.0298	595.0298	0.0114	0.0109	598.5658
Regional Shopping Center	251.616	2.7100e-003	0.0247	0.0207	1.5000e-004		1.8700e-003	1.8700e-003		1.8700e-003	1.8700e-003		29.6019	29.6019	5.7000e-004	5.4000e-004	29.7778
Total		**0.7660**	**6.7463**	**4.2573**	**0.0418**		**0.5292**	**0.5292**		**0.5292**	**0.5292**		**8,355.9832**	**8,355.9832**	**0.1602**	**0.1532**	**8,405.6387**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	1.11916	0.0121	0.1031	0.0439	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.6662	131.6662	2.5200e-003	2.4100e-003	132.4486
Apartments Mid Rise	35.7843	0.3859	3.2978	1.4033	0.0211		0.2666	0.2666		0.2666	0.2666		4,209.9164	4,209.9164	0.0807	0.0772	4,234.9339
General Office Building	1.28342	0.0138	0.1258	0.1057	7.5000e-004		9.5600e-003	9.5600e-003		9.5600e-003	9.5600e-003		150.9911	150.9911	2.8900e-003	2.7700e-003	151.8884
High Turnover (Sit Down Restaurant)	22.7599	0.2455	2.2314	1.8743	0.0134		0.1696	0.1696		0.1696	0.1696		2,677.6342	2,677.6342	0.0513	0.0491	2,693.5460
Hotel	4.76972	0.0514	0.4676	0.3928	2.8100e-003		0.0355	0.0355		0.0355	0.0355		561.1436	561.1436	0.0108	0.0103	564.4782
Quality Restaurant	5.05775	0.0545	0.4959	0.4165	2.9800e-003		0.0377	0.0377		0.0377	0.0377		595.0298	595.0298	0.0114	0.0109	598.5658
Regional Shopping Center	0.251616	2.7100e-003	0.0247	0.0207	1.5000e-004		1.8700e-003	1.8700e-003		1.8700e-003	1.8700e-003		29.6019	29.6019	5.7000e-004	5.4000e-004	29.7778
Total		**0.7660**	**6.7463**	**4.2573**	**0.0418**		**0.5292**	**0.5292**		**0.5292**	**0.5292**		**8,355.9832**	**8,355.9832**	**0.1602**	**0.1532**	**8,405.6387**

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	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192
Unmitigated	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192

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	2.2670					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	24.1085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.6500	14.1000	6.0000	0.0900		1.1400	1.1400		1.1400	1.1400	0.0000	18,000.0000	18,000.0000	0.3450	0.3300	18,106.9650
Landscaping	2.4766	0.9496	82.4430	4.3600e-003		0.4574	0.4574		0.4574	0.4574		148.5950	148.5950	0.1424		152.1542
Total	**30.5020**	**15.0496**	**88.4430**	**0.0944**		**1.5974**	**1.5974**		**1.5974**	**1.5974**	**0.0000**	**18,148.5950**	**18,148.5950**	**0.4874**	**0.3300**	**18,259.1192**

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	2.2670					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	24.1085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.6500	14.1000	6.0000	0.0900		1.1400	1.1400		1.1400	1.1400	0.0000	18,000.0000	18,000.0000	0.3450	0.3300	18,106.9650
Landscaping	2.4766	0.9496	82.4430	4.3600e-003		0.4574	0.4574		0.4574	0.4574		148.5950	148.5950	0.1424		152.1542
Total	**30.5020**	**15.0496**	**88.4430**	**0.0944**		**1.5974**	**1.5974**		**1.5974**	**1.5974**	**0.0000**	**18,148.5950**	**18,148.5950**	**0.4874**	**0.3300**	**18,259.1192**

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

Village South Specific Plan (Proposed)

Los Angeles-South Coast County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	45.00	1000sqft	1.03	45,000.00	0
High Turnover (Sit Down Restaurant)	36.00	1000sqft	0.83	36,000.00	0
Hotel	50.00	Room	1.67	72,600.00	0
Quality Restaurant	8.00	1000sqft	0.18	8,000.00	0
Apartments Low Rise	25.00	Dwelling Unit	1.56	25,000.00	72
Apartments Mid Rise	975.00	Dwelling Unit	25.66	975,000.00	2789
Regional Shopping Center	56.00	1000sqft	1.29	56,000.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	2.2	**Precipitation Freq (Days)**	33
Climate Zone	9			**Operational Year**	2028
Utility Company	Southern California Edison				
CO2 Intensity (lb/MWhr)	702.44	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

Project Characteristics - Consistent with the DEIR's model.

Land Use - See SWAPE comment regarding residential and retail land uses.

Construction Phase - See SWAPE comment regarding individual construction phase lengths.

Demolition - Consistent with the DEIR's model. See SWAPE comment regarding demolition.

Vehicle Trips - Saturday trips consistent with the DEIR's model. See SWAPE comment regarding weekday and Sunday trips.

Woodstoves - Woodstoves and wood-burning fireplaces consistent with the DEIR's model. See SWAPE comment regarding gas fireplaces.

Energy Use -

Construction Off-road Equipment Mitigation - See SWAPE comment on construction-related mitigation.

Area Mitigation - See SWAPE comment regarding operational mitigation measures.

Water Mitigation - See SWAPE comment regarding operational mitigation measures.

Trips and VMT - Local hire provision

Table Name	Column Name	Default Value	New Value
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	FireplaceWoodMass	1,019.20	0.00
tblFireplaces	NumberWood	1.25	0.00
tblFireplaces	NumberWood	48.75	0.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblTripsAndVMT	WorkerTripLength	14.70	10.00
tblVehicleTrips	ST_TR	7.16	6.17
tblVehicleTrips	ST_TR	6.39	3.87
tblVehicleTrips	ST_TR	2.46	1.39
tblVehicleTrips	ST_TR	158.37	79.82

tblVehicleTrips	ST_TR	8.19	3.75
tblVehicleTrips	ST_TR	94.36	63.99
tblVehicleTrips	ST_TR	49.97	10.74
tblVehicleTrips	SU_TR	6.07	6.16
tblVehicleTrips	SU_TR	5.86	4.18
tblVehicleTrips	SU_TR	1.05	0.69
tblVehicleTrips	SU_TR	131.84	78.27
tblVehicleTrips	SU_TR	5.95	3.20
tblVehicleTrips	SU_TR	72.16	57.65
tblVehicleTrips	SU_TR	25.24	6.39
tblVehicleTrips	WD_TR	6.59	5.83
tblVehicleTrips	WD_TR	6.65	4.13
tblVehicleTrips	WD_TR	11.03	6.41
tblVehicleTrips	WD_TR	127.15	65.80
tblVehicleTrips	WD_TR	8.17	3.84
tblVehicleTrips	WD_TR	89.95	62.64
tblVehicleTrips	WD_TR	42.70	9.43
tblWoodstoves	NumberCatalytic	1.25	0.00
tblWoodstoves	NumberCatalytic	48.75	0.00
tblWoodstoves	NumberNoncatalytic	1.25	0.00
tblWoodstoves	NumberNoncatalytic	48.75	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveDayYear	25.00	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	0.00
tblWoodstoves	WoodstoveWoodMass	999.60	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	4.2621	46.4460	31.4068	0.0635	18.2032	2.0456	20.2488	9.9670	1.8820	11.8490	0.0000	6,154.3377	6,154.3377	1.9472	0.0000	6,203.0186
2022	4.7966	38.8851	39.6338	0.1195	8.8255	1.6361	10.4616	3.6369	1.5052	5.1421	0.0000	12,035.3440	12,035.3440	1.9482	0.0000	12,060.6013
2023	4.3939	25.8648	37.5031	0.1162	7.0088	0.7598	7.7685	1.8799	0.7142	2.5940	0.0000	11,710.4080	11,710.4080	0.9617	0.0000	11,734.4497
2024	237.0656	9.5503	14.9372	0.0238	1.2171	0.4694	1.2875	0.3229	0.4319	0.4621	0.0000	2,307.0517	2,307.0517	0.7164	0.0000	2,324.9627
Maximum	**237.0656**	**46.4460**	**39.6338**	**0.1195**	**18.2032**	**2.0456**	**20.2488**	**9.9670**	**1.8820**	**11.8490**	**0.0000**	**12,035.3440**	**12,035.3440**	**1.9482**	**0.0000**	**12,060.6013**

2.1 Overall Construction (Maximum Daily Emission)

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	4.2621	46.4460	31.4068	0.0635	18.2032	2.0456	20.2488	9.9670	1.8820	11.8490	0.0000	6,154.3377	6,154.3377	1.9472	0.0000	6,203.0186
2022	4.7966	38.8851	39.6338	0.1195	8.8255	1.6361	10.4616	3.6369	1.5052	5.1421	0.0000	12,035.3440	12,035.3440	1.9482	0.0000	12,060.6013
2023	4.3939	25.8648	37.5031	0.1162	7.0088	0.7598	7.7685	1.8799	0.7142	2.5940	0.0000	11,710.4080	11,710.4080	0.9617	0.0000	11,734.4497
2024	237.0656	9.5503	14.9372	0.0238	1.2171	0.4694	1.2875	0.3229	0.4319	0.4621	0.0000	2,307.0517	2,307.0517	0.7164	0.0000	2,324.9627
Maximum	**237.0656**	**46.4460**	**39.6338**	**0.1195**	**18.2032**	**2.0456**	**20.2488**	**9.9670**	**1.8820**	**11.8490**	**0.0000**	**12,035.3440**	**12,035.3440**	**1.9482**	**0.0000**	**12,060.6013**

	ROG	NOx	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	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192
Energy	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387
Mobile	9.5233	45.9914	110.0422	0.4681	45.9592	0.3373	46.2965	12.2950	0.3132	12.6083		47,917.8005	47,917.8005	2.1953		47,972.6839
Total	**40.7912**	**67.7872**	**202.7424**	**0.6043**	**45.9592**	**2.4640**	**48.4231**	**12.2950**	**2.4399**	**14.7349**	**0.0000**	**74,422.3787**	**74,422.3787**	**2.8429**	**0.4832**	**74,637.4417**

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	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192
Energy	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387
Mobile	9.5233	45.9914	110.0422	0.4681	45.9592	0.3373	46.2965	12.2950	0.3132	12.6083		47,917.8005	47,917.8005	2.1953		47,972.6839
Total	**40.7912**	**67.7872**	**202.7424**	**0.6043**	**45.9592**	**2.4640**	**48.4231**	**12.2950**	**2.4399**	**14.7349**	**0.0000**	**74,422.3787**	**74,422.3787**	**2.8429**	**0.4832**	**74,637.4417**

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

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Demolition	Demolition	9/1/2021	10/12/2021	5	30	
2	Site Preparation	Site Preparation	10/13/2021	11/9/2021	5	20	
3	Grading	Grading	11/10/2021	1/11/2022	5	45	
4	Building Construction	Building Construction	1/12/2022	12/12/2023	5	500	
5	Paving	Paving	12/13/2023	1/30/2024	5	35	
6	Architectural Coating	Architectural Coating	1/31/2024	3/19/2024	5	35	

Acres of Grading (Site Preparation Phase): 0

Acres of Grading (Grading Phase): 112.5

Acres of Paving: 0

Residential Indoor: 2,025,000; Residential Outdoor: 675,000; Non-Residential Indoor: 326,400; Non-Residential Outdoor: 108,800; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Village South Specific Plan (Proposed) - Los Angeles-South Coast County, Winter

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Demolition	Concrete/Industrial Saws	1	8.00	81	0.73
Demolition	Excavators	3	8.00	158	0.38
Demolition	Rubber Tired Dozers	2	8.00	247	0.40
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	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	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Demolition	6	15.00	0.00	458.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Site Preparation	7	18.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	801.00	143.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	160.00	0.00	0.00	10.00	6.90	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Demolition - 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					3.3074	0.0000	3.3074	0.5008	0.0000	0.5008			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411		3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**3.3074**	**1.5513**	**4.8588**	**0.5008**	**1.4411**	**1.9419**		**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

3.2 Demolition - 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	0.1304	4.1454	1.0182	0.0117	0.2669	0.0128	0.2797	0.0732	0.0122	0.0854		1,269.8555	1,269.8555	0.0908		1,272.1252
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	0.0532	0.0346	0.3963	1.1100e-003	0.1141	9.5000e-004	0.1151	0.0303	8.8000e-004	0.0311		110.4707	110.4707	3.3300e-003		110.5539
Total	**0.1835**	**4.1800**	**1.4144**	**0.0128**	**0.3810**	**0.0137**	**0.3948**	**0.1034**	**0.0131**	**0.1165**		**1,380.3262**	**1,380.3262**	**0.0941**		**1,382.6791**

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					3.3074	0.0000	3.3074	0.5008	0.0000	0.5008			0.0000			0.0000
Off-Road	3.1651	31.4407	21.5650	0.0388		1.5513	1.5513		1.4411	1.4411	0.0000	3,747.9449	3,747.9449	1.0549		3,774.3174
Total	**3.1651**	**31.4407**	**21.5650**	**0.0388**	**3.3074**	**1.5513**	**4.8588**	**0.5008**	**1.4411**	**1.9419**	**0.0000**	**3,747.9449**	**3,747.9449**	**1.0549**		**3,774.3174**

3.2 Demolition - 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	0.1304	4.1454	1.0182	0.0117	0.2669	0.0128	0.2797	0.0732	0.0122	0.0854		1,269.8555	1,269.8555	0.0908		1,272.1252
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	0.0532	0.0346	0.3963	1.1100e-003	0.1141	9.5000e-004	0.1151	0.0303	8.8000e-004	0.0311		110.4707	110.4707	3.3300e-003		110.5539
Total	**0.1835**	**4.1800**	**1.4144**	**0.0128**	**0.3810**	**0.0137**	**0.3948**	**0.1034**	**0.0131**	**0.1165**		**1,380.3262**	**1,380.3262**	**0.0941**		**1,382.6791**

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809		3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**		**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

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	0.0638	0.0415	0.4755	1.3300e-003	0.1369	1.1400e-003	0.1381	0.0363	1.0500e-003	0.0374		132.5649	132.5649	3.9900e-003		132.6646
Total	**0.0638**	**0.0415**	**0.4755**	**1.3300e-003**	**0.1369**	**1.1400e-003**	**0.1381**	**0.0363**	**1.0500e-003**	**0.0374**		**132.5649**	**132.5649**	**3.9900e-003**		**132.6646**

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					18.0663	0.0000	18.0663	9.9307	0.0000	9.9307			0.0000			0.0000
Off-Road	3.8882	40.4971	21.1543	0.0380		2.0445	2.0445		1.8809	1.8809	0.0000	3,685.6569	3,685.6569	1.1920		3,715.4573
Total	**3.8882**	**40.4971**	**21.1543**	**0.0380**	**18.0663**	**2.0445**	**20.1107**	**9.9307**	**1.8809**	**11.8116**	**0.0000**	**3,685.6569**	**3,685.6569**	**1.1920**		**3,715.4573**

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	0.0638	0.0415	0.4755	1.3300e-003	0.1369	1.1400e-003	0.1381	0.0363	1.0500e-003	0.0374		132.5649	132.5649	3.9900e-003		132.6646
Total	**0.0638**	**0.0415**	**0.4755**	**1.3300e-003**	**0.1369**	**1.1400e-003**	**0.1381**	**0.0363**	**1.0500e-003**	**0.0374**		**132.5649**	**132.5649**	**3.9900e-003**		**132.6646**

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					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265		6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**8.6733**	**1.9853**	**10.6587**	**3.5965**	**1.8265**	**5.4230**		**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

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	0.0000	0.0000	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	0.0709	0.0462	0.5284	1.4800e-003	0.1521	1.2700e-003	0.1534	0.0404	1.1700e-003	0.0415		147.2943	147.2943	4.4300e-003		147.4051
Total	**0.0709**	**0.0462**	**0.5284**	**1.4800e-003**	**0.1521**	**1.2700e-003**	**0.1534**	**0.0404**	**1.1700e-003**	**0.0415**		**147.2943**	**147.2943**	**4.4300e-003**		**147.4051**

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					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	4.1912	46.3998	30.8785	0.0620		1.9853	1.9853		1.8265	1.8265	0.0000	6,007.0434	6,007.0434	1.9428		6,055.6134
Total	**4.1912**	**46.3998**	**30.8785**	**0.0620**	**8.6733**	**1.9853**	**10.6587**	**3.5965**	**1.8265**	**5.4230**	**0.0000**	**6,007.0434**	**6,007.0434**	**1.9428**		**6,055.6134**

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	0.0000	0.0000	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	0.0709	0.0462	0.5284	1.4800e-003	0.1521	1.2700e-003	0.1534	0.0404	1.1700e-003	0.0415		147.2943	147.2943	4.4300e-003		147.4051
Total	**0.0709**	**0.0462**	**0.5284**	**1.4800e-003**	**0.1521**	**1.2700e-003**	**0.1534**	**0.0404**	**1.1700e-003**	**0.0415**		**147.2943**	**147.2943**	**4.4300e-003**		**147.4051**

3.4 Grading - 2022

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041		6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**8.6733**	**1.6349**	**10.3082**	**3.5965**	**1.5041**	**5.1006**		**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

3.4 Grading - 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	0.0416	0.4861	1.4300e-003	0.1521	1.2300e-003	0.1534	0.0404	1.1300e-003	0.0415		142.1207	142.1207	4.0000e-003		142.2207
Total	**0.0665**	**0.0416**	**0.4861**	**1.4300e-003**	**0.1521**	**1.2300e-003**	**0.1534**	**0.0404**	**1.1300e-003**	**0.0415**		**142.1207**	**142.1207**	**4.0000e-003**		**142.2207**

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					8.6733	0.0000	8.6733	3.5965	0.0000	3.5965			0.0000			0.0000
Off-Road	3.6248	38.8435	29.0415	0.0621		1.6349	1.6349		1.5041	1.5041	0.0000	6,011.4105	6,011.4105	1.9442		6,060.0158
Total	**3.6248**	**38.8435**	**29.0415**	**0.0621**	**8.6733**	**1.6349**	**10.3082**	**3.5965**	**1.5041**	**5.1006**	**0.0000**	**6,011.4105**	**6,011.4105**	**1.9442**		**6,060.0158**

3.4 Grading - 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	0.0416	0.4861	1.4300e-003	0.1521	1.2300e-003	0.1534	0.0404	1.1300e-003	0.0415		142.1207	142.1207	4.0000e-003		142.2207
Total	**0.0665**	**0.0416**	**0.4861**	**1.4300e-003**	**0.1521**	**1.2300e-003**	**0.1534**	**0.0404**	**1.1300e-003**	**0.0415**		**142.1207**	**142.1207**	**4.0000e-003**		**142.2207**

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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612		2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**		**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

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	0.4284	13.1673	3.8005	0.0354	0.9155	0.0256	0.9412	0.2636	0.0245	0.2881		3,789.0750	3,789.0750	0.2381		3,795.0283
Worker	2.6620	1.6677	19.4699	0.0571	6.0932	0.0493	6.1425	1.6163	0.0454	1.6617		5,691.9354	5,691.9354	0.1602		5,695.9408
Total	**3.0904**	**14.8350**	**23.2704**	**0.0926**	**7.0087**	**0.0749**	**7.0836**	**1.8799**	**0.0699**	**1.9498**		**9,481.0104**	**9,481.0104**	**0.3984**		**9,490.9691**

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	1.7062	15.6156	16.3634	0.0269		0.8090	0.8090		0.7612	0.7612	0.0000	2,554.3336	2,554.3336	0.6120		2,569.6322
Total	**1.7062**	**15.6156**	**16.3634**	**0.0269**		**0.8090**	**0.8090**		**0.7612**	**0.7612**	**0.0000**	**2,554.3336**	**2,554.3336**	**0.6120**		**2,569.6322**

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	0.4284	13.1673	3.8005	0.0354	0.9155	0.0256	0.9412	0.2636	0.0245	0.2881		3,789.0750	3,789.0750	0.2381		3,795.0283
Worker	2.6620	1.6677	19.4699	0.0571	6.0932	0.0493	6.1425	1.6163	0.0454	1.6617		5,691.9354	5,691.9354	0.1602		5,695.9408
Total	**3.0904**	**14.8350**	**23.2704**	**0.0926**	**7.0087**	**0.0749**	**7.0836**	**1.8799**	**0.0699**	**1.9498**		**9,481.0104**	**9,481.0104**	**0.3984**		**9,490.9691**

3.5 Building Construction - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584		2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**		**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.5 Building Construction - 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	0.3183	9.9726	3.3771	0.0343	0.9156	0.0122	0.9277	0.2636	0.0116	0.2752		3,671.4007	3,671.4007	0.2096		3,676.6417
Worker	2.5029	1.5073	17.8820	0.0550	6.0932	0.0479	6.1411	1.6163	0.0441	1.6604		5,483.7974	5,483.7974	0.1442		5,487.4020
Total	**2.8211**	**11.4799**	**21.2591**	**0.0893**	**7.0088**	**0.0601**	**7.0688**	**1.8799**	**0.0557**	**1.9356**		**9,155.1981**	**9,155.1981**	**0.3538**		**9,164.0437**

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	1.5728	14.3849	16.2440	0.0269		0.6997	0.6997		0.6584	0.6584	0.0000	2,555.2099	2,555.2099	0.6079		2,570.4061
Total	**1.5728**	**14.3849**	**16.2440**	**0.0269**		**0.6997**	**0.6997**		**0.6584**	**0.6584**	**0.0000**	**2,555.2099**	**2,555.2099**	**0.6079**		**2,570.4061**

3.5 Building Construction - 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	0.3183	9.9726	3.3771	0.0343	0.9156	0.0122	0.9277	0.2636	0.0116	0.2752		3,671.4007	3,671.4007	0.2096		3,676.6417
Worker	2.5029	1.5073	17.8820	0.0550	6.0932	0.0479	6.1411	1.6163	0.0441	1.6604		5,483.7974	5,483.7974	0.1442		5,487.4020
Total	**2.8211**	**11.4799**	**21.2591**	**0.0893**	**7.0088**	**0.0601**	**7.0688**	**1.8799**	**0.0557**	**1.9356**		**9,155.1981**	**9,155.1981**	**0.3538**		**9,164.0437**

3.6 Paving - 2023

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694		2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0327**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**		**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

3.6 Paving - 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	0.0469	0.0282	0.3349	1.0300e-003	0.1141	9.0000e-004	0.1150	0.0303	8.3000e-004	0.0311		102.6928	102.6928	2.7000e-003		102.7603
Total	**0.0469**	**0.0282**	**0.3349**	**1.0300e-003**	**0.1141**	**9.0000e-004**	**0.1150**	**0.0303**	**8.3000e-004**	**0.0311**		**102.6928**	**102.6928**	**2.7000e-003**		**102.7603**

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	1.0327	10.1917	14.5842	0.0228		0.5102	0.5102		0.4694	0.4694	0.0000	2,207.5841	2,207.5841	0.7140		2,225.4336
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**1.0327**	**10.1917**	**14.5842**	**0.0228**		**0.5102**	**0.5102**		**0.4694**	**0.4694**	**0.0000**	**2,207.5841**	**2,207.5841**	**0.7140**		**2,225.4336**

3.6 Paving - 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	0.0469	0.0282	0.3349	1.0300e-003	0.1141	9.0000e-004	0.1150	0.0303	8.3000e-004	0.0311		102.6928	102.6928	2.7000e-003		102.7603
Total	**0.0469**	**0.0282**	**0.3349**	**1.0300e-003**	**0.1141**	**9.0000e-004**	**0.1150**	**0.0303**	**8.3000e-004**	**0.0311**		**102.6928**	**102.6928**	**2.7000e-003**		**102.7603**

3.6 Paving - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310		2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**		**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

3.6 Paving - 2024

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	0.0444	0.0257	0.3114	1.0000e-003	0.1141	8.8000e-004	0.1150	0.0303	8.1000e-004	0.0311		99.5045	99.5045	2.4700e-003		99.5663
Total	**0.0444**	**0.0257**	**0.3114**	**1.0000e-003**	**0.1141**	**8.8000e-004**	**0.1150**	**0.0303**	**8.1000e-004**	**0.0311**		**99.5045**	**99.5045**	**2.4700e-003**		**99.5663**

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	0.9882	9.5246	14.6258	0.0228		0.4685	0.4685		0.4310	0.4310	0.0000	2,207.5472	2,207.5472	0.7140		2,225.3963
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	**0.9882**	**9.5246**	**14.6258**	**0.0228**		**0.4685**	**0.4685**		**0.4310**	**0.4310**	**0.0000**	**2,207.5472**	**2,207.5472**	**0.7140**		**2,225.3963**

3.6 Paving - 2024

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	0.0444	0.0257	0.3114	1.0000e-003	0.1141	8.8000e-004	0.1150	0.0303	8.1000e-004	0.0311		99.5045	99.5045	2.4700e-003		99.5663
Total	**0.0444**	**0.0257**	**0.3114**	**1.0000e-003**	**0.1141**	**8.8000e-004**	**0.1150**	**0.0303**	**8.1000e-004**	**0.0311**		**99.5045**	**99.5045**	**2.4700e-003**		**99.5663**

3.7 Architectural Coating - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	236.4115					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609		281.4481	281.4481	0.0159		281.8443
Total	**236.5923**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**		**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.7 Architectural Coating - 2024

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	0.4734	0.2743	3.3220	0.0107	1.2171	9.4300e-003	1.2266	0.3229	8.6800e-003	0.3315		1,061.3818	1,061.3818	0.0264		1,062.0410
Total	**0.4734**	**0.2743**	**3.3220**	**0.0107**	**1.2171**	**9.4300e-003**	**1.2266**	**0.3229**	**8.6800e-003**	**0.3315**		**1,061.3818**	**1,061.3818**	**0.0264**		**1,062.0410**

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	236.4115					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1808	1.2188	1.8101	2.9700e-003		0.0609	0.0609		0.0609	0.0609	0.0000	281.4481	281.4481	0.0159		281.8443
Total	**236.5923**	**1.2188**	**1.8101**	**2.9700e-003**		**0.0609**	**0.0609**		**0.0609**	**0.0609**	**0.0000**	**281.4481**	**281.4481**	**0.0159**		**281.8443**

3.7 Architectural Coating - 2024

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	0.4734	0.2743	3.3220	0.0107	1.2171	9.4300e-003	1.2266	0.3229	8.6800e-003	0.3315		1,061.3818	1,061.3818	0.0264		1,062.0410
Total	**0.4734**	**0.2743**	**3.3220**	**0.0107**	**1.2171**	**9.4300e-003**	**1.2266**	**0.3229**	**8.6800e-003**	**0.3315**		**1,061.3818**	**1,061.3818**	**0.0264**		**1,062.0410**

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	9.5233	45.9914	110.0422	0.4681	45.9592	0.3373	46.2965	12.2950	0.3132	12.6083		47,917.8005	47,917.8005	2.1953		47,972.6839
Unmitigated	9.5233	45.9914	110.0422	0.4681	45.9592	0.3373	46.2965	12.2950	0.3132	12.6083		47,917.8005	47,917.8005	2.1953		47,972.6839

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Low Rise	145.75	154.25	154.00	506,227	506,227
Apartments Mid Rise	4,026.75	3,773.25	4075.50	13,660,065	13,660,065
General Office Building	288.45	62.55	31.05	706,812	706,812
High Turnover (Sit Down Restaurant)	2,368.80	2,873.52	2817.72	3,413,937	3,413,937
Hotel	192.00	187.50	160.00	445,703	445,703
Quality Restaurant	501.12	511.92	461.20	707,488	707,488
Regional Shopping Center	528.08	601.44	357.84	1,112,221	1,112,221
Total	8,050.95	8,164.43	8,057.31	20,552,452	20,552,452

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	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
Apartments Mid Rise	14.70	5.90	8.70	40.20	19.20	40.60	86	11	3
General Office Building	16.60	8.40	6.90	33.00	48.00	19.00	77	19	4
High Turnover (Sit Down	16.60	8.40	6.90	8.50	72.50	19.00	37	20	43
Hotel	16.60	8.40	6.90	19.40	61.60	19.00	58	38	4
Quality Restaurant	16.60	8.40	6.90	12.00	69.00	19.00	38	18	44
Regional Shopping Center	16.60	8.40	6.90	16.30	64.70	19.00	54	35	11

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Apartments Low Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Apartments Mid Rise	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
General Office Building	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
High Turnover (Sit Down Restaurant)	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Hotel	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Quality Restaurant	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821
Regional Shopping Center	0.543088	0.044216	0.209971	0.116369	0.014033	0.006332	0.021166	0.033577	0.002613	0.001817	0.005285	0.000712	0.000821

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Village South Specific Plan (Proposed) - Los Angeles-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
Category	lb/day										lb/day					
NaturalGas Mitigated	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387
NaturalGas Unmitigated	0.7660	6.7462	4.2573	0.0418		0.5292	0.5292		0.5292	0.5292		8,355.9832	8,355.9832	0.1602	0.1532	8,405.6387

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	1119.16	0.0121	0.1031	0.0439	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.6662	131.6662	2.5200e-003	2.4100e-003	132.4486
Apartments Mid Rise	35784.3	0.3859	3.2978	1.4033	0.0211		0.2666	0.2666		0.2666	0.2666		4,209.9164	4,209.9164	0.0807	0.0772	4,234.9339
General Office Building	1283.42	0.0138	0.1258	0.1057	7.5000e-004		9.5600e-003	9.5600e-003		9.5600e-003	9.5600e-003		150.9911	150.9911	2.8900e-003	2.7700e-003	151.8884
High Turnover (Sit Down Restaurant)	22759.9	0.2455	2.2314	1.8743	0.0134		0.1696	0.1696		0.1696	0.1696		2,677.6342	2,677.6342	0.0513	0.0491	2,693.5460
Hotel	4769.72	0.0514	0.4676	0.3928	2.8100e-003		0.0355	0.0355		0.0355	0.0355		561.1436	561.1436	0.0108	0.0103	564.4782
Quality Restaurant	5057.75	0.0545	0.4959	0.4165	2.9800e-003		0.0377	0.0377		0.0377	0.0377		595.0298	595.0298	0.0114	0.0109	598.5658
Regional Shopping Center	251.616	2.7100e-003	0.0247	0.0207	1.5000e-004		1.8700e-003	1.8700e-003		1.8700e-003	1.8700e-003		29.6019	29.6019	5.7000e-004	5.4000e-004	29.7778
Total		**0.7660**	**6.7463**	**4.2573**	**0.0418**		**0.5292**	**0.5292**		**0.5292**	**0.5292**		**8,355.9832**	**8,355.9832**	**0.1602**	**0.1532**	**8,405.6387**

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Low Rise	1.11916	0.0121	0.1031	0.0439	6.6000e-004		8.3400e-003	8.3400e-003		8.3400e-003	8.3400e-003		131.6662	131.6662	2.5200e-003	2.4100e-003	132.4486
Apartments Mid Rise	35.7843	0.3859	3.2978	1.4033	0.0211		0.2666	0.2666		0.2666	0.2666		4,209.9164	4,209.9164	0.0807	0.0772	4,234.9339
General Office Building	1.28342	0.0138	0.1258	0.1057	7.5000e-004		9.5600e-003	9.5600e-003		9.5600e-003	9.5600e-003		150.9911	150.9911	2.8900e-003	2.7700e-003	151.8884
High Turnover (Sit Down Restaurant)	22.7599	0.2455	2.2314	1.8743	0.0134		0.1696	0.1696		0.1696	0.1696		2,677.6342	2,677.6342	0.0513	0.0491	2,693.5460
Hotel	4.76972	0.0514	0.4676	0.3928	2.8100e-003		0.0355	0.0355		0.0355	0.0355		561.1436	561.1436	0.0108	0.0103	564.4782
Quality Restaurant	5.05775	0.0545	0.4959	0.4165	2.9800e-003		0.0377	0.0377		0.0377	0.0377		595.0298	595.0298	0.0114	0.0109	598.5658
Regional Shopping Center	0.251616	2.7100e-003	0.0247	0.0207	1.5000e-004		1.8700e-003	1.8700e-003		1.8700e-003	1.8700e-003		29.6019	29.6019	5.7000e-004	5.4000e-004	29.7778
Total		**0.7660**	**6.7463**	**4.2573**	**0.0418**		**0.5292**	**0.5292**		**0.5292**	**0.5292**		**8,355.9832**	**8,355.9832**	**0.1602**	**0.1532**	**8,405.6387**

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	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192
Unmitigated	30.5020	15.0496	88.4430	0.0944		1.5974	1.5974		1.5974	1.5974	0.0000	18,148.5950	18,148.5950	0.4874	0.3300	18,259.1192

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	2.2670					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	24.1085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.6500	14.1000	6.0000	0.0900		1.1400	1.1400		1.1400	1.1400	0.0000	18,000.0000	18,000.0000	0.3450	0.3300	18,106.9650
Landscaping	2.4766	0.9496	82.4430	4.3600e-003		0.4574	0.4574		0.4574	0.4574		148.5950	148.5950	0.1424		152.1542
Total	**30.5020**	**15.0496**	**88.4430**	**0.0944**		**1.5974**	**1.5974**		**1.5974**	**1.5974**	**0.0000**	**18,148.5950**	**18,148.5950**	**0.4874**	**0.3300**	**18,259.1192**

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	2.2670					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	24.1085					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	1.6500	14.1000	6.0000	0.0900		1.1400	1.1400		1.1400	1.1400	0.0000	18,000.0000	18,000.0000	0.3450	0.3300	18,106.9650
Landscaping	2.4766	0.9496	82.4430	4.3600e-003		0.4574	0.4574		0.4574	0.4574		148.5950	148.5950	0.1424		152.1542
Total	**30.5020**	**15.0496**	**88.4430**	**0.0944**		**1.5974**	**1.5974**		**1.5974**	**1.5974**	**0.0000**	**18,148.5950**	**18,148.5950**	**0.4874**	**0.3300**	**18,259.1192**

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

Local Hire Provision Net Change	
Without Local Hire Provision	
Total Construction GHG Emissions (MT CO2e)	3,623
Amortized (MT CO2e/year)	120.77
With Local Hire Provision	
Total Construction GHG Emissions (MT CO2e)	3,024
Amortized (MT CO2e/year)	100.80
% Decrease in Construction-related GHG Emissions	***17%***

EXHIBIT B

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. (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.

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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.

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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.

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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.

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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 Conferenc*e. 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 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

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

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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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

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:

- 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.

- 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 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.

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 examination, 2009-2011.

Appendix B

BREEZE AERMOD Model Results

Max. Annual (5 YEARS) Results of Pollutant: PM25 (ug/m**3)

Group ID	High	Avg. Conc.	UTM		Elev.	Hill Ht.	Flag Ht.	Rec. Type	Grid ID
			East (m)	North (m)	(m)	(m)	(m)		
ALL	1ST	0.00232	605422.90	4170691.00	0.00	0.00	1.80	DC	
	2ND	0.00229	605422.90	4170696.00	0.00	0.00	1.80	DC	
	3RD	0.00228	605427.90	4170691.00	0.00	0.00	1.80	DC	
	4TH	0.00228	605417.90	4170711.00	0.00	0.00	1.80	DC	
	5TH	0.00227	605422.90	4170701.00	0.00	0.00	1.80	DC	
	6TH	0.00227	605417.90	4170716.00	0.00	0.00	1.80	DC	
	7TH	0.00226	605417.90	4170721.00	0.00	0.00	1.80	DC	
	8TH	0.00226	605427.90	4170696.00	0.00	0.00	1.80	DC	
	9TH	0.00226	605422.90	4170706.00	0.00	0.00	1.80	DC	
	10TH	0.00225	605412.90	4170821.00	0.00	0.00	1.80	DC	

Highest Results of Pollutant: PM25

Avg. Per.	Grp ID	High	Type	Val	Units	Date	UTM		Elev.	Hill Ht.	Flag Ht.	Rec. Type	Grid ID
						YYMMDDHH	East (m)	North (m)	(m)	(m)	(m)		
1-HR	ALL	1ST	Avg. Conc.	0.04092	ug/m**3	12121807	605402.40	4170969.70	0.00	0.00	1.80	DC	

Summary of Total Messages

#	Message Type
0	Fatal Error Message(s)
4	Warning Message(s)
15235	Informational Message(s)
43872	Hours Were Processed
13448	Calm Hours Identified
1787	Missing Hours Identified (4.07 Percent)

Error & Warning Messages

Msg. Type	Pathway	Ref. #	Description
WARNING	CO	W276	Special proc for 1h-NO2/SO2 24hPM25 NAAQS disabled PM25 H1H
WARNING	CO	W363	Multiyr 24h/Ann PM25 processing not applicable for PM25 H1H

WARNING	OU	W565	Possible Conflict With Dynamically Allocated FUNIT PLOTFILE
WARNING	MX	W481	Data Remaining After End of Year. Number of Hours= 48

www.breeze-software.com

Appendix C

SMP-39 Site

Livermore, CA

UPDATE TO ENVIRONMENTAL NOISE STUDY

12 January 2024

Prepared for: Timur Tecimer
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Torrance, CA 90502
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Jennifer Freedman
Overton Moore Properties
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Prepared by: **Salter**
Diego Hernandez – Associate — dhernandez@salter-inc.com
Ethan Salter – Vice President — esalter@salter-inc.com

Salter Project 23-0142

INTRODUCTION

This report summarizes our environmental noise study of future traffic and loading dock activities from the proposed 6-building warehouse facility along Jack London Boulevard, south of Livermore Airport and west of Discovery Drive in Livermore, California. The purpose of the study was to determine the estimated growth in traffic noise levels resulting in the loading dock trucking activity and if traffic noise impacts from the proposed facility will meet the relevant requirements of the City General Plan Noise Element and Noise Ordinance.

This report has been updated to reflect the change in increased truck trips during nighttime hours.

EXECUTIVE SUMMARY

- Noise from the project's loading docks, future intra-project vehicle traffic, and likely HVAC equipment will increase CNEL[1] or DNL[2] noise levels at noise-sensitive receiver locations by 1 dB. An increase of 3 dB or less DNL is not expected to be noticeable and is not considered significant.
- Noise from project-created traffic would not result in a significant increase in noise levels on Jack London Boulevard or Isabel Avenue at adjacent properties.

REPORT ORGANIZATION

This report contains the following sections:

- Project Site
- Acoustical Criteria
- Existing Noise Environment
- Noise Impact Assessment
    - Loading Dock and Intra-Project Traffic Noise (Parking Lot)
    - Tenant HVAC Equipment Noise

[1] Community Noise Equivalent Level (CNEL) – A descriptor for the 24-hour A-weighted average noise level. The CNEL concept accounts for the increased acoustical sensitivity of people to noise during the evening and nighttime hours. Sound levels during the hours from 7 pm to 10 pm are penalized 5 dB; sound levels during the hours from 10 pm to 7 am are penalized 10 dB. A 10-dB increase in sound level is perceived by people to be a doubling of loudness.

[2] Day-Night Average Sound Level (DNL) – A descriptor established by the U.S. Environmental Protection Agency to describe the average day-night level with a penalty applied to noise occurring during the nighttime hours (10 pm - 7 am) to account for the increased sensitivity of people during sleeping hours. Also noted as Ldn. The difference between CNEL and DNL is often less than 1 dB.

PROJECT SITE

The proposed project will have a total lot area of approximately 47.86 acres, located south of West Jack London Boulevard. It is bounded by the Livermore Airport to the north, and Discovery Drive to the east, in the City of Livermore.

There will be six warehouse buildings totaling 2,084,953 square feet with 104 total loading docks. The site is adjacent to existing office and warehouse facilities to the east, approximately 850 feet away. An industrial quarry is located to the south. There are no noise-sensitive residential properties within 2,300 feet of the project site.

ACOUSTICAL CRITERIA

The following are project criteria and/or guidelines for the City of Livermore and State of California.

City of Livermore 2003-2025 General Plan Noise Element

Policy P4, Objective N-1.1

The Noise Element of the Livermore General Plan (Chapter 9, Policy P4 of Objective N-1.1) contains land use compatibility guidelines for environmental noise in the community. Table 1, below, summarizes these guidelines for residential and industrial land uses[3] in terms of CNEL or DNL. The definitions of each land use category follow below the table.

Table 1: Summary of Table 9-7 – Land Use Compatibility Guidelines for Community Noise CNEL or DNL, dB

Land Use Category	Normally Acceptable	Conditionally Acceptable	Normally Unacceptable	Clearly Unacceptable
Residential Low-Density[4], Single-family, Duplex, Mobile Homes	≤60	55-70	70-75	>75
Industrial, Manufacturing, Utilities, Agricultural	≤75	70-80	>75	--

[3] Table 9-7 of the Noise Element, page 9-27.

[4] Per General Plan Noise Ordinance Objective N-1.4, Policy P4, the criterion for single-family residential back yards is 60 dB CNEL/DNL.

Normally Acceptable: *If the noise level is within the "normally acceptable" level, noise exposure would be acceptable for the intended land use. Development may occur without requiring an evaluation of the noise environment unless the use could generate noise impacts on adjacent uses.*

Conditionally Acceptable: *If the noise level is within the "conditionally acceptable" level, noise exposure would be conditionally acceptable; a specified land use may be permitted only after detailed analysis of the noise environment and the project characteristics to determine whether noise insulation or protection features are required. Such noise insulation features may include measures to protect noise-sensitive outdoor activity areas (e.g., at residences, schools, or parks) or may include building sound insulation treatments such as sound-rated windows to protect interior spaces in sensitive receptors.*

Normally Unacceptable: *If the noise level is within the "normally unacceptable" level, analysis and mitigation are required. Development should generally not be undertaken unless adequate noise mitigation options have been analyzed and appropriate mitigations incorporated into the project to reduce the exposure of people to unacceptable noise levels.*

Clearly Unacceptable: *New construction should not be undertaken unless all feasible noise mitigation options have been analyzed and appropriate mitigation incorporated into the project to adequately reduce exposure of people to unacceptable noise levels.*

Noise Element Objective N-1.5

Objective N-1.5 seeks to reduce the level of noise generated by "stationary mechanical and other noise-generating equipment". Policy P1 states that "the City shall require that industrial and commercial uses be designed and operated to avoid the generation of noise effects on surrounding land uses from exceeding the following noise levels for exterior environments, operating longer than half an hour per hour:

- 55 dBA L50[5] (7:00am to 10:00pm)
- 45 dBA L50 (10:00pm to 7:00am)

Policy P2 allows short-term events to have levels louder than those cited above. For events that occur less than 15 minutes per hour, levels can be increased by 5 dBA; events no more than 5 minutes per hour are allowed an additional 10 dBA, and those taking place one minute or less per hour are allowed an additional 15 dBA. Policy P4 allows an exemption from Policy P1 for motor vehicles on public streets between the hours of 7:00am and 8:00pm. We understand that Policies P1, P2, and P4 could apply to the noise from backup alarms (aka "beepers" or "squawkers").

Objective N-1.5 specifically describes "stationary source noises", so when referring to L_{50} noise levels we analyzed the noise of trucks that are expected to sit in the loading dock area, estimated to be at least 2,395 feet from the nearest residence.

[5] L50 – The noise level exceeded 50% of the time. For a discussion of environmental acoustics, please refer to Appendix A.

State of California CEQA Guidelines and Impact Criteria

The California Environmental Quality Act (CEQA) contains guidelines that evaluate the significance of noise attributable to a proposed project. This would include (but is not limited to) added traffic noise, mechanical equipment noise, and construction noise. CEQA asks the following applicable questions. Would the project result in:

1. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?
2. Generation of excessive ground borne vibration or ground borne noise levels?
3. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public-use airport, would the project expose people residing or working in the project area to excessive noise levels?

CEQA does not define the noise level increase that is considered "substantial". Typically, the local general plan would establish limits with respect to allowable noise and vibration increases. However, the City of Livermore General Plan does not contain numerical standards of significance for noise increases. For the items above, noise level increases of 3 dBA or less are generally considered less-than-significant. Substantial adverse community response would be expected only for increases of 5 dBA or more.

EXISTING NOISE ENVIRONMENT

Project Site Description

To quantify the existing site noise environment, a monitor continuously measured noise levels along Jack London Boulevard on 5 and 10 April 2023. Table 2 shows a summary of the measured data. Figure 1, attached, shows the approximate measurement location.

Table 2: Measured Environmental Noise Levels

Site	Location	DNL (dB)	Leq(h) (dB)
LT-1	Jack London Boulevard, approximately 12-feet above grade	75	76

NOISE IMPACT ASSESSMENT

Site Noise Context

We conducted a noise measurement at the project site (see Figure 1) between 5 and 10 April 2023, which logged noise data from nearby roadways and the airport.

FUTURE LOADING DOCK AND INTRA-PROJECT TRAFFIC NOISE ESTIMATES

Future Loading Dock Calculation Methodology

Operational noise from the proposed facility is expected to consist primarily of tractor-trailers accessing loading dock areas. To estimate truck noise at the proposed facility, we referenced recently measured noise levels at a distribution facility elsewhere in California which involved semi-trucks similar in size to those that are expected to access the proposed project's facility.

Calculations for resulting noise levels due to on-site truck and car trip generation durations and activities were based on the measurements at this local distribution facility with ancillary information provided to us for that reference project in 2018.

Based on the assumptions described below, estimated noise levels were then compared to applicable criteria to determine if noise from the proposed facility would exceed the City's noise goals (described above) at the nearest receivers.

Traffic volumes for the proposed project were referenced from the provided Traffic Impact Analysis document (dated 4 April 2023) by TJKM, which describes the total daily truck trips and the partial distribution over the peak AM and PM hours and the relative expected proportion of project-generated trips using Jack London Boulevard and Isabel Avenue.

Intra-Project Traffic Methodology

Intra-project traffic noise will consist of traffic noise associated with future warehouse employee vehicles within the designated parking lots. To estimate vehicle noise at the employee parking lots, we also reference the Traffic Impact Analysis document for the expected traffic volume of warehouse employees.

Noise Source Analysis and Assumptions

Future Loading Docks

Our analysis estimated future noise from the facility based on the following assumptions discussed with the client via email, and per the overall site plan:

1. Trucks will enter and exit the site from three driveways off West Jackson Boulevard, from the north.
2. Non-truck noises associated with loading/unloading activity (i.e., forklifts, rolling doors, carts, pallet crushing, items dropping), are assumed to be located near the dock doors and are included in our analysis.
3. An average truck trip (not including unloading/loading) is estimated to last for a cumulative period of about 2 minutes and be at least 930 feet from the nearest commercial property line.
4. Trucks occupy the loading dock in their loading area that is nearest to noise-sensitive receiver (Commercial buildings east of Discovery Drive, to the east of the building).
5. Total number of loading docks: 104
6. Number and distribution of truck trips is based on the traffic impact analysis, with approximately 719 total truck trips per 24-hour period (continuous 24/7 operation) distributed as follows:
    - AM Peak is 7-9 AM- 10.8%
    - 9-4 PM -61%
    - PM Peak is 4 PM - 6 PM -10.8%
    - 6 PM - 10 PM 3.9%
    - 10 PM -7 AM 13.4%
7. The proposed warehouse buildings have south-facing loading docks which are recessed approximately 60 feet from the easternmost building's façade, providing substantial shielding for truck operation noise. This feature is expected to obstruct the direct line of sight of the project's loading docks from the commercial neighbors to the east, especially in buildings closer to Discovery Drive.
8. Having measured operations at a local representative loading dock site, a typical truck "trip" consists of the following events (estimated sound levels based on measurements at similar facilities):
    a. Truck passby (arrival, departure): 69 dBA at 30 feet
    b. Truck airbrakes: 72 dBA at 25 feet
    c. Truck backup alarm: 79 dBA at 30 feet
    d. Brief idle before engine shutoff: 70 dBA at 25 feet
    e. Truck engine ignition and airbrakes: 71 dBA at 25 feet
    f. Truck accelerating from stop: 74 dBA at 25 feet

g. Truck trip reference heights[6] (above grade)

i. Passby, brief idle, acceleration, and ignition: 8 feet

ii. Back-up beeper and airbrake: 2.5 feet

Intra-Project Traffic Noise

Our analysis estimated future noise from the facility parking lots is based on the following assumptions:

1. Employees will enter and exit the site from the three driveways from the north (via Jack London Boulevard).
2. Vehicle trips will be split between Jack London Boulevard and Isabel Avenue per the TJKM report's traffic projections. Our traffic analysis calculations tell us the following:

- 80% of project generated trips will be along Jack London Boulevard
- 20% of project generated trips will be along Isabel Avenue
- There will be an average noise level increase of approximately 3dB on both roadways due to traffic increases. This increase is not considered to be significant.

3. Once on site, vehicles will travel an average of 15 miles per hour or less.
4. Vehicles will be spread out evenly amongst the parking areas.
5. An average vehicle trip is estimated to last for a cumulative period of about 2 minutes and be at least 900 feet from the nearest commercial property line.
6. Similar percentages were assumed for intra-project vehicle trips in the project parking lots as were truck trips, as shown in the distribution below.

- AM Peak is 7-9 AM- 10.8%
- 9-4 PM -61%
- PM Peak is 4 PM - 6 PM -10.8%
- 6 PM - 10 PM 3.9%
- 10 PM -7 AM 13.4%

[6] Truck source heights excerpted from Caltrans Technical Noise Supplement document (TeNS) document dated October 1998.

Estimated Future Noise Levels

We have combined both existing and future project-generated noise sources. Future project sources include the proposed loading dock noise, rooftop HVAC equipment, parking areas, and estimated traffic contribution, while the existing noise sources are the existing traffic. Logarithmically, adding expected noise contribution to the existing noise environment would result in a noise level of approximately DNL 76 dBA from all contributing noise sources upon the project's completion:

DNL **30**[a] dB [HVAC] + DNL **32**[b] dB [employee lot] + DNL **50**[c] dB [trucks] = DNL **50**[d] dB [future noise level at receivers]

a = cumulative building rooftop HVAC noise
b = employee parking lot noise
c = loading dock truck noise

d = cumulative future project sources

DNL **67**[e] dB [existing traffic] + DNL **50**[e] dB [combined future sources] **=** DNL **67**[f] dB [future noise level at receivers]

e = measured at project site, see **Figure 1**
e = determined from loading docks + HVAC noise + parking lots
f = calculated

See Appendix A for additional information on decibel mathematics.

We evaluated the following noise sources from the proposed project on the surrounding environment:

- Potential rooftop mechanical equipment noise
- Project-related traffic increases

We have drawn the following conclusions from the analysis:

The following summarizes the portion of the CEQA checklist pertaining to noise.

Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project exceeding standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

A: Permanent Increase in Noise Levels due to Project-Generated Noise

It is anticipated that the potential office spaces located on northern facades of the six buildings will be mechanically ventilated. Based on previous projects of similar design, we have assumed the use of up to four typical 5-ton package rooftop units located above each office (a total of 56 units). No outdoor mechanical equipment has been specified at this time. Specific equipment will be confirmed during the design phase.

Preliminary sound power level data provided from a similarly sized project with similar 5-ton outdoor package fan units indicates that combined noise from these units sums to approximately DNL 30 dB at the nearest property lines, assuming the units operate continuously for 24-hour operation. The rooftop parapet is assumed to provide acoustical shielding to nearby neighbors because they would break line-of-sight to the nearest receivers.

Depending on the final equipment placement, as well as any specific parapets, barriers, and shielding provided by buildings (which would reduce noise levels at the property lines), noise levels may vary. We do not expect the noise contribution to be significant in these aspects.

B: Predicted Permanent Increase in Noise Levels due Project Traffic Volumes

It has been communicated by the team that the projected truck trips per day will be approximately as shown below in Table 3.

Table 3: SMP-39 Truck Trips

Hour	Percent	ITE Trips
7 – 9 AM	10.8%	78
9 AM – 4 PM	61.0%	439
4 – 6 PM	10.8%	78
6 – 10 PM	3.9%	28
10 PM – 7 AM	13.4%	96
Total	100 %	719

Overall, the project would result in a net increase in daily trips by 719, amounting to an overall traffic noise DNL increase of <1 dB. Therefore, this would not result in a significant increase in noise levels at existing adjacent properties.

Would the project result in generation of excessive ground-borne vibration or ground-borne noise levels?

A: Permanent Increase in Vibration Levels due to Project-Generated Vibration

The planned use for the site, as warehouse buildings, is not expected to generate significant amounts of ground-borne noise or vibration.

Loading Dock Future Noise Levels (CNEL/DNL)

We estimated noise levels at local receptors from the sources described in the previous section. To account for future increases in local traffic noise levels, we added 1 dB DNL to the measured levels[7] (see Table 2 above).

Table 4 below summarizes the estimated DNL levels at the closest property plane to the east of the building, under the assumption that the facility would receive its trucking activities 24 hours per day.

Table 4: Calculated Future Facility Noise at Noise-Sensitive Land Uses: CNEL/DNL, dBA

Scenario	Nearby Receiving Locations	Existing Noise at Receiver	Loading Docks at Receiver	Intra-Project Traffic Noise Levels at Receiver	Combined Existing plus Project	Change (dB)
24-hour Operations	East Property Line (Residences across Isabel Avenue)	67	61	32	68	+1 dB

The data shows that loading dock-generated noise is not expected to impact adjacent receivers to the north and the residences to the east. The calculated increase in DNL at the nearest property line with the project and future traffic noise levels (near term 2025) will be approximately 1 dB. A change of 3 dB or less is not expected to be noticeable and is not considered significant.

Future L_{50} Noise Levels

The following assumptions were made about the 24-hour operation of the project in our estimated L_{50} calculations:

- The volume of expected truck trips is consistent with the truck trip distribution established in item 6 of the Noise Source Analysis and Assumptions section (i.e., a maximum of 10 truck per hour at nighttime, or 13.4% of trucks between 10:00 pm and 7:00 am).
- The 6- and 10-foot berms will be incorporated into the project.
- Backup alarms are expected to be at a height of approximately 2.5 feet.
- Trucks do not move great distances when their backup alarm is engaged.

Table 5 summarizes the estimated daytime and nighttime L_{50} for the proposed project. Since backup alarms for nighttime are predicted to occur less than 15 minutes per hour, the criterion can increase by 5 dBA per Policy P2. However, since back up alarms would be more than 15 minutes per hour during the daytime, no additional increases are accounted for in our analysis.

[7] The California Department of Transportation assumes a traffic volume increase of three-percent per year, which corresponds to a 1 dB increase in DNL over a ten-year period.

Table 5: Calculated 24-Hour Future Facility L_{50} Value: L_{50}, dBA

Time of Day	Estimated L_{50} Value	Criterion L_{50} Value
Daytime (7am-10pm)	40 dBA	55 dBA
Nighttime (10pm-7am)	35 dBA	50 dBA

Our calculations of overall operational L_{50} noise levels do not exceed the allowable values stated by the City (i.e., Policy P1, Objective N-1.5), it is our understanding that other current similar projects in the vicinity have caused local neighbor complaints due to trucks' back-up alarms at those locations in the past.

Back-up alarms were assumed to be 79 dB at a reference distance of 30 feet. The distance attenuation between the loading dock to the façade of the nearest residence provides a 31 dB reduction. Although backup alarms would be audible from the residences, the L_{50} threshold of 50 dBA will not be exceeded due to the limited number of trips during this timeframe (estimated at 40 trips in 9-hour time frame).

Calculations assumed the source height of these backup alarms to be approximately 2.5 feet from grade. The current buildings would adequately obstruct the direct line-of-sight of these backup alarms to the residential receivers. The dimensions of the proposed berms are calculated to reduce intermittent noise levels (such as those produced by backup alarms) by up to 6 dB at the closest residents.

Quieter backup alarms (aka "squawkers"), which are becoming more prevalent in delivery vehicles for various large e-commerce websites, and other vendors, may be used by trucking operators visiting this site in the future, therefore beeper noise has the potential to be reduced. A best practice for consideration would be to implement these alternative devices in other truck populations in the future.

CONCLUSIONS AND COMMENTS

1. Future loading dock-generated noise (due to on-site trucks and vehicles) over a 24-hour operation period is not expected to impact receivers to the east. The calculated increase in CNEL/DNL at the nearest noise-sensitive residential receivers with the project and future traffic noise levels will be <1 dB. A change of 2 dB or less is not considered significant nor is it expected to be noticeable to residents east of the project site.
2. Considering the 2,395-foot distance between the nearest loading dock and the closest residents, and the trucks being a stationary source rather than a moving vehicle once the leaving the loading dock area of the project site, the city's L_{50} criterion is not applicable once a truck begins moving closer to the residential area. Given the minority of expected project truck trips conducted in the nighttime hours (10 trips per hour on average from 10 PM to 7 AM), noise from stationary trucks at the nearest loading dock are expected to comply with the City's L_{50} nighttime requirement assuming backup alarms are not continuously operating for more than 30 minutes per hour.

* * *

APPENDIX A: FUNDAMENTAL CONCEPTS OF ENVIRONMENTAL NOISE

This section provides background information to aid in understanding the technical aspects of this report.

Three dimensions of environmental noise are important in determining subjective response. These are:

- The intensity or level of the sound
- The frequency spectrum of the sound
- The time-varying character of the sound

Airborne sound is a rapid fluctuation of air pressure above and below atmospheric pressure. Sound levels are usually measured and expressed in decibels (dBA), with 0 dBA corresponding roughly to the threshold of hearing.

The "frequency" of a sound refers to the number of complete pressure fluctuations per second in the sound. The unit of measurement is the cycle per second (cps) or hertz (Hz). Most of the sounds, which we hear in the environment, do not consist of a single frequency, but of a broad band of frequencies, differing in level. The name of the frequency and level content of a sound is its sound spectrum. A sound spectrum for engineering purposes is typically described in terms of octave bands, which separate the audible frequency range (for human beings, from about 20 to 20,000 Hz) into ten segments.

Many rating methods have been devised to permit comparisons of sounds having quite different spectra. Surprisingly, the simplest method correlates with human response practically as well as the more complex methods. This method consists of evaluating all of the frequencies of a sound in accordance with a weighting that progressively de-emphasizes the importance of frequency components below 1000 Hz and above 5000 Hz. This frequency weighting reflects the fact that human hearing is less sensitive at low frequencies and at extreme high frequencies relative to the mid-range.

The weighting system described above is called "A"-weighting, and the level so measured is called the "A-weighted sound level" or "A-weighted noise level." The unit of A-weighted sound level is sometimes abbreviated "dBA." In practice, the sound level is conveniently measured using a sound level meter that includes an electrical filter corresponding to the A-weighting characteristic. All U.S. and international standard sound level meters include such a filter. Typical sound levels found in the environment and in industry are shown in Figure A-1.

Although a single sound level value may adequately describe environmental noise at any instant in time, community noise levels vary continuously. Most environmental noise is a conglomeration of distant noise sources, which results in a relatively steady background noise having no identifiable source. These distant sources may include traffic, wind in trees, industrial activities, etc. and are relatively constant from moment to moment. As natural forces change or as human activity follows its daily cycle, the sound level may vary slowly from hour to hour. Superimposed on this slowly varying background is a succession of identifiable noisy events of brief duration. These may include nearby activities such as single vehicle pass-bys, aircraft flyovers, etc. which cause the environmental noise level to vary from instant to instant.

To describe the time-varying character of environmental noise, statistical noise descriptors were developed. "L10" is the A-weighted sound level equaled or exceeded during 10 percent of a stated time period. The L10 is considered a good measure of the maximum sound levels caused by discrete noise events. "L50" is the A-weighted sound level that equals or exceeded 50 percent of a stated time period; it represents the median sound level. The "L90" is the A-weighted sound level equaled or exceeded during 90 percent of a stated time period and is used to describe the background noise.

As it is often cumbersome to quantify the noise environment with a set of statistical descriptors, a single number called the average sound level or "L_{eq}" is now widely used. The term "L_{eq}" originated from the concept of a so-called equivalent sound level which contains the same acoustical energy as a varying sound level during the same time period. In simple but accurate technical language, the L_{eq} is the average A-weighted sound level in a stated time period. The L_{eq} is particularly useful in describing the subjective change in an environment where the source of noise remains the same but there is change in the level of activity. Widening roads and/or increasing traffic are examples of this kind of situation.

In determining the daily measure of environmental noise, it is important to account for the different response of people to daytime and nighttime noise. During the nighttime, exterior background noise levels are generally lower than in the daytime; however, most household noise also decreases at night, thus exterior noise intrusions again become noticeable. Further, most people trying to sleep at night are more sensitive to noise. To account for human sensitivity to nighttime noise levels, a special descriptor was developed. The descriptor is called the L_{dn} (Day/Night Average Sound Level), which represents the 24-hour average sound level with a penalty for noise occurring at night. The L_{dn} computation divides the 24-hour day into two periods: daytime (7:00 am to 10:00 pm); and nighttime (10:00 pm to 7:00 am). The nighttime sound levels are assigned a 10 dBA penalty prior to averaging with daytime hourly sound levels.

For highway noise environments, the average noise level during the peak hour traffic volume is approximately equal to the L_{dn}.

The effects of noise on people can be listed in three general categories:

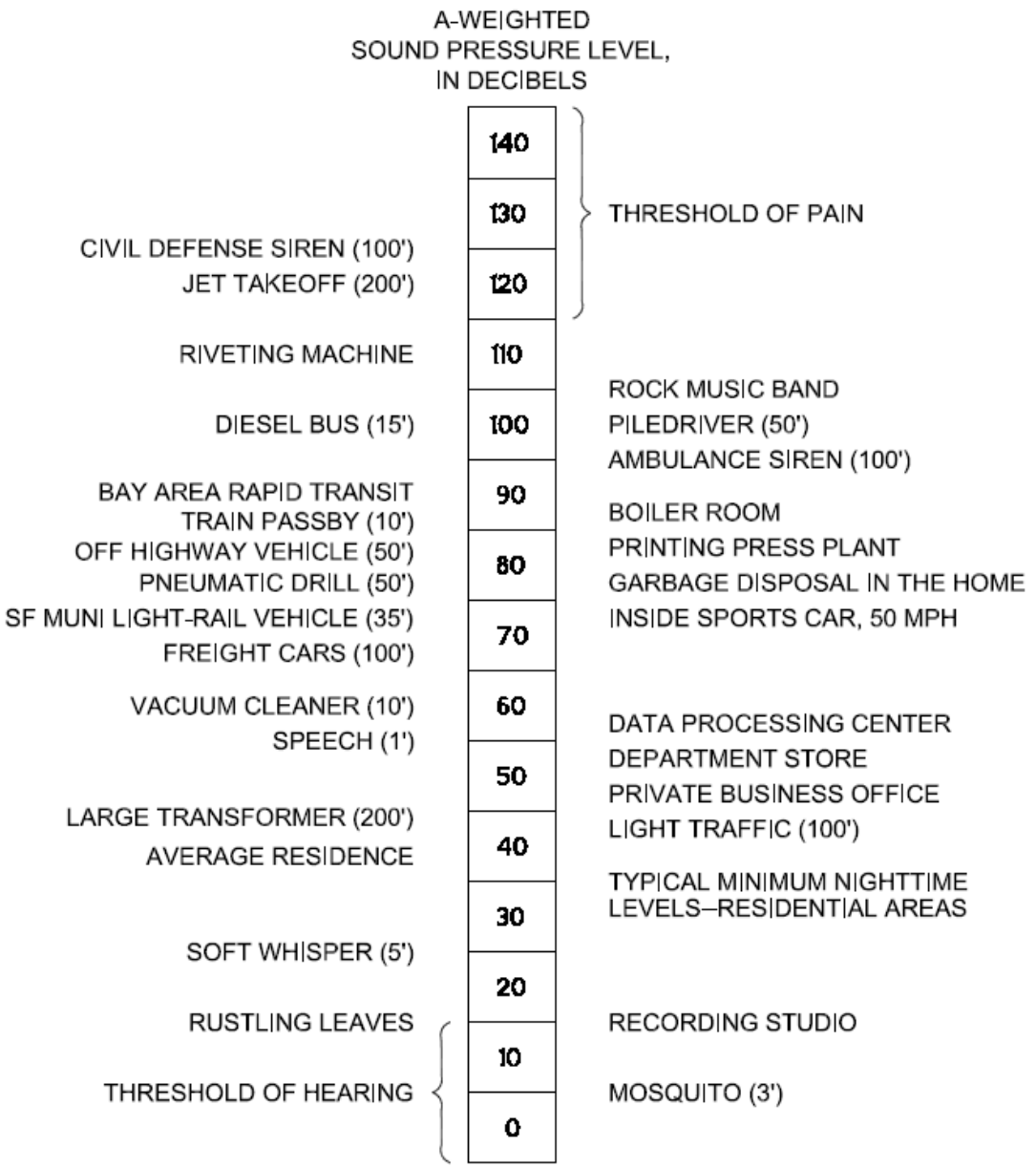
- Subjective effects of annoyance, nuisance, dissatisfaction
- Interference with activities such as speech, sleep, and learning
- Physiological effects such as startle, hearing loss

The sound levels associated with environmental noise usually produce effects only in the first two categories. Unfortunately, there has never been a completely predictable measure for the subjective effects of noise nor of the corresponding reactions of annoyance and dissatisfaction. This is primarily because of the wide variation in individual thresholds of annoyance and habituation to noise over time.

Thus, an important factor in assessing a person's subjective reaction is to compare the new noise environment to the existing noise environment. In general, the more a new noise exceeds the existing, the less acceptable the new noise will be judged.

Regarding increases in noise level, knowledge of the following relationships will be helpful in understanding the quantitative sections of this report:

Except in carefully controlled laboratory experiments, a change of only 1 dBA in sound level cannot be perceived. Outside of the laboratory, a 3 dBA change is considered a just-noticeable difference. A change in level of at least 5 dBA is required before any noticeable change in community response would be expected. A 10 dBA change is subjectively heard as approximately a doubling in loudness and would almost certainly cause an adverse community response.



(100') = DISTANCE IN FEET BETWEEN SOURCE AND LISTENER

TYPICAL SOUND LEVELS MEASURED IN THE ENVIRONMENT AND INDUSTRY

FIGURE A1

1107 C 11.25.03

Salter

San Francisco

San Jose

Los Angeles

Honolulu

Seattle

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LIVERMORE SMP-39 SITE MEASUREMENT LOCATION AND MEASURED NOISE LEVEL

FIGURE 1

Salter #	MEV/ECS
23-0142	05.02.23

Appendix D

Oaks Business Park SMP-40

Livermore, CA

UPDATE TO ENVIRONMENTAL NOISE STUDY

12 January 2024

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Salter Project 21-0471

INTRODUCTION

This report summarizes our study of environmental noise of the proposed project (Livermore Oaks Business Park SMP-40) on nearby land uses. The project site is west of Isabel Avenue (State Highway 84), north of Stanley Boulevard, and south of Discovery Drive in Livermore, California. The purpose of the study was to determine whether estimated activity noise and construction noise from the proposed facility will meet the relevant requirements of the City General Plan Noise Element and Noise Ordinance at adjacent land uses.

This report has been updated based on the City's peer reviewer comments from May 2022 and March 2023, and subsequent coordination regarding increased truck trips during nighttime hours.

EXECUTIVE SUMMARY

- Noise from the project's loading docks, future intra-project vehicle traffic, and likely HVAC equipment will increase CNEL[1] or DNL[2] noise levels at noise-sensitive receiver locations at most by 3 dB. An increase of 3 dB or less DNL is not expected to be noticeable and is not considered significant.
- Given the minimal projected noise impact from the project, no additional mitigation measures are required.

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[2] Day-Night Average Sound Level (DNL) – A descriptor established by the U.S. Environmental Protection Agency to describe the average day-night level with a penalty applied to noise occurring during the nighttime hours (10 pm - 7 am) to account for the increased sensitivity of people during sleeping hours. Also noted as Ldn. The difference between CNEL and DNL is often less than 1 dB.

PROJECT SITE

The proposed project will have a total area of approximately 40 acres, west of Isabel Avenue (State Highway 84) and between Stanley Boulevard and Discovery Drive in the City of Livermore. Warehouse Building 1 will be about 470,350 square feet with 68 loading docks, while Building 2 will be 288,750 square feet with 62 loading docks. The site is adjacent to existing industrially zoned warehouse facilities with loading docks to the north. Noise-sensitive residential receivers are located across Isabel Avenue to the east about 1,785-feet away from Building 1, and 885-feet away from Building 2. Two berms have been incorporated on the project site: a 6-foot by 125-foot landscape berm on the Northeast corner of the project property line, and a 10-foot by 60-foot screening wall east of Building 2's southern loading docks.

ACOUSTICAL CRITERIA

The following are project criteria and/or guidelines per the City of Livermore and State of California.

City of Livermore 2003-2025 General Plan Noise Element

Policy P4, Objective N-1.1

The Noise Element of the Livermore General Plan (Chapter 9, Policy P4 of Objective N-1.1) contains land use compatibility guidelines for environmental noise in the community. Table 1, below, summarizes these guidelines for residential and industrial land uses[3] in terms of CNEL or DNL. The definitions of each land use category follow below the table.

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[3] Table 9-7 of the Noise Element, page 9-27.

[4] Per General Plan Noise Ordinance Objective N-1.4, Policy P4, the criterion for single-family residential back yards is 60 dB CNEL/DNL.

Normally Acceptable: *If the noise level is within the "normally acceptable" level, noise exposure would be acceptable for the intended land use. Development may occur without requiring an evaluation of the noise environment unless the use could generate noise impacts on adjacent uses.*

Conditionally Acceptable: *If the noise level is within the "conditionally acceptable" level, noise exposure would be conditionally acceptable; a specified land use may be permitted only after detailed analysis of the noise environment and the project characteristics to determine whether noise insulation or protection features are required. Such noise insulation features may include measures to protect noise-sensitive outdoor activity areas (e.g., at residences, schools, or parks) or may include building sound insulation treatments such as sound-rated windows to protect interior spaces in sensitive receptors.*

Normally Unacceptable: *If the noise level is within the "normally unacceptable" level, analysis and mitigation are required. Development should generally not be undertaken unless adequate noise mitigation options have been analyzed and appropriate mitigations incorporated into the project to reduce the exposure of people to unacceptable noise levels.*

Clearly Unacceptable: *New construction should not be undertaken unless all feasible noise mitigation options have been analyzed and appropriate mitigation incorporated into the project to adequately reduce exposure of people to unacceptable noise levels.*

Noise Element Objective N-1.5

Objective N-1.5 seeks to reduce the level of noise generated by "stationary mechanical and other noise-generating equipment". Policy P1 states that "the City shall require that industrial and commercial uses be designed and operated to avoid the generation of noise effects on surrounding land uses from exceeding the following noise levels for exterior environments, operating longer than half an hour per hour:

- 55 dBA L50[5] (7:00am to 10:00pm)
- 45 dBA L50 (10:00pm to 7:00am)

Policy P2 allows short-term events to have levels louder than those cited above. For events that occur less than 15 minutes per hour, levels can be increased by 5 dBA; events no more than 5 minutes per hour are allowed an additional 10 dBA, and those taking place one minute or less per hour are allowed an additional 15 dBA. Policy P4 allows an exemption from Policy P1 for motor vehicles on public streets between the hours of 7:00am and 8:00pm. We understand that Policies P1, P2, and P4 could apply to the noise from backup alarms (aka "beepers" or "squawkers").

[5] L50 – The noise level exceeded 50% of the time. For a discussion of environmental acoustics, please refer to Appendix A.

Objective N-1.5 specifically describes "stationary source noises", so when referring to L_{50} noise levels we analyzed the noise of trucks that are expected to sit in the loading dock area, estimated to be at least 1,025 feet from the nearest residence.

California Department of Transportation (CalTrans) Construction Vibration Criteria

The California Department of Transportation[6] (DOT) provides vibration guidelines for two scenarios: human perception and construction damage. These tables are included below as guidelines for potential project vibration levels. "Transient" vibrations are classified as impulsive events that are short in duration (e.g., debris falling, blasting). "Continuous" vibrations are more sustained vibration events over longer periods of time (e.g., jackhammering, drilling). Table 2 describes the human response to different levels of ground-borne vibration for transient and continuous events.

Table 2: Guideline Vibration Annoyance Potential Threshold Criteria[7]

Human Response	Maximum PPV[8] (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Barely perceptible	0.04	0.01
Distinctly perceptible	0.25	0.04
Strongly perceptible	0.90	0.10
Severe	2.00	0.40

Table 3 provides a guideline for vibration criteria to assess the damage potential from ground vibration induced by construction equipment. Thresholds for continuous vibrations are lower than those for transient vibrations and are therefore considered more "conservative". These are standard significance thresholds used in the industry to determine impacts of ground borne vibrations on structures.

6 Transportation and Construction Vibration Guidance Manual September 2013 (DOT Document).

7 This is Table 20 from the DOT document.

8 (PPV): Peak Particle Velocity.

Table 3: Guideline Vibration Damage Potential Threshold Criteria[9]

Structure and Condition	Maximum PPV (in/sec)	
	Transient Sources	Continuous/Frequent Intermittent Sources
Extremely fragile historic buildings, ruins, ancient monuments	0.12	0.08
Fragile buildings	0.20	0.10
Historic and some old buildings	0.50	0.25
Older residential structures	0.50	0.30
New residential structures	1.00	0.50
Modern industrial/commercial buildings	2.00	0.50

The immediate adjacent properties are all modern industrial or commercial buildings. Across Isabel Avenue/Highway 84 to the east are existing single-family residences. Based on Table 3, we have applied the more stringent residential criteria of 1.0 PPV for transient events and 0.50 PPV for continuous events.

State of California CEQA Guidelines and Impact Criteria

The California Environmental Quality Act (CEQA) contains guidelines that evaluate the significance of noise attributable to a proposed project. This would include (but is not limited to) added traffic noise, mechanical equipment noise, and construction noise. CEQA asks the following applicable questions. Would the project result in:

1. Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?
2. Generation of excessive ground borne vibration or ground borne noise levels?
3. For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public-use airport, would the project expose people residing or working in the project area to excessive noise levels?

CEQA does not define the noise level increase that is considered “substantial”. Typically, the local general plan would establish limits with respect to allowable noise and vibration increases. However, the City of Livermore General Plan does not contain numerical standards of significance for noise increases. For the items above, noise level increases of 3 dBA or less are generally considered less-than-significant. Substantial adverse community response would be expected only for increases of 5 dBA or more.

9 This is Table 19 of the DOT document.

EXISTING NOISE ENVIRONMENT

Project Site Description

To quantify the existing site noise environment, two monitors continuously measured noise levels along the project property lines to the north and east between 2 and 4 November 2021. **Table 4** summarizes measured data and **Figure 1**, attached, shows the approximate measurement locations. Locations were selected based not only on project setbacks but also on what nearby locations were accessible via public rights-of-way.

Table 4: Measured Environmental Noise Levels

Site	Location	Measured DNL (dBA)
LT-1	Business Park, approximately 10-feet above grade	65
LT-2	Arroyo Bike Trail, approximately 10-feet above grade	67

Site Noise Context

Noise measurements at the project site (see **Figure 1**), collected data from vehicle pass-bys on nearby roads. Measured on-site noise levels were DNL 65 dB and 67 dB at the project site (see **Figure 1**). LT-1 was placed near the nearest existing warehouse across from residences, and LT-2 was placed on the closest accessible utility pole across from residences. Adjustments were made, as appropriate, to estimate the change in noise levels from the long-term monitor location to the locations of the nearest residences east of Isabel Avenue.

We have combined cumulative existing and future noise sources that would result from the project's completion. Future project sources include the proposed loading dock noise, rooftop HVAC equipment, parking areas, and estimated traffic contribution, while the existing noise sources are the existing traffic. Adding expected noise contribution to the existing noise environment logarithmically would result in a noise level of approximately **DNL 67 dB** from all contributing noise sources upon the project's completion:

DNL 29[a] dB [Future HVAC] + DNL 29[b] dB [employee lot] + DNL 52 [c] dB [trucks] = DNL 52 [d] dB [future noise level at receivers]

a = cumulative building rooftop HVAC noise
b = employee parking lot noise
c = truck noise at loading docks

d = cumulative future project sources

DNL 67[e] dB [existing traffic] + DNL 52[e] dB [combined future sources] = DNL 67[f] dB [future noise level at receivers]

e = measured at project site, see **Figure 1**
e = determined from loading docks + HVAC noise + parking lots
f = calculated

See Appendix A for additional information on decibel mathematics.

NOISE IMPACT ASSESSMENT ANALYSIS

We evaluated the following noise sources from the proposed project on the surrounding environment:

- Potential rooftop mechanical equipment noise
- Short-term construction noise and vibration
- Project-related traffic increases

The following summarizes the portion of the CEQA checklist pertaining to noise.

Would the project result in generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

A: Permanent Increase in Noise Levels due to Project-Generated Noise

The owner anticipates that tenant office spaces located on the corners of each building will be mechanically ventilated with typical 5-ton package units located above the offices in each corner of each building. No other outdoor mechanical equipment has been specified at this time. Specific equipment will be confirmed during the design phase.

Preliminary sound power level data has been provided for these 5-ton outdoor package fan units indicating that combined noise from these units sums to approximately DNL 29 dB at the nearest property lines. This assumes 24-hour operation of this equipment (in line with the operation hours of the building). The rooftop parapet is assumed to provide acoustical shielding to nearby neighbors because they would break line-of-sight to the nearest receivers.

Depending on the final equipment placement, as well as any specific parapets, barriers, and shielding provided by buildings (which would reduce noise levels at the property lines), noise levels may vary. We do not expect the noise contribution to be significant in these aspects.

B: Predicted Permanent Increase in Noise Levels due Project Traffic Volumes

It has been communicated by the team that the projected truck trips per day will be approximately as shown below in Table 5.

Table 5: SMP-40 Truck Trips

Hour	Percent	ITE Trips
7 – 9 AM	9.4%	20
9 AM – 4 PM	42.7%	91
4 – 6 PM	12.7%	27
6 – 10 PM	16.4%	35
10 PM – 7 AM	18.8%	40
Total	100 %	213

Overall, the project would result in a net increase in daily trips by 213, amounting to an overall traffic noise DNL increase of approximately 2 dB. Therefore, this would not result in a significant increase in noise levels at existing adjacent properties.

C: Temporary Increase in Noise Levels due to Construction

Construction activities will likely include the use of heavy equipment for grading and other activities, through completion of buildings and landscaping. Heavy trucks would travel to, from, and within the site hauling soil, equipment, and building materials. Smaller equipment, such as jackhammers, pneumatic tools, and saws could also be used throughout the demolition and construction phases in various areas. The noise and vibration associated with these activities would be generated within the entire project area.

Based on our experience with similar projects' construction methods and phasing, our preliminary understanding and assumptions of expected equipment is shown in Table 6. Reference levels for construction equipment are listed in Table 7, both at the reference distance of 50-feet and at 884-feet, which is the distance from Building 1 to the residences across Isabel Avenue.

Table 6: List of Typical Construction Equipment and Phasing

Phase	Equipment
Demolition	Concrete/Industrial Saws, Excavators, Rubber-Tired Dozers, Tractors/Loaders/Backhoes
Site Preparation	Graders, Rubber-Tired Dozers, Tractors/Loaders/Backhoes
Grading/Excavation	Excavators, Drill Rig for Shoring Beams (Caisson Drilling), Rubber-Tired Dozers, Tractors/Loaders/Backhoes
Trenching	Tractor/Loader/Backhoe, Excavators
Building Exterior	Cranes, Forklifts, Generator Sets, Tractors/Loaders/Backhoes, Welders
Building Interior/ Architectural Coating	Air Compressors, Aerial Lift
Paving/Landscaping/ Site Concrete	Cement and Mortar Mixers, Paving Equipment, Rollers, Tractors/Loaders/Backhoes

Table 7: Construction Equipment Reference Noise Levels[10]

Typical Equipment	Estimated Maximum Instantaneous L_{max}[11] Noise Level (dBA at 50 feet)	Estimated Maximum Instantaneous L_{max} Noise Level (dBA at 884 feet)
Aerial Lift	83	26
Air Compressors	81	24
Cement and Mortar Mixers	85	28
Concrete/Industrial Saws	76	19
Cranes	83	26
Drill Rig for Shoring Beams (Caisson Drilling)	85	28
Excavators	85	28
Forklifts	83	26
Generator Sets	81	24
Graders	85	28
Paving Equipment	89	32
Rollers	74	17
Rubber-Tired Dozers	85	28
Tractors/Loaders/Backhoes	84	27
Welders	73	16

Actual construction noise levels will vary based on distance to each piece of equipment or work area from the receiver and shielding from adjacent buildings and construction elements.

The following is a list of measures that could be adopted by the contractor to reduce the impact of construction noise on neighbors:

1. Consistent with the Livermore Municipal Code, construction will be limited to weekdays between the hours of 7:00 a.m. and 8:00 p.m. and Saturdays through Sunday between the hours of 9:00 a.m. and 6:00 p.m.

10 Equipment noise levels at 50-feet are from Section 9, Federal Highway Administration Highway Traffic Noise Construction Noise Handbook (August 2006) and Table 12-2, Transit Noise and Vibration Impact Assessment, United States Department of Transportation, Office of Planning and Environment, Federal Transit Administration, May 2006.

11 L_{max} (Maximum Sound Level) – The maximum sound level for a specified measurement period of time as defined in ASTM E1686.

2. There are currently no immediately adjacent residential receivers, but Industrial-zoned PDI parcels are immediately north of the proposed project site. Unless residences are built immediately adjacent to this property prior to the construction, a noise barrier is not required.
3. Contractors shall utilize “quiet” models of air compressors and other stationary noise sources where technology exists.
4. Internal combustion engine-driven equipment shall be equipped with mufflers which are in good condition and appropriate for the equipment.
5. Stationary noise-generating equipment, such as air compressors and portable power generators, shall be located as far away as possible from adjacent property lines.
6. Staging areas and construction material areas shall be located as far away as feasible from adjacent residences.
7. All unnecessary idling of internal combustion engines should be prohibited.
8. The contractor should designate a "noise disturbance construction superintendent" who will be responsible for tracking and responding to any complaints about construction noise. The noise disturbance construction superintendent will determine the cause of the noise complaint (e.g., starting too early, bad muffler, etc.) and will require that reasonable measures are implemented to correct the problem. The telephone number for the noise disturbance construction superintendent will be posted at the construction site and included in any construction notices sent to neighbors.

Would the project result in generation of excessive ground-borne vibration or ground-borne noise levels?

A: Permanent Increase in Vibration Levels due to Project-Generated Vibration

The planned use for the site, as warehouse buildings, is not expected to generate significant amounts of ground-borne noise or vibration.

B: Temporary Increase in Vibration Levels due to Construction

The nearest and most sensitive adjacent receivers include residences to the east approximately 500 feet from the closest area of construction on the project site. Industrial-zoned parcels to the north are assumed to be less sensitive.

Project construction may include activities such as the use of concrete saws, excavation and grading, and the use of rolling stock equipment (tracked vehicles, compactors, etc.). Typical construction vibration levels at 50-feet are listed in Table 8, below. Most of the construction will occur set back from the property line. As indicated in the criteria section above, the risk of damage to nearby structures may begin to occur at a limit of 1.0 in/sec PPV for transient vibration events and 0.50 PPV for continuous events.

Table 8: Example Construction Vibration Levels[12]

Equipment	PPV at 50 ft. (in/sec)[13]
Vibratory Roller	0.049
Hydraulic Breaker	0.03 to 0.08
Large Bulldozer	0.03
Loaded Trucks	0.03
Excavator	0.03
Caisson/pier drilling	0.03
Jackhammer	0.01
Small Bulldozer	0.001
Crane, Forklift, Bobcat	No significant vibration

Based on the vibration levels shown in Table 8, construction equipment is not expected to cause structural damage to adjacent properties because project construction is not expected to exceed the thresholds for new residential buildings or commercial/industrial structures as shown above in Table 3. Ground borne noise would also not be expected to be significant at these vibration levels.

FUTURE LOADING DOCK AND INTRA-PROJECT TRAFFIC NOISE

Future Loading Dock Calculation Methodology

Operational noise from the proposed facility is expected to consist primarily of tractor-trailers accessing loading dock areas. To estimate truck noise at the proposed facility, we referenced recently measured noise levels at a local distribution facility which involved semi-trucks similar in size to those that are expected to access the proposed project's facility.

Calculations for resulting noise levels due to on-site truck and car trip generation durations and activities were based on the measurements at this local distribution facility with ancillary information provided to us for that project on 15 February 2018 and 20 December 2023.

Based on the assumptions described below, estimated noise levels were then compared to applicable criteria to determine if noise from the proposed facility would exceed the City's noise goals (described above) at adjacent residences.

12 Table 12-2, Transit Noise and Vibration Impact Assessment, United States Department of Transportation, Office of Planning and Environment, Federal Transit Administration, May 2006.

13 Using a value of n = 1.5 per FTA recommendation, where n is the attenuation rate through the ground

Traffic volumes produced by the proposed project were provided by TJKM in December 2023. Their study estimated that a total of 213 truck trips[14] would occur at the facilities throughout the 24 hours of operation. Overton Moore Properties provided further details about the potentially likely distribution of those trucks each hour throughout the 24-hour operation period.

Intra-Project Traffic Analysis Methodology

Intra-project traffic noise will consist of traffic noise associated with future warehouse employee vehicles within the designated parking lots. To estimate vehicle noise at the employee parking lots, we referenced the TJKM provided traffic volumes for the proposed project.

Noise Source Analysis and Assumptions

Future Loading Docks

Our analysis estimated future noise from the facility based on the following assumptions discussed with the client via email, and per the overall site plan:

1. Trucks will enter and exit the site from Atlantis Court and Challenger Street, from the north (via Discovery Drive).
2. Non-truck noises associated with loading/unloading activity (i.e., forklifts, rolling doors, carts, pallet crushing, items dropping), are assumed to be located near the dock doors and are included in our analysis.
3. An average truck trip (not including unloading/loading) is estimated to last for a cumulative period of about 2 minutes and be at least 1025 feet from the nearest residential property line.
4. Trucks occupy the loading dock in their loading area that is nearest to noise-sensitive receiver (Residents across Isabel Avenue, to the east of the building).
5. Total number of loading docks: 130 (68 in Building 1 and 62 in Building 2)
6. Number and distribution of truck trips is based on TJKM's traffic study estimate, with approximately 213 total truck trips per 24-hour period (continuous 24/7 operation) distributed as follows:
    - AM Peak is 7-9 AM – 9.4%
    - 9-4 PM – 42.7%
    - PM Peak is 4 PM - 6 PM – 12.7%
    - 6 PM - 10 PM – 16.4%
    - 10 PM - 7 AM – 18.8%

[14] Email correspondence provided on 12/20/23 confirmed the 213 daily truck trips as 20% of total vehicle trips based in ITE data (TJKM Study)

7. Building 2 provides substantial acoustical shielding for most of Building 1 and its operations to the eastern residents. Because of this, Building 1 is not expected to have a meaningful impact on the residential receivers' sound environment to the east.
8. Loading docks in Building 2 are located on the north and south facades, configured to maintain the maximum possible distance away from the residential area to the east.
9. North-facing docks of Building 2 will have a direct line-of-sight to the warehouse to the north. We assume that some shielding is provided by the perpendicular orientation of the docks of Building 1, which would slightly reduce our overall calculated noise contribution of the loading docks to the northern warehouse receivers because of the partial line-of-sight.
10. 24-hour operation assumed.
11. Loading docks not in use on each building have closed doors.
12. A typical truck "trip" consists of the following events (estimated sound levels based on aforementioned measurements at similar facilities):
    a. Truck passby (arrival, departure at slow speed): 69 dBA at 30 feet
    b. Truck airbrakes: 72 dBA at 25 feet
    c. Truck backup alarm: 79 dBA at 30 feet
    d. Brief idle before engine shutoff: 70 dBA at 25 feet
    e. Truck engine ignition and airbrakes: 71 dBA at 25 feet
    f. Truck accelerating from stop: 74 dBA at 25 feet
    g. Truck noise source reference heights[15] (above grade)
        i. Passby, brief idle, acceleration, and ignition: 8 feet
        ii. Back-up beeper and airbrake: 2.5 feet
        iii. Topographical site analysis included in Section C3.1 of the Grading and Drainage Plan show potential terrain shielding of about three feet between the dock elevation and receivers to the east of Isabel Avenue

Intra-Project Traffic Noise

Our analysis estimated future noise from the facility parking lots is based on the following assumptions:

1. Employees will enter and exit the site from Atlantis Court and Challenger Street, from the north (via Discovery Drive).
2. Once on site, vehicles will move at 15 miles per hour or less.
3. Vehicles will be spread out evenly amongst the seven parking areas.

[15] Truck source heights excerpted from Caltrans Technical Noise Supplement document (TeNS) document dated October 1998.

4. An average vehicle trip is estimated to last for a cumulative period of about 2 minutes and be at least 550 feet from the nearest residential property line.
5. Similar proportional percentages were assumed for vehicle trips in the project parking lots as were the truck trips, as shown in the distribution below.
    - AM Peak is 7 AM - 9 AM- 9.4%
    - 9 AM – 4 PM -42.7%
    - PM Peak is 4 PM -6 PM -12.7%
    - 7 PM - 10 PM 16.4%
    - 10 PM - 7 AM 18.8%

Estimated Future Noise Levels

Future Average Noise Levels (CNEL/DNL)

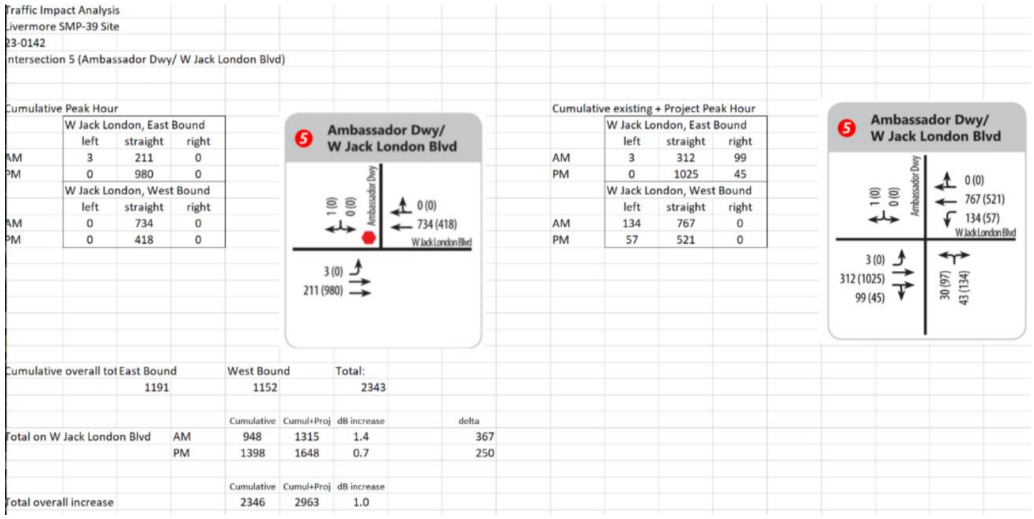
We estimated noise levels at local receptors from the sources described in the previous section. To account for future increases in local traffic noise levels (growth in traffic on Isabel Avenue and other local roadways), we added 1 dB DNL to the measured levels[16] (see **Table 4** above).

We calculated the acoustical impact of project traffic increase due to both projects SMP-39 and SMP-40 with the provided peak hour traffic volumes for the cumulative without project and cumulative with project scenarios. The analysis used the FHWA-RD-77-108 traffic noise calculation model. The figures below show the various calculations for the intersections of interest (i.e., 5, 9, 10, and 11) as provided to us via the traffic volume study developed for both SMP-39 and SMP-40.

Figure A: Intersection Map Legend

[16] The California Department of Transportation assumes a traffic volume increase of three-percent per year, which corresponds to a 1 dBA increase in DNL over a ten-year period.

Figure B: Traffic Volume Analysis for Intersection 5



Traffic Impact Analysis
Livermore SMP-39 Site
23-0142
Intersection 5 (Ambassador Dwy/ W Jack London Blvd)

Cumulative Peak Hour

	W Jack London, East Bound		
	left	straight	right
AM	3	211	0
PM	0	980	0
	W Jack London, West Bound		
	left	straight	right
AM	0	734	0
PM	0	418	0

5 Ambassador Dwy/ W Jack London Blvd

1 (0)
0 (0)
Ambassador Dwy
0 (0)
734 (418)
W Jack London Blvd
3 (0)
211 (980)

Cumulative existing + Project Peak Hour

	W Jack London, East Bound		
	left	straight	right
AM	3	312	99
PM	0	1025	45
	W Jack London, West Bound		
	left	straight	right
AM	134	767	0
PM	57	521	0

5 Ambassador Dwy/ W Jack London Blvd

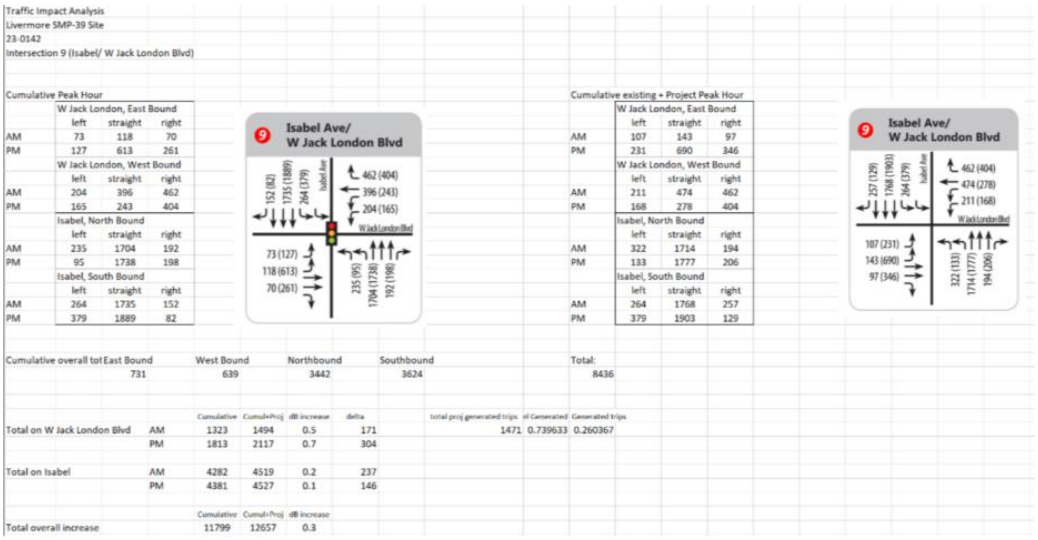
1 (0)
0 (0)
Ambassador Dwy
0 (0)
767 (521)
134 (57)
W Jack London Blvd
3 (0)
312 (1025)
99 (45)
30 (97)
43 (134)

Cumulative overall tot	East Bound	West Bound	Total:
	1191	1152	2343

		Cumulative	Cumul+Proj	dB increase	delta
Total on W Jack London Blvd	AM	948	1315	1.4	367
	PM	1398	1648	0.7	250

	Cumulative	Cumul+Proj	dB increase
Total overall increase	2346	2963	1.0

Figure C: Traffic Volume Analysis for Intersection 9



Traffic Impact Analysis
Livermore SMP-39 Site
23-0142
Intersection 9 (Isabel/ W Jack London Blvd)

Cumulative Peak Hour

	W Jack London, East Bound		
	left	straight	right
AM	73	118	70
PM	127	613	261
	W Jack London, West Bound		
	left	straight	right
AM	204	396	462
PM	165	243	404
	Isabel, North Bound		
	left	straight	right
AM	235	1704	192
PM	95	1738	198
	Isabel, South Bound		
	left	straight	right
AM	264	1735	152
PM	379	1889	82

9 Isabel Ave/ W Jack London Blvd

152 (82)
1735 (1889)
264 (379)
Isabel Ave
462 (404)
396 (243)
204 (165)
W Jack London Blvd
73 (127)
118 (613)
70 (261)
235 (95)
1704 (1738)
192 (198)

Cumulative existing + Project Peak Hour

	W Jack London, East Bound		
	left	straight	right
AM	107	143	97
PM	231	690	346
	W Jack London, West Bound		
	left	straight	right
AM	211	474	462
PM	168	278	404
	Isabel, North Bound		
	left	straight	right
AM	322	1714	194
PM	133	1777	206
	Isabel, South Bound		
	left	straight	right
AM	264	1768	257
PM	379	1903	129

9 Isabel Ave/ W Jack London Blvd

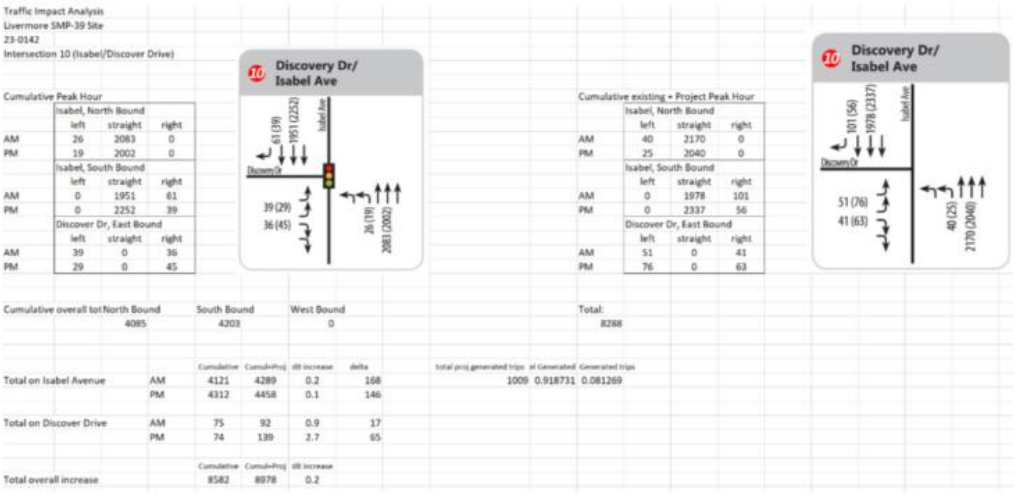
257 (129)
1768 (1903)
264 (379)
Isabel Ave
462 (404)
474 (278)
211 (168)
W Jack London Blvd
107 (231)
143 (690)
97 (346)
322 (133)
1714 (1777)
194 (206)

Cumulative overall tot	East Bound	West Bound	Northbound	Southbound	Total:
	731	639	3442	3624	8436

		Cumulative	Cumul+Proj	dB increase	delta	total proj generated trips	nl Generated	Generated trips
Total on W Jack London Blvd	AM	1323	1494	0.5	171	1471	0.739633	0.260367
	PM	1813	2117	0.7	304			
Total on Isabel	AM	4282	4519	0.2	237			
	PM	4381	4527	0.1	146			

	Cumulative	Cumul+Proj	dB increase
Total overall increase	11799	12657	0.3

Figure D: Traffic Volume Analysis for Intersection 10



Traffic Impact Analysis
Livermore SMP-39 Site
23-0142
Intersection 10 (Isabel/Discover Drive)

Cumulative Peak Hour

	Isabel, North Bound left	straight	right
AM	26	2083	0
PM	19	2002	0
	Isabel, South Bound		
	left	straight	right
AM	0	1951	61
PM	0	2252	39
	Discover Dr, East Bound		
	left	straight	right
AM	39	0	36
PM	29	0	45

Discovery Dr/ Isabel Ave

61 (39) 1951 (2252) Isabel Ave Discovery Dr 39 (29) 36 (45) 26 (19) 2083 (2002)

Cumulative existing + Project Peak Hour

	Isabel, North Bound left	straight	right
AM	40	2170	0
PM	25	2040	0
	Isabel, South Bound		
	left	straight	right
AM	0	1978	101
PM	0	2337	56
	Discover Dr, East Bound		
	left	straight	right
AM	51	0	41
PM	76	0	63

Discovery Dr/ Isabel Ave

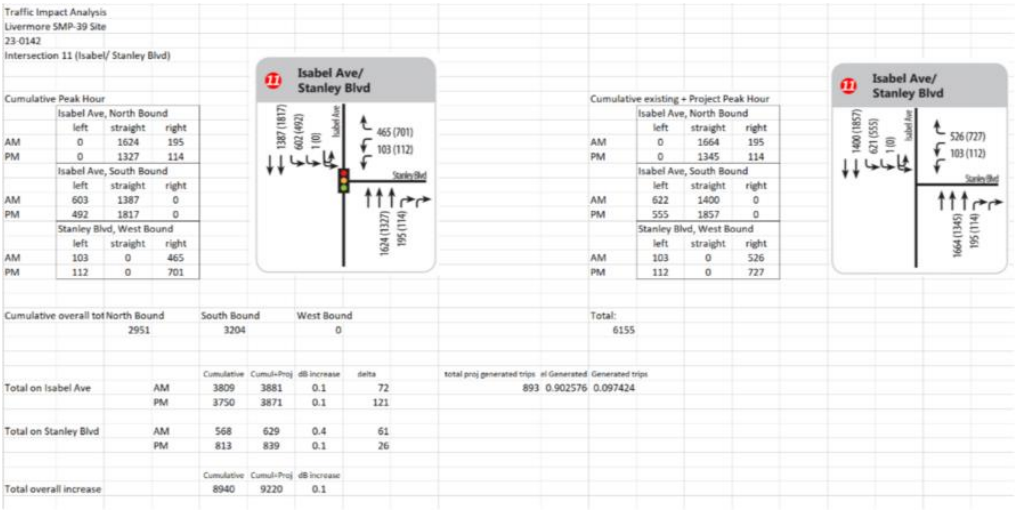
101 (56) 1978 (2337) Isabel Ave Discovery Dr 51 (76) 41 (63) 40 (25) 2170 (2040)

Cumulative overall tot	North Bound	South Bound	West Bound	Total:
	4085	4203	0	8288

		Cumulative	Cumul+Proj	dB increase	delta
Total on Isabel Avenue	AM	4121	4289	0.2	168
	PM	4312	4458	0.1	146
Total on Discover Drive	AM	75	92	0.9	17
	PM	74	139	2.7	65
Total overall increase		Cumulative 8582	Cumul+Proj 8978	dB increase 0.2	

total proj generated trips	xl Generated	Generated trips
1009	0.918731	0.081269

Figure E: Traffic Volume Analysis for Intersection 11



Traffic Impact Analysis
Livermore SMP-39 Site
23-0142
Intersection 11 (Isabel/ Stanley Blvd)

Cumulative Peak Hour

	Isabel Ave, North Bound left	straight	right
AM	0	1624	195
PM	0	1327	114
	Isabel Ave, South Bound		
	left	straight	right
AM	603	1387	0
PM	492	1817	0
	Stanley Blvd, West Bound		
	left	straight	right
AM	103	0	465
PM	112	0	701

Isabel Ave/ Stanley Blvd

1387 (1817) 602 (492) 1 (0) Isabel Ave 465 (701) 103 (112) Stanley Blvd 1624 (1327) 195 (114)

Cumulative existing + Project Peak Hour

	Isabel Ave, North Bound left	straight	right
AM	0	1664	195
PM	0	1345	114
	Isabel Ave, South Bound		
	left	straight	right
AM	622	1400	0
PM	555	1857	0
	Stanley Blvd, West Bound		
	left	straight	right
AM	103	0	526
PM	112	0	727

Isabel Ave/ Stanley Blvd

1400 (1857) 621 (555) 1 (0) Isabel Ave 526 (727) 103 (112) Stanley Blvd 1664 (1345) 195 (114)

Cumulative overall tot	North Bound	South Bound	West Bound	Total:
	2951	3204	0	6155

		Cumulative	Cumul+Proj	dB increase	delta
Total on Isabel Ave	AM	3809	3881	0.1	72
	PM	3750	3871	0.1	121
Total on Stanley Blvd	AM	568	629	0.4	61
	PM	813	839	0.1	26
Total overall increase		Cumulative 8940	Cumul+Proj 9220	dB increase 0.1	

total proj generated trips	xl Generated	Generated trips
893	0.902576	0.097424

As shown above, the increase in traffic due to the project would be approximately 1 to 2 dBA to the DNL when combined.

Table 9 below summarizes the estimated DNL levels at the closest property plane to the east of the building, under the assumption that the facility would receive its trucking and commuting employee activities during the 24 hours of operation.

Table 9: Calculated 24-Hour Future Facility Noise at Nearest Noise-Sensitive Land Uses: CNEL/DNL, dBA

Nearby Receiving Locations	Existing Noise at Receiver (Residences)	Loading Docks at Receiver	Intra-Project Traffic Noise Levels at Receiver	Combined Existing plus Project	Change (dBA)
East Property Line (Residences across Isabel)	67	60	32	69	+2
North Property Line (Neighboring Warehouse)	65	65	36	68	+3

The calculated increase in DNL at the residential property line with the project and future traffic noise levels (near term 2025) will be approximately 2 dB. At the northern industrial uses, a DNL 3 dB change is predicted. A change of 3 dB or less is not expected to be noticeable and is not considered significant.

Our calculations of maximum noise levels assume that the trucks operating at the closest docks to the residences will be active at the same proportion as stated above. The noise analysis also assessed the increase in traffic noise levels resulting from project traffic in combination with future traffic noise level increases on the surrounding roadway network resulting from other anticipated development in the region. The resultant cumulative increase is 3 dB. This would not be considered a significant increase to the predicted project operation noise environment.

Future L_{50} Noise Levels

The following assumptions were made about the 24-hour operation of the project in our estimated L_{50} calculations:

- The volume of expected truck trips is consistent with the truck trip distribution established in item 6 of the Noise Source Analysis and Assumptions section (i.e., a maximum of 5 trucks per hour at nighttime, or 18.8% of trucks between 10:00 pm and 7:00 am).
- The 6- and 10-foot berms will be incorporated into the project.
- Backup alarms are expected to be at a height of approximately 2.5 feet.
- Trucks do not move great distances when their backup alarm is engaged.

Table 10 summarizes the estimated daytime and nighttime L_{50} for the proposed project. Since backup alarms for nighttime are predicted to occur less than 15 minutes per hour, the criterion can increase by 5 dBA per Policy P2. However, since back up alarms would be more than 15 minutes per hour during the daytime, no additional increases are accounted for in our analysis.

Table 10: Calculated 24-Hour Future Facility L_{50} Value: L_{50}, dBA

Time of Day	Estimated L_{50} Value	Criterion L_{50} Value
Daytime (7am-10pm)	50 dBA	55 dBA
Nighttime (10pm-7am)	45 dBA	50 dBA

Although our calculations of overall operational L_{50} noise levels do not exceed the allowable values stated by the City (i.e., Policy P1, Objective N-1.5), backup alarm noise may be audible at residences to the east during quieter nighttime hours. It is our understanding that other current similar projects in the vicinity have caused local neighbor complaints due to trucks' back-up alarms at those locations in the past.

Back-up alarms were assumed to be 79 dB at a reference distance of 30 feet. The distance attenuation between the loading dock to the façade of the nearest residence provides a 31 dB reduction. Although backup alarms would be audible from the residences, the L_{50} threshold of 50 dBA will not be exceeded due to the limited number of trips during this timeframe (estimated at 40 trips in 9-hour time frame).

Calculations assumed the source height of these backup alarms to be approximately 2.5 feet from grade. The incorporation of the proposed 6- and 10-foot-tall berms would adequately obstruct the direct line-of-sight of these backup alarms to the residential receivers. The dimensions of the proposed berms are calculated to reduce intermittent noise levels (such as those produced by backup alarms) by up to 6 dB at the closest residents.

Quieter backup alarms (aka "squawkers"), which are becoming more prevalent in delivery vehicles for various large e-commerce websites, and other vendors, may be used by trucking operators visiting this site in the future, therefore beeper noise has the potential to be reduced. A best practice for consideration would be to implement these alternative devices in other truck populations in the future.

CONCLUSIONS AND COMMENTS

1. Future cumulative project site noise from rooftop HVAC equipment, loading dock-generated noise, stationary trucks, and employee vehicles, is not expected to significantly impact receivers to the east or to the north. The calculated increase in CNEL/DNL for the warehouse receivers to the north will be 3 dB, while the closest residential receivers across Isabel Avenue will have a 2dB increase from the existing environment under the expected 24-hour operations.

   A change of 3 dB or less is not considered significant for residents to the east or the commercial neighbors to the north of the project site. A cumulative DNL of 69 dB for the receivers does not exceed the industrial 75 dB DNL threshold defined in Table 9-7 of the Livermore Noise Element as well as the L_{50} level from Objective N-1.5 of the General Plan.

   Considering the 1,025-foot distance between the nearest loading dock and the closest residents, and the trucks being a stationary source rather than a moving vehicle once the leaving the loading dock area of the project site, the city's L_{50} criterion is not applicable once a truck begins moving closer to the residential area. Given the minority of expected project truck trips conducted in the nighttime

hours (less than 5 trips per hour on average from 10 PM to 7 AM), noise from stationary trucks at the nearest loading dock are expected to comply with the City's L_{50} nighttime requirement assuming backup alarms are not continuously operating for more than 30 minutes per hour.

2. It is our understanding that there are no State or Federal requirements for noise levels of backup alarms except for OSHA, which only requires them to be "significantly louder" than the surrounding environment. Because the background noise levels around most facilities are not known, manufacturers typically increase the alarm volume to compensate.

   Best practices to reduce alarm audibility at the facility to be evaluated would be to require users to limit alarm volume levels, employ signal personnel, lights, and other means to notify people about ongoing truck activities within the facility.

* * *

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APPENDIX A: FUNDAMENTAL CONCEPTS OF ENVIRONMENTAL NOISE

This section provides background information to aid in understanding the technical aspects of this report.

Three dimensions of environmental noise are important in determining subjective response. These are:

- The intensity or level of the sound
- The frequency spectrum of the sound
- The time-varying character of the sound

Airborne sound is a rapid fluctuation of air pressure above and below atmospheric pressure. Sound levels are usually measured and expressed in decibels (dBA), with 0 dBA corresponding roughly to the threshold of hearing.

The "frequency" of a sound refers to the number of complete pressure fluctuations per second in the sound. The unit of measurement is the cycle per second (cps) or hertz (Hz). Most of the sounds, which we hear in the environment, do not consist of a single frequency, but of a broad band of frequencies, differing in level. The name of the frequency and level content of a sound is its sound spectrum. A sound spectrum for engineering purposes is typically described in terms of octave bands, which separate the audible frequency range (for human beings, from about 20 to 20,000 Hz) into ten segments.

Many rating methods have been devised to permit comparisons of sounds having quite different spectra. Surprisingly, the simplest method correlates with human response practically as well as the more complex methods. This method consists of evaluating all of the frequencies of a sound in accordance with a weighting that progressively de-emphasizes the importance of frequency components below 1000 Hz and above 5000 Hz. This frequency weighting reflects the fact that human hearing is less sensitive at low frequencies and at extreme high frequencies relative to the mid-range.

The weighting system described above is called "A"-weighting, and the level so measured is called the "A-weighted sound level" or "A-weighted noise level." The unit of A-weighted sound level is sometimes abbreviated "dBA." In practice, the sound level is conveniently measured using a sound level meter that includes an electrical filter corresponding to the A-weighting characteristic. All U.S. and international standard sound level meters include such a filter. Typical sound levels found in the environment and in industry are shown in Figure A-1.

Although a single sound level value may adequately describe environmental noise at any instant in time, community noise levels vary continuously. Most environmental noise is a conglomeration of distant noise sources, which results in a relatively steady background noise having no identifiable source. These distant sources may include traffic, wind in trees, industrial activities, etc. and are relatively constant from moment to moment. As natural forces change or as human activity follows its daily cycle, the sound level may vary slowly from hour to hour. Superimposed on this slowly varying background is a succession of

identifiable noisy events of brief duration. These may include nearby activities such as single vehicle pass-bys, aircraft flyovers, etc. which cause the environmental noise level to vary from instant to instant.

To describe the time-varying character of environmental noise, statistical noise descriptors were developed. "L10" is the A-weighted sound level equaled or exceeded during 10 percent of a stated time period. The L10 is considered a good measure of the maximum sound levels caused by discrete noise events. "L50" is the A-weighted sound level that is equaled or exceeded 50 percent of a stated time period; it represents the median sound level. The "L90" is the A-weighted sound level equaled or exceeded during 90 percent of a stated time period and is used to describe the background noise.

As it is often cumbersome to quantify the noise environment with a set of statistical descriptors, a single number called the average sound level or "L_{eq}" is now widely used. The term "L_{eq}" originated from the concept of a so-called equivalent sound level which contains the same acoustical energy as a varying sound level during the same time period. In simple but accurate technical language, the L_{eq} is the average A-weighted sound level in a stated time period. The L_{eq} is particularly useful in describing the subjective change in an environment where the source of noise remains the same but there is change in the level of activity. Widening roads and/or increasing traffic are examples of this kind of situation.

In determining the daily measure of environmental noise, it is important to account for the different response of people to daytime and nighttime noise. During the nighttime, exterior background noise levels are generally lower than in the daytime; however, most household noise also decreases at night, thus exterior noise intrusions again become noticeable. Further, most people trying to sleep at night are more sensitive to noise. To account for human sensitivity to nighttime noise levels, a special descriptor was developed. The descriptor is called the L_{dn} (Day/Night Average Sound Level), which represents the 24-hour average sound level with a penalty for noise occurring at night. The L_{dn} computation divides the 24-hour day into two periods: daytime (7:00 am to 10:00 pm); and nighttime (10:00 pm to 7:00 am). The nighttime sound levels are assigned a 10 dBA penalty prior to averaging with daytime hourly sound levels.

For highway noise environments, the average noise level during the peak hour traffic volume is approximately equal to the L_{dn}.

The effects of noise on people can be listed in three general categories:

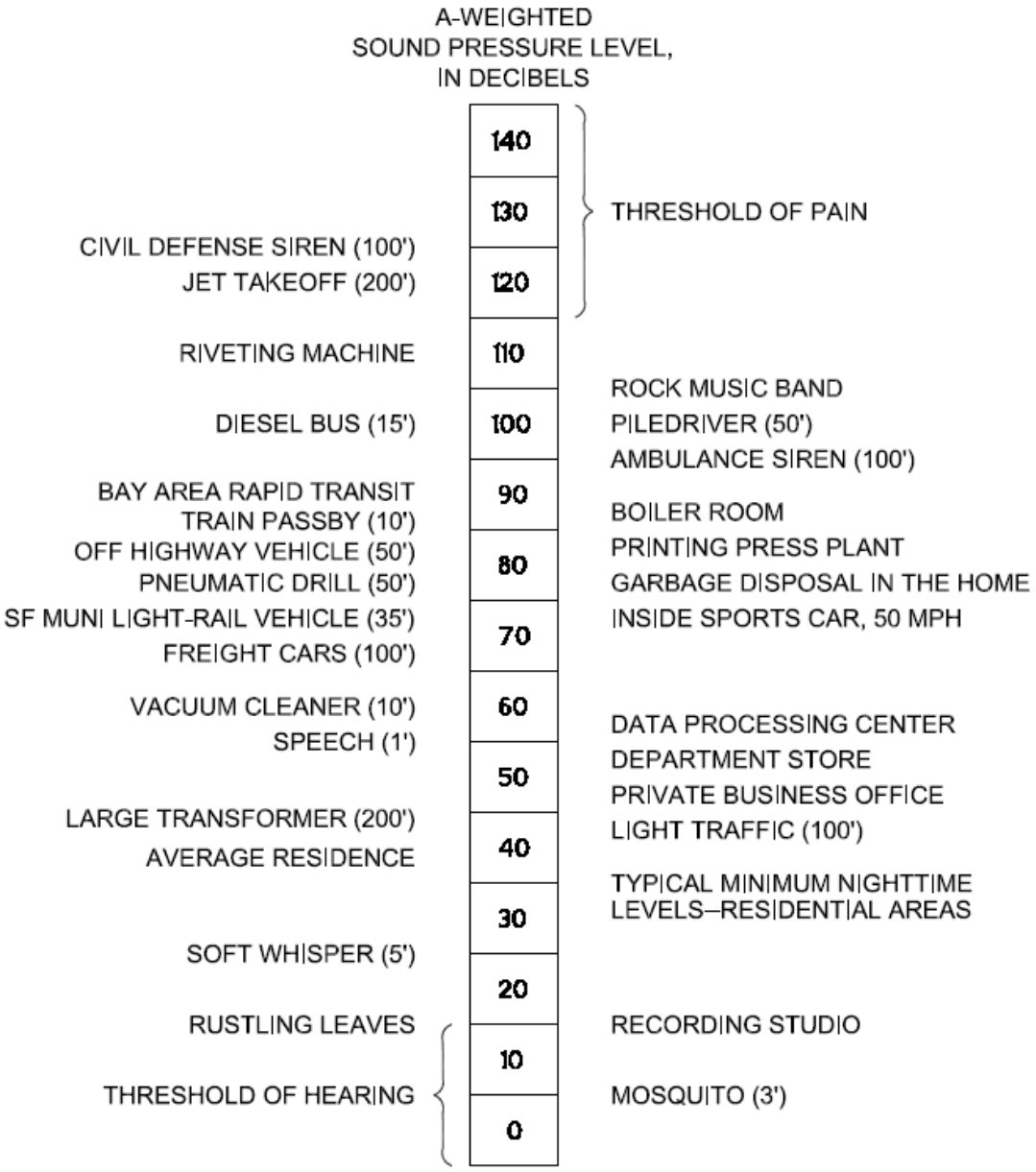
- Subjective effects of annoyance, nuisance, dissatisfaction
- Interference with activities such as speech, sleep, and learning
- Physiological effects such as startle, hearing loss

The sound levels associated with environmental noise usually produce effects only in the first two categories. Unfortunately, there has never been a completely predictable measure for the subjective effects of noise nor of the corresponding reactions of annoyance and dissatisfaction. This is primarily because of the wide variation in individual thresholds of annoyance and habituation to noise over time.

Thus, an important factor in assessing a person's subjective reaction is to compare the new noise environment to the existing noise environment. In general, the more a new noise exceeds the existing, the less acceptable the new noise will be judged.

With regard to increases in noise level, knowledge of the following relationships will be helpful in understanding the quantitative sections of this report:

Except in carefully controlled laboratory experiments, a change of only 1 dBA in sound level cannot be perceived. Outside of the laboratory, a 3 dBA change is considered a just-noticeable difference. A change in level of at least 5 dBA is required before any noticeable change in community response would be expected. A 10 dBA change is subjectively heard as approximately a doubling in loudness, and would almost certainly cause an adverse community response.



TYPICAL SOUND LEVELS MEASURED IN THE ENVIRONMENT AND INDUSTRY

FIGURE A1

1107 C 11.25.03

Salter

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San Jose

Los Angeles

Honolulu

Seattle

www.salter-inc.com

OAKS BUSINESS PARK – SMP–40 MEASUREMENT LOCATIONS AND MEASURED NOISE LEVELS

FIGURE 1

Salter #	MEV/ECS
21–0471	02.21.23